If you become
DISABLED

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If You Become Disabled

Over a period of more than 25 years, old-age and survivors insurance under the social security law has become well known to most Americans.

The basic idea of this program has been that workers and their employers and self-employed people contribute to a fund while they are working, and when earnings stop because of the death of the worker or because of his retirement, payments are made from the fund to the worker and his dependents or to his survivors.

In recent years the old-age and survivors insurance program has been enlarged to give protection also against loss of earnings because of severe, long-lasting disability.

The risk of disability hangs over all of us, and although it may strike only one in every hundred, it may affect the family's financial security more than the retirement or even the death of a worker. This booklet tells what you need to know about the social security disability provisions—how they may affect you and your family now or in the future.

Two kinds of disability protection are provided under the social security disability program:

- Disabled workers under 65 and their dependents may be paid monthly benefits.
- The disabled sons and daughters of retired or disabled workers and of workers who have died may be paid monthly benefits if they are 18 years of age or older and have been disabled since before they reached 18 years of age.

All disabled people who apply under these provisions of the social security law are referred to their State vocational rehabilitation agencies. Where practicable, these agencies will provide these disabled persons with help in overcoming their handicaps and in becoming self-supporting.

How Long Must You Have Worked Under Social Security?*

Not all disabled people who have been in work covered by social security are eligible to get disability benefits.

To be eligible—

You must have worked under social security for at least 5 years—or, since social security credits are counted in units of calendar quarters of the year, in at least 20 calendar quarters.

*The disabled son or daughter of a retired, disabled, or deceased worker does not need to have any record of work under social security to get payments as a disabled child.

The 20 calendar quarters need not be consecutive, but they must all have been during a 10-year period ending in or after the calendar quarter in which you became disabled.

Note: If you become disabled after 1971, you may need more than 5 years of work.

Active military service at any time after September 15, 1940, and work in the railroad industry can count toward this work requirement for the purpose of freezing your social security record, (protecting your future benefit rights), but can count toward disability insurance payments only in the following situations:

- Active military service can count toward disability benefits only if no monthly payments, based in whole or in part on the same period of service, are payable by the military organization or by a Federal agency other than the Veterans Administration.

  Exception: Where a person has active military service after 1956, his active service from January 1951 on may count toward social

security disability benefits even if he is eligible for payments from his military organization based on the same period of service.

- Railroad work can count toward social security disability benefits only if the worker had fewer than 120 months of railroad service and is not eligible for a railroad retirement annuity.

How Disabled Must You Be?

To be eligible for disability insurance benefits, or to receive childhood disability benefits, you must have an illness or injury which is so severe that in the words of the law, it makes you unable to "engage in any substantial gainful activity." It must be a physical or mental condition which is expected to continue indefinitely.

To be eligible for disability insurance benefits, your disability must have lasted for 6 full calendar months or more and must have begun at least 6 full calendar months before the month in which you reached age 65.

If you can't do your regular work, but can do other substantial gainful work, you cannot qualify under these disability provisions.

If your condition is a temporary one and is expected to improve with medical treatment so that you will be able to return to work, you cannot qualify under these disability provisions.

If you are doing substantial gainful work despite your condition, you will not be eligible to receive disability benefits.

The rules in the social security law for deciding whether a person is disabled are different from the rules in some other Government and private disability programs. This means that some people, receiving payments for "total disability" from another Government agency, or from a private company, may not be found eligible under the social security law.

There is a special provision for people who are totally blind. If you are totally blind (as defined in the social security law) but are able to work anyhow, you may have your social security record frozen.

In this way, you keep your social security rights intact and keep your benefits from being reduced by not counting the years when you had no earnings or your earnings were low. But for a totally blind person to receive monthly disability benefits, it must be shown that he is unable to work because of his loss of eyesight. If a person has such poor eyesight that it keeps him from working, but he is not totally blind under the definition of blindness in the law, he will be eligible to receive disability benefits under the same conditions as a person with some other kind of disability which prevents him from working.

Getting the Evidence and Making a Decision

If you are applying for disability insurance benefits, or childhood disability benefits, you are responsible for getting medical evidence concerning your disability. When you make your application, your social security office will give you a medical report form on which

medical evidence can be supplied. You will be asked to take or mail this form to your doctor and to places where you have been treated for your condition. The social security district office will help you in every way possible to fill out your application and get the necessary evidence.

On the medical report form which your doctor or a hospital, institution, or agency fills out for you, they are asked to give the medical history of your condition: what the doctors have found to be wrong with you, how severe it is, what medical tests have shown, and what treatments you have received. *They are not asked to decide whether or not you are "disabled" under the social security law.*

When this medical evidence has been obtained and put into your file by the social security office along with other available evidence on your education, experience, and other abilities, the complete file is sent to an agency of your State under an agreement between the State and the Federal Government.

A "team" of trained people in the State agency—doctors and others who have had experience in seeing the effects of disabling conditions upon people's ability to work—will consider all of the facts in your file. (In some cases the State agency may ask you to get additional evidence or to have a medical examination.)

The medical evidence from your doctor or other sources will show the severity of your condition—to what degree you are unable to do such things as move about, handle things, hear, speak, understand, or reason. Sometimes the evidence shows that despite the presence of disease or injury a person is still able to function with little or no limitation and thus does not qualify for disability benefits. In other cases the medical records will show clearly that a person is so affected by his disease (or injury) that he cannot be expected to do any substantial gainful work.

Here are some examples of conditions which are ordinarily severe enough to make a person "unable to engage in any substantial gainful activity:"

1. Loss of use of both arms, both legs, or a leg and an arm.

2. Progressive diseases which have resulted in the physical loss of a leg or arm or which have caused the limb to become useless. Among these progressive diseases are diabetes, multiple sclerosis, and Buerger's disease.

3. Diseases of heart, lungs, or blood vessels which have resulted in serious loss of heart or lung reserve as shown by X-ray, electrocardiogram, or other tests so that, in spite of medical treatment, there is breathlessness, pain or fatigue on slight exertion, such as walking several blocks, using public transportation, or doing small chores.

4. Cancer which is progressive and cannot be improved or cured by surgery or other treatment.

5. Damage to the brain, or brain abnormality, which has resulted in severe loss of judgment, intellect, orientation, or memory.

6. Mental disease (e.g., psychosis or severe psychoneurosis) requiring constant supervision or continued confinement in an institution.

7. Loss of vision or narrowing of vision to the extent that the individual has central visual acuity of no better than 20/200 in the better eye after best correction, or an equivalent concentric contraction of visual fields.

8. Permanent and total inability to speak.

9. Total deafness (which cannot be corrected by a hearing aid).

In cases where the medical evidence does not show clearly that the person is disabled under the law, his age, education, and vocational background are also considered in deciding whether he has the capacity for substantial gainful work.

Benefits for Disabled Workers

If you are under 65 years of age, have worked under social security for the required time, and are disabled to the degree described on page 10, under the heading "How Disabled Must You Be?" you may be eligible for monthly disability insurance benefits after you have been disabled for at least 6 full calendar months. If you have been disabled for 6 full calendar months or more and have not yet applied for these benefits get in touch with your social security office about making your application SOON.

It is important to file for social security disability benefits promptly since back payments can be made for no more than 12 months.

The amount of your monthly disability insurance payment will depend on your average monthly earnings as shown in your social security record. It will be the same as the amount of the old-age insurance benefit you would get if you were already 65. See table on page 31 giving examples of monthly disability benefits.

Disability insurance benefits are not paid in addition to any dependents or survivors insurance benefits which may be payable to you under the social security law. If you become entitled to more than one of these benefits at the same time, the amount will ordinarily be equal to the largest of the benefits. However, a person who becomes entitled to another type of social security benefit before age 65 cannot later become entitled to a disability benefit even if the disability benefit would be higher than the other benefit.

Benefits for Dependents of Disabled Workers

While you are receiving disability insurance benefits, dependents benefits may be paid to certain members of your family—just as in the case of a retired worker.

Payments can be made to any of your children who are under age 18, or who have been totally disabled since before they reached 18 years of age. (See page 20.)

Your wife, regardless of her age, can be paid benefits if she has in her care children who are eligible for these dependents benefits.

If you have no child eligible for benefits, your wife may qualify for payments when she reaches age 62. (The dependent husband of a disabled woman worker may qualify for husband's benefits at age 62.)

If you are receiving disability insurance benefits and one of your eligible dependents earns more than $1,200 in a year, he or she may not be due some of his or her payments.

If your disability benefits stop because it is found that you are no longer disabled within the meaning of the law, your dependents' benefits will stop too.

Childhood Disability Benefits

If you have a disabled son or daughter, he or she may receive childhood disability benefits regardless of his or her age if—

> *You are receiving social security old-age or disability insurance benefits,* or
>
> *You die after working long enough under social security to become insured for the payment of survivors benefits.*

To receive childhood disability monthly benefits, the son or daughter of an insured worker must:

- Have become disabled before reaching 18.
- Have a disability which meets the requirements described on page 10, under the heading "How Disabled Must You Be?"

- Be unmarried when benefits start.
- Be dependent upon a parent, stepparent, or adopting parent who is receiving social security old-age or disability insurance benefits, or
- Have been dependent on a parent who died after March 31, 1938, who had worked long enough under social security to become insured for the payment of survivors insurance benefits.

If a severely disabled person under the age of 18 is now receiving child's insurance benefits which are scheduled to stop when he reaches his 18th birthday, he or someone in his family should get in touch with the social security office a few months before he reaches 18.

The mother of a disabled son or daughter who is entitled to childhood disability benefits may also qualify for benefits, regardless of her age, if she has the son or daughter in her care.

You Will Be Notified of the Decision in Your Case

You will receive a notice in the mail from the Social Security Administration as soon as a decision has been reached in your case. After you have done your part about getting the evidence on your disability, you do not need to do anything more. If it seems like a long wait to you, you can be sure that the time taken is in your interest—so that all the facts can be carefully studied and a proper decision made.

A notice that your disability application has been denied does not mean that a decision has been made about your right to benefits when you reach retirement age or the right of your survivors to benefits in

case of your death. It means only that you are not now eligible to receive disability insurance benefits. But when you apply for benefits at 62 or later you may still get the advantage of the provision in the law which permits the dropping out of at least 5 years in which you had low earnings or no earnings at all. This "drop-out" may be made whether or not a worker has ever been kept from working because of a disability.

If Your Application Is Denied

If you get a letter notifying you that your application has been denied, it will tell you the reason. It may be that the doctors and other experts who have studied your case have found that your condition is not serious enough to prevent you from doing some other kind of work. Or the evidence may show that your condition is of a type which is not likely to continue indefinitely or which could be improved by treatment so that you could work.

In some cases a person's application under the disability provisions may be denied because he did not meet the work requirements (as explained on pages 8–10) on or after the date the evidence shows that his disability began.

If your application is denied, you may still, if you wish, present new evidence concerning your disability. Your social security office will be glad to see that any new evidence you may have is presented and your case reconsidered.

If you have no new evidence to offer, but feel strongly that the decision in your case is not in accordance with the provisions in the social security law, you may ask your social security office to have your case reconsidered. If you believe that the results of this reconsideration are not correct, you may request a hearing before a hearing examiner of the Social Security Administration.

Vocational Rehabilitation and Special Employment Services

Whether or not you are found eligible to receive disability insurance benefits or childhood disability benefits, you may be offered help in overcoming your disability and in preparing for and finding work.

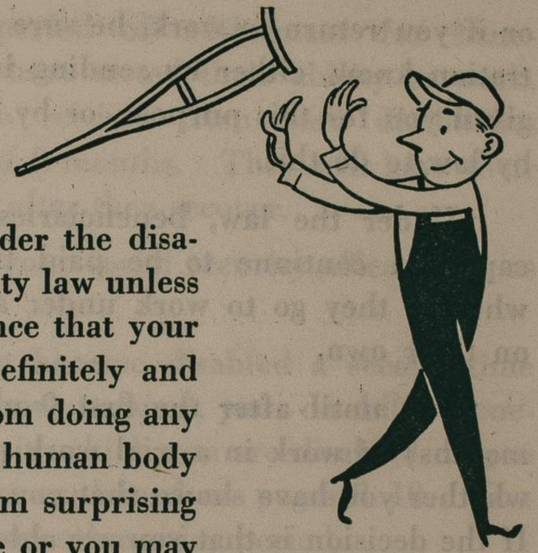
When you apply under any one of the disability provisions in the social security law, you will be referred to your State vocational rehabilitation agency. Information in your file is made available to help them decide whether you can benefit from rehabilitation services and, if so, what kinds of services will be most

useful to you. The vocational rehabilitation agency has responsibility for providing counseling, training, and other services which disabled people may need to help them get back on the job.

You may also get employment counseling and selective placement services at the local office of your State Employment Service.

People who have been found eligible for disability insurance benefits or for childhood disability benefits will not be paid those benefits if, without good cause, they refuse rehabilitation services offered to them by their State vocational rehabilitation agencies.

If You Recover or Return To Work



You will not be found eligible under the disability provisions in the social security law unless it appears from the medical evidence that your condition is likely to continue indefinitely and is a condition that prevents you from doing any substantial gainful work. But the human body and human willpower often perform surprising feats—your condition may improve or you may learn new skills and be able to go to work.

If, after you have received notice that you have been found "disabled" under the social security law, your condition does improve,

or if you return to work, be sure to let the Social Security Administration know, either by sending in the postcard form which will be given you for this purpose, or by writing a letter. You are required by law to do this.

Under the law, beneficiaries who work despite severe handicaps can continue to be paid their benefits during 12 months—whether they go to work under a vocational rehabilitation plan, or on their own.

Not until after the first 9 months (not necessarily consecutive months) of work in a trial work period will a decision be made as to whether you have shown that you have regained your ability to work. If the decision is that you are able to engage in substantial work, and therefore are no longer disabled within the meaning of the law, you will still be paid benefits for 3 months longer—to the end of the 12-month period.

The law also provides a period of adjustment for beneficiaries who recover before they have tested their ability to work, as well as for beneficiaries who recover from their disabilities before they have worked in each of 9 months. They will have their benefits paid to them for 3 months after they recover.

In any event, you should let your social security office know as soon as you start work.

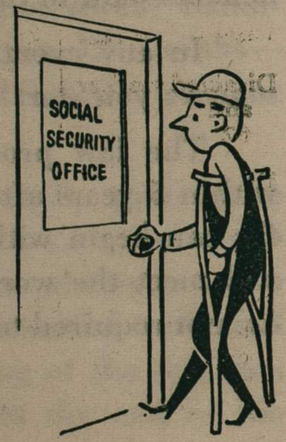
The law provides that if you become disabled a second time within 5 years after your benefits have stopped, your disability benefits can begin with the first month in which you are disabled, if you still meet the work requirements as explained on pages 8–10. You are not required to serve a second 6-month waiting period.

Your Social Security Office

To apply for disability benefits, get in touch with your social security district office.

If you are unable to visit the social security office, you may telephone or write or someone else may make the call for you.

You can get the address of your social security office from the post office or from the telephone directory under "United States Government, Department of Health, Education, and Welfare, Social Security Administration."



EXAMPLES OF MONTHLY DISABILITY BENEFITS

	Average yearly earnings								
	$800	*$1,200*	*$1,800*	*$2,400*	*$3,000*	*$3,600*	*$4,200*	*$4,500*	*$4,800**
Disabled worker.	*$40.00*	*$59.00*	*$73.00*	*$84.00*	*$95.00*	*$105.00*	*$116.00*	*$121.00*	*$127.00*
Disabled worker and wife aged 62.....	*55.00*	*81.20*	*100.40*	*115.50*	*130.70*	*144.40*	*159.50*	*166.40*	*174.70*
Disabled worker, one child, and wife (regardless of age)....	*60.00*	*88.50*	*120.00*	*161.60*	*190.00*	*210.00*	*232.00*	*242.00*	*254.00*
Disabled worker, two or more children and wife (regardless of age)....	*60.00*	*88.50*	*120.00*	*161.60*	*202.40*	*236.40*	*254.00*	*254.00*	*254.00*

*Because earnings of $4,800 cannot be credited for any year before 1959, benefits in this column will not generally be payable for a few years to come.

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Social Security Administration | **Bureau of Old-Age and Survivors Insurance**

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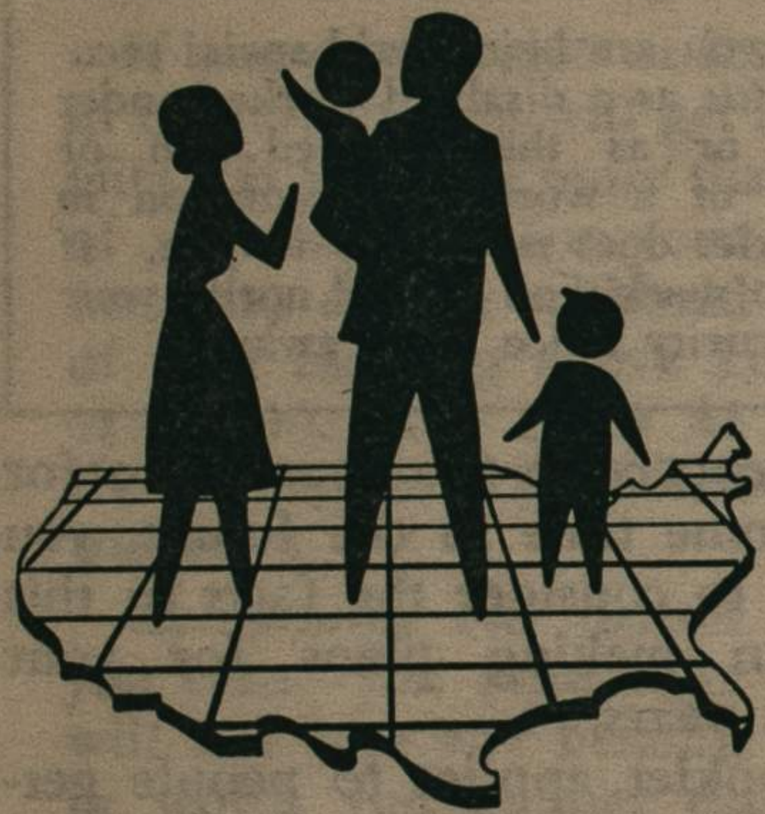
IF YOU WORK WHILE YOU GET



SOCIAL SECURITY PAYMENTS

U.S. Department of Health, Education, and Welfare
Social Security Administration
Bureau of Old-Age and Survivors Insurance

Under the social security program, workers and their employers and self-employed people pay into a fund while they are working. Then, when earnings are reduced because of retirement or severe disability, benefits are paid from the fund to the worker and his family; or if earnings stop because of the worker's death, payments are made to his survivors.

When a person eligible for old-age or survivors insurance benefit payments goes to work, or continues to work, and has substantial earnings, some or all of his benefits must be withheld.

This booklet explains the provisions of the law which, in effect, measure a beneficiary's retirement or loss of earnings and which tell how much in benefits are payable to him for any particular year or month.

If you are already a beneficiary, this booklet will be handy to keep as a reminder of what you need to know about these conditions. It may also answer some questions you may not have thought of when you were in your social security district office.

> *Note:* If you are being paid social security benefits as a disabled worker under age 65, or as the disabled son or daughter of a worker, information in this booklet does *not* apply to you. If you go to work, you should notify your social security office right away.

If you expect to file your claim for benefits some time in the future, you will want to consider the facts in this booklet in making plans for your retirement years.

This booklet applies to people getting benefits as:

- retired workers
- wives or dependent husbands of retired or disabled workers

- children under 18 years of age
- widowed mothers
- aged widows or dependent widowers
- aged dependent parents

If You Work While Getting Benefits

If you earn $1,200 or less in 1961 or in later years, you will get all your benefits. If you earn more than $1,200, $1 of your benefits (or your total family benefits) can be withheld for each $2 of your earnings above $1,200 and up to $1,700. For every $1 of earnings above $1,700, $1 of benefits can be withheld.

Exceptions: No matter how much you earn—you (and your dependents) will not lose any benefits for months in which you neither earn wages of more than $100 nor render substantial services in self-employment. Neither will you lose benefits for any month in which you are 72 or over.

The chart below will give you an idea of about how much can be withheld from your benefits during a year if your total earnings for that year go over $1,200.

If your earnings are	*This much can be withheld from your benefits (or your total family benefits)* for that year:*	
$1,200 or less...	None.	
$1,300.....	$50.	That is, $1 is withheld for each $2 of earnings between $1,200 and $1,700.
$1,400.....	$100.	
$1,500.....	$150.	
$1,600.....	$200.	
$1,700.....	$250.	
Over $1,700....	For each $1 earned over $1,700 an additional $1 in benefits may be withheld.	

*"Family benefits" are the total of all benefits payable to you and any persons receiving payments based on your earnings record.

Note.—The amounts to be withheld are withheld *only* from benefits for months you were under 72 *and* worked. Nothing is ever withheld for any month in which:

1. You neither worked as an employee for more than $100 nor rendered substantial services as a self-employed person, *or*
2. You were 72 or over.

Example.—John Stone, who is receiving a benefit of $100 a month, works as an employee during all months of the year and makes a total of $2,250. This would call for $800—or eight benefit checks—to be withheld from his benefits for that year and he would be paid benefits for only 4 months. However, for 6 months of the year, Mr. Stone's wages were only $95 a month. He can, therefore, be paid his benefits for those months and will receive six checks for the year instead of four.

An estimate of yearly earnings that you make will be used as a guide in determining how much you are not due in benefits for 1961 or a later year. This amount will be held back in units of full monthly benefit payments beginning with the payment for the month of January. Therefore, you can tell about when your benefit payments might start in any year after 1960 by dividing the amount to be withheld from your benefits during the year (based on your estimate) by the amount of your monthly benefit rate (or your total family benefit rate).

If, for example, you estimated that you would earn $1,400 in a year, $100 of your benefits would be held back for that year. If your monthly benefit rate (or your total family benefit rate) is also $100, your check for the month of January would be held back to make up for the amount of benefits not due you. You would be paid your benefits for all of the other months of the year.

If, on the other hand, your monthly benefit rate was $50, your checks for the months of January and February would be held back. Your benefit payments would start with the payment for the month of March.

Whenever the amount to be withheld leaves a part of a month's benefit payable, the partial benefit is paid after the close of the year.

When Services in Self-Employment Are Substantial*

When a person works as an employee of someone else, the amount of work he does in a month can be measured by the amount of wages he is paid for that work. The monthly earnings of a self-employed person, on the other hand, are not a reliable gage of the amount of work he has done in any particular month.

To make a fair decision as to whether a self-employed person's services in a month are substantial, several factors must be considered:

1. The amount of time he spends on business;
2. The kind of work he does;
3. How the work compares with what he did in the past.

If he spends more than 45 hours in a month on his business, generally his services would be considered substantial. If he spends 45 hours or less in a month, his services would usually *not* be considered substantial. However, as little as 20 hours of work in a month could be substantial services if they involved the management of a sizable business or were spent in a highly skilled occupation.

Time spent on the business includes time spent planning and managing, as well as doing physical work. It also includes time spent away from the place of business when the activity is related to the business.

*The question of whether services are substantial must be decided only where a beneficiary's earnings are over $1,200 for a year.

It will help you in making your reports to the Social Security Administration if you keep a simple, month-by-month record of the time you spend in connection with your business.

When a decision based on time alone would be unreasonable, consideration is given to the kind of work done. The more valuable and highly skilled the work is, the more likely it is to be substantial.

If facts about the time the self-employed person spends and the kind of work he does are not enough for a decision, the work is compared to what he did in the past. A sizable reduction in the amount or importance of his work would be an indication that his services are not substantial.

If it is still not clear, after all these points have been considered, whether he is or is not performing substantial services, all other circumstances are considered.

What Do I Count in Figuring My Total Annual Earnings?

Wages.—If you are working for wages or a salary, you will count the gross wages or salary (not the take-home pay) you *earned* for your work during the year. If wages for any of that work were paid to you after the close of the year, be sure to count in such amounts. But do not count any wages *paid* to you during the year for work you did in an earlier year.

Count any wages in a form other than cash, such as meals and living quarters. *Exception:* If you work as a domestic in a private household or work on a farm, count only your cash wages.

Count bonuses, commissions, fees, and vacation and holiday payments.

Count earnings from all types of work, whether or not they are covered by social security.

Earnings From Self-Employment.—If you work for yourself, count your net profit, after expenses, from all trades or businesses of which you are either the sole owner or partner, and from the practice of any profession, whether covered by social security or not.

Do not count as part of your annual earnings any investment income in the form of dividends from stocks you own or interest. Do not count annuities or pensions. Do not count your rentals from real estate which you own unless

- You are a real estate dealer, or
- You rent out a farm you own and under your rental arrangement you participate materially in the production or management of production of farm commodities on your land.

What Is My Taxable Year?

If your taxable year runs from January 1 to December 31, as is true for most of us, count your earnings for that period in order to figure out how much benefits will be payable. If your taxable year is a fiscal year, ending on a day other than December 31, use your fiscal year as your base year. In either case, your earnings for the whole 12-month period must be counted.

Must I Count My Earnings for Months Before I Filed a Claim for Benefits?

You must count your earnings for the whole taxable year in order to decide how much in benefits will be due you in that year. This is true even in the year in which you first file your claim. So any earnings you made in months both before and after your claim was filed

must be counted to determine your total earnings for the taxable year.

Example.—Joseph Dean earns $440 in wages from January through April, and he reaches 65 and qualifies for benefits of $75 a month in May 1961. He continues to work and earns another $1,060 after he files his claim. He must count not only that $1,060, but also the $440 he earned before May. So his total earnings in the year will add up to $1,500. It is this amount which will be used to determine how much in benefits is payable to him for that year. This means that $150 in benefits will not be due him for the 8-month period, May through December. Mr. Dean's checks for May and June will be withheld to make up this amount. But he will receive benefit checks starting with the month of July.

How Are My Earnings Figured for the Year in Which I Reach Age 72?

You will get a benefit check for the month in which you reach age 72 and for all the months and years thereafter, no matter how much you earn, But in figuring the amount of benefits payable to you for the months before your 72d birthday, you must count all your wages and net earnings from self-employment during the entire year in which your 72d birthday falls.

Example.—Edward Jones, whose benefit rate is $70 a month, makes $105 a month and earns $840 in the first 8 months of 1961. His 72d birthday is in September. In the last 4 months of the year, he makes $240 a month and so earns $960 more. His total earnings for the year are $1,800. Therefore, $350 in benefits is to be withheld for the year. His checks for January through May will be held back to make up this amount.

How To Figure Earnings for a Year in Which Benefits End

Benefits payable to a child beneficiary end when he reaches 18 (unless he becomes totally disabled before he is 18, and remains so), marries, or is adopted by a person other than his stepparent, grandparent, aunt, or uncle.

Benefits to a widow, widower, disabled child 18 or over, parent, or divorced wife end when he or she marries, unless the new husband or wife is also receiving old-age, survivors, or disability insurance benefits. A wife's benefits end if she is divorced.

To figure the amount of benefits due a beneficiary for a year in which benefits ended (for example, because he or she reached 18, or married), earnings for the entire taxable year must be counted. This is true no matter in what month the event terminating benefits occurred.

Example.—Johnnie Greene, who is getting child's benefits of $90 a month, works after school and earns $105 per month, and earns $840 in the first 8 months of 1961. He reaches 18 in the month of September. He then takes a full-time job, and his earnings for the rest of the year amount to $1,060. To find how much benefits are not due Johnnie in that year, his total earnings of $1,900 are counted. According to the chart on page 3, $450, or five checks, will be withheld for the part of the year before his 18th birthday in September.

How To Figure Earnings for the Year of a Beneficiary's Death

The month in which a beneficiary dies becomes the last month of his taxable year. So, if he dies before December, he has a short taxable year, and the limit on his earnings is not $1,200 but is $100 times the number of months in his taxable year.

Example.—John Granger whose benefit rate is $100 a month dies in May 1961, having earned $1,100. His taxable year ended at his death in May. Since his taxable year was 5 months rather than 12 months long, the earnings limitation in his case was $500 (5 months times $100), rather than $1,200. John earned $600 more than the earnings limitation. The amount of benefits to be withheld is $350, that is, $1 for each $2 earned above the $500 limitation until it was exceeded by $500, and $1 for each $1 thereafter. If he has already been paid all his benefits for the first 4 months of the year, $350 will have to be withheld from amounts due his survivors or will have to be recovered from his estate.

When and How Do I Report My Earnings?

Before the End of the Year.—If, at any time during the year, you are working for wages of more than $100 a month (or are rendering substantial services in self-employment) and expect your total earnings for the year to amount to more than $1,200, report this to the Social Security Administration giving an estimate of how much you expect to earn during the year. Your social security office will give you some special post cards for this purpose, but you can make your report in a letter, if you prefer.

When you report, your benefits will be stopped for the number of months necessary based on your estimate. You should try to make as accurate an estimate of yearly earnings as you can. If your estimate turns out to be too low, you will have to pay back some benefits at the end of the year. If your estimate turns out to be too high, more benefits will be withheld from you during the year than need be. (You will, of course, get a check for the unpaid amount when we get a final report from you telling us how much you actually did earn during the year.)

If, later in the year, you are neither working for wages of more than $100 a month nor rendering substantial services in self-employment—or if there is a substantial change in your expected earnings for the year—you should notify your social security office, using the form given you for that purpose. Your benefit payments will then be started up or stopped as necessary.

After the End of the Year.—You are required to file an annual report with the Social Security Administration if your earnings amounted to more than $1,200 for a year. This report must be filed on or before April 15 of the following year. Failure to do so may result in a loss of additional benefits.

The report must be filed in addition to any income tax return you send to the District Director of Internal Revenue.

You need *not* file an annual report on your earnings if:

- You reached 72 years of age before the beginning of the year; *or*

- You did not receive any benefit checks for any month of the year because of your work.

If, during a year, you reported that you were working and expected to earn more than $1,200, you will probably receive an annual report form in the mail at the end of the year. But if you do not, be sure to get one from your social security office.

This report of what you earn will be used to figure out how much in benefits was payable to you in the year past. It also gives you a chance to show the months in which you did not work for wages of over $100 and did not render substantial services in self-employment.

If, on the basis of the information you give, the Social Security Administration finds that too much of your benefits were held back during the year, a check for the total amount of benefits due will be sent to you. If, on the other hand, you have been paid too much in benefits, the amount that you have been overpaid will be withheld from future benefits payable or must be refunded.

Although the law does not require a beneficiary to make an annual report if no benefit checks have been paid to him during the year, you should make such a report if you believe that any benefits are due you. You must make a report within 3 years, 3 months, and 15 days after the end of a year in which all of your benefits were withheld, in order to get any payments due you for that year.

Example.—Mr. Henry Rogers and his wife are receiving a benefit of $150 a month. Rogers goes to work as an

employee at the beginning of March. He notifies the Social Security Administration that he is earning wages of more than $100 a month and expects to earn $2,100 during the full year. Therefore, $650 must be withheld from his benefits. Thus, five full monthly checks are held back for March through July, making a total of $750 held back, and his checks started again beginning with August. After the end of the year Mr. Rogers files an annual report. If his estimate turns out to be correct, he would be due a partial benefit of $100. However, if Mr. Rogers' correct earnings for the year turned out to be $2,600 instead of $2,100, $1,150 should have been withheld for the year. Since only $750 was withheld, Mr. Rogers and his wife would be overpaid $400. The overpayment of $400 would be held back from future benefits payable, or would have to be refunded.

Will Further Earnings Increase the Amount of My Retirement Benefit Payments?

If you work after you have applied for old-age insurance benefits, you can ask to have your benefit amount refigured to take account of your additional earnings.

Your benefit amount can be refigured if you earn more than $1,200 in a year after the year in which you made your application for benefits, and if your additional earnings are high enough to increase your benefit amount.

Your benefit amount can be refigured after the end of the year in which you earned more than $1,200.

Suppose I Am Receiving Benefits for Someone Else?

If you are receiving the monthly old-age or survivors insurance benefits for someone else—for a child beneficiary,

or for an adult who is not able to handle his own funds—you are responsible for knowing the conditions under which those benefits can be paid and for making all the necessary reports.

Example.—If you are receiving the benefit checks for a child under 18 and the child goes to work, you should report to the Social Security Administration if it appears that his earnings for the year will amount to more than $1,200. You must also make the annual report on his earnings and report any events which mean that his benefits should be stopped altogether; for example, because of his adoption, his marriage, or his death.

If the child will reach age 18 during the year, his earnings after his 18th birthday may reduce the amount of benefits that he is entitled to receive for the months before his birthday. (See Example on page 9.)

Under certain conditions, a family may continue to receive full benefits or only slightly reduced benefits, even though one of the beneficiaries in the family group is employed or self-employed. This is true only when there are a number of beneficiaries in the family group and the total benefits payable to the family have reached the limit which can be paid under the law. You will be told if this provision applies in your case when you report that a beneficiary is working.

Suppose More Than One in the Family Is Receiving Benefits?

If a retired worker and his dependents are receiving payments, the amount that is not due because of his earnings

will be withheld from the total family benefits. But if a person receiving benefits as a dependent or survivor works, only his own benefit check is affected.

Example 1.—Mr. Burns is 66. He, his wife, and their child are entitled to family benefits of $150 a month based on his earnings. Mr. Burns works throughout an entire year and earns $125 a month, or $1,500 for the year. $150, an amount equal to the family benefit for 1 month, must be withheld.

Example 2.—Mrs. Baker is a widow. She and her two children are entitled to monthly survivors insurance benefits of $231.90, based on the earnings of her husband who died in 1959. Mrs. Baker's widow's benefit amounts to $77.30 of the family check. Mrs. Baker works throughout an entire year, earning $150 a month. Her total earnings will be $1,800. The children do not work. On the basis of the $1,800 she earns, Mrs. Baker will not be entitled to receive $350 of the benefits she would otherwise get for the year. The amount will be withheld from her benefit checks for 5 months. She will continue to receive benefit checks for her children throughout the year.

Example 3.—Clara Johnson, age 63, is receiving benefits as the wife of a disabled worker. Mrs. Johnson works throughout the entire year at $160 a month. Her total earnings are $1,920. Therefore, $470 of her benefits will be withheld for the year. Her husband will receive checks for all 12 months.

Suppose I Go Outside the United States?

If you work outside the United States after you become entitled to benefits,

and if that work is not covered by our social security system, other rules may apply to you. Your benefits will not be payable to you for any month in which you do such work on seven or more calendar days (while you are under 72).

Also, if you are not a citizen or national of the United States, there are situations in which your payments may be stopped if you remain outside the United States for more than 6 consecutive months, whether or not you work.

You should notify the Social Security Administration promptly if you go abroad to live or work.

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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

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SOCIAL SECURITY and Your Household EMPLOYEE

How you can tell whether you must pay social security taxes on wages you pay to people employed in your private household.

District Director of Internal Revenue _____
(*Date*)

I have one or more household workers in my employ who come under social security. The first date I paid or expect to pay taxable wages to a household employee is _____

_____ 196___.

I prefer to file my reports:

☐ On the simplified Form 942 for employers of household employees.

☐ On the regular Form 941 which I (or my husband or wife) am already filing for business employees.

Please send me information.

PLEASE PRINT NAME AND ADDRESS

Employer's name _____

Address _____

_____

OASI–21

If wife signs as employer, please use husband's given name, for example, "Mrs. John Henry Doe," not "Mrs. Mary Jane Doe."

U.S. DEPARTMENT OF
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SOCIAL SECURITY and Your Household EMPLOYEE

How you can tell whether you must pay social security taxes on wages you pay to people employed in your private household.

THE FEDERAL SOCIAL SECURITY law covers most household employees. A man or woman who qualifies under the law gets:

Monthly payments for himself and his dependents when he reaches retirement age.

Monthly payments for himself and his dependents if, because of disability, he is no longer able to work.

Monthly payments for his family if he dies.

All household employees are covered by social security if they receive from an employer cash wages of $50 or more in a calendar quarter for household work performed in or about the employer's private home.

Taxes to pay for these insurance benefits are shared equally by the worker and his employer. This folder tells which household workers are covered by the law and how to report their wages.

Household workers in roominghouses, boardinghouses, hotels, etc., are covered regardless of the amount of their earnings. Household workers on farms operated for profit are also covered but under different conditions. For further information, go to your social security office or to your District Director of Internal Revenue.

These Are Calendar Quarters

Jan.	Feb.	Mar.
Apr.	May	June
July	Aug.	Sept.
Oct.	Nov.	Dec.

Who Are Household Workers?

Maids, cooks, gardeners, valets, chauffeurs, etc., performing household work in or about a private home—*also* babysitters—whether adult or teenage—who come to a private home regularly to care for children.

Not All Household Workers Are Covered by the Law

If the total amount of cash you pay an employee for household work in a calendar quarter is less than $50, it does not count toward benefits and no social security tax is paid on it.

Work performed as an employee by a parent for his son or daughter, by a child under 21 for his parent, by a husband for his wife, or by a wife for her husband is not covered by the law.

If You Pay a Household Worker $50 or More in Cash Wages in a Calendar Quarter:

Social security taxes must be paid on these wages.

You are expected to deduct 3 percent from the worker's cash wages. This is his contribution toward the social security tax. Your contribution is an equal amount. Before the end of the month after the calendar quarter you must send the tax, using either Form 942 or Form 941, with a report of wages paid, to the District Director of Internal Revenue.

This Is What You Should Do:

Fill out and mail the post card below. You will then receive information about how to make the reports.

Ask your employee to show you his or her social security card, and copy the name and number from it. You will need them for your reports.

If your employee does not have a social security account number, tell him or her to get one from the nearest social security district office. If the number is not obtained in time to enter it on your tax return, write "unknown" in the space provided for the number and enclose a slip giving the employee's name and address.

Just as any other employer, you are required to give your employee a yearly statement of the total wages paid during the year and the total amount of social security tax deducted from those wages.

If More Than One Person Works in Your Home:

Consider each separately. Each person employed in your home who is paid $50 or more in cash wages in a calendar quarter is covered by the law.

Are Room, Board, and Car Tokens Counted?

No, only cash payments count. But all cash paid counts, even if part of it is paid to cover the cost of board, room, or car tokens.

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Social Security Administration

U.S. TREASURY DEPARTMENT, Internal Revenue Service

OASI–21 March 1961

GPO : 1961—O–586294

PLACE
STAMP
HERE

DISTRICT DIRECTOR OF INTERNAL REVENUE

City

19

Roots

STOP!

AND THINK

Are you putting off something important?

Do you need to make a will?

To whom should you go for help if you are ...

"PLANNING A WILL"

PLANNING A WILL

Gladys Myers, Specialist in Home Management, Extension Service
Kansas State College, Manhattan, Kansas

FOREWORD

Senator James Couzens died in 1936 leaving an estate of 34 million and no will. He had consulted attorneys, found the state would divide his fortune exactly as he wished and intentionally died without a will. But so few property owners ever take the time or trouble even to find out whether or not a will is a better way to help them distribute property after their death.

This brief circular attempts to call attention to the subject of the disposal of property at death of the owner. It should in no way be considered an authority, for laws which now appear on the statute books may be changed by future legislation. It points to the attorney as the source of legal information; consult him. It points out that if a person wishes to have his property at his death go otherwise than as the Kansas statutes would divide it, he needs to have a will drawn.

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PLANNING A WILL

A will is an important document because it disposes of your property after your death. But a will is a human instrument as well as a legal instrument. It should give happiness rather than unhappiness.

It is not the purpose of this circular to tell you what you should do with your property, but to help you do what you want done.

Get an attorney to help you make your will.

At the very outset one thing should be stressed. **You should go to an attorney to get help when you want your will drawn.** The best protection against legal contests that you can give your will is to have it drawn by a competent attorney whom you trust. Legal words have court meanings that are known to attorneys. When you are ill, you seek the help of the best doctor you can find. You don't try to treat yourself or go to a veterinarian for treatment. So, too, when you need help in making a will, you are wise to go see the person trained in law, the attorney. It is true that bankers, real estate persons, lay people have drawn valid wills. However, the better rule is to let the attorney draw your will.

Is a will needed?

Property must go somewhere. It must at all times have a living owner. It is for this reason that Kansas has laws that decide who is to receive your property if you die without a will (intestate). If you want your property to go other than as the law would decide, it is up to you to make a will telling how you want your property to go. A person who dies, leaving a will, dies testate.

Why make a will?

By means of a will, your personal wishes and not those of the laws of the state of Kansas, will govern the distribution of your estate. You may deal with every member of your family as an individual and will property to them upon a basis other than that of relationship to you.

You may want your youngest son, John, to have the home place because he stayed at home with you helping you to manage your farm in your old age. Under the Kansas laws, John would share along with the rest of the children taking his undivided part. With a will you can leave the home place to him as his part, if that is what you want to do.

Or take a family situation in which the children are all minors (under legal age). The real estate is all in the hus-

band's name. In case of death of the husband, the young mother will have to bother with guardianship proceedings and will have probate court supervision until the youngest child is of legal age. With a will, you can will all of your property to your wife, trusting her to take care of the minor children.

Or let's take this situation. There are times in the family life cycle when an older child has been given a college education or set up in business. There may be younger children that are not yet old enough to need that kind of financial help. By means of a will you can make it possible for those younger children to have an educational or business opportunity equal to that of the older ones in case of your death.

You can name your executor.

A will also permits you to name the executor of your estate. You may also direct that the executor serve without bond. This could mean considerable saving to the estate if the estate is a large one.

You can give gifts.

Gifts to friends or to educational, religious, and charitable enterprises can be made with a will. Such gifts are not provided for in the Kansas laws of descent and distribution.

Cooperate with your attorney.

An attorney expects intelligent cooperation from you, his client. You need to give to him a complete statement of your financial situation and of your net worth as well as tell him the persons to whom you want your property to go. Decide what you want done, then see your attorney. Trust him to see that it is done. However, it is wise to remember that the more simple you can make your will the better.

Who may make a will?

Any person of sound mind and possessing the rights of majority can make a will under the Kansas statutes. Most will contests are based upon one or two grounds—lack of testamentary capacity to make a will and undue influence.

The general rule is that if the testator (the maker) knows the extent of his property, knows his relationship to those who would, should, or might be the objects of his bounty and understands the function of a will, he is said to have the requisite mental capacity. The court decides whether or not a person has had testamentary capacity.

Undue influence is the substitution of the will of another for that of the maker, for some one else decides how the property is to go. Mere suspicion of undue influence is not sufficient. Undue influence has to be proved.

A child has no vested interest in your property.

You can disinherit any or all of your children. You do not have to leave any child whom you want to disinherit a small sum of money such as a dollar. Some attorneys follow the practice of naming the children just to show to each child that he was not forgotten by his parent. However, if it can be proved that the maker had testamentary capacity the children need not be named or left any money in the will.

Rights of spouse

The words "husband" "wife" do not appear in the Kansas laws of descent and distribution. The law uses the word "spouse" when referring to either a husband or wife. The law of Kansas places the legal limitation upon any married person's right to make a will when it says "Either spouse may will away from the other, half of his property, subject to the rights of homestead and allowance secured by statute. Neither spouse shall will away from the other more than half of his property, subject to such rights and allowances, unless the other shall consent thereto in writing executed in the presence of two or more competent witnesses or shall elect to take under the testator's will as provided by law".

Keeping your will up to date.

A will is not something to make and then forget about. Your property situation may change. For example, you may sell the property you now own and buy other pieces of property. Then, too, your family situation may change. Children are born. Children get married and leave home. It is because of this constant shift in both the property and the family situation that you should get your will out as your situation changes and have it **checked with your attorney.** Its provisions may be such that you will want to revise your will accordingly. You want to keep your will up to date. Just remember, though, let your attorney make any changes. Let him do all of the tinkering and you'll be neither the cause nor the victim of a broken will.

Residuary clause

The final gift in the will that your attorney will help you make usually starts like this "All the rest, residue and remainder I give to————" This is called the residuary clause. It takes care of anything that might be left after all debts, taxes, administration expenses, and other testamentary gifts are made. It, too, can help to take care of your changing property and family situation.

Cost of making a will. The cost of making a will varies. It will not cost as much to draw a simple will as a complicated one. In some counties where there is a bar association, the county bar association has set a minimum fee.

How a will may be revoked. A will does not take effect until the death of the maker. You may destroy your will by burning or tearing it up, or by cancelling or obliterating it with intent to destroy. You may make a later will. If you only want minor changes, a codicil (a baby will) can be added at the end of the will which changes sections of it. A word of caution, though. **Let your attorney help you make any changes.**

Marriage and a birth of a child subsequent to the marriage revokes a will by operation of the law of Kansas.

Probation of a will. Before a will has any legal effect, it must be probated; that is, officially proved in the probate court. Any will to be valid must be probated within a year after death. The Kansas law also says that any person who has possession of a will of someone else and does not offer it for probate within one year is barred from all rights under the will and is liable for damages sustained by other beneficiaries who do not know of it.

Where to keep your will. After making a will you should store it in a safe place where it can be found after you are gone. The Kansas law makes it possible for you to store your will with your county probate court. The court will enclose your will in a sealed envelope, endorse it with the name and address of the testator (maker of the will), and will give you a certificate of deposit. You can go get it any time you want. Or if you are unable to go and get it yourself a written order signed by you with two subscribing witnesses will get it for you.

DEFINITION OF LEGAL TERMS FREQUENTLY USED

Adult—A person old enough to acquire legal majority, usually 21 years of age.

Administrator—One appointed by the probate court to settle an estate when no will is made.

Alien—A person who is not a citizen of the country in which he is living.

Appraised—Value determined by study rather than by public sale.

Attestation—The act of signing of the name at the end of a will or other legal paper usually before witnesses to prove that it is valid.

Beneficiary—One who benefits; one who receives property.

Bequeath—To give **personal** property by will; **real** property is **devised** by will.

Bequest—A gift of **personal** property by will.

Decedent—A dead person.

Descent—The transfer of title to property upon the death of an ancestor.

Devise—A gift of real property by will. A gift of personal property by will is bequest.

Distribution—The act of dividing the property among the heirs.

Escheat—The reversion of the property to the state.

Estate—The legal interest one has in any property.

Executor—A person named in a will to carry out its provisions as interpreted by the probate court.

Heir—A person entitled to inherit the lands or real property of another.

Holographic will—A will written by the hand of the testator.

Homestead—The land and buildings occupied by the owner as a home for himself and family and protected by law from the claims of creditors.

Intestate—Not having made a will; opposite of testate.

Issue—Children, offspring.

Legacy—A gift of personal property made by will or testament.

Letters of Administration—Authority granted by the probate court to a person called the administrator to settle the estate of one dying intestate or without a will.

Letters Testamentary—Authority granted by the probate court to a person named in the will.

Lien—A legal claim on the property of another.

Lineal descent—Direct descent—Grandparents, parents, children, grandchildren.

Majority—Age at which a person is legally capable of managing his own affairs.

Minority—Age at which a person is legally incapable of managing his own affairs.

Next of kin—The person entitled by law to inherit the personal property of one dying without having made a will.

Noncupative will—An oral will.

Partition—Division of real estate.

Probate court—A court to determine the heirs and direct the settlement of estates as well as other matters.

Remainder estate—The rights or interests left after a life estate has been created out of a fee simple estate.

Revision—The rights or interests that remain in a grantor after he has created a life estate or subordinate interests out of a fee simple estate.

Seized—To have real property as an owner.

Spouse—Husband or wife.

Statute—Law passed by a legislature.

Succession—The act of becoming beneficially entitled to the estate of a deceased person.

Testament—A written statement or **will** concerning the disposition of one's property at death.

Testate—Having made a testament or will.

Testator—One who has made a testament or will.

Title—The right to property; the legal evidence of ownership.

Vested—Property rights held by title.

Will—A written statement or **testament** concerning the disposition of one's property.

Witness—One who sees the signing of an instrument such as a will, deed or contract and who signs his name as testimony that he saw it.

KANSAS PROBATE CODE (in part)

Taken from 1947 Supplement to General Statutes of Kansas 1935.

ARTICLE 4—HOMESTEAD AND FAMILY ALLOWANCES

59-401—**Homestead.** "A homestead to the extent of one hundred and sixty acres of land lying without, or of one acre lying within, the limits of an incorporated city, occupied by the decedent and family at time of the owner's death, as a resident, and continued to be so occupied by the surviving spouse and children, after such death, together with all the improvements on the same, shall be wholly exempt from distribution under any of the laws of this state, and from the payment of the debts of the decedent, but it shall not be exempt from sale for taxes thereon, or for the payment of obligations contracted for the purchase thereof, or for the erection of improvements thereon, or for the payment of any lien given thereon by the joint consent of husband and wife. The title to the homestead property of a decedent shall pass the same as the title to other property of the decedent."

59-402—**Partition of homestead.** "The homestead shall not be subject to forced partition unless the surviving spouse remarries, nor until all the children arrive at the age of majority."

59-403—**Allowances to spouse and minor children.** "When a resident of the state dies, testate or intestate, the surviving spouse shall be allowed, for the benefit of such spouse and the decedent's minor children during the period of their minority, from the personal property of which the decedent was possessed or to which he was entitled at the time of death the following:

(1) The wearing apparel, family library, pictures, musical instruments, furniture and household goods, utensils and implements used in the home, one automobile, and provisions and fuel on hand necessary for the support of the spouse and minor children for one year.

(2) The sum of seven hundred fifty dollars or other personal property at its appraised value in full or part payment thereof. The property shall not be liable for the payment of any of decedent's debts or other demands against his estate, except liens thereon existing at the time of his death. If there are no minor children the property shall belong to the spouse; if there are minor children and no spouse, it shall belong to the minor children. The selection shall be made by the spouse, if living, otherwise by the guardian of the minor children. In case any of the decedent's minor children are not living with the surviving spouse, the court may make such division as it deems equitable."

59-404—**Effect of election by spouse.** "The surviving spouse, by electing to take under the will of the decedent or by consenting thereto, does not waive the homestead right nor the right to such allowance, unless it clearly appears from the will that the provision therein made for such spouse was intended to be in lieu of such rights."

ARTICLE 5—INTESTATE SUCCESSION

59-501—"As used in this article the word 'children' means natural children, including a posthumous child, the children adopted as provided by law, and includes illegitimate children when applied to mother and child, and also when applied to father and child where the father has notoriously or in writing recognized his paternity of the child, or his paternity thereof has been determined in his lifetime in any action or proceeding involving that question in a court of competent jurisdiction. The word 'issue' includes adopted children of deceased children or issue."

59-502—**Descent of property of intestate resident.** "Subject to any homestead rights, the allowances provided in section 21, (59-503) and the payment of reasonable funeral expenses, expenses of last sickness and costs of administration, taxes and debts, the property of a resident decedent, who dies intestate, shall at the time of his death pass by intestate succession as provided in this article."

59-503—**Descent of property of intestate nonresident.** "Real estate situated in this state, owned by an intestate decedent who is a nonresident of this state at the time of his death, shall pass by intestate succession in the same manner as though he were a resident of this state at time of his death. The personal property of such a decedent shall pass by intestate succession under the laws of the place of his residence at the time of his death."

59-504—**Surviving spouse.** "If the decedent leaves a spouse and no children or issue of a previously deceased child, all property shall go to the surviving spouse."

"If the decedent leaves a spouse and a child or children, or issue of a previously deceased child or children, one half of such property shall pass to surviving spouse."

59-505—**Half of realty to surviving spouse.** "Also the surviving spouse shall be entitled to receive one-half of all real estate of which the decedent at any time during the marriage was seized or possessed and to the disposition whereof the survivor shall not have consented in writing, or by a will, or by an election as provided by law to take under a will, except such real estate as has been sold on execution or judicial sale, or taken by other legal proceeding: Provided, that the surviving spouse shall not be entitled to any interest under the provisions of this section in any real estate of which such decedent in his lifetime made a conveyance when such spouse at the time of the conveyance was not a resident of this state and never had been during the existence of the marriage relation."

59-506—**Surviving children or issue.** "If the decedent leaves a child or children or issue of a previously deceased child or children, and no spouse, all his property shall pass to the surviving child or in equal shares to the surviving children and the living issue, if any, of a previously deceased child but such issue shall collectively take only the share their parent would have taken had such parent been living. If the decedent leaves such child, children, or issue and a spouse, one-half of such property shall pass to such child, children, and issue as aforesaid."

59-507—**No spouse, child or issue, of the decedent.** "If the decedent leaves no surviving spouse, child or issue, but leaves a surviving parent or surviving parents, all of his property shall pass to such surviving parent or in equal shares to such surviving parents, but if the decedent is an adopted child, such property shall pass to his adoptive parent or parents in like manner including a natural parent who is the spouse of an adoptive parent."

59-508—**No spouse, child, issue or parents.** "If the decedent leaves no surviving spouse, child, issue or parents, the respective shares of his property which would have passed to the parents, had both of them been living, shall pass to the heirs of such parents respectively (excluding their respective spouses), the same as it would have passed had such parents owned it in equal shares and died intestate at the time of his death."

59-509—**Limitation on descent.** "In computing degrees of relationship by blood for the purpose of the passing of property of an intestate decedent, each generation in the ascending or descending line shall be counted as one degree. None of such property shall pass except by lineal descent to a person further removed from the decedent than the sixth degree, as so computed."

59-514—**Escheat.** "If an intestate decedent leaves no person entitled to take his property by intestate succession, as provided in this article, it shall escheat to and become the property of the state.

ARTICLE 6—WILLS

59-601—**Who May Make a Will?** Any person of sound mind and possessing the rights of majority, may dispose of any or all of his property by will, subject to the provisions of this act.

59-602—**Limitation on testamentary power.** (1) Any devise or real estate located in this state, and any bequest of any personal property by a resident of this state, without regard to the time when the will containing such devise or bequest shall have been made, to any foreign country, subdivision thereof, or city, body politic, or corporation, located therein or existing under the laws thereof, or in trust or otherwise to any trustee or agent thereof, except devises and bequests to institutions created and existing exclusively for religious, educational, or charitable purposes, is hereby prohibited. Any such devise or bequest shall be void. (2) Either spouse may will away from the other half of his property, subject to the rights of homestead and allowances secured by statute. Neither spouse shall will away from the other more than half of his property, subject to such rights and allowances, unless the other shall consent thereto in writing executed in the presence of two or more competent witnesses, or shall elect to take under the testator's will as provided by law.

59-603—**Election of spouse.** The surviving spouse, who shall not have consented in the lifetime of the testator to the testator's will as provided by law, may make an election whether he will take under the will or take what he is entitled to by the laws of intestate succession; but he shall not be entitled to both. If the survivor fails to consent or to make an election he shall take by the laws of intestate succession.

59-604—**Devise or bequest to witness.** A beneficial devise or bequest made in a will to a subscribing witness thereto shall be void, unless there are two other competent subscribing witnesses who are not beneficiaries thereunder. But if such witness would have been entitled to any share of the testator's estate in the absence of a will, then so much of such share as will not exceed the value of the devise or bequest shall pass to him from the part of the estate included in the void devise or bequest. Such share shall be considered as a legacy or devise within the meaning of section 103. (59-1405)

49-605—**Preparation of will by principal beneficiary.** If it shall appear that any will was written or prepared by the sole or principal beneficiary in such will, who, at the time of writing or preparing the same, was the confidential agent or legal adviser of the testator, or who occupied at the time any other position of confidence or trust to such testator, such will shall not be held to be valid unless it shall affirmatively appear that the testator had read or knew the contents of such will, and had independent advice with reference thereto.

59-606—**Execution and attestation.** Every will, except an oral will as provided in section 44, shall be in writing, and signed at the end thereof by the party making the same, or by some other person in his presence and by his express direction, and shall be attested and subscribed in the presence of such party by two or more competent witnesses, who saw the testator subscribe or heard him acknowledge the same.

59-607—**Competency of witness.** If a witness to a will is competent at the time of his attestation, his subsequent incompetency shall not prevent the admission of such will to probate.

59-608—**Noncupative will.** An oral will made in the last sickness shall be valid in respect to personal property, if reduced to writing and subscribed by two competent, disinterested witnesses within thirty days after the speaking of the testamentary words, when the testator called upon some person present at the time the testamentary words were spoken to bear testimony to said disposition as his will.

59-609—**Will executed without state.** A will executed without this state in the manner prescribed by this act, or by the law of the place of its execution, or by the law of the testator's residence either at the time of its execution or of the testator's death, shall be deemed to be legally executed, and shall have the same force and effect as if executed in compliance with the provisions of this act: **Provided,** Said will is in writing and subscribed by the testator.

59-610—**Revocation by marriage and birth; divorce.** If after making a will the testator marries and has a child, by birth or adoption, the will is thereby revoked. If after making a will the testator is divorced, all provisions in such will in favor of the testator's spouse so divorced are thereby revoked.

59-611—**Manner of revocation.** Except as provided in section 46, no will in writing shall be revoked or altered otherwise than by some other will in writing; or by some other writing of the testator declaring such revocation or alteration and executed with the same formalities with which the will itself was required by law to be executed; or unless such will be burnt, torn, cancelled, obliterated or destroyed, with the intent and for the purpose of revoking the same, by the testator himself or by another person in his presence by his direction.

59-612—**Revocation of second will not revivor of first.** If the testator shall make a second will, the revocation of the second will shall not revive the first will, unless it appears by the terms of such revocation that it was his intention to revive the first will, or unless after such revocation he shall duly republish his first will in the presence of two or more competent witnesses who shall subscribe the same in the presence of the testator.

59-613—**After-acquired property.** All property acquired by the testator after making his will shall pass thereby in this manner as if possessed by him at the time when he made his will, unless a different intention appears from the will.

59-614—**When devise passes whole.** Every devise of real estate shall pass all the estate of the testator therein, unless it clearly appears by the will that he intended a less estate to pass.

59-615—**Issue of relative.** If a devise or bequest is made to an adopted child or any blood relative by lineal descent or within the sixth degree, and such adopted child or blood relative dies before the testator, leaving issue who survive the testator, such issue shall take the same estate which said devisee or legatee would have taken if he had survived, unless a different disposition is made or required by the will.

59-616—**Probate essential.** No will shall be effectual to pass real or personal property unless it shall have been duly admitted to probate.

59-617—**Limitation on probate of a written will.** No will of a testator who died while a resident of this state shall be effectual to pass property unless an application is made for the probate of such will within one year after the death of the testator, except as hereinafter provided.

59-618—**Liability and effect of withholding will.** Any person who has possession of the will of a testator dying a resident of this state, or has knowledge of such will and access to it for the purpose of probate, and knowingly withholds it from the probate court having jurisdiction to probate it for more than one year after the death of the testator, shall be barred from all rights under the will and shall be liable for all damages sustained by such beneficiaries who do not have such possession of the will and are without such knowledge thereof and such access thereto; and the said will may be admitted to probate as to any innocent beneficiary on the application by him for such probate, if such application is made within ninety days after he has knowledge of such will and access thereto and within five years after the death of the testator: **Provided,** the title of any purchaser in good faith, without knowledge of such will, to any property derived from the fiduciary, heirs, devisees, or legatees of the decedent, shall not be defeated by the production of the will of such decedent and the application for probate thereof after the expiration of one year from the death of the decedent.

59-619—**Limitation on probate of oral will.** No oral will shall be admitted to probate unless an application is made therefor within six months after the death of the testator.

59-620—**Deposit of wills; certificate; opening; venue.** A will enclosed in a sealed wrapper, upon which is endorsed the name and address of the testator, the day when the person by whom it is delivered,

may be deposited in the probate court of the county where the testator resides. The court shall give a certificate of its deposit and shall retain such will. During the testator's lifetime, such will shall be delivered only to him or upon his written order witnessed by at least two subscribing witnesses. After the testator's death the court shall open the will publicly and retain the same. Notice shall be given to the executor and to such other persons as the court may designate. If the property venue is in another court the will shall be transmitted to such court, but before such transmission a true copy thereof shall be made by and retained in the court in which the will was deposited.

59-621—**Duty of custodian; liability.** After the death of a testator the person having custody of his will shall deliver it to the court which has jurisdiction thereof. Every person who willfully neglects or refuses to deliver a will after being duly ordered to do so shall be guilty of contempt of court. He shall be further liable to any party aggrieved for the damages which may be sustained by such neglect or refusal.

ARTICLE 7—UNIFORM SIMULTANEOUS DEATH LAW

58-701—**Disposal of property when no sufficient evidence of survivorship.** Where title to property or the devolution thereof depends upon priority of death and there is no sufficient evidence that the persons concerned have died otherwise than simultaneously the property of such person shall be disposed of as if he had survived, except as otherwise provided in this act.

KANSAS STATE COLLEGE EXTENSION SERVICE

MANHATTAN, KANSAS

CIRCULAR 224 JUNE, 1950

Cooperative Extension Work in Agriculture and Home Economics, Kansas State College of Agriculture and Applied Science and the United States Department of Agriculture Acts of May 8 and June 30, 1914, L. C. Williams, Director. 6-50-10M

16

STOP!

AND THINK

Are you putting off something important?

Do you need to make a will?

To whom should you go for help if you are ...

"PLANNING A WILL"

PLANNING A WILL

Gladys Myers, Specialist in Home Management, Extension Service
Kansas State College, Manhattan, Kansas

FOREWORD

Senator James Couzens died in 1936 leaving an estate of 34 million and no will. He had consulted attorneys, found the state would divide his fortune exactly as he wished and intentionally died without a will. But so few property owners ever take the time or trouble even to find out whether or not a will is a better way to help them distribute property after their death.

This brief circular attempts to call attention to the subject of the disposal of property at death of the owner. It should in no way be considered an authority, for laws which now appear on the statute books may be changed by future legislation. It points to the attorney as the source of legal information; consult him. It points out that if a person wishes to have his property at his death go otherwise than as the Kansas statutes would divide it, he needs to have a will drawn.

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PLANNING A WILL

A will is an important document because it disposes of your property after your death. But a will is a human instrument as well as a legal instrument. It should give happiness rather than unhappiness.

It is not the purpose of this circular to tell you what you should do with your property, but to help you do what you want done.

Get an attorney to help you make your will.

At the very outset one thing should be stressed. **You should go to an attorney to get help when you want your will drawn.** The best protection against legal contests that you can give your will is to have it drawn by a competent attorney whom you trust. Legal words have court meanings that are known to attorneys. When you are ill, you seek the help of the best doctor you can find. You don't try to treat yourself or go to a veterinarian for treatment. So, too, when you need help in making a will, you are wise to go see the person trained in law, the attorney. It is true that bankers, real estate persons, lay people have drawn valid wills. However, the better rule is to let the attorney draw your will.

Is a will needed?

Property must go somewhere. It must at all times have a living owner. It is for this reason that Kansas has laws that decide who is to receive your property if you die without a will (intestate). If you want your property to go other than as the law would decide, it is up to you to make a will telling how you want your property to go. A person who dies, leaving a will, dies testate.

Why make a will?

By means of a will, your personal wishes and not those of the laws of the state of Kansas, will govern the distribution of your estate. You may deal with every member of your family as an individual and will property to them upon a basis other than that of relationship to you.

You may want your youngest son, John, to have the home place because he stayed at home with you helping you to manage your farm in your old age. Under the Kansas laws, John would share along with the rest of the children taking his undivided part. With a will you can leave the home place to him as his part, if that is what you want to do.

Or take a family situation in which the children are all minors (under legal age). The real estate is all in the hus-

band's name. In case of death of the husband, the young mother will have to bother with guardianship proceedings and will have probate court supervision until the youngest child is of legal age. With a will, you can will all of your property to your wife, trusting her to take care of the minor children.

Or let's take this situation. There are times in the family life cycle when an older child has been given a college education or set up in business. There may be younger children that are not yet old enough to need that kind of financial help. By means of a will you can make it possible for those younger children to have an educational or business opportunity equal to that of the older ones in case of your death.

You can name your executor.

A will also permits you to name the executor of your estate. You may also direct that the executor serve without bond. This could mean considerable saving to the estate if the estate is a large one.

You can give gifts.

Gifts to friends or to educational, religious, and charitable enterprises can be made with a will. Such gifts are not provided for in the Kansas laws of descent and distribution.

Cooperate with your attorney.

An attorney expects intelligent cooperation from you, his client. You need to give to him a complete statement of your financial situation and of your net worth as well as tell him the persons to whom you want your property to go. Decide what you want done, then see your attorney. Trust him to see that it is done. However, it is wise to remember that the more simple you can make your will the better.

Who may make a will?

Any person of sound mind and possessing the rights of majority can make a will under the Kansas statutes. Most will contests are based upon one or two grounds—lack of testamentary capacity to make a will and undue influence.

The general rule is that if the testator (the maker) knows the extent of his property, knows his relationship to those who would, should, or might be the objects of his bounty and understands the function of a will, he is said to have the requisite mental capacity. The court decides whether or not a person has had testamentary capacity.

Undue influence is the substitution of the will of another for that of the maker, for some one else decides how the property is to go. Mere suspicion of undue influence is not sufficient. Undue influence has to be proved.

A child has no vested interest in your property.

You can disinherit any or all of your children. You do not have to leave any child whom you want to disinherit a small sum of money such as a dollar. Some attorneys follow the practice of naming the children just to show to each child that he was not forgotten by his parent. However, if it can be proved that the maker had testamentary capacity the children need not be named or left any money in the will.

Rights of spouse

The words "husband" "wife" do not appear in the Kansas laws of descent and distribution. The law uses the word "spouse" when referring to either a husband or wife. The law of Kansas places the legal limitation upon any married person's right to make a will when it says "Either spouse may will away from the other, half of his property, subject to the rights of homestead and allowance secured by statute. Neither spouse shall will away from the other more than half of his property, subject to such rights and allowances, unless the other shall consent thereto in writing executed in the presence of two or more competent witnesses or shall elect to take under the testator's will as provided by law".

Keeping your will up to date.

A will is not something to make and then forget about. Your property situation may change. For example, you may sell the property you now own and buy other pieces of property. Then, too, your family situation may change. Children are born. Children get married and leave home. It is because of this constant shift in both the property and the family situation that you should get your will out as your situation changes and have it **checked with your attorney.** Its provisions may be such that you will want to revise your will accordingly. You want to keep your will up to date. Just remember, though, let your attorney make any changes. Let him do all of the tinkering and you'll be neither the cause nor the victim of a broken will.

Residuary clause

The final gift in the will that your attorney will help you make usually starts like this "All the rest, residue and remainder I give to————" This is called the residuary clause. It takes care of anything that might be left after all debts, taxes, administration expenses, and other testamentary gifts are made. It, too, can help to take care of your changing property and family situation.

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QUIZ - WHAT DO YOU KNOW ABOUT PROPERTY?

True 1. This statement that married women often make about property that "What
✓ False is mine is mine and what is his is half mine" is a correct statemetn.

✓ True 2. A wife has the same property rights as her husband.
False

✓ True 3. The reason why the signature of a spouse is required in a mortgage
False and on a deed is because it frees the land from the possibility of
future claim by the other spouse in case of death.

✓ True 4. A married woman who does not have her name as a part of the title to
False the property owned by the family has no property even though she may
help to earn the money that pays for the property.

✓ True 5. The practice that some old folks have of making out land deeds to their
False children and putting them in their locked box or desk for the child-
ren to get and record after the parents' death is not a good practice.

✓ True 6. A warranty deed is proof of clear title.
False

✓ True 7. A quit claim deed will give you a clear title to the property provided
False that the legal history of the property as shown by the county records
is clear.

✓ True
False 8. When you purchase real estate, you are assured of a clear title if the
seller provides you with an abstract brought up to date.

True 9. It is poor practice for a husband to own property jointly with right of
✓ False survivor with any person other than his wife because this deprives his
wife of her right to inherit that property.

✓ True 10. A husband and wife should go to an attorney in arranging for a joint
False tenancy with right of survivorship of land.

True 11. When purchasing land, all personal property on the land is included in
✓ False the sale unless otherwise stated.

True 12. Any fixtures or personal properties that are added and attached to the
✓ False land becomes a part of the real estate.

True 13. A bank account that is a joint account with the right of survivorship
✓ False clause is a good arrangement for a husband and wife to have.

True 14. Every family has a written memorandum of its investments and insurance.
✓ False

CHECK THE RIGHT ANSWER

An activity to be used in a discussion of business and legal matters.

1....a. Personal property includes everything the family owns except its real estate.

....b. Personal property includes only clothing, jewelry, the family car, and house furnishings.

2....a. Chattels are the same as personal property.

....b. Chattels refer to business equipment only - livestock, machinery, trucks, store fixtures, etc.

3....a. In a partnership each partner is liable for the debts of the business in proportion to the amount of money he has invested in it.

....b. In a partnership each partner is liable for all debts of the business.

4....a. A promissory note must call for a stated rate of interest if it is to be collectibel.

.....b. A promissory note does not need to state a rate of interest to be collectible provided it indicates that no interest is to be charged.

5....a. A chattel mortgage can be given on anything the family owns except its real estate.

....b. A chattel mortgage can be given on business equipment only, such as livestock, machinery, trucks, store fixtures, etc.

6....a. An administrator is the person names in a will to execute that will and testament.

....b. An administrator is the person the court appoints to administer the estate of a person who dies without leaving a will.

7....a. An executor is the person whom the testator names in his will to execute his will and testament.

....b. An executor is the person named by the court to administer the estate of a person who dies without leaving a will.

8....a. A warranty deed is proof that you have a clear title to your property.

....b. A warranty deed is a form of property transfer in which the seller warrants that he is giving you a clear title to the property. It is not proof of a clear title.

9....a. A quit claim deed does not give you a clear title to the property.

....b. A quit claim deed will give you a clear title to the property provided the legal history of the property as shown by the county records indicates that the title is clear.

10....a. Any two persons may hold property is joint tenancy, the property passing to the survivor without deed or will.

....b. Only a husband and wife may hold property in joint tenancy, the property passing to the survivor without deed or will.

Cost of making a will. The cost of making a will varies. It will not cost as much to draw a simple will as a complicated one. In some counties where there is a bar association, the county bar association has set a minimum fee.

How a will may be revoked. A will does not take effect until the death of the maker. You may destroy your will by burning or tearing it up, or by cancelling or obliterating it with intent to destroy. You may make a later will. If you only want minor changes, a codicil (a baby will) can be added at the end of the will which changes sections of it. A word of caution, though. **Let your attorney help you make any changes.**

Marriage and a birth of a child subsequent to the marriage revokes a will by operation of the law of Kansas.

Probation of a will. Before a will has any legal effect, it must be probated; that is, officially proved in the probate court. Any will to be valid must be probated within a year after death. The Kansas law also says that any person who has possession of a will of someone else and does not offer it for probate within one year is barred from all rights under the will and is liable for damages sustained by other beneficiaries who do not know of it.

Where to keep your will. After making a will you should store it in a safe place where it can be found after you are gone. The Kansas law makes it possible for you to store your will with your county probate court. The court will enclose your will in a sealed envelope, endorse it with the name and address of the testator (maker of the will), and will give you a certificate of deposit. You can go get it any time you want. Or if you are unable to go and get it yourself a written order signed by you with two subscribing witnesses will get it for you.

DEFINITION OF LEGAL TERMS FREQUENTLY USED

Adult—A person old enough to acquire legal majority, usually 21 years of age.

Administrator—One appointed by the probate court to settle an estate when no will is made.

Alien—A person who is not a citizen of the country in which he is living.

Appraised—Value determined by study rather than by public sale.

Attestation—The act of signing of the name at the end of a will or other legal paper usually before witnesses to prove that it is valid.

Beneficiary—One who benefits; one who receives property.

Bequeath—To give **personal** property by will; **real** property is **devised** by will.

Bequest—A gift of **personal** property by will.

Decedent—A dead person.

Descent—The transfer of title to property upon the death of an ancestor.

Devise—A gift of real property by will. A gift of personal property by will is bequest.

Distribution—The act of dividing the property among the heirs.

Escheat—The reversion of the property to the state.

Estate—The legal interest one has in any property.

Executor—A person named in a will to carry out its provisions as interpreted by the probate court.

Heir—A person entitled to inherit the lands or real property of another.

Holographic will—A will written by the hand of the testator.

Homestead—The land and buildings occupied by the owner as a home for himself and family and protected by law from the claims of creditors.

Intestate—Not having made a will; opposite of testate.

Issue—Children, offspring.

Legacy—A gift of personal property made by will or testament.

Letters of Administration—Authority granted by the probate court to a person called the administrator to settle the estate of one dying intestate or without a will.

Letters Testamentary—Authority granted by the probate court to a person named in the will.

Lien—A legal claim on the property of another.

Lineal descent—Direct descent—Grandparents, parents, children, grandchildren.

Majority—Age at which a person is legally capable of managing his own affairs.

Minority—Age at which a person is legally incapable of managing his own affairs.

Next of kin—The person entitled by law to inherit the personal property of one dying without having made a will.

Noncupative will—An oral will.

Partition—Division of real estate.

Probate court—A court to determine the heirs and direct the settlement of estates as well as other matters.

Remainder estate—The rights or interests left after a life estate has been created out of a fee simple estate.

Revision—The rights or interests that remain in a grantor after he has created a life estate or subordinate interests out of a fee simple estate.

Seized—To have real property as an owner.

Spouse—Husband or wife.

Statute—Law passed by a legislature.

Succession—The act of becoming beneficially entitled to the estate of a deceased person.

Testament—A written statement or will concerning the disposition of one's property at death.

Testate—Having made a testament or will.

Testator—One who has made a testament or will.

Title—The right to property; the legal evidence of ownership.

Vested—Property rights held by title.

Will—A written statement or testament concerning the disposition of one's property.

Witness—One who sees the signing of an instrument such as a will, deed or contract and who signs his name as testimony that he saw it.

KANSAS PROBATE CODE (in part)

Taken from 1947 Supplement to General Statutes of Kansas 1935.

ARTICLE 4—HOMESTEAD AND FAMILY ALLOWANCES

59-401—**Homestead.** "A homestead to the extent of one hundred and sixty acres of land lying without, or of one acre lying within, the limits of an incorporated city, occupied by the decedent and family at time of the owner's death, as a resident, and continued to be so occupied by the surviving spouse and children, after such death, together with all the improvements on the same, shall be wholly exempt from distribution under any of the laws of this state, and from the payment of the debts of the decedent, but it shall not be exempt from sale for taxes thereon, or for the payment of obligations contracted for the purchase thereof, or for the erection of improvements thereon, or for the payment of any lien given thereon by the joint consent of husband and wife. The title to the homestead property of a decedent shall pass the same as the title to other property of the decedent."

59-402—**Partition of homestead.** "The homestead shall not be subject to forced partition unless the surviving spouse remarries, nor until all the children arrive at the age of majority."

59-403—**Allowances to spouse and minor children.** "When a resident of the state dies, testate or intestate, the surviving spouse shall be allowed, for the benefit of such spouse and the decedent's minor children during the period of their minority, from the personal property of which the decedent was possessed or to which he was entitled at the time of death the following:

(1) The wearing apparel, family library, pictures, musical instruments, furniture and household goods, utensils and implements used in the home, one automobile, and provisions and fuel on hand necessary for the support of the spouse and minor children for one year.

(2) The sum of seven hundred fifty dollars or other personal property at its appraised value in full or part payment thereof. The property shall not be liable for the payment of any of decedent's debts or other demands against his estate, except liens thereon existing at the time of his death. If there are no minor children the property shall belong to the spouse; if there are minor children and no spouse, it shall belong to the minor children. The selection shall be made by the spouse, if living, otherwise by the guardian of the minor children. In case any of the decedent's minor children are not living with the surviving spouse, the court may make such division as it deems equitable."

59-404—**Effect of election by spouse.** "The surviving spouse, by electing to take under the will of the decedent or by consenting thereto, does not waive the homestead right nor the right to such allowance, unless it clearly appears from the will that the provision therein made for such spouse was intended to be in lieu of such rights."

ARTICLE 5—INTESTATE SUCCESSION

59-501—"As used in this article the word 'children' means natural children, including a posthumous child, the children adopted as provided by law, and includes illegitimate children when applied to mother and child, and also when applied to father and child where the father has notoriously or in writing recognized his paternity of the child, or his paternity thereof has been determined in his lifetime in any action or proceeding involving that question in a court of competent jurisdiction. The word 'issue' includes adopted children of deceased children or issue."

59-502—**Descent of property of intestate resident.** "Subject to any homestead rights, the allowances provided in section 21, (59-503) and the payment of reasonable funeral expenses, expenses of last sickness and costs of administration, taxes and debts, the property of a resident decedent, who dies intestate, shall at the time of his death pass by intestate succession as provided in this article."

59-503—**Descent of property of intestate nonresident.** "Real estate situated in this state, owned by an intestate decedent who is a nonresident of this state at the time of his death, shall pass by intestate succession in the same manner as though he were a resident of this state at time of his death. The personal property of such a decedent shall pass by intestate succession under the laws of the place of his residence at the time of his death."

59-504—**Surviving spouse.** "If the decedent leaves a spouse and no children or issue of a previously deceased child, all property shall go to the surviving spouse."

"If the decedent leaves a spouse and a child or children, or issue of a previously deceased child or children, one half of such property shall pass to surviving spouse."

59-505—**Half of realty to surviving spouse.** "Also the surviving spouse shall be entitled to receive one-half of all real estate of which the decedent at any time during the marriage was seized or possessed and to the disposition whereof the survivor shall not have consented in writing, or by a will, or by an election as provided by law to take under a will, except such real estate as has been sold on execution or judicial sale, or taken by other legal proceeding: Provided, that the surviving spouse shall not be entitled to any interest under the provisions of this section in any real estate of which such decedent in his lifetime made a conveyance when such spouse at the time of the conveyance was not a resident of this state and never had been during the existence of the marriage relation."

59-506—**Surviving children or issue.** "If the decedent leaves a child or children or issue of a previously deceased child or children, and no spouse, all his property shall pass to the surviving child or in equal shares to the surviving children and the living issue, if any, of a previously deceased child but such issue shall collectively take only the share their parent would have taken had such parent been living. If the decedent leaves such child, children, or issue and a spouse, one-half of such property shall pass to such child, children, and issue as aforesaid."

59-507—**No spouse, child or issue, of the decedent.** "If the decedent leaves no surviving spouse, child or issue, but leaves a surviving parent or surviving parents, all of his property shall pass to such surviving parent or in equal shares to such surviving parents, but if the decedent is an adopted child, such property shall pass to his adoptive parent or parents in like manner including a natural parent who is the spouse of an adoptive parent."

59-508—**No spouse, child, issue or parents.** "If the decedent leaves no surviving spouse, child, issue or parents, the respective shares of his property which would have passed to the parents, had both of them been living, shall pass to the heirs of such parents respectively (excluding their respective spouses), the same as it would have passed had such parents owned it in equal shares and died intestate at the time of his death."

59-509—**Limitation on descent.** "In computing degrees of relationship by blood for the purpose of the passing of property of an intestate decedent, each generation in the ascending or descending line shall be counted as one degree. None of such property shall pass except by lineal descent to a person further removed from the decedent than the sixth degree, as so computed."

59-514—**Escheat.** "If an intestate decedent leaves no person entitled to take his property by intestate succession, as provided in this article, it shall escheat to and become the property of the state.

ARTICLE 6—WILLS

59-601—**Who May Make a Will?** Any person of sound mind and possessing the rights of majority, may dispose of any or all of his property by will, subject to the provisions of this act.

59-602—**Limitation on testamentary power.** (1) Any devise or real estate located in this state, and any bequest of any personal property by a resident of this state, without regard to the time when the will containing such devise or bequest shall have been made, to any foreign country, subdivision thereof, or city, body politic, or corporation, located therein or existing under the laws thereof, or in trust or otherwise to any trustee or agent thereof, except devises and bequests to institutions created and existing exclusively for religious, educational, or charitable purposes, is hereby prohibited. Any such devise or bequest shall be void. (2) Either spouse may will away from the other half of his property, subject to the rights of homestead and allowances secured by statute. Neither spouse shall will away from the other more than half of his property, subject to such rights and allowances, unless the other shall consent thereto in writing executed in the presence of two or more competent witnesses, or shall elect to take under the testator's will as provided by law.

59-603—**Election of spouse.** The surviving spouse, who shall not have consented in the lifetime of the testator to the testator's will as provided by law, may make an election whether he will take under the will or take what he is entitled to by the laws of intestate succession; but he shall not be entitled to both. If the survivor fails to consent or to make an election he shall take by the laws of intestate succession.

59-604—**Devise or bequest to witness.** A beneficial devise or bequest made in a will to a subscribing witness thereto shall be void, unless there are two other competent subscribing witnesses who are not beneficiaries thereunder. But if such witness would have been entitled to any share of the testator's estate in the absence of a will, then so much of such share as will not exceed the value of the devise or bequest shall pass to him from the part of the estate included in the void devise or bequest. Such share shall be considered as a legacy or devise within the meaning of section 103. (59-1405)

49-605—**Preparation of will by principal beneficiary.** If it shall appear that any will was written or prepared by the sole or principal beneficiary in such will, who, at the time of writing or preparing the same, was the confidential agent or legal adviser of the testator, or who occupied at the time any other position of confidence or trust to such testator, such will shall not be held to be valid unless it shall affirmatively appear that the testator had read or knew the contents of such will, and had independent advice with reference thereto.

59-606—**Execution and attestation.** Every will, except an oral will as provided in section 44, shall be in writing, and signed at the end thereof by the party making the same, or by some other person in his presence and by his express direction, and shall be attested and subscribed in the presence of such party by two or more competent witnesses, who saw the testator subscribe or heard him acknowledge the same.

59-607—**Competency of witness.** If a witness to a will is competent at the time of his attestation, his subsequent incompetency shall not prevent the admission of such will to probate.

59-608—**Noncupative will.** An oral will made in the last sickness shall be valid in respect to personal property, if reduced to writing and subscribed by two competent, disinterested witnesses within thirty days after the speaking of the testamentary words, when the testator called upon some person present at the time the testamentary words were spoken to bear testimony to said disposition as his will.

59-609—**Will executed without state.** A will executed without this state in the manner prescribed by this act, or by the law of the place of its execution, or by the law of the testator's residence either at the time of its execution or of the testator's death, shall be deemed to be legally executed, and shall have the same force and effect as if executed in compliance with the provisions of this act: **Provided,** Said will is in writing and subscribed by the testator.

59-610—**Revocation by marriage and birth; divorce.** If after making a will the testator marries and has a child, by birth or adoption, the will is thereby revoked. If after making a will the testator is divorced, all provisions in such will in favor of the testator's spouse so divorced are thereby revoked.

59-611—**Manner of revocation.** Except as provided in section 46, no will in writing shall be revoked or altered otherwise than by some other will in writing; or by some other writing of the testator declaring such revocation or alteration and executed with the same formalities with which the will itself was required by law to be executed; or unless such will be burnt, torn, cancelled, obliterated or destroyed, with the intent and for the purpose of revoking the same, by the testator himself or by another person in his presence by his direction.

59-612—**Revocation of second will not revivor of first.** If the testator shall make a second will, the revocation of the second will shall not revive the first will, unless it appears by the terms of such revocation that it was his intention to revive the first will, or unless after such revocation he shall duly republish his first will in the presence of two or more competent witnesses who shall subscribe the same in the presence of the testator.

59-613—**After-acquired property.** All property acquired by the testator after making his will shall pass thereby in this manner as if possessed by him at the time when he made his will, unless a different intention appears from the will.

59-614—**When devise passes whole.** Every devise of real estate shall pass all the estate of the testator therein, unless it clearly appears by the will that he intended a less estate to pass.

59-615—**Issue of relative.** If a devise or bequest is made to an adopted child or any blood relative by lineal descent or within the sixth degree, and such adopted child or blood relative dies before the testator, leaving issue who survive the testator, such issue shall take the same estate which said devisee or legatee would have taken if he had survived, unless a different disposition is made or required by the will.

59-616—**Probate essential.** No will shall be effectual to pass real or personal property unless it shall have been duly admitted to probate.

59-617—**Limitation on probate of a written will.** No will of a testator who died while a resident of this state shall be effectual to pass property unless an application is made for the probate of such will within one year after the death of the testator, except as hereinafter provided.

59-618—**Liability and effect of withholding will.** Any person who has possession of the will of a testator dying a resident of this state, or has knowledge of such will and access to it for the purpose of probate, and knowingly withholds it from the probate court having jurisdiction to probate it for more than one year after the death of the testator, shall be barred from all rights under the will and shall be liable for all damages sustained by such beneficiaries who do not have such possession of the will and are without such knowledge thereof and such access thereto; and the said will may be admitted to probate as to any innocent beneficiary on the application by him for such probate, if such application is made within ninety days after he has knowledge of such will and access thereto and within five years after the death of the testator: **Provided,** the title of any purchaser in good faith, without knowledge of such will, to any property derived from the fiduciary, heirs, devisees, or legatees of the decedent, shall not be defeated by the production of the will of such decedent and the application for probate thereof after the expiration of one year from the death of the decedent.

59-619—**Limitation on probate of oral will.** No oral will shall be admitted to probate unless an application is made therefor within six months after the death of the testator.

59-620—**Deposit of wills; certificate; opening; venue.** A will enclosed in a sealed wrapper, upon which is endorsed the name and address of the testator, the day when the person by whom it is delivered,

may be deposited in the probate court of the county where the testator resides. The court shall give a certificate of its deposit and shall retain such will. During the testator's lifetime, such will shall be delivered only to him or upon his written order witnessed by at least two subscribing witnesses. After the testator's death the court shall open the will publicly and retain the same. Notice shall be given to the executor and to such other persons as the court may designate. If the property venue is in another court the will shall be transmitted to such court, but before such transmission a true copy thereof shall be made by and retained in the court in which the will was deposited.

59-621—**Duty of custodian; liability.** After the death of a testator the person having custody of his will shall deliver it to the court which has jurisdiction thereof. Every person who willfully neglects or refuses to deliver a will after being duly ordered to do so shall be guilty of contempt of court. He shall be further liable to any party aggrieved for the damages which may be sustained by such neglect or refusal.

ARTICLE 7—UNIFORM SIMULTANEOUS DEATH LAW

58-701—**Disposal of property when no sufficient evidence of survivorship.** Where title to property or the devolution thereof depends upon priority of death and there is no sufficient evidence that the persons concerned have died otherwise than simultaneously the property of such person shall be disposed of as if he had survived, except as otherwise provided in this act.

KANSAS STATE COLLEGE EXTENSION SERVICE

MANHATTAN, KANSAS

CIRCULAR 224 JUNE, 1950

Cooperative Extension Work in Agriculture and Home Economics, Kansas State College of Agriculture and Applied Science and the United States Department of Agriculture Acts of May 8 and June 30, 1914, L. C. Williams, Director. 6-50-10M

STOP!

AND THINK

Are you putting off something important?

Do you need to make a will?

To whom should you go for help if you are ...

"PLANNING A WILL"

PLANNING A WILL

Gladys Myers, Specialist in Home Management, Extension Service
Kansas State College, Manhattan, Kansas

FOREWORD

Senator James Couzens died in 1936 leaving an estate of 34 million and no will. He had consulted attorneys, found the state would divide his fortune exactly as he wished and intentionally died without a will. But so few property owners ever take the time or trouble even to find out whether or not a will is a better way to help them distribute property after their death.

This brief circular attempts to call attention to the subject of the disposal of property at death of the owner. It should in no way be considered an authority, for laws which now appear on the statute books may be changed by future legislation. It points to the attorney as the source of legal information; consult him. It points out that if a person wishes to have his property at his death go otherwise than as the Kansas statutes would divide it, he needs to have a will drawn.

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PLANNING A WILL

A will is an important document because it disposes of your property after your death. But a will is a human instrument as well as a legal instrument. It should give happiness rather than unhappiness.

It is not the purpose of this circular to tell you what you should do with your property, but to help you do what you want done.

Get an attorney to help you make your will.

At the very outset one thing should be stressed. **You should go to an attorney to get help when you want your will drawn.** The best protection against legal contests that you can give your will is to have it drawn by a competent attorney whom you trust. Legal words have court meanings that are known to attorneys. When you are ill, you seek the help of the best doctor you can find. You don't try to treat yourself or go to a veterinarian for treatment. So, too, when you need help in making a will, you are wise to go see the person trained in law, the attorney. It is true that bankers, real estate persons, lay people have drawn valid wills. However, the better rule is to let the attorney draw your will.

Is a will needed?

Property must go somewhere. It must at all times have a living owner. It is for this reason that Kansas has laws that decide who is to receive your property if you die without a will (intestate). If you want your property to go other than as the law would decide, it is up to you to make a will telling how you want your property to go. A person who dies, leaving a will, dies testate.

Why make a will?

By means of a will, your personal wishes and not those of the laws of the state of Kansas, will govern the distribution of your estate. You may deal with every member of your family as an individual and will property to them upon a basis other than that of relationship to you.

You may want your youngest son, John, to have the home place because he stayed at home with you helping you to manage your farm in your old age. Under the Kansas laws, John would share along with the rest of the children taking his undivided part. With a will you can leave the home place to him as his part, if that is what you want to do.

Or take a family situation in which the children are all minors (under legal age). The real estate is all in the hus-

band's name. In case of death of the husband, the young mother will have to bother with guardianship proceedings and will have probate court supervision until the youngest child is of legal age. With a will, you can will all of your property to your wife, trusting her to take care of the minor children.

Or let's take this situation. There are times in the family life cycle when an older child has been given a college education or set up in business. There may be younger children that are not yet old enough to need that kind of financial help. By means of a will you can make it possible for those younger children to have an educational or business opportunity equal to that of the older ones in case of your death.

You can name your executor.

A will also permits you to name the executor of your estate. You may also direct that the executor serve without bond. This could mean considerable saving to the estate if the estate is a large one.

You can give gifts.

Gifts to friends or to educational, religious, and charitable enterprises can be made with a will. Such gifts are not provided for in the Kansas laws of descent and distribution.

Cooperate with your attorney.

An attorney expects intelligent cooperation from you, his client. You need to give to him a complete statement of your financial situation and of your net worth as well as tell him the persons to whom you want your property to go. Decide what you want done, then see your attorney. Trust him to see that it is done. However, it is wise to remember that the more simple you can make your will the better.

Who may make a will?

Any person of sound mind and possessing the rights of majority can make a will under the Kansas statutes. Most will contests are based upon one or two grounds—lack of testamentary capacity to make a will and undue influence.

The general rule is that if the testator (the maker) knows the extent of his property, knows his relationship to those who would, should, or might be the objects of his bounty and understands the function of a will, he is said to have the requisite mental capacity. The court decides whether or not a person has had testamentary capacity.

Undue influence is the substitution of the will of another for that of the maker, for some one else decides how the property is to go. Mere suspicion of undue influence is not sufficient. Undue influence has to be proved.

A child has no vested interest in your property.

You can disinherit any or all of your children. You do not have to leave any child whom you want to disinherit a small sum of money such as a dollar. Some attorneys follow the practice of naming the children just to show to each child that he was not forgotten by his parent. However, if it can be proved that the maker had testamentary capacity the children need not be named or left any money in the will.

Rights of spouse

The words "husband" "wife" do not appear in the Kansas laws of descent and distribution. The law uses the word "spouse" when referring to either a husband or wife. The law of Kansas places the legal limitation upon any married person's right to make a will when it says "Either spouse may will away from the other, half of his property, subject to the rights of homestead and allowance secured by statute. Neither spouse shall will away from the other more than half of his property, subject to such rights and allowances, unless the other shall consent thereto in writing executed in the presence of two or more competent witnesses or shall elect to take under the testator's will as provided by law".

Keeping your will up to date.

A will is not something to make and then forget about. Your property situation may change. For example, you may sell the property you now own and buy other pieces of property. Then, too, your family situation may change. Children are born. Children get married and leave home. It is because of this constant shift in both the property and the family situation that you should get your will out as your situation changes and have it **checked with your attorney.** Its provisions may be such that you will want to revise your will accordingly. You want to keep your will up to date. Just remember, though, let your attorney make any changes. Let him do all of the tinkering and you'll be neither the cause nor the victim of a broken will.

Residuary clause

The final gift in the will that your attorney will help you make usually starts like this "All the rest, residue and remainder I give to————" This is called the residuary clause. It takes care of anything that might be left after all debts, taxes, administration expenses, and other testamentary gifts are made. It, too, can help to take care of your changing property and family situation.

Cost of making a will. The cost of making a will varies. It will not cost as much to draw a simple will as a complicated one. In some counties where there is a bar association, the county bar association has set a minimum fee.

How a will may be revoked. A will does not take effect until the death of the maker. You may destroy your will by burning or tearing it up, or by cancelling or obliterating it with intent to destroy. You may make a later will. If you only want minor changes, a codicil (a baby will) can be added at the end of the will which changes sections of it. A word of caution, though. **Let your attorney help you make any changes.**

Marriage and a birth of a child subsequent to the marriage revokes a will by operation of the law of Kansas.

Probation of a will. Before a will has any legal effect, it must be probated; that is, officially proved in the probate court. Any will to be valid must be probated within a year after death. The Kansas law also says that any person who has possession of a will of someone else and does not offer it for probate within one year is barred from all rights under the will and is liable for damages sustained by other beneficiaries who do not know of it.

Where to keep your will. After making a will you should store it in a safe place where it can be found after you are gone. The Kansas law makes it possible for you to store your will with your county probate court. The court will enclose your will in a sealed envelope, endorse it with the name and address of the testator (maker of the will), and will give you a certificate of deposit. You can go get it any time you want. Or if you are unable to go and get it yourself a written order signed by you with two subscribing witnesses will get it for you.

DEFINITION OF LEGAL TERMS FREQUENTLY USED

Adult—A person old enough to acquire legal majority, usually 21 years of age.

Administrator—One appointed by the probate court to settle an estate when no will is made.

Alien—A person who is not a citizen of the country in which he is living.

Appraised—Value determined by study rather than by public sale.

Attestation—The act of signing of the name at the end of a will or other legal paper usually before witnesses to prove that it is valid.

Beneficiary—One who benefits; one who receives property.

Bequeath—To give **personal** property by will; **real** property is **devised** by will.

Bequest—A gift of **personal** property by will.

Decedent—A dead person.

Descent—The transfer of title to property upon the death of an ancestor.

Devise—A gift of real property by will. A gift of personal property by will is bequest.

Distribution—The act of dividing the property among the heirs.

Escheat—The reversion of the property to the state.

Estate—The legal interest one has in any property.

Executor—A person named in a will to carry out its provisions as interpreted by the probate court.

Heir—A person entitled to inherit the lands or real property of another.

Holographic will—A will written by the hand of the testator.

Homestead—The land and buildings occupied by the owner as a home for himself and family and protected by law from the claims of creditors.

Intestate—Not having made a will; opposite of testate.

Issue—Children, offspring.

Legacy—A gift of personal property made by will or testament.

Letters of Administration—Authority granted by the probate court to a person called the administrator to settle the estate of one dying intestate or without a will.

Letters Testamentary—Authority granted by the probate court to a person named in the will.

Lien—A legal claim on the property of another.

Lineal descent—Direct descent—Grandparents, parents, children, grandchildren.

Majority—Age at which a person is legally capable of managing his own affairs.

Minority—Age at which a person is legally incapable of managing his own affairs.

Next of kin—The person entitled by law to inherit the personal property of one dying without having made a will.

Noncupative will—An oral will.

Partition—Division of real estate.

Probate court—A court to determine the heirs and direct the settlement of estates as well as other matters.

Remainder estate—The rights or interests left after a life estate has been created out of a fee simple estate.

Revision—The rights or interests that remain in a grantor after he has created a life estate or subordinate interests out of a fee simple estate.

Seized—To have real property as an owner.

Spouse—Husband or wife.

Statute—Law passed by a legislature.

Succession—The act of becoming beneficially entitled to the estate of a deceased person.

Testament—A written statement or will concerning the disposition of one's property at death.

Testate—Having made a testament or will.

Testator—One who has made a testament or will.

Title—The right to property; the legal evidence of ownership.

Vested—Property rights held by title.

Will—A written statement or testament concerning the disposition of one's property.

Witness—One who sees the signing of an instrument such as a will, deed or contract and who signs his name as testimony that he saw it.

KANSAS PROBATE CODE (in part)

Taken from 1947 Supplement to General Statutes of Kansas 1935.

ARTICLE 4—HOMESTEAD AND FAMILY ALLOWANCES

59-401—**Homestead.** "A homestead to the extent of one hundred and sixty acres of land lying without, or of one acre lying within, the limits of an incorporated city, occupied by the decedent and family at time of the owner's death, as a resident, and continued to be so occupied by the surviving spouse and children, after such death, together with all the improvements on the same, shall be wholly exempt from distribution under any of the laws of this state, and from the payment of the debts of the decedent, but it shall not be exempt from sale for taxes thereon, or for the payment of obligations contracted for the purchase thereof, or for the erection of improvements thereon, or for the payment of any lien given thereon by the joint consent of husband and wife. The title to the homestead property of a decedent shall pass the same as the title to other property of the decedent."

59-402—**Partition of homestead.** "The homestead shall not be subject to forced partition unless the surviving spouse remarries, nor until all the children arrive at the age of majority."

59-403—**Allowances to spouse and minor children.** "When a resident of the state dies, testate or intestate, the surviving spouse shall be allowed, for the benefit of such spouse and the decedent's minor children during the period of their minority, from the personal property of which the decedent was possessed or to which he was entitled at the time of death the following:

(1) The wearing apparel, family library, pictures, musical instruments, furniture and household goods, utensils and implements used in the home, one automobile, and provisions and fuel on hand necessary for the support of the spouse and minor children for one year.

(2) The sum of seven hundred fifty dollars or other personal property at its appraised value in full or part payment thereof. The property shall not be liable for the payment of any of decedent's debts or other demands against his estate, except liens thereon existing at the time of his death. If there are no minor children the property shall belong to the spouse; if there are minor children and no spouse, it shall belong to the minor children. The selection shall be made by the spouse, if living, otherwise by the guardian of the minor children. In case any of the decedent's minor children are not living with the surviving spouse, the court may make such division as it deems equitable."

59-404—**Effect of election by spouse.** "The surviving spouse, by electing to take under the will of the decedent or by consenting thereto, does not waive the homestead right nor the right to such allowance, unless it clearly appears from the will that the provision therein made for such spouse was intended to be in lieu of such rights."

ARTICLE 5—INTESTATE SUCCESSION

59-501—"As used in this article the word 'children' means natural children, including a posthumous child, the children adopted as provided by law, and includes illegitimate children when applied to mother and child, and also when applied to father and child where the father has notoriously or in writing recognized his paternity of the child, or his paternity thereof has been determined in his lifetime in any action or proceeding involving that question in a court of competent jurisdiction. The word 'issue' includes adopted children of deceased children or issue."

59-502—**Descent of property of intestate resident.** "Subject to any homestead rights, the allowances provided in section 21, (59-503) and the payment of reasonable funeral expenses, expenses of last sickness and costs of administration, taxes and debts, the property of a resident decedent, who dies intestate, shall at the time of his death pass by intestate succession as provided in this article."

59-503—**Descent of property of intestate nonresident.** "Real estate situated in this state, owned by an intestate decedent who is a nonresident of this state at the time of his death, shall pass by intestate succession in the same manner as though he were a resident of this state at time of his death. The personal property of such a decedent shall pass by intestate succession under the laws of the place of his residence at the time of his death."

59-504—**Surviving spouse.** "If the decedent leaves a spouse and no children or issue of a previously deceased child, all property shall go to the surviving spouse."

"If the decedent leaves a spouse and a child or children, or issue of a previously deceased child or children, one half of such property shall pass to surviving spouse."

59-505—**Half of realty to surviving spouse.** "Also the surviving spouse shall be entitled to receive one-half of all real estate of which the decedent at any time during the marriage was seized or possessed and to the disposition whereof the survivor shall not have consented in writing, or by a will, or by an election as provided by law to take under a will, except such real estate as has been sold on execution or judicial sale, or taken by other legal proceeding: Provided, that the surviving spouse shall not be entitled to any interest under the provisions of this section in any real estate of which such decedent in his lifetime made a conveyance when such spouse at the time of the conveyance was not a resident of this state and never had been during the existence of the marriage relation."

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ARTICLE 6—WILLS

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59-602—**Limitation on testamentary power.** (1) Any devise or real estate located in this state, and any bequest of any personal property by a resident of this state, without regard to the time when the will containing such devise or bequest shall have been made, to any foreign country, subdivision thereof, or city, body politic, or corporation, located therein or existing under the laws thereof, or in trust or otherwise to any trustee or agent thereof, except devises and bequests to institutions created and existing exclusively for religious, educational, or charitable purposes, is hereby prohibited. Any such devise or bequest shall be void. (2) Either spouse may will away from the other half of his property, subject to the rights of homestead and allowances secured by statute. Neither spouse shall will away from the other more than half of his property, subject to such rights and allowances, unless the other shall consent thereto in writing executed in the presence of two or more competent witnesses, or shall elect to take under the testator's will as provided by law.

59-603—**Election of spouse.** The surviving spouse, who shall not have consented in the lifetime of the testator to the testator's will as provided by law, may make an election whether he will take under the will or take what he is entitled to by the laws of intestate succession; but he shall not be entitled to both. If the survivor fails to consent or to make an election he shall take by the laws of intestate succession.

59-604—**Devise or bequest to witness.** A beneficial devise or bequest made in a will to a subscribing witness thereto shall be void, unless there are two other competent subscribing witnesses who are not beneficiaries thereunder. But if such witness would have been entitled to any share of the testator's estate in the absence of a will, then so much of such share as will not exceed the value of the devise or bequest shall pass to him from the part of the estate included in the void devise or bequest. Such share shall be considered as a legacy or devise within the meaning of section 103. (59-1405)

49-605—**Preparation of will by principal beneficiary.** If it shall appear that any will was written or prepared by the sole or principal beneficiary in such will, who, at the time of writing or preparing the same, was the confidential agent or legal adviser of the testator, or who occupied at the time any other position of confidence or trust to such testator, such will shall not be held to be valid unless it shall affirmatively appear that the testator had read or knew the contents of such will, and had independent advice with reference thereto.

59-606—**Execution and attestation.** Every will, except an oral will as provided in section 44, shall be in writing, and signed at the end thereof by the party making the same, or by some other person in his presence and by his express direction, and shall be attested and subscribed in the presence of such party by two or more competent witnesses, who saw the testator subscribe or heard him acknowledge the same.

59-607—**Competency of witness.** If a witness to a will is competent at the time of his attestation, his subsequent incompetency shall not prevent the admission of such will to probate.

59-608—**Noncupative will.** An oral will made in the last sickness shall be valid in respect to personal property, if reduced to writing and subscribed by two competent, disinterested witnesses within thirty days after the speaking of the testamentary words, when the testator called upon some person present at the time the testamentary words were spoken to bear testimony to said disposition as his will.

59-609—**Will executed without state.** A will executed without this state in the manner prescribed by this act, or by the law of the place of its execution, or by the law of the testator's residence either at the time of its execution or of the testator's death, shall be deemed to be legally executed, and shall have the same force and effect as if executed in compliance with the provisions of this act: **Provided,** Said will is in writing and subscribed by the testator.

59-610—**Revocation by marriage and birth; divorce.** If after making a will the testator marries and has a child, by birth or adoption, the will is thereby revoked. If after making a will the testator is divorced, all provisions in such will in favor of the testator's spouse so divorced are thereby revoked.

59-611—**Manner of revocation.** Except as provided in section 46, no will in writing shall be revoked or altered otherwise than by some other will in writing; or by some other writing of the testator declaring such revocation or alteration and executed with the same formalities with which the will itself was required by law to be executed; or unless such will be burnt, torn, cancelled, obliterated or destroyed, with the intent and for the purpose of revoking the same, by the testator himself or by another person in his presence by his direction.

59-612—**Revocation of second will not revivor of first.** If the testator shall make a second will, the revocation of the second will shall not revive the first will, unless it appears by the terms of such revocation that it was his intention to revive the first will, or unless after such revocation he shall duly republish his first will in the presence of two or more competent witnesses who shall subscribe the same in the presence of the testator.

59-613—**After-acquired property.** All property acquired by the testator after making his will shall pass thereby in this manner as if possessed by him at the time when he made his will, unless a different intention appears from the will.

59-614—**When devise passes whole.** Every devise of real estate shall pass all the estate of the testator therein, unless it clearly appears by the will that he intended a less estate to pass.

59-615—**Issue of relative.** If a devise or bequest is made to an adopted child or any blood relative by lineal descent or within the sixth degree, and such adopted child or blood relative dies before the testator, leaving issue who survive the testator, such issue shall take the same estate which said devisee or legatee would have taken if he had survived, unless a different disposition is made or required by the will.

59-616—**Probate essential.** No will shall be effectual to pass real or personal property unless it shall have been duly admitted to probate.

59-617—**Limitation on probate of a written will.** No will of a testator who died while a resident of this state shall be effectual to pass property unless an application is made for the probate of such will within one year after the death of the testator, except as hereinafter provided.

59-618—**Liability and effect of withholding will.** Any person who has possession of the will of a testator dying a resident of this state, or has knowledge of such will and access to it for the purpose of probate, and knowingly withholds it from the probate court having jurisdiction to probate it for more than one year after the death of the testator, shall be barred from all rights under the will and shall be liable for all damages sustained by such beneficiaries who do not have such possession of the will and are without such knowledge thereof and such access thereto; and the said will may be admitted to probate as to any innocent beneficiary on the application by him for such probate, if such application is made within ninety days after he has knowledge of such will and access thereto and within five years after the death of the testator: **Provided,** the title of any purchaser in good faith, without knowledge of such will, to any property derived from the fiduciary, heirs, devisees, or legatees of the decedent, shall not be defeated by the production of the will of such decedent and the application for probate thereof after the expiration of one year from the death of the decedent.

59-619—**Limitation on probate of oral will.** No oral will shall be admitted to probate unless an application is made therefor within six months after the death of the testator.

59-620—**Deposit of wills; certificate; opening; venue.** A will enclosed in a sealed wrapper, upon which is endorsed the name and address of the testator, the day when the person by whom it is delivered,

unlestate
Title 3 1 one person
2 husband & wife, hold
3, sound right of survivor,

may be deposited in the probate court of the county where the testator resides. The court shall give a certificate of its deposit and shall retain such will. During the testator's lifetime, such will shall be delivered only to him or upon his written order witnessed by at least two subscribing witnesses. After the testator's death the court shall open the will publicly and retain the same. Notice shall be given to the executor and to such other persons as the court may designate. If the property venue is in another court the will shall be transmitted to such court, but before such transmission a true copy thereof shall be made by and retained in the court in which the will was deposited.

59-621—**Duty of custodian; liability.** After the death of a testator the person having custody of his will shall deliver it to the court which has jurisdiction thereof. Every person who willfully neglects or refuses to deliver a will after being duly ordered to do so shall be guilty of contempt of court. He shall be further liable to any party aggrieved for the damages which may be sustained by such neglect or refusal.

ARTICLE 7—UNIFORM SIMULTANEOUS DEATH LAW

58-701—**Disposal of property when no sufficient evidence of survivorship.** Where title to property or the devolution thereof depends upon priority of death and there is no sufficient evidence that the persons concerned have died otherwise than simultaneously the property of such person shall be disposed of as if he had survived, except as otherwise provided in this act.

right of survivorship

KANSAS STATE COLLEGE EXTENSION SERVICE

MANHATTAN, KANSAS

CIRCULAR 224 JUNE, 1950

Cooperative Extension Work in Agriculture and Home Economics, Kansas State College of Agriculture and Applied Science and the United States Department of Agriculture Acts of May 8 and June 30, 1914, L. C. Williams, Director. 6-50-10M

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Now, with the new "5010," there's a John Deere Tractor in the right size for every wheatland operation . . . the new "5010" for farming the horizons; the 55 h.p. "3010" and 80 h.p. "4010" Standards for smaller operations.

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Look them over, then enjoy the real pleasure that comes from driving one of these modern tractors. Ask your John Deere dealer for details on the convenient Credit Plan which will help put one of these tractors to work earning bigger profits for you.

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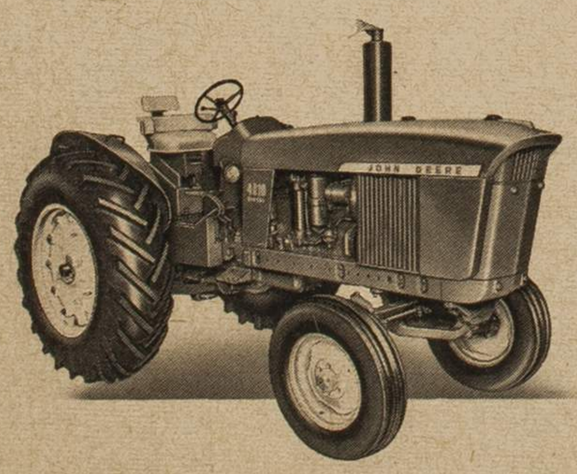

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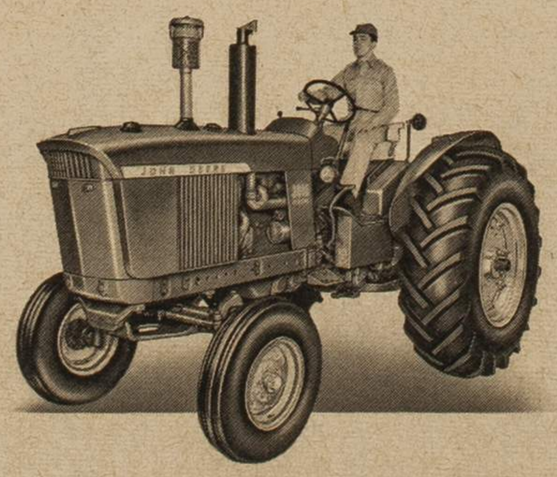

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Fast and versatile—the 4-cylinder 55 h.p. "3010" is tailored to handle all the power requirements of smaller wheatland acreages; works good-sized equipment at top field speeds to more than pay its own way.

NOVEMBER-DECEMBER
1962 · VOLUME 67

THE **Furrow**

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Art Editor
WAYNE JOHNSTON

Associate Editors
RALPH REYNOLDS
G. E. FERRIS
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THE FURROW is free to farmers, courtesy John Deere dealers. To request THE FURROW or change your address, notify your dealer.

Where Christmas holly grows

Our English holly story in this issue is purely for interest. This is one crop you can read about and not worry about, because the odds are something like 25,000 to 1 against your ever growing it commercially. There are only about 75 members in the Oregon Holly Growers Association, considerably fewer in Washington, and the Oregonians say they produce about 85 percent of the West Coast's commercial holly.

Incidentally, the Teufel Holly Farm in our story is a family project or, more-accurately, a four-family operation. As you might expect, the Teufels have developed a superior hybrid holly—a hardier, more-beautiful strain.

In looking to the new year

Somebody said this fall: "Don't censure a businessman for taking part in politics . . . he's fighting for his business life, for the livelihood of his employees." This would apply to farmers, since they are businessmen. The "pinch" comes in various forms—commonly in taxes and regulations, both of which involve politics (managing public affairs) at some level of government. And, of course, both taxes and regulations—for whatever purpose—always add to the costs of doing business.

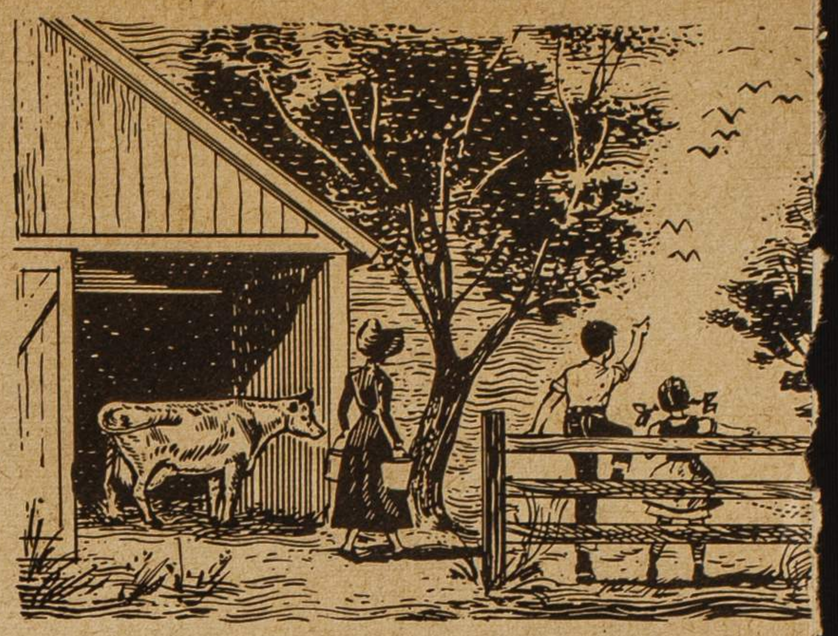
This is inevitable in any form of government, since tax money comes only from people—sometimes indirectly, but always from people, whether rich or poor.

As a group, U. S. citizens do demand (and appear to tolerate) heavy expenditures for public services. But they have learned through increasing taxes that they must pay for whatever government does, or tries to do, for them. And the thinking citizen also discerns that the average person grows strong and self-reliant to the extent he stands on his own feet. It was not, in the early American tradition at least, for a citizen deliberately to choose a crutch in lieu of walking on his own two legs.

". . . For what avail the plow or sail, or land or life, if Freedom fail?"

—*Ralph Waldo Emerson*

THERE IS INDEED SCIENCE *in* SUPERSTITION



Some superstitions are fanciful hogwash but many are rooted in scientific fact. Others work, yet remain a mystery to science

By REX R. GOGERTY

Almost everyone who ever planted a potato or milked a cow recalls a pet superstition concerning weather, crops, livestock or people. Some of these are just that—superstition—others are based squarely on scientific fact. For the record, and risking argument, let's separate the precise from the poppycock.

RING AROUND THE MOON

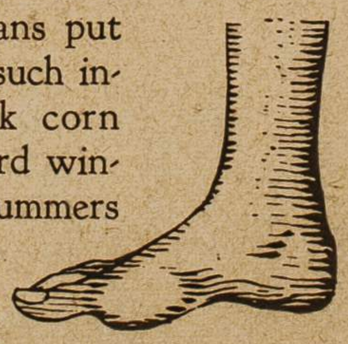
Since Moses' time, people have tried their hand at predicting the weather—some feel forecasting has improved little through the centuries. The moon has long been a handy weather gauge although meteorologists maintain the phase of the moon has little bearing on the weather—no matter if it is tipped so that "a farmer can hang his harness on it" or "no water will run out of it." But a halo around the moon is more than just back-forty hoodoo. Filmy, high cirrus clouds indicating moisture (ice crystals) at high levels, often precede rain.

The Weather Bureau receives many anxious calls each spring about an ominous "cross on the moon." Invariably the mysterious cross is the result of looking through a newly hung screen.

The experts consider birds far better forecasters than animals. Swallows, for instance, fly higher in fine weather than foul due to changing barometric pressures—they seem to feel the weight of the air. But an extra heavy coat of fur on a four-legged critter only means he'll be mighty uncomfortable until chillier weather arrives. Their long range forecasting record is far worse than that of U. S. Weather Bureau computers.

The Indians' ability to predict the weather far in advance has long puzzled and occasionally embarrassed the barograph boys. The Seminole of the Florida Everglades began preparing for the great hurricane of 1926 some four days before it struck the mainland. They had even persuaded the Indian agent to move all his charges to a safe place.

BUNION BAROMETERS



The Plains Indians put great stock in such indications as thick corn husks preceding hard winters and hot, dry summers following severe winters. Iowa State University researchers don't buy these calculations, but they cautiously recommend easterly winds, aching bunions and joints, and even train whistles as passable signs of a change in the weather. A falling barometer or rising humidity can stir up bunions, rural or otherwise, and R. H. Shaw, Professor of Agricultural Climatology at Iowa State, says predicting rain by an easterly wind is sound procedure. Seems a low pressure area to the south backwashes its counter-clockwise winds and moisture over cool, dry air. In other words, it's an odds-on chance you'll get wet.

Rain on Easter Sunday or other special days has little bearing on the coming season, but records provide averages.

LIGHTNING TO LABORATORY

The Pennsylvania Germans can boast some of the most colorful, if not always the most accurate weather signs. "Never point your finger at lightning,"

is certainly good advice from a safety viewpoint; but the adage, "morning showers and old women's dancing do not last long," would depend a lot on the strength of the ladies and storms in question. Weather experts have found morning storms to be less severe than those occurring in the heat of the day.

The hill folks of a generation or two ago were the undisputed champions of home-brewed patent medicines and, unmindful of research, they got results. The broth of boiled oak bark was standard for what ails the milk cow. Poultices of bread and milk or platan leaf stopped infection in mules and people of all ages. Medical men agree there is merit in the drawing and healing power of most poultices. Even half grown chickens have been butchered and applied to draw rattlesnake venom out of a man's leg. In emergencies there just isn't time to argue the scientific angles if the cure works.

Superstition has, in fact, often been the taproot of great scientific discovery. Milkmaids in 18th century England were not only the best in the business—

they were the healthiest since they seldom contracted the big scourge of the day, smallpox. Dr. Edward Jenner investigated the barnyard magic and decided the girls' constant exposure to the milder cowpox germs was the big reason for their immunity. In 1796, he developed a vaccine from cowpox bacteria.

COBWEB BANDAGES

Animal lore cuts a wide swath in the superstition manual. A faithful few ranchers still consider it downright poor management to brand, castrate or wean calves unless the Zodiac is right.

Extension Animal Husbandman, Robert C. de Baca of ISU says these are strictly matters of personal choice, but cobwebs do have a great deal of healing power for dehorning wounds and in other cases where coagulation is a problem. Clean creek mud has helped sterilize many a pony's barbed-wire slash.

HORSEHAIR SNAKES

The old horsehair-snake trick has impressed as many small boys as the steam thresher whistle. Here is the factual explanation from Entomologist Harold Gunderson: The "snake" is simply a tiny nematode that is carried into the water by a mixed-up June beetle or thirsty grasshopper. The insect dies but the nematode emerges. Sometimes it grows to the length of 18 to 20 inches; thus giving the practical joker wriggling proof that a mare's tail is a goodly bundle of snakes when properly watered.

Some folks swear that full-fledged snakes can break into pieces when they're being chased—the sections then taking different routes and becoming separate snakes. "Highly unlikely," says Dr. Gunderson. Some lizards do have the ability to lose their tails and sprout new ones; but a severed snake's just plain gone.

HOW TO CURE OR KILL

"You may shear your sheep when elder blossoms peep," is the poetic reminder of Nebraska sheepmen. This is sound advice, but many other livestock remedies are less lyrical, still workable.

Turpentine poured into the funnel-like ear of a down hog is considered an all-purpose tonic by some old-guard hogmen. And Dakota ranchers consider bacon and eggs (uncooked, that is) surefire for curing calf scours. Animal disease experts concede such witches' brews would cure almost anything, but they still favor antibiotics. One practicing, but anonymous, veterinarian does recommend a mixture of whiskey and warm water to take the chill off a newly dropped calf. And a veterinarian reports off the record that ordinary rubbing alcohol poured in a shook-up, laboring sow's ear will do as a tranquilizer.

SOIL SORCERY

Plant crops, flowers and gardens when the weather and soil conditions are right, is the advice of USDA agronomists. They find little germination or growing value in planting by signs. But the emerging oak leaf gets the scientific nod. "When the oak leaf is the size of a squirrel's ear" is still a pretty good starting gun for Midwest corn planters.

Heavier plant population is considered a recent wrinkle in corn-raising circles, but the Indians planted four kernels in a hill, honoring the four cardinal points of the compass. The Pilgrims were not to be outdone. They planted five; one for the blackbird, one for the crow, one for the cutworm, and two to grow.

And water from nature's own faucet gives crops a boost that irrigation water doesn't—just as old-timers claim. Falling rain dissolves the nitrate in the air and deposits it in the soil.

WATER WITCHES

The subject of water brings us to the granddaddy of all rural voodoo—water dowsing. This topic alone can cause more arguments than an election-year promise. Several Nobel Prize winners and physicists endorse this mysterious method, but the U. S. Geological Survey has little time for the forked stick as an underground water probe. Arthur M. Sowder, Extension Forester for the USDA, claims dowsing is his interesting and workable off-the-job hobby.

Kenneth Roberts in his book *Henry Gross and His Dowsing Rod*, says, "not all the derision of all the geologists in the world can in any way alter the unfailing accuracy of the dowsing rod in Henry Gross' hands."

Every divining rod devotee will agree, but if a man doesn't have the gift (and only 1 in 1,000 does) the flexible peach, willow, or ash limb won't point to the cistern he's standing on. To the believer and successful practitioner, dowsing for water is a science—a profession.

AGONY OF A FRUIT TREE

Another off-beat rural remedy is that of hammering nails into a barren tree to produce blossoms. An Iowa man

whose 14-year-old fruit tree was loaded with leaves but nary a blossom checked with university agronomists. They diagnosed the trouble as a lack of mineral and gave him an unofficial go-ahead on the hard-boiled home remedy. The tree sprouted blossoms the first year after he filled the trunk with nails and the ground at the base with old tire chains. It survived the injection and continues to bear fruit every year. Sometimes the cure is more logical than weird.

Science continues to find new promise in old theories. Streptomycin is made by growing a certain organism in broth containing soybean meal, as are the new disease fighters—nitrofurrins. Onion and garlic fumes kill bacteria, also romance.

Science is not based on folklore, but its basic research often begins there.

Hard-shelled soils tame fast when you hit them with a husky John Deere Disk. So do cloddy plowing, heavy cover crops, and tough trash. Great strength with deep, aggressive blade action and plenty of clearance quickly shows your problem fields who's boss.

An example of the wide line of John Deere Disks is the brawny RWA, shown above. Tubular and channel-steel backbone and main frame have beef and rigidity without excess weight. On-the-go depth adjustment speeds crossing wet spots. Clearance is excellent. Blades (regular and heavy-duty types, 8½-inch spacing) are tempered and hardened for toughness and durability. See your John Deere dealer soon for full details—and ask about his confidential credit plan.

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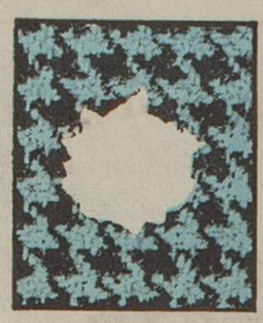

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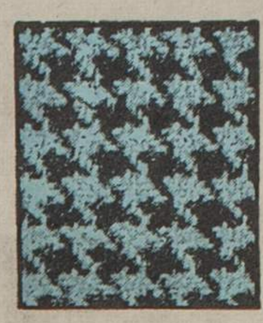

AFTER

Dear Friend:

Do you need extra money? And I don't mean $5.00 or $10.00 a week. Would you be interested in earning up to $50.00 in a week for part-time work done at home? Some folks who devote full time to the work, report even greater earnings are possible working right in their own homes.

If you sincerely want to earn extra money at home, you'll be interested in the wonderful opportunity offered by the Fabricon method of Invisible mending. Fabricon Mending is quiet, dignified work. It requires no door bell ringing or hard sales effort. Experienced Fabricon menders report that customers seek them out and then business and profits come almost automatically.

Fabricon mending is the rare, little-known art of invisibly mending holes, cuts, tears and rips in clothing and fabrics. With Fabricon overlay mending method a torn garment is actually mended so the damage cannot be seen. Fabricon mending is truly invisible — not sewing or darning.

The demand for invisible mending service is big and growing bigger. Laundries, cleaners, clothing stores, department stores and countless individuals need and want invisible mending service. In many towns there isn't even one person qualified to do this work, so garments requiring invisible mending are sent to big cities. Big city service is often slow. Big city prices are high. A local invisible mender - offering faster, better and more economical service - should have little or no trouble getting virtually all the business in town. This isn't just an optimistic statement. It has happened for dozens and dozens of Fabricon invisible menders.

Yes, there most likely is an exceptional opportunity waiting for the right person in your community. The Fabricon invisible mender in your town can look forward to building a steady business, a business that others have found will pay off in profit for full time or spare time work at home.

Specifically, what earnings can be expected with invisible mending? This is a most important question and I want to answer it truthfully and sincerely. Some Fabricon invisible menders have earned over $100.00 in one week working at home. Other exceptional Fabricon invisible menders have earned up to $11.50 for one hour of work. Let me just say that the normal charge for invisible mending a small hole (usually about twenty or thirty minutes work) is from $2.00 to $3.50. Larger damages can bring $10.00 or more. One Fabricon invisible mender got over $20.00 for her work on one moth damaged coat. Yes, chances for earning with Fabricon invisible mending are promising indeed.

Can you do the work? This is another important question. The answer is that Fabricon invisible mending is easy to learn if you have normal use of hands, good eye-sight with or without glasses, want to learn, and can understand plain ordinary simple English. You need no special qualifications, education or previous experience. Age makes little difference. Fabricon invisible mending is being done by average people - men and women - who knew nothing about the work until they took our course.

I have told you just a little about Fabricon invisible mending in this letter. The complete exciting story is available FREE and without obligation to you. Just write and ask for it. I'll tell you what other folks have accomplished with Fabricon invisible mending. I'll tell you and show you how to get started - how to earn while you learn. I'll send you the complete, exciting story of an opportunity that may start you on the road to extra money, success and respect in your community. Just fill out the Business Reply Card you'll find enclosed and mail it back to me. No stamp is necessary - we pay the postage. I'll send you all the facts by return mail....FREE. No salesman will ever call. All information will be mailed to you. You are under no obligation whatsoever. Fill out and mail the reply card NOW!

Sincerely yours,
Fabricon Company

Kenneth Watson

Kenneth Watson, Manager

P. S. On the reverse side of this letter I have reproduced one of our advertisements now appearing in a national magazine. I know you will find it interesting. Read what it says then fill out the enclosed postage-paid reply card and mail it to me for free information and details.

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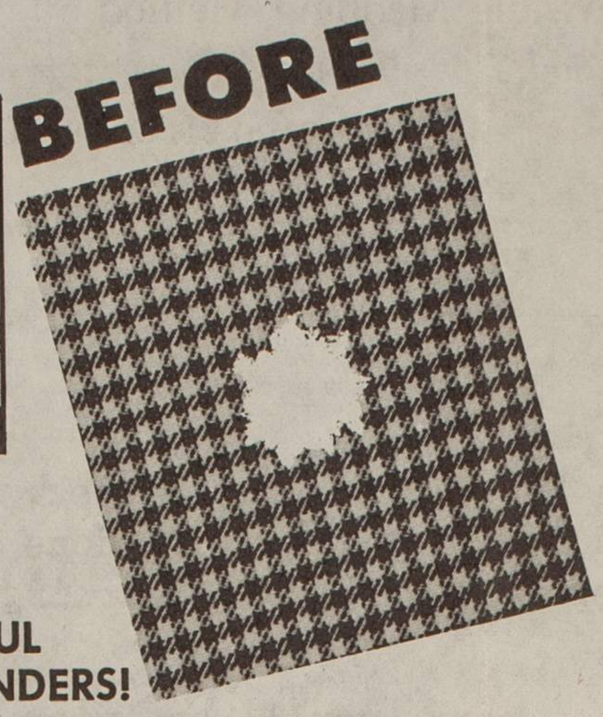
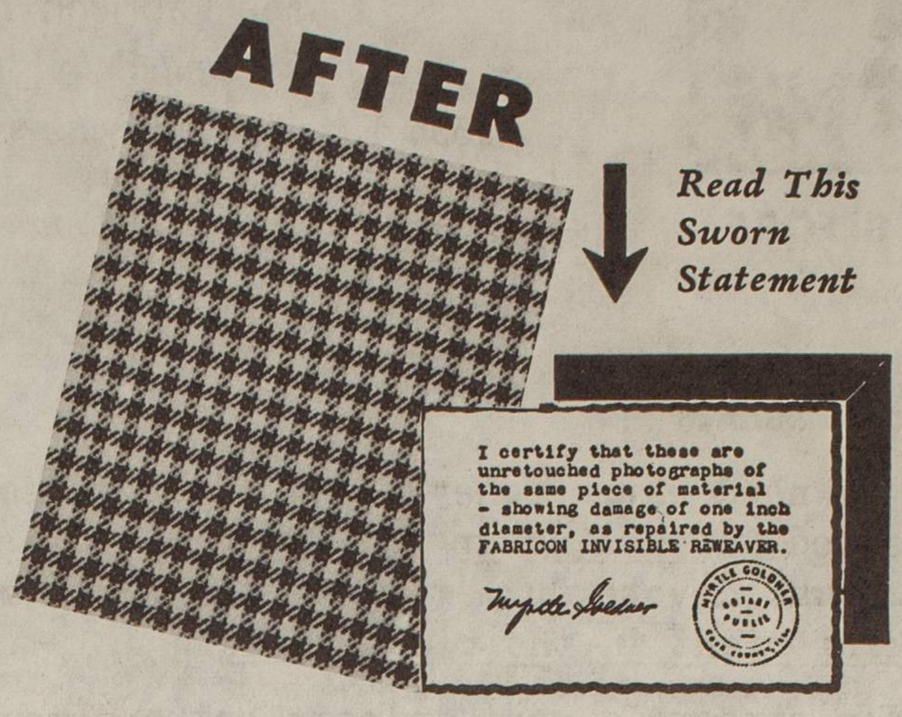
Ken Watson *Martha Watson*

EARNINGS OF OVER $10.00 IN AN HOUR REPORTED BY SUCCESSFUL FABRICON INVISIBLE MENDERS!





Repaired by A FABRICON INVISIBLE MENDER

We can show you the way to this

ALL-PROFIT HOME BUSINESS

that can bring you extra money in your spare time.

IMAGINE!

an enjoyable pastime
a profitable hobby
a money-saving skill
a business of your own
work in your home
no equipment to buy
no selling or canvassing

by Kenneth and Martha Watson

Here is a business idea so ideally suited for home earnings, so inexpensive to start and so cost-free to maintain that you will be amazed.

We want you to read every word of our story —because it may mean the difference between just getting along or finding a wonderful, fascinating profitable career in a field that has brought profits and prestige to hundreds of average men and women.

Let us tell you about it. Many years ago the secret of invisible fabric weaving was developed by old-world craftsmen. By the use of this skilled art, men discovered they could take a garment that had been damaged by moth holes, cuts, burns or tears and restore it to perfect condition again—so perfect, in fact, that the spot of the former damage could not be found.

For centuries this skill was a closely guarded secret passed on from father to son and no amount of money could get this information for an outsider.

An Ancient Art — Modernized

A few years ago the Fabricon Company spent much time and research on this ancient art. They modernized it, developed up-to-date equipment for this work. Then they began teaching it to a selected group of students. Results were amazing. Students quickly produced expert work. But the cost of the course was high. Students had to come to Chicago, spend considerable time in supervised classes, costs ran into many hundreds of dollars.

As students ourselves it seemed to us that the course with the new modern equipment was so simple and so easy to grasp that it could be taught as effectively without classroom instruction. So we convinced the Fabricon Company of the wisdom of getting the secrets of this age-old art down in black and white, in simple written form.

When we published our first manual on the Fabricon Method, the results exceeded our wildest hopes. Not only in the numbers of people who had been seeking just this perfect way to earn extra money at home—but in the quality of work many of them have been able to perform in a short time.

We are now in the fourth re-print of our instruction manual. Each issue has been improved and expanded as we found new and better ways to teach by mail. It is hard to imagine how further improvement could be possible. Among the many people who are now in a successful business as a result of our help, we have wonderful compliments about the process, and the truthful way we advertise it.

No Supplies to Buy — Ever

What makes the invisible reweaving business so especially good? The one thing that we feel makes invisible reweaving so outstandingly attractive is this—once you have learned the Fabricon Overlay Method, you never have to spend another penny for equipment, supplies, materials or merchandise. We have nothing else to sell.

There are numerous other attractive features, too. Let us list here just a few of the highlights. The work is easy to learn for anyone with normal use of hands and good eyesight (with or without glasses) who sincerely wants to learn.

Then there is the marvelous flexibility of putting this trade to work for you. You can work full time or you can use it as a part-time extra income, or even to repair your family's clothing.

It is our opinion that the field is uncrowded and that the prices the work commands are high. The reason for this, we believe, is that in most areas there is practically no competition.

The Fabricon course is the most complete of its kind. It is detailed and illustrated down to the last item. It not only teaches the process of overlay invisible reweaving with the Fabricon invisible reweaver but TELLS EXACTLY HOW TO START UP IN BUSINESS. AND —included in our complete course is the guaranteed equipment for doing the work, the Fabricon Invisible Reweaver—the only equipment you will need to start and stay in business.

Only Fabricon Can Teach Fabricon

Remember, the trade-marked Fabricon Invisible Reweaver is registered in the UNITED STATES PATENT OFFICE, No. 532,416. No one else can make or sell the Fabricon Invisible Reweaver. This special equipment is one of the secrets of our success.

More than that, we are so confident, from experience, that the Fabricon Method will bring you extra money working at home that all we ask, when you order, is a modest down payment.

There may be years of contentment, earnings and pleasure awaiting the far-sighted men and women who send in for the details of the Fabricon plan. Remember, we DO NOT send a salesman. All information will come to you by mail.

Another tip—save this page and when you receive our information, compare it with what we claim here and see if every word we say isn't true. Then, when you become one of our students, compare our material again and you'll see we have made no claims that we can't prove — to the letter.

Yes, we feel that invisible reweaving is a wonderful opportunity for men and women of all ages to engage in a profitable, fascinating and rewarding trade — a business of your own that no one can ever take from you — a business you can enter into with such tiny investment that you will be delighted.

Just send your name and address to us. We'll rush back to you complete information—simple and understandable—without any obligation on your part.

Best of luck,
Ken and Martha Watson
THE FABRICON CO.
1555 HOWARD ST.
CHICAGO 26, ILL.

HERE'S PROOF! Read what the **UNITED STATES DEPARTMENT OF HEALTH, WELFARE AND EDUCATION** has to say about Invisible Reweaving (Invisible Mending) as an all-profit home business. The words below are not ours! They are reported exactly as they appear in the Departments official publication, Service Series number 320, Pages 130-131:

> ***"No educational requirements necessary . . . there really is no limit to what a person might do in this type of business . . . small amount of capital required . . . (reweaver) would be his (or her) own boss . . . the skill is a closely guarded trade secret and most reweavers are reluctant to pass the knowledge on to others."***

This may be just what you are looking for. Find out now without charge or obligation. Without one cent cost we will tell you how you can learn all the secrets and get into this little known, all-profit business. Get all the details—all the information—FREE! Fill out and return the enclosed postpaid card today. No stamp needed. We pay the postage. Mail your card now!

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ANSWERS TO CANCER

BY WILLIAM GADDIS

CANCER WHO WHAT WHEN WHERE ?

Cancer, one of history's oldest diseases, is found throughout the world today, in all forms of life, in all cultures and races of man. Its cause—or causes—still unknown, the most challenging mystery ever to confront medical science, cancer can strike anyone, anywhere, at any age. It now ranks second as the cause of death and its toll is still rising. In 1900 there were 41,000 deaths in America from cancer; by 1959 the figure had risen to a quarter of a million.

The growing number of cancer deaths in the United States is related in part, of course, to the increase in our population, with its larger proportion of senior citizens. Since the dramatic conquests of medical science in other areas of disease, increasing numbers of Americans now live well past the age of 45, the age when cancer's death rate rises sharply. As more people live longer, cancer rates are higher.

Some forms of cancer, however, are increasing more than others. Lung cancer, for example, shows the most alarming rise. Deaths caused by lung cancer have increased over tenfold in the last thirty years, from 2,571 in 1931 to 39,000 estimated for 1962. On the other, more hopeful side, deaths from cancer of the uterus have not increased in proportion to our great population increase. In fact, the percentage of cures of this once-fatal form of the disease has now risen to 55 per cent.

Cancer strikes one person in every four—few families escape. Early detection and prevention are the best safeguards that modern science can offer; for once the disease has spread in the body, there is no cure. Man, woman, or child, certain ages, and certain areas of your body, are more vulnerable than others. Virtually none is immune, but virtually none is beyond your vigilance.

This booklet will give you the latest information available about what you can do to protect yourself and your family.

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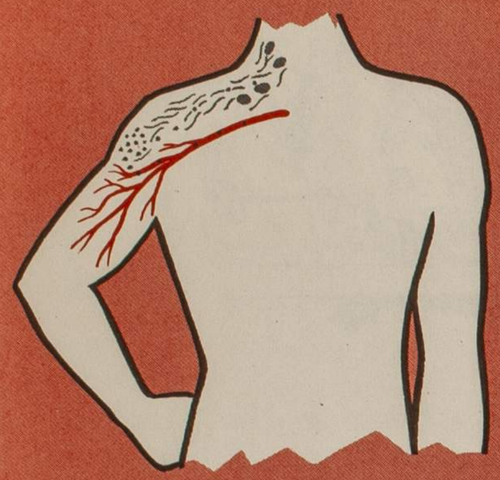
WHY IS IT SO IMPORTANT TO DETECT CANCER IN ITS EARLIEST STAGES?

The answer lies in the patterns of growth that are followed by this disease, or rather, these diseases. For cancer is not a single disease but a whole family of them. Cancers can occur anywhere in the human body; they are as different from each other as the body tissues where they appear.

The tissues that make up our bodies are composed of tiny complex units called "cells." Each cell, though it may weigh no more than 1/50,000 of an ounce, is composed of the essential substances of life itself. Growth is the orderly process of normal cell reproduction: one cell divides into two, these two become four, the four eight, and so on. A newborn baby's body consists of over 200 billion cells. As we grow up, the cells continue to multiply by the same orderly process, which comes to an end when we become adults. For the rest of our lives, new cells form only to replace worn-out cells, heal injuries, and keep the body in good repair. Otherwise, they stop multiplying.

Cancer cells, however, multiply in an uncontrolled, disorderly way, producing useless tissue and destroying the normal cells around them. The still-unsolved mysteries of cell chemistry may hold the key to the reason for this abnormal growth. The part played by an important cell chemical called "DNA" is already under intensive investigation. Recent laboratory research with DNA may lead to



Cancer cells start growing in one place but sooner or later one or more will break away and move through the lymph vessels to a lymph node or other parts of the body . . . . . through lymph glands . . . or blood stream

the discovery of ways to build up the body's own defenses against the disease by checking the reproduction of cancer cells before a tumor is formed.

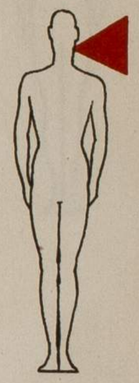
Tumors are not necessarily cancerous. Many tumors that form in the body as swellings or lumps are no more than excess fatty tissue or cysts that are called "benign" because they hold little or no danger for life or health. Your physician, of course, is the only one to decide whether a tumor calls for further investigation. Any lump or swelling should be brought to his attention.

The dangers of the "malignant" tumor, or cancer, are that it doesn't stop growing and that it spreads to other parts of the body. However, as long as this colony of cancer cells remains where the disease started, it can often be destroyed by radiation or removed by surgery. And so early detection is the vital factor in cancer control, for the dangerous phases of the disease are the later ones.

When cells start to break away from a cancerous tumor, they may spread the disease to other parts of the body where the lymph and blood vessels carry them. In the first stage of the disease's spread, which physicians call "metastasis," the malignant cells may be trapped in nearby lymph nodes. Before the disease spreads further, surgery and radiation still offer possibilities of cure.

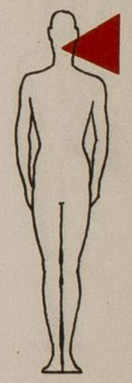
WHERE CANCER STRIKES

SKIN



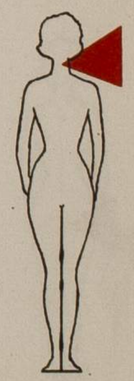
Skin cancers, the most easily detected, are practically 100 per cent curable with early, adequate treatment. If you have a wart or mole that changes in shape or color, or have a sore that does not heal, or notice a thickened scaly area on your skin, let your physician examine it promptly. Some people are more likely targets than others for the common types of skin cancer. More men than women have them, for example, and they are more common among older people. Furthermore, people who work out of doors a great deal show a higher percentage of skin cancers, in the areas of the body exposed to the sun—the face, neck, and hands. Proportionately more fair-skinned people are affected. Thus, physicians advise against overexposure to the sun, especially if you are fair-skinned.

MOUTH



Mouth cancers are more frequent among men. But since the mouth is so easily examined, there is little excuse for these cancers to develop unnoticed. When brushing your teeth, you should notice any fever blister, boil, or sore in your mouth that fails to heal; bring it to your physician's attention. With early detection and proper treatment, the present rate of cures of 36 per cent for this type of cancer could be almost doubled.

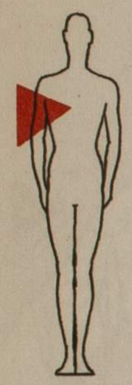
THROAT



Rate of cures is high for cancer of the larynx (voice box) if such obvious warnings signs as persistent hoarseness are heeded. Like a chronic sore throat—another possible sign of cancer—this symptom should not be treated with patent medicines or gargles if it goes on for more than two weeks but should be reported to your physician.

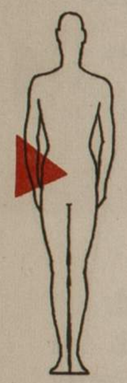
LUNGS

The leading cause of death from cancer among men today, lung cancer, is still increasing at an alarming rate, with fourteen times as many deaths estimated for 1961 as that for only thirty years ago. Lung cancer can develop silently, or your body may try to warn you with a persistent but sometimes slight cough that you hardly notice. If you have such a cough, tell your



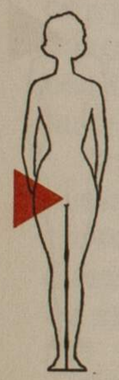
physician about it and have a chest X ray annually or as often as he advises. Be alert for any change, especially coughing up blood. Whether this symptom means cancer or not, it should receive immediate medical attention.

The rise in lung cancer among men in recent years—it now causes six times as many deaths among men as among women—means that your doctor will be on the lookout for it, particularly if you are over forty. You will probably be asked whether you smoke, and—if you do—how much, since a good deal of statistical evidence seems to point to a relationship between heavy cigarette smoking and cancer. Whatever the cause (some medical researchers question the significance of the parallel between the increase in cigarette smoking and lung cancer), regular chest X rays are still the best check on lung cancer, and new surgical methods make effective treatment safe in the early stages.



KIDNEY, BLADDER, AND PROSTATE

Trouble signals from the area of the urinary organs—particularly the appearance of blood in the urine, back pains, or difficulty in urinating—may, of course, arise from less severe causes. But they can also mean cancer of the kidney or bladder—about twice as frequent among men as women—and should have prompt medical attention if they persist. In men, similar symptoms call for examination of the prostate gland. Enlargement of this gland, which is fairly common in older men, is harmless in most cases, but only the physician's examination can rule out a developing cancer.



UTERUS

Fourteen thousand lives a year—that is the toll that cancer of the uterus takes among American women today. And this number *could* be virtually zero. Two communities—one in Kansas, one in Ohio—have recently given us living proof that this form of the disease can be eliminated as a major killer.

Recently, a program for detecting uterine cancer was arranged in Abilene, Kansas; about 500 women were expected to come for examination. The response was overwhelming. Before the program was over, medical personnel for miles around were pressed into service to assist in the examination of 2,500 women who came. This response is evidence that the public education program *is* getting results. It is considered possible that this form of the disease could rapidly be eliminated as a major cause of death.

The program in Columbus, Ohio, proved the vital importance of the annual medical checkup. Thousands of women from the Columbus area were examined and asked to come back for annual checkups the three following years. Of the 512 cases discovered during the course of the program, all of those women diagnosed as having "early" cancer are alive today.

If you have not yet had such an examination, and should notice unusual bleeding or discharge from the vaginal tract, be sure to report these conditions to your physician. And don't put off your annual examination even though these symptoms are not present.

LEUKEMIA AND LYMPHOMA

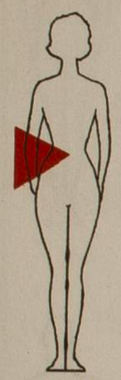
Today, cancer ranks as a leading cause of death among children. Leukemia and lymphoma are cancers of the blood-forming tissues. They cause more deaths of children under six than any other disease and take the lives of an alarmingly increasing number of adults—a toll estimated at more than 14,000 in 1962.

One of this country's leading cancer experts predicts that the first great breakthrough in determining the cause of cancer will probably come from research in leukemia. Many research scientists share his view, for since the first success of drugs in temporarily checking the progress of leukemia, the search for drugs and vaccines against the disease has become a major area of promise in cancer research. Until the last few years, no treatment of any sort was effective against leukemia, but the newly developed drugs now may extend the lives of patients up to three years. Such discoveries give scientists reason to hope for drugs that will add leukemia, and perhaps the rest of the cancers, to the roll of almost-forgotten diseases of the past.

BREAST

The most common type of cancer among women in this country, breast cancer, is curable in eight out of ten cases—when it is found early. Breast cancer can occur at almost any age. Learning to examine your own breasts for trouble signals is your best protection. This should be done every month at the end of your menstrual period—and monthly after the menopause too. You will be reassured to know that most lumps that women discover in their breasts are not cancer. But again, let your physician be the one to reassure you about any such finding you may make, for this is the most common sign of this form of the disease. You should note carefully any change in

size or shape of your breasts or dimpling of the skin. Early diagnosis and proper treatment could save 81 per cent of breast cancer cases instead of the present 46 per cent.



DIGESTIVE TRACT

About one-fourth of all cancers occur somewhere along this pathway of food through the body—the esophagus, the stomach, the intestines, and the rectum. Because the digestive tract is more difficult to examine than are the external parts of the body, these cancers are less easily detected in their early stages. These facts, and the vital importance of early detection, were underscored in a recent study of stomach cancer treatment: 59 per cent of the patients were saved when the cancer was discovered before it had gone beyond the wall of the stomach.

Today, the possibility for early detection of stomach cancers has been increased by use of the Papanicolaou method of recovering and studying cells from the stomach lining. This technique, first applied to the detection of uterine cancer by its discoverer, Dr. George N. Papanicolaou, follows a simple parallel in nature—the fact that the body sheds cells much as a tree sheds its leaves. Microscopic examination of these cells, commonly called the "Pap" test, can detect the presence of cancer in the part of the body they come from before other signs of the disease appear. Thousands of lives have already been saved by this recent advance in techniques of cancer detection.

But you, after all, should be the first to notice any slight early symptoms: persistent indigestion, difficulty in swallowing, rectal bleeding, or a change in bowel habits. Of course, none of these signs automatically means cancer, but if any of them lasts for more than two weeks, be sure to tell your physician about it.

MEANWHILE . . .

Your part in cancer control is still—

- To get a thorough checkup every year, no matter how well you feel.
- To learn cancer's seven danger signals,* and to see your doctor if any of them lasts more than two weeks.

1. **Unusual bleeding or discharge.**
2. **A lump or thickening in the breast or elsewhere.**
3. **A sore that does not heal.**
4. **A change in bowel or bladder habits.**
5. **Hoarseness or persistent cough.**
6. **Indigestion or difficulty in swallowing.**
7. **Change in a wart or mole.**

*Compiled by the American Cancer Society.

THE HEALTH EXAMINATION

The health examination is a personal affair, and a first-hand report is the best introduction to its details. This one, written by Dorothy Patterson and published in the Paterson Evening News *(New Jersey), won an award for the best editorial treatment by a daily newspaper on the subject of cancer. It should be remembered, however, that each examination may differ from this specific example. Other doctors may use different methods.*

It was a gray February morning. A raw wind swept in from the East River, whipping up the trash in the gutters and bringing tears to my eyes.

I was happy to step inside the warm interior of the [cancer clinic].

I'd been duly prepared—had followed my instructions carefully, right down to the castor oil cocktail.

Now I was about to undergo a complete "head to toe" inside-and-out cancer prevention examination . . .

My first stop was the weighing-in station. . . . Next, the main examining room, lined with curtained cubicles along one wall, dressing rooms along the other.

To one of these I was shown by an aide, handed a white surgical gown and told to remove all clothing except shoes and stockings.

In the curtained cubicle, I met Dr. G (all clinic personnel must be nameless) a pleasant, assured young woman who spoke with an interesting trace of an accent .

"Just sit on the table, please. Your first visit, isn't it?" she asked looking over the record form before her.

I nodded.

"I will have to ask you some questions," she said in precise English. The questions were the usual aimed at getting a complete medical history.

"Any lumps, swelling, persistent hoarseness, unnatural bleeding?" I could say "no" to all of these and I was thankful.

Now Dr. G was about to begin the actual examination.

With sure fingers, professional fingers, she examined my neck, behind my ears, under my jawbone.

Apparently nothing unusual. At least there was nothing in her manner to indicate there might be.

Then my eyes, inside my nostrils and mouth, my throat and the inner side of my lips, using a lighted scope.

A few notes on the case record. Back to me. "Clasp your hands behind your head please, lean forward," she requested. Then she was examining my breasts, then under my armpits. Her fingers slowed in their probing. She was carefully palpating the area under my right arm. "This is it," I told myself, while my stomach zoomed down to my stockinged toes. "I've got it."

"Excuse me," she said calmly. "I want Dr. L to look at this." . . .

A figure briskly stepped through the curtains into the examining room, with my doctor at her side.

"Dr. G is always finding things in the armpit," she remarked cheerily. I licked my dry lips and returned a wan smile.

Then she too pressed her fingers gently but firmly over the area. "You do have a very small palpable mass there, but from its position and in view of your history, it does not indicate any malignance," she announced when she had completed her examination.

"Every two months or so, check it. If it should show any change, have your doctor look at it.

"I see by your chart you had a benign [tumor] removed from the left side in 1948. This is in just about the same position on the opposite side.

"Such masses often occur in women your age. They represent natural fibrocystic changes that come with advancing years. Usually they are benign. But they should be watched."

Her words brought deep relief, but did she have to mention "advancing years?"

She smiled and left the booth. The examination continued. "Please remove your shoes and stockings."

I did, and Dr. G went carefully over the soles of my feet. Certain rare but deadly forms of cancer begin in such widely separated places of the anatomy as the bottoms of the feet and the eyeballs. "We take no chances," said Dr. G.

A Papanicolaou smear and an iodine stain test to spot cervical or uterine cancer came next; completely painless, except for a slight sting from the iodine. All over now but the proctoscopy [examination of the lining of the colon and rectum with a special instrument].

A digital examination can be counted on to detect a fairly high percentage of rectal cancers, but once a person reaches the high incidence years (over 40), more effective measures are required if early detection is to be achieved. Tiny lesions and polyps that may give advance warning of cancer can only be seen during proctosigmoidoscopy. They cannot be felt in the very early stages when chances of cure are best.

In less time than it took to write this description, my examination was over.

"Nothing to it," I can truthfully say. I could hardly describe it as uncomfortable.

"That's it," I heard Dr. G saying. "You may get dressed now. Before you leave please go to the X-ray room for a chest X ray. Dr. D will be waiting for you in his office when you've finished."

So far, I was sure I'd made a pretty good score. All of the pamphlets I'd read said they'd be doing biopsies or holding consultations if anything suspicious had turned up. I was feeling much relieved but not entirely convinced.

In the X-ray department I was given a metal numbering tag. It was like lining up in the bakery on Saturday morning. I was number 13. "Good thing I'm not superstitious," I thought. . . .

In about five minutes my name was called. I walked into a small windowless room. "Take off your jacket and step over here," the pretty technician directed, at the same time reaching out for my case record and the numbered tag.

"Lean forward, and put your chin here. Breathe deeply. Hold your breath when I say hold. Breathe . . . hold. Breathe . . . hold, that's all. Thank you."

The examination was over. I'd gone through the mill. Dr. D's office and the answers were just down the hall. . . .

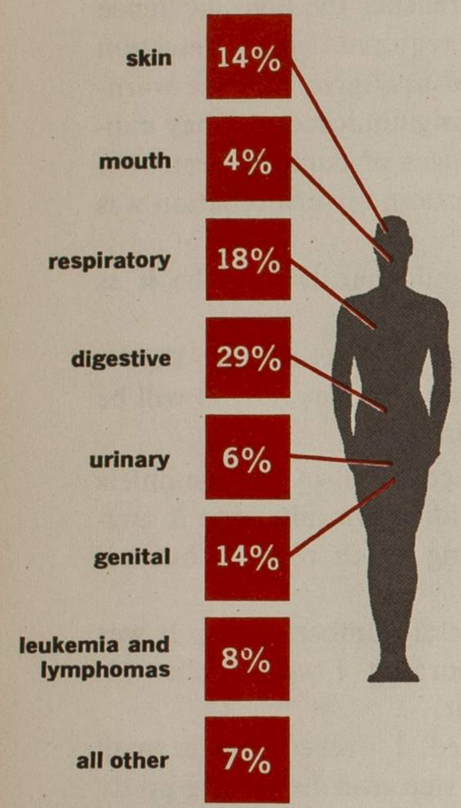
"I've got good news. You've nothing to worry about. We'll have the reports on the cytological tests in a few days. But from what we've seen so far, you can be pretty sure you don't have cancer." (This was confirmed a week later.)

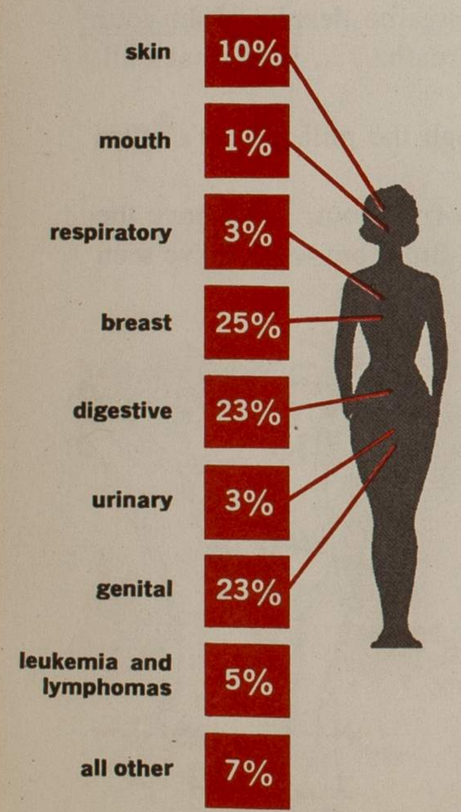
At the reception desk I checked out and picked up an appointment card for next year.

It was five minutes past 12 by the lobby clock. I'd registered at 9:15.

I walked out into the February afternoon. . . . The raw wind from the East River caught my breath. The sky was gray. There were snow flurries in the air, but for me it was spring, and the sun was shining.

CANCER INCIDENCE BY SEX





LATEST FACTS ABOUT CANCER*

Location of Cancer	Estimated New Cases 1962	Estimated Deaths 1962	DANGER SIGNALS	SAFEGUARDS
SKIN	67,000	4,000	Sore that does not heal; change in wart or mole.	Annual checkup; special tissue examination if needed; avoidance of overexposure to sun and of friction from clothing over a mole or wart.
MOUTH AND THROAT	19,000	9,000	Sore that does not heal; difficulty in swallowing; hoarseness.	Annual checkup, including examination of mouth and throat.
LUNG	45,000	39,000	Persistent cough; lingering chest ailment.	Annual checkup; chest X ray.
BREAST	63,000	24,000	Lump or thickening in the breast.	Annual checkup; monthly self-examination of breasts.
STOMACH	25,000	19,000	Indigestion that lasts two weeks.	Annual checkup.
COLON AND RECTUM	72,000	40,000	Change in bowel habits; bleeding from rectum.	Annual checkup, including examination of lining of colon and rectum with a special instrument called a "proctoscope."
KIDNEY AND BLADDER	28,000	13,000	Bleeding; difficulty in urinating.	Annual checkup, including urinalysis.
PROSTATE	31,000	16,000	Difficulty in urinating.	Annual checkup, including examination of prostate.
UTERUS	40,000	14,000	Unusual bleeding or discharge.	Annual checkup, including pelvic examination and "Pap" test.
LEUKEMIA	16,000	14,000	Paleness; fatigue; loss of appetite; persistent low fever.	Annual checkup, including special blood tests.
LYMPHOMAS	19,000	14,000	Painless swelling in neck, armpit, groin, or abdomen.	Annual checkup, with special tissue examination if indicated.

*Adapted from **1962 Cancer Facts and Figures,** American Cancer Society.

PAST AND FUTURE
—The Conquest of Disease

Less than two centuries ago, a single man, Edward Jenner, ended the scourge of smallpox in a giant stride—vaccination—that opened an entirely new frontier against disease. And toward the end of the century that followed, one genius of research after another appeared, and one disease after another was conquered—malaria in 1880, tetanus in 1889, diphtheria in 1890, yellow fever in 1899. The medical conquests of the twentieth century have become steadily more complex. Each one has seemed to demand more time, more money, more dedicated men than before—diabetes in 1922, pernicious anemia in 1926, pneumonia in 1941, poliomyetitis in 1955.

Government agencies, voluntary foundations, hospitals and universities, medical associations, and private industry have combined their massive forces in a research attack on cancer that is the greatest and costliest undertaking in medical history. Two million Americans take part in the research, public education, and service programs of the American Cancer Society, a nationwide voluntary organization founded almost half-a-century ago to fight cancer. Today, its publicly supported programs of grants and fellowships devoted to research and teaching penetrate almost every area of the cancer problem.

In specific areas of research, the resources of the federal government are brought to bear through the National Institutes of Health. A broad research program in chemotherapy, or treatment of the disease by drugs, is now being carried on by the National Cancer Institute, with its own hospital and clinical research center at Bethesda, Maryland. Government funds also assist private industry with research in this field. Compounds at the rate of 50,000 a year are being tested for their effectiveness against various cancers. Almost no branch of modern science is ignored in the cancer battle, and no possibility overlooked. Researchers have already identified viruses responsible for bringing about many plant and animal tumors. There is a possibility of similar cancer prevention in humans. Basic research aims at understanding the functions of the cell itself.

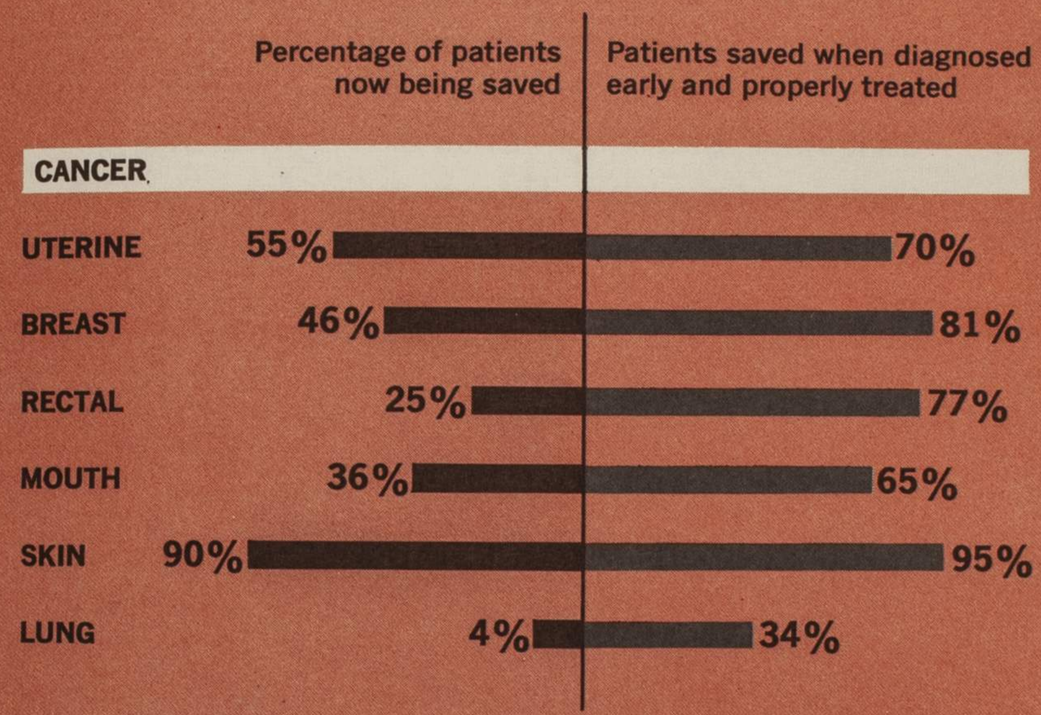
Meanwhile, the two known effective treatments for cancer—surgery and radiation—are constantly being improved with new knowledge and techniques. New drugs for preventing infections, new techniques for preventing shock, and better understanding of the body's chemical balance are making surgery safer and more effective. Through the development of new instruments and better methods of application, radiation treatment is being improved. The use of radioactive isotopes helps in treating some cancers and locating others for treatment.

And finally, don't be fooled by "secret cures." There aren't any for cancer, and anyone who tells you he has one is wasting your precious time—time that could mean the difference between an early cure and none.

WHAT YOU DON'T KNOW... CAN HURT YOU

Your part in cancer control starts with you. No matter how well you feel, take time out, once a year, for a thorough medical checkup.

Every fourth cancer death is a needless death. The present cure rate of one in three could be raised to one in two. There is still no known cure for advanced cancer, after the malignant cells have spread throughout the body. But the needless deaths can be eliminated by detection and proper treatment in the early stages.



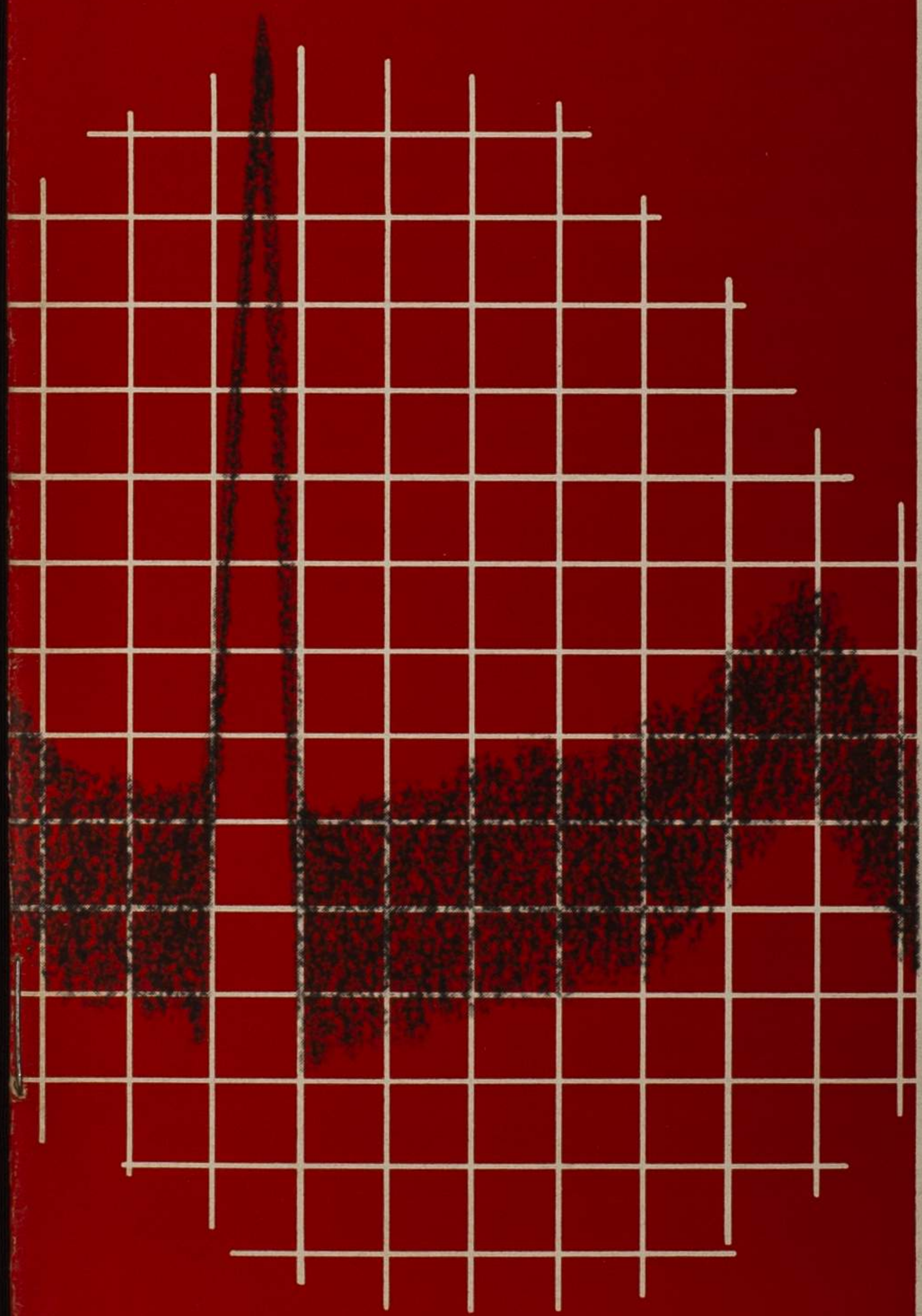
(Estimates based on reports to the Third National Cancer Conference that included comprehensive data from the Connecticut State Department of Health, as well as the records of many hospitals, clinics, and other medical sources. The figures are believed to be sound estimates for most of the United States).

"Substantial progress has been made in cancer control. One out of three is now being saved. With the knowledge and skills now at hand, many millions statistically marked for death from cancer can be saved. This depends upon prompt, effective use of all knowledge and skills... *While cancer is fatal if untreated, or treated too late, early cancer is among the most curable of the major causes of death.* Scientists cannot do it alone. Much depends on the conscience and the will of the people. There is a place for everyone in this fight."

THE AMERICAN CANCER SOCIETY

LITHO IN U.S.A.

YOUR HEART



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How much do you know about YOUR HEART?

Most people go through their 20's and 30's not giving their hearts much thought. And this is as it should be. But when people reach their 40's and 50's sometimes their attitude changes to one of fear. They may worry about getting high blood pressure or worry about the high blood pressure they have. They may read in the paper of an old schoolmate's death from a heart attack and wonder if they'll be next.

Is this worry justified? Much of it is not, although it is true that there is an actual increase in the number of older people with heart disease. For it is also true that today we have far more knowledge of how to help people with heart disease live and work happily and productively.

And if you take a look at the reasons for the increase in heart disease, you will see that they are not discouraging. People are living longer now than formerly, because today few lives are cut short by the infectious diseases of childhood and youth. Then, too, because of modern knowledge and methods of diagnosing disturbances of the heart and circulatory system, many illnesses that would formerly have been attributed to other causes are now properly classified as resulting from heart disease.

Brilliant new surgical techniques for the correction of defects of the heart have been developed in recent years, and these achievements and the discovery of other new treatments that offer great potentialities for the care of circulatory ailments enable medical authorities to face the future with confidence. Scientists feel that even greater progress will be made in the future – progress which will

bring large reductions in the amount of disability from heart disease.

HOW YOUR HEART WORKS

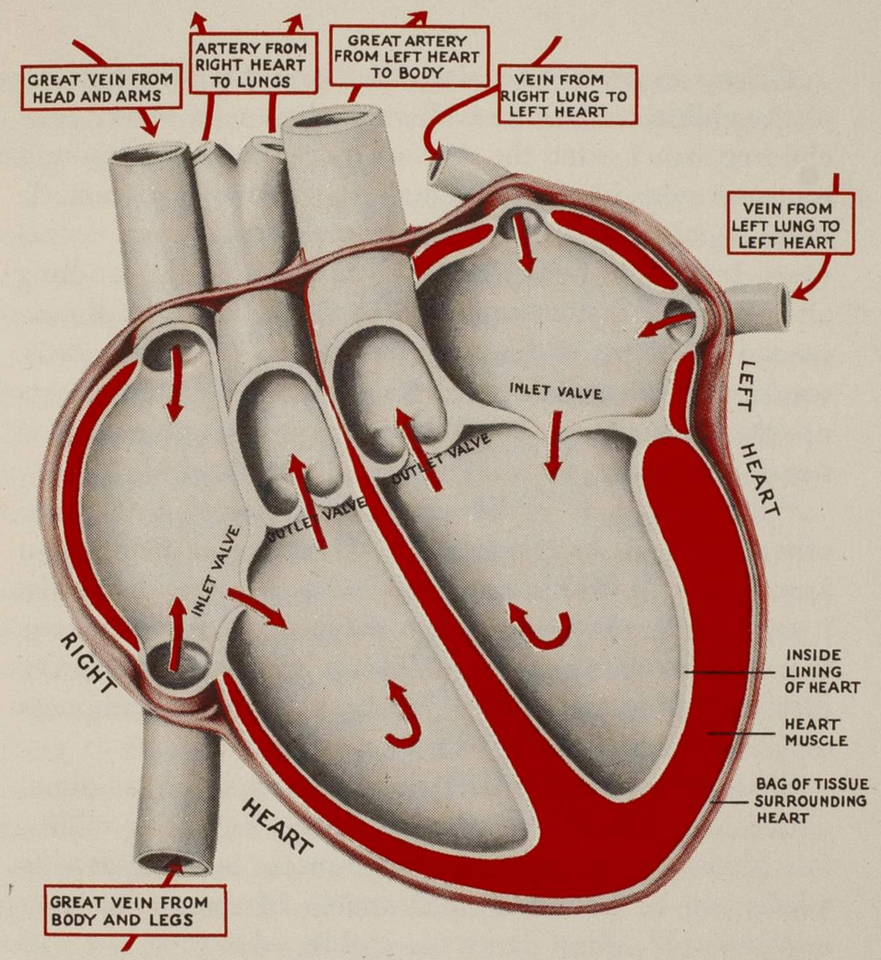
Your heart is a very strong organ. It's only about the size of a large fist, but most of its bulk is muscle. Its one job is to pump out into the arteries the blood returned to it by the veins (see the diagram). All the millions of cells in the body depend upon the rapidly circulating blood stream for life-giving oxygen and other nourishment and for the removal of wastes.

Your blood makes up only about 8 percent of your body weight. But to keep that blood in circulation through miles of blood vessels during an ordinary day of work, play, and rest, the healthy heart pumps many, many hundreds of gallons of blood at an average daily rate of 70-80 strokes a minute. Its normal pumping action is a continuous series of regular contractions and relaxations – beat-rest, beat-rest, beat-rest.

Your heart normally rests twice as much as it works. But during periods of strenuous physical activity or emotional strain, it may beat twice as fast as usual and pump out twice as much blood. The faster the heart beats, the harder it works, and the less time it has to rest. This is the reason why doctors put so much emphasis on moderation for middle-aged people and those with sick hearts.

RHEUMATIC FEVER

Perhaps you don't worry about your own heart but have a tendency to feel a little anxious sometimes about your children's hearts. If or when you do, it's reassuring to remember that only a few children out of every thousand get rheumatic fever, which precedes rheumatic heart disease, and that in recent years deaths from rheumatic fever have been sharply curtailed.



The heart is a powerful hollow muscle divided, by a muscular wall, into two main divisions – a right and a left. Each division has two chambers which work together as a unit. The blood stream flows from the body into the right side of the heart through veins. From there it is pumped to the lungs, where it gets rid of a waste gas (carbon dioxide) collected from the body cells and picks up a load of oxygen to carry to the body cells. After passing through the lungs the blood stream flows into the left side of the heart, from which it is pumped to the body through arteries.

The drawing on this page is not an exact representation of the heart in cross-section, but rather a pictorial diagram to show the course taken by the blood from the body → to the heart → to the lungs → back to the heart → and out to the body again.

There's no need to be alarmed if you discover that one of the children's friends is ill with rheumatic fever. Your children won't catch the disease itself from being around someone who has it. Although the cause of rheumatic fever is not yet known, we do know that it works in this way: Just as a lighted match starts a fire in kindling already laid in a stove or fireplace, so an attack of a disease caused by germs of the streptococcus family – tonsillitis, scarlet fever, ear infection, for example – often lights up rheumatic fever in a child or young adult who is susceptible to it.

actively
Diet
Ex, ample Rest

What makes one child more likely to get it than another? It seems to run in families and occur more often among people who live in crowded conditions that make it easy for predisposing germs such as the streptococcus to pass from one throat to another. It is possible that faulty diet and inadequate protection from cold and dampness may also play a part.

Rheumatic fever usually begins in children at about ages 5 and 6, but it can be contracted by young adults, too. However, many cases of rheumatic heart disease in adults can be traced to mild attacks of rheumatic fever or chorea (St. Vitus' dance) in childhood.

When rheumatic fever – a disease which attacks the connective tissue of the body – attacks the brain tissue, St. Vitus' dance (twitching and jerking of the face, arms, or legs) results. In practically all cases of St. Vitus' dance the motions eventually stop. But more often rheumatic fever repeatedly attacks the connective tissue of the heart, and the heart may be left permanently injured.

In the past, very few children had only *one* attack of rheumatic fever. It was far more likely that the child who had one attack would have others and that the lining of his heart would become so scarred that one or more of the heart valves would begin to function imperfectly. Now, however, the daily use of sulfa drugs or antibiotics to prevent streptococcal infection will prevent recurring attacks in a majority of patients and so lessen the possibility of heart damage.

If despite precautions a streptococcal infection *is* contracted, in a majority of cases its early treatment with an antibiotic will prevent the subsequent development of rheumatic fever.

Even in the case of a child whose heart has already been permanently injured, there is cause for optimism. He can still grow up to be a happy, moderately active individual. There have been dramatic advances in surgery for improving the function of scar-damaged heart valves.

Among the signs and symptoms that may point to rheumatic fever are pains in the joints and muscles, poor appetite, nosebleed, failure to gain weight, slight fever, unexplained tiredness, and St. Vitus' dance.

It is wise for every child with a first attack of rheumatic fever to be in a hospital to have his condition carefully examined and evaluated as well as to receive the medical care he needs. He must be kept in bed during the active phase to give his heart the rest it needs to make as good a recovery as possible. The doctor is the one to determine when the child can get up, how active he can be when he returns to normal living, and whether daily doses of an antibiotic or sulfa are advisable.

After his recovery he'll need, as do all children, a well-balanced diet, periodic medical supervision, plenty of sleep and rest, and ample amounts of play and sunshine.

HIGH BLOOD PRESSURE

It is an undeniable fact that high blood pressure is most often seen in middle-aged people. Undeniable, too, is that it causes a large number of deaths and a tremendous amount of disability. But the popular belief that high blood pressure (or hypertension) is caused by aging is

not based on fact. There is no reason for anyone to feel that because he is getting along in years he must be getting high blood pressure.

What then *is* the cause of high blood pressure? Sometimes it occurs with other diseases, such as kidney trouble or disturbances of the endocrine glands. In these cases, when the disease is cured, usually the hypertension is, too. When the cause is unknown, as it is in the majority of cases, the condition is called *essential hypertension.* It seems to run in families and occur more often among people who are overweight.

To gain an understanding of high blood pressure, it is first necessary to know the meaning of "blood pressure" – which is simply the pressure of the blood against the walls of the arteries. Everyone has blood pressure, and everyone's pressure goes up and down. It is highest during systole – the period when the heart pumps a fresh load of blood into the elastic-walled arteries which stretch to accommodate it – and lowest during diastole – the period when the heart pauses between beats to fill with blood. High blood pressure is commonly taken to mean high *systolic* pressure. However, the *diastolic* pressure is the more important of the two, as it represents the basic pressure exerted on the arterial walls independent of the additional pressure due to the contraction of the heart.

Another factor that makes everyone's blood pressure normally rise and fall is the behavior of the arterioles (the smallest branches of the arteries). The arterioles are controlled by nerves which make them constrict (tighten up) when you are all keyed up with joy, fear, anger, or worry. When they constrict, less blood can get into them from the arteries, and so the pressure of the blood in the arteries goes up. The arterioles dilate (open wider) when the excitement is over, and the pressure goes down.

The functioning of the nervous system is not the only cause of constricted arterioles. It is generally accepted by physicians that certain chemical substances set free into the blood stream from various body organs and glands can also cause the arterioles to thicken or narrow. Why this happens in some people and not in others, what the relationship is between these substances and the influence of the nervous system, and why some people have a more sensitive nervous system than others are all questions that scientists are seeking to answer. They are important questions, because high blood pressure means simply that some influence keeps the arterioles of the body in a more or less constantly constricted or tightened-up state.

The effect of hypertension on the heart is what you might expect if you screwed down the nozzle of a hose connected with a water pump. Just as the pump would have to work harder to increase the pressure in the hose to keep water spraying out of the nozzle in the same volume as before, so the heart must work harder, though not necessarily more rapidly, and the pressure in the arteries must increase to keep the blood flowing through the constricted arterioles at nearly the normal rate. To take care of this extra work, the heart muscle is forced to enlarge (the first step in the development of hypertensive heart disease). And often, but not always, the walls of the arteries become scarred, thickened, and lose their elasticity – a process called sclerosis, or hardening, of the arteries (arteriosclerosis).

The blood vessels of the heart, brain, and kidneys are particularly susceptible to hardening associated with *persistent* high blood pressure. When the blood vessels of the brain are involved, what is known as a "stroke" may occur – that is, a small artery may rupture or be closed by a blood clot.

In some cases of hypertension there may be no symptoms at all; in others there may be headaches, dizziness, fatigue, flushing, or general aches and pains. If you have any of these symptoms, you should certainly see a doctor.

Sometimes high blood pressure clears up by itself before it has a chance to damage the heart and blood vessels, and sometimes it can be lowered to a safe level by diet, drugs, or surgery. If you have high blood pressure, it's not very sensible to become preoccupied with your blood pressure readings, because more important than the height of the pressure is the ability of your blood vessels to stand the strain. The best things that you can do for yourself are to follow your doctor's advice carefully, and to live, as well as you can, a life of moderation in all things.

(Some people have low blood pressure or hypotension. There is no need to worry about this, because low blood pressure is rarely associated with illness, and your physician will tell you if it is significant.)

CORONARY ARTERY DISEASE

When you hear that the man down the block has "heart trouble," a good guess might be that he has coronary artery disease. For heart disease caused by disease of the coronary arteries (which have the job of supplying the heart muscle itself with blood) is an increasingly common form of heart disease between the ages of 40 and 60 and occurs much more often among men than women.

The chief cause of coronary artery disease is thickening of the coronary arteries (coronary atherosclerosis), not infrequently associated with hypertension. Hardening of these arteries was formerly thought to be generally associated with aging, but there is now a widely-held theory that the roughening or thickening occurs when the body's mechanism for handling certain fatty particles (either eaten or developed within the body) breaks down. Intensive studies of this process are now being made.

When the coronary arteries become narrowed, the heart muscle receives a smaller amount of blood (this sometimes results in what is known as coronary insufficiency). However, the heart muscle is so strong that it is not easily affected. Many people are able to live quite comfortably with coronary artery disease if they are careful not to place too great a strain on their hearts. Some people with a comparatively small amount of heart damage make themselves worse by worrying excessively or by refusing to slow down their pace of living.

HEART ATTACK OR CORONARY THROMBOSIS

Just about everyone is familiar with the term "heart attack," but not so many people know what it means or that the great majority of people survive their first attack.

The term heart attack usually means the sudden closing (occlusion) of a coronary artery by a blood clot (thrombus). This condition, which usually causes severe crushing pain in the chest, accompanied by weakness, pallor, and sweating, never occurs in a normal artery but only in one previously thickened or roughened. Sometimes the pain is mistaken for acute indigestion.

When such severe pain occurs, a doctor should be called immediately. He may prescribe various treatments, but most of the work of healing will be done by the body itself. When a coronary artery is closed, neighboring arteries increase in size and new branches develop to nourish the area surrounding the closed artery. During the healing period the heart needs as much rest as possible, so the patient must stay in bed for a considerable period.

In a majority of cases the healing is so successful that the patient can resume his normal activities, but sometimes some degree of insufficiency remains. If this is the case, the patient will be warned by symptoms (either difficulty in breathing or feelings of pressure or tightness in the chest) when he is overexerting. Medicine can usually relieve this discomfort.

Substances which prevent the blood from clotting (anticoagulants) may be helpful in reducing the complications of coronary thrombosis, and sometimes they help prevent or delay it. These drugs are given only under the supervision of a physician.

CARDIAC PAIN (ANGINA PECTORIS)

When the coronary arteries are diseased, pain is often experienced even when there has been no thrombosis. It can be merely a feeling of pressure in the chest or it can be a severe pressing or strangling pain under the breastbone and radiating down the arms. It is brought on by exertion and with rest usually lasts only a few minutes. Anyone who experiences it should see a doctor, who will give him medication that will ordinarily relieve the pain almost at once. The physician will also instruct the patient in how to regulate his life and use medication to prevent or lessen the severity of such attacks.

OTHER TYPES OF HEART DISEASE

The term heart disease covers more than 20 different kinds of conditions. However, the big three – rheumatic heart disease, hypertensive heart disease, coronary artery disease – account for the bulk of disabilities and deaths. Fortunately we now know how to prevent or cure some of the minor types.

Heart Disease Associated with Infections

The heart can become involved in practically any infectious disease, but very few cases of heart disease are caused by infections other than rheumatic fever or syphilis. This is true because nowadays so many communicable diseases are prevented by immunization or are treated successfully with serums or drugs before they have a chance to infect or weaken the heart.

Although heart disease resulting from syphilis is completely preventable, it can still occur if the syphilis is untreated. The syphilis germs (*spirochetes*) probably invade the aorta (the large blood vessel leading out of the lower left chamber of the heart) soon after they first enter the body, but actual damage does not show up until years later. If syphilis is detected early in its course, the spirochetes can be destroyed by drugs before they damage the aorta. When syphilis goes unchecked and its destructive work is uncovered years later, treatment can sometimes help relieve symptoms and retard further progress of the disease.

Congenital Defects

A very small number of babies are born with defects in the heart or blood vessels (congenital defects). Because of recent advances in surgical techniques, many of these children (including some of the so-called "blue babies") can be restored to normal or near normal life.

Bacterial Endocarditis

Bacterial endocarditis, usually caused by bacteria of the streptococcus family, is an infection of the endocardium or heart lining. Formerly usually fatal, it now can often be treated successfully with antibiotics. It occurs most frequently in people who have had rheumatic heart disease or who have congenital heart defects. Doctors give such people antibiotics before any surgical procedures are performed as many cases of bacterial endocarditis occur after operations or deliveries or tooth extractions. The rarer acute form develops when bacteria enter the blood stream during the course of a severe illness, such as meningitis or pneumonia. Thanks to antibiotics, acute bacterial endocarditis is usually cured before it starts, because the underlying infection is treated effectively.

WARNING SIGNALS

Sometimes the development of heart disease is not accompanied by any symptoms; sometimes the body sends out warning signals that should be heeded immediately. *They may not mean heart disease,* but it is wise to see your physician if you notice any of the following:

Unusual shortness of breath – If, say, you suddenly find that you're all out of breath after climbing one flight of stairs, you're right to ask your doctor about it. Shortness of breath associated with moderate exertion can be an early symptom of a weakened heart muscle. It is caused most commonly by the congestion of blood in the lungs which occurs when

the left side of the heart fails to pump along all the blood it receives from the right side via the lungs.

A feeling of tightness or pain in the chest directly related to exertion or excitement — There are many other reasons for discomfort in the chest besides a troubled heart. The cavity of the chest and the upper part of the abdomen, which is separated from the chest by only a thin sheet of muscle, are packed tightly with organs. Any extra pressure — for example, gas in the stomach or intestine — may give rise to pain in the chest although the heart is completely well. But if you have any doubt at all about the reason for your discomfort, play safe and see your doctor.

Swelling of the feet and ankles — When the circulation is slowed because the heart fails to pump with its customary vigor, fluid may gather in the tissues and cause swelling, which is usually first noticed in the feet and ankles. Before this condition was understood, it was called dropsy.

Unusual fatigue — If you often feel very tired even when you haven't been unusually active, it may be a sign that you have high blood pressure or an impaired heart.

But what about skipped beats, rapid beatings, palpitations of the heart (consciousness of the heartbeat)? Aren't they symptoms of heart disease? Usually they are not, for, curiously enough, the heart can behave queerly and alarmingly without there being anything wrong with it. If you feel that your heart is not behaving normally, of course you'll want to see a doctor; but after he examines you, if he tells you that there is nothing wrong, *believe him!*

THE HEART-BLOOD VESSEL EXAMINATION

Is there anything you can do to prevent heart disease? The American Heart Association says, "Some forms of heart disease can be prevented . . . a few can be cured. *All heart cases can be cared for best if diagnosed early.*"

Early diagnosis is possible, of course, only if you report faithfully year after year at your doctor's office for a check-up and if you consult him in between times at the appearance of any symptoms.

If you tell your doctor you are worried about your heart or your blood pressure, the first thing he will do is ask you to describe your symptoms. Symptoms are indications of trouble which only you can feel. As they give your doctor important information about you, it is essential that you describe them accurately. He will then proceed to look for signs of trouble — things which he himself can detect with the help of various instruments and tests.

HOW'S YOUR BLOOD PRESSURE?

Your physician will measure the amount of pressure exerted by your blood against an arterial wall at the peak of the heartbeat (systole) and at the pause between beats (diastole). A series of such readings will give him valuable information about your blood pressure, but if your pressure is high, he will also need to have information about your arteries. What is the condition of the arteries? Any hardening? How much pressure can they stand?

The small blood vessels at the back of the eyes can be seen easily. Your doctor will examine them with an instrument called an ophthalmoscope and thus learn something about the condition of the important small blood vessels. From an analysis of your urine (urinalysis), and perhaps by other tests of kidney function, he will gain valuable information about the condition of your kidneys. This knowledge is important, because high blood pressure or hypertension is sometimes associated with kidney disease.

HOW'S YOUR HEART?

Usually the physician first feels (palpates) and taps (percusses) the cardiac region of the chest to determine the position, size, and shape of your heart. In addition, he may ask you to stand behind the screen of a fluoroscope while he studies the shadow of your heart cast by X-rays on the screen. To have a permanent record for further study, he may also have an X-ray picture taken.

By listening to the sounds made by your heart in action through a stethoscope, which magnifies them, the doctor

is able to hear "murmurs" or sounds indicating other deviations from normal. Heart murmurs are abnormal sounds which may or may not indicate that something is wrong with the heart. A great many murmurs have little or no importance. Others may indicate that damage has been done to the valves or heart muscle as a result of rheumatic fever or some other condition.

Your physician may also have an electrocardiogram made. This is a written record of the electrical activity which sweeps down and over your heart at each heartbeat. The sensitive apparatus that does the writing at the dictation of the heart is called an electrocardiograph. A physician can tell whether the wave patterns recorded in an electrocardiogram are normal or abnormal, and so gain additional evidence about the condition and action of your heart muscle.

There are many other methods of examining the heart which your doctor will use if he thinks it necessary. He'll probably want to determine how well your heart functions by seeing how it behaves in various forms of physical exercise. Testing the extent and speed with which the red cells of the blood settle when a sample of blood is allowed to stand in a tube (sedimentation test) is a valuable aid in studying rheumatic fever.

The development of new techniques for accurate diagnosis increases the importance of your annual checkup. Be sure to make it a yearly "must."

Recently two new diagnostic techniques have been used with considerable success where special studies are needed. One of these is a method of injecting, into the veins of the arms, an opaque material. Its progress through the heart can be followed by X-rays and thus malformations of the heart can be more easily detected.

The other is a technique (cardiac catheterization) for testing the amount of oxygen in the blood and the pressure of the blood in the chambers of the heart and vessels.

If your doctor finds that you have any form of heart trouble, he will tell you so. Sometimes when people are told that they have heart trouble, they begin to blame themselves. They think if only they had not exercised so much, or eaten so much, or smoked so much. They are wrong in feeling this way, for doctors today believe that although such overindulgences are harmful after the heart is diseased, they rarely bring on injury to the heart.

Your doctor has at his command many potent drugs and new surgical techniques, but even more important than what he can do for you is what you can do for yourself. So instead of blaming yourself or despairing, you will want to work out with him a new living plan and then follow it.

The object of the way of living your doctor will recommend will be the lifting of all removable burdens – for example, those imposed by fatigue, overweight, infections, and emotional upsets.

Exercise – You will want to avoid very strenuous or prolonged exertion, because it puts an extra strain on a damaged heart. But if you have high blood pressure, mild exercise will probably be prescribed, because after mild physical activity, the blood pressure tends to fall.

Your doctor will prescribe in some detail the amount of exercise you can or should take, and he'll give you some general rules to follow, such as: Get as much sleep or rest as you can; don't run or walk too fast; don't walk against a high wind; don't climb stairs unnecessarily (when you do have to mount stairs, do it slowly and rest now and then). The American Heart Association has prepared material to help housewives with heart disease simplify their work. (Ask your doctor or local heart association for it.) But you are the one who must abide by the rules, and you are the one who, in taking exercise, must exercise judgment as well.

Eating – What does eating have to do with heart trouble? During digestion the heart's work is increased, so the more you eat, the more work your heart must do. The burden of extra weight around a body organ makes the work of that organ more strenuous, thus imposing an extra strain on the heart.

A diagnosis of heart trouble or high blood pressure will probably mean not that you'll have to give up your favorite foods, but rather that you'll have to eat more moderately of them. If you're overweight, your doctor will probably advise you to diet, and he may suggest five or six light meals a day instead of the usual three so as to spread out the work the heart does during digestion. He may prescribe a low sodium diet. Many hypertensive patients have benefited from such a diet. Many doctors prescribe for cardiac patients a diet which limits the types and amounts of fats. Your doctor will tell you what is best for *you*.

Smoking – If you're a confirmed smoker, you perhaps feel that smoking relaxes you. However, it seems to have the opposite effect on your blood vessels. Experiments have shown that when you smoke, your arterioles almost immediately tighten or constrict, and your blood pressure goes up. So of course if you have high blood pressure or hardening of the arteries, it is advisable for you not to smoke or to limit your smoking. Your doctor will advise you about this.

General Health Care – Run over in your mind the general rules for health that should be followed by everyone. Then underscore each rule three times, for if you have heart trouble, you should be even more careful of your general health than are your hardier colleagues. For example, everyone should see a physician regularly, but you, of course, will need to keep in close touch with a doctor, as your diet, weight, activity, amount of rest – your way of life – should have constant and careful medical supervision.

Everyone should avoid infections, but you who already have a handicapped heart must take particular care to prevent further damage to it by avoiding infections such as colds, sore throats, pneumonia, and infections of the sinuses and teeth. If you should develop an acute infection, be sure to call a doctor.

Perhaps at this point you feel that you've heard a discouragingly large number of do's and don't's – maybe you *don't* want to hear any more! But actually the general restrictions have not been so many; there is still a vast amount of enjoyable activity available to you.

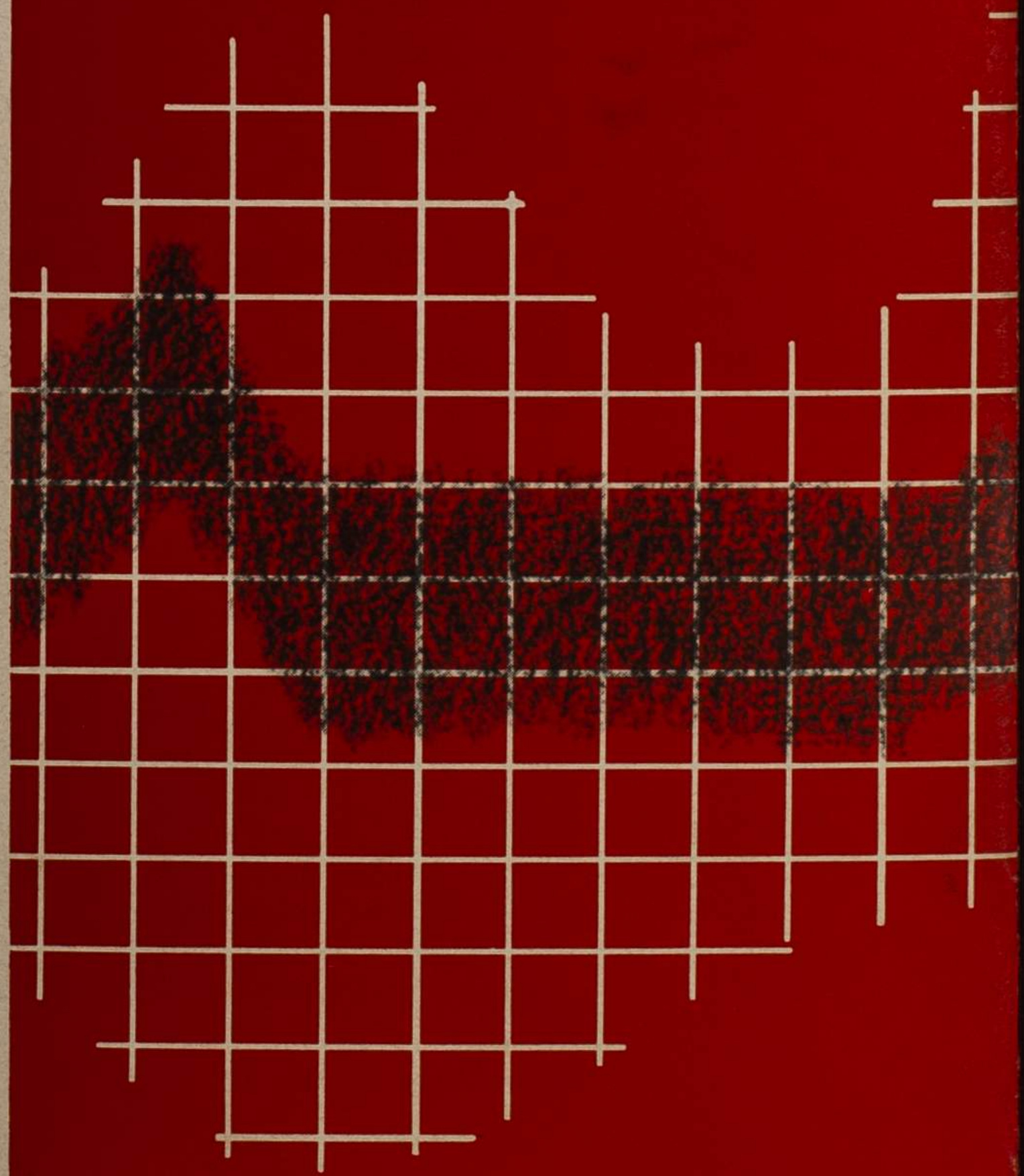
So do live up to your fullest potentialities. If you have to cut out your favorite sport, why not look around for a less strenuous one? It doesn't have to be taxing to be enjoyable! As for work, most people with heart disease can and do work. Usually they are able to stay at their same jobs. Your doctor, of course, will advise you about this.

Some local heart associations have set up work evaluation clinics. And for the small number of people who must change jobs, programs to help them do this successfully have been developed in many communities. Such programs help a person decide what new kind of work he is suited for, help him train for it, and aid him in actually getting a job. Ask your doctor or your local heart association about the facilities available in your community.

People who are willing to try for serenity – who are able to go ahead with less speed and less worry, who face their handicaps without fear, coaxing their hearts along without letting their impairment become an obsession – these are the people who have the best chance for a full, happy, and lengthy life despite heart trouble.

The text of this pamphlet was prepared with the cooperation and advice of the American Heart Association, 44 East 23d Street, New York 10, N. Y. For information about other publications relating to heart disease write to that Association.

The cover design of Your Heart *is an artist's rendition of an electrocardiogram (see page 14).*



METROPOLITAN LIFE INSURANCE COMPANY

HOME OFFICE: NEW YORK

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San Francisco

Canadian Head Office
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YOUR SOCIAL SECURITY

FEDERAL OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE

YOUR SOCIAL SECURITY

The basic idea of old-age, survivors, and disability insurance under the social security law is a simple one.

During working years employees, their employers, and self-employed people pay social security taxes which go into special funds; and

When earnings have stopped because the worker has retired, or died, or is disabled, benefit payments are made from the funds to replace part of the earnings the family has lost.

Nine out of ten working people are now building protection for themselves and their families under the social security law.

SOCIAL SECURITY OFFICES

The Social Security Administration has district offices conveniently located throughout the country. These offices have representatives who go regularly to other communities to serve the public.

If you have any questions about social security not answered in this booklet, call at one of these district offices or get in touch with it by telephone or mail. The people who work there will be glad to answer questions and to explain your rights. They will also assist groups or organizations in informing their members about social security through talks, films, and other activities.

To find the address of your local social security office, ask at your post office or look in the telephone directory under United States Government, Department of Health, Education, and Welfare, Social Security Administration.

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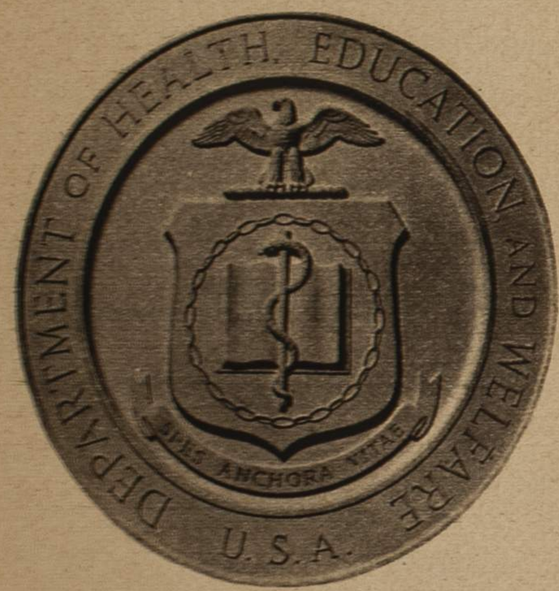


FEDERAL OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE

Chapter 1

AMOUNT OF WORK REQUIRED

Three basic types of benefits are payable under the Federal social insurance system of social security—old-age, survivors, and disability insurance benefits.

To get monthly payments for yourself and your family, or for your survivors to get payments in case of your death, you must first have credit for a certain amount of work under social security.

You may have earned social security credit by working in employment covered by the law at any time after 1936 and in self-employment covered by the law after 1950.

Social security credits are called "quarters of coverage." In general, this means a 3-month period in which wages of $50 or more are paid. A self-employed person gets four "quarters of coverage" for a year in which his net earnings are $400 or more.

Since most people have regular earnings, and many have earnings reported annually, the amount of credit required is given here in years of work. Credit for four quarters, earned at any time, is equal to credit for 1 year of work under social security.

If you should stop working under social security before you have earned sufficient credit to become insured, no benefits will be payable to you. However, the earnings credited to you will remain on your social security record; then if you should later return to work covered by social security, regardless of your age, both your past earnings and any additional earnings will be combined in determining whether you qualify for benefits.

Fully Insured

Just how much credit you must have to be fully insured depends upon the year you reach 65 if you are a man, or 62 if you are a woman, or upon the date of your death or disability if you die or become disabled before reaching that age.

You are fully insured if you have credit for at least as many years as shown on the appropriate line of the following chart.

A worker who reaches 65 (62 for women) or dies	*Will need credit for no more than this much work*
In 1957 or earlier	1½ years
1958	1¾
1959	2
1960	2¼
1961	2½
1962	2¾
1963	3
1964	3¼
1965	3½
1966	3¾
1967	4
1968	4¼
1969	4½
1970	4¾
1971	5
1975	6
1979	7
1983	8
1987	9
1991 or later	10

If you become disabled or die before reaching 65 (62 if a woman) you are fully insured if you have credit for ¼ year of work (earned at any time after 1936) for each year after 1950 and up to the year of your death or disability. In counting the number of years after 1950, omit the year in which you reached age 21 and all previous years.

No one is fully insured with credit for less than 1½ years of work and no one needs more than 10 years of work to be fully insured. Having a fully insured status, however, means only that you are eligible for benefits—it does not govern the amount of your benefits. The amount will depend on your average earnings.

Currently Insured

You will be currently insured if you have social security credit for at least 1½ years work within the 3 years before you die or become entitled to retirement benefits.

The table on page 14 shows, for each type of social security benefit, whether the worker must be fully insured, currently insured, or both. Your local social security office has copies of a leaflet called "Social Security Benefits." Ask for a copy if you would like more information about how social security credits are earned.

Chapter 2

OLD-AGE RETIREMENT PAYMENTS

When you have worked long enough to be "fully insured" and have reached 62, you and certain members of your family can be paid monthly social security payments while you are "retired." It is not necessary to stop work completely to get benefits; see page 12 for information about working while you receive payments.

The Amount of Your Payments

The amount of your payments is figured from your average earnings under social security. The more regularly you work under social security and the higher your earnings, the higher your benefit will be.

The amount of your old-age payments will also depend on whether you start getting them at 65 or decide to get them earlier. Your monthly payment will be lower if you choose to receive benefits before you are 65.

Most people may figure their average yearly earnings by

(1) counting the number of years after 1955 and up to, but not including, the year they reach 65 (62 for women). (If the result is less than 5, increase it to 5.)

(2) selecting an equal number of years after 1950 in which their earnings were highest.

(3) averaging their earnings in the selected years.

The exact amount, of course, cannot be figured until you apply for the payments. You can, however, estimate the amount of your average yearly earnings and find about what your benefit will be from the table on page 10.

Your Application for Payments

Before your payments can start you must get in touch with your social security office and apply for them.

If you have proof of your age (a birth certificate or a baptismal certificate made at, or shortly after your birth, for example) take it with you when you apply. If your wife and children are eligible for payments, you should also take your marriage certificate and the children's birth certificates.

Do not delay applying because you do not have some of these papers available. When you apply, your local social security office will suggest other proofs that may be used.

Increasing Payments by Additional Work

If it will result in higher benefits, you may have your benefit refigured after the end of the year in which you applied for benefits, or after any later year in which you earn over $1,200.

DISABILITY PAYMENTS

If you become disabled before age 65, you may qualify for monthly disability benefits, and certain members of your family may also be paid monthly benefits.

How Disabled Must You Be?

To be found disabled under the social security law, you must have a condition so severe that, in the words of the law, it makes you unable to "engage in any substantial gainful activity." If you can't do your regular work, but can do other substantial gainful work, you cannot qualify under these disability provisions.

Your disability must be the kind of physical or mental condition which will show up in medical examinations or tests. It must have lasted for at least 6 months and be expected to continue for a long and indefinite time.

How Much Work Is Required?

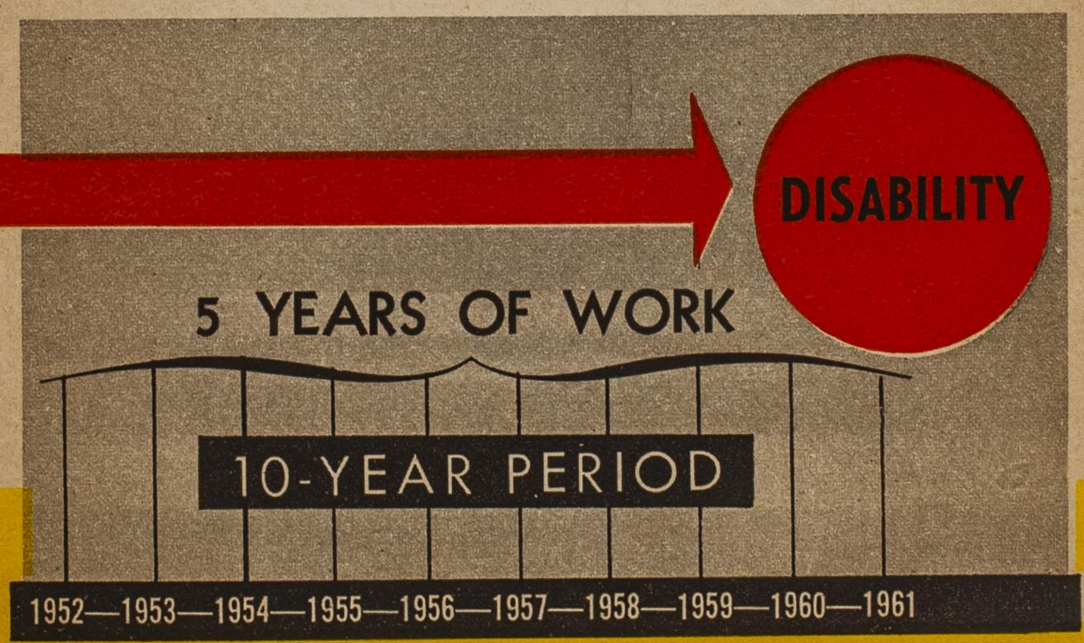
To get disability insurance payments, you must have social security credit for at least 5 years of work in a 10-year period ending when you are disabled.

Proof of Your Disability

If you ever apply for disability insurance benefits, your social security office will give you a medical report form to have filled in by your doctor or by a hospital or clinic where you have had treatment. You are responsible for whatever charges the doctors or the hospital may make for their services.

The Amount of Your Disability Benefit

The amount of your monthly disability insurance payment is the same as the amount of the old-age insurance benefit you would get if you were already 65. Figure your average earnings as if you reached 65 (62 if a woman) at the time you became disabled (see page 4). For more detailed information, ask your local social security office for a copy of Booklet 29, "If You Become Disabled."



FAMILY PAYMENTS

When a worker receives old-age or disability benefits, or dies, payments can also be made to certain of his dependents, including:

- unmarried children under 18 years of age;
- unmarried children 18 or over who were severely disabled before they reached 18 and have remained so since;
- a wife, regardless of her age, if she is caring for a child who is getting payments based on the worker's social security account;
- a wife 62 or older even if there are no children entitled to payments;
- a dependent husband 62 or over.

Additional survivors' benefits may be paid to:

- dependent parents at 62;
- a divorced wife, if, before the worker's death, she is dependent on him for her support pursuant to a court order or agreement, and if she has in her care his child who is also entitled to payments.

In addition, a lump-sum death payment may be made to the widow or widower who was living in the same household with the worker at death; otherwise, it can go to pay the worker's burial expenses. The lump sum is three times the amount of his monthly retirement benefit, but cannot exceed $255.

If a person becomes entitled to monthly benefits based on the social security account of more than one worker, he will receive each month no more than the largest benefit. For example, a woman

who is eligible for benefits based on her own earnings and also for wife's benefits based on the earnings of her husband will receive an amount equal to the larger of the two benefits.

Amount of Your Family's Benefits

If you receive old-age or disability benefits, the monthly payments to your wife, child, or dependent husband will be one-half of the benefit you receive. In the event of your death, your eligible widow while under 62, and your children and parents (if both parents survive) will receive three-fourths of your benefit amount. Your widow over 62, or your parent, if only one parent survives, will receive 10 percent more. However, benefits may be less than these amounts when they must be reduced to keep the total family payments within the maximum provided in the law.

If the wife of a living worker chooses to start getting payments before she reaches 65, she gets a reduced amount for as long as she receives wife's benefits unless she is caring for a child who is getting payments on her husband's account. Full benefits to a widow, however, are payable at 62.

Proofs Needed

When a wife or widow applies for benefits she should, if possible, bring with her—her marriage certificate, her birth certificate, and the birth certificates of any children who may be eligible for payments.

However, she should not delay applying because she does not have some of these papers available.

Proof of support is required before benefits can be paid to a parent or husband. Generally, this must be done within 2 years after the worker dies, or in the case of a husband, within 2 years after his wife applies for old-age or disability benefits.

An Application Is Necessary

Survivors or dependents insurance payments cannot start until an application has been made. When a worker applies for old-age or disability benefits, his eligible dependents should also apply. When a person who has worked under the social security law dies, some

EXAMPLES OF MONTHLY PAYMENTS

Average yearly earnings after 1950 (*See page 4*)	$800 or less	$1,200	$1,800	$2,400	$3,000	$3,600	$4,200	$4,800*
RETIREMENT								
Retirement at 65 or later / Disability benefits	$40.00	$59.00	$73.00	$84.00	$95.00	$105.00	$116.00	$127.00
Retirement at 64	37.40	55.10	68.20	78.40	88.70	98.00	108.30	118.60
Retirement at 63	34.70	51.20	63.30	72.80	82.40	91.00	100.60	110.10
Retirement at 62	32.00	47.20	58.40	67.20	76.00	84.00	92.80	101.60
Wife's benefit at 65 or with child in her care	20.00	29.50	36.50	42.00	47.50	52.50	58.00	63.50
Wife's benefit at 64	18.40	27.10	33.50	38.50	43.60	48.20	53.20	58.30
Wife's benefit at 63	16.70	24.60	30.50	35.00	39.60	43.80	48.40	53.00
Wife's benefit at 62	15.00	22.20	27.40	31.50	35.70	39.40	43.50	47.70
SURVIVORS								
Widow 62 or over	40.00	48.70	60.30	69.30	78.40	86.70	95.70	104.80
Widow under 62 and 1 child	60.00	88.50	109.60	126.00	142.60	157.60	174.00	190.60
Widow under 62 and 2 children	60.00	88.50	120.00	161.60	202.40	236.40	254.00	254.00
One surviving child	40.00	44.30	54.80	63.00	71.30	78.80	87.00	95.30
Two surviving children	60.00	88.50	109.60	126.00	142.60	157.60	174.00	190.60
Maximum family payment	60.00	88.50	120.00	161.60	202.40	240.00	254.00	254.00
Lump-sum death payment	120.00	177.00	219.00	252.00	255.00	255.00	255.00	255.00

**Because earnings of $4,800 cannot be credited for any year before 1959, retirement benefits in this column will not generally be payable for a few years to come.*

member of his family should get in touch with the social security office promptly.

An application for a lump-sum payment must ordinarily be made within 2 years after the worker's death.

RIGHT OF APPEAL

If you do not think that the decision made on your claim is correct, you may ask the Bureau of Old-Age and Survivors Insurance to reconsider it. If, following this reconsideration, you wish to have a hearing on your claim, you may ask for a hearing by an examiner of the Office of Hearings and Appeals. There is no charge for reconsidering your claim or for review or hearing by the hearing examiner.

Your social security office will explain how you may appeal and will help you to get your claim reconsidered, or request a hearing.

After you receive notice of the hearing examiner's decision, if you are not satisfied with it you may ask for a review by the Appeals Council of the Social Security Administration in Washington.

If you are not satisfied with the decision of the Appeals Council, you may take your case to the Federal courts.

IF YOU WORK AFTER PAYMENTS START

When you apply for old-age or survivors insurance benefits, your social security office will explain to you how your earnings will affect your benefit payments and will tell you when and how to make reports to the Social Security Administration.

When you earn $1,200 or less in a year, you get all your benefits. If you earn more than $1,200 in a year, $1 of your benefits (or your family benefits) may be withheld for each $2 you earn from $1,200 to $1,700. For every $1 you earn over $1,700, $1 in benefits may be withheld. Family benefits include all benefits payable to you and to any dependents receiving payments based on your social security record.

For example, you work throughout some year (after 1960) and earn a total of $1,750. Three hundred dollars (one-half of the first $500 over $1,200, plus the $50 over $1,700) in benefits would then be withheld for that year. If your monthly benefit rate (or the monthly

family benefit rate) is $100, checks for the months of January, February, and March of that year would be held back to make up for the amount of benefits not due you.

Regardless of your total earnings for a year benefits will be payable for any month in which you neither earn wages of more than $100 nor perform substantial services in self-employment. Benefits will also be payable for any month in which you are 72 or over.

The decision as to whether you are performing substantial services in self-employment depends on the amount of time you devote to your business, the kind of services you perform, how your services compare with the services performed in past years, and other circumstances of your particular case.

The earnings of a person who is receiving benefits as a dependent or as a survivor affect only his own benefits and will not stop payments to other members of his family.

Earnings from work of any kind, whether or not it is covered by the social security law, must be counted in deciding the amount of benefits due for a year. Total wages (not just take-home pay) and any net earnings from self-employment must be added together in figuring up your earnings for the year. However, income from savings, investments, pensions, and insurance does not affect your benefits and should not be counted in with your earnings.

In the year in which you first become entitled to benefits, you must count your total earnings for the entire year in determining the amount of benefits that can be paid to you.

After you reach 72, you can earn any amount and still get payments for the months in which you are 72 or over. However, your earnings for the entire year in which you reach 72 must be counted in figuring the amount of benefits due you for the months in that year before your 72d birthday.

Beneficiaries Outside the United States

Special rules affect the payment of benefits to people outside the United States. If you intend to go outside the United States while you are receiving benefits, get more information about these rules from your social security office.

PAYMENTS

RETIREMENT

Monthly payment to—	*If you are—*
You as a retired worker and your wife and child.....	Fully insured.
Your dependent husband 62 or over.....	Both fully and currently insured.

SURVIVORS

Monthly payments to your—	*If at death you are—*
Widow 62 or over...	Fully insured
Widow or dependent divorced wife if caring for your child who is entitled to benefits.....	Either fully or currently insured.
Dependent child.....	Either fully or currently insured.
Dependent widower 62 or over.....	*Both* fully and currently insured.
Dependent parent at 62....	Fully insured.
Lump-sum death payment..	Either fully or currently insured.

DISABILITY

Monthly payments to—	*If you are fully insured—and meet work requirements explained on page 6.*
You and your dependents if you are totally disabled for work	

Chapter 3

SOME EVENTS THAT STOP PAYMENTS

If one of the events listed below occurs, payments are stopped. The last check due is the one for the month before the event.

Generally, if a person receiving monthly benefit payments as a dependent or as a survivor marries a person who is not also a beneficiary, his or her right to payments stops.

Payments to a child under 18 stop whenever the child marries.

Payments to a wife or dependent husband are ended if a divorce is granted.

Payments to a wife or widow under 62 will stop when she no longer has in her care a child who is also entitled to monthly payments.

When a child entitled to benefits reaches age 18, his payments are stopped unless he is disabled. When a child is adopted, his payments end unless he is adopted by his stepparent, grandparent, aunt, or uncle.

When any person receiving monthly benefits dies, his or her payments are ended.

If a person receiving disability benefits recovers or returns to work, his payments (and any payments to his dependents) will stop, but not right away—he will be given a chance to test his ability to work and to adjust. *If a beneficiary goes to work despite a severe handicap,* he can continue to be paid benefits for as long as 12 months. *If a beneficiary recovers from his disability,* his benefits will continue to be paid for 3 months.

Chapter 4

SOCIAL SECURITY TAXES

Federal old-age, survivors, and disability insurance benefits are paid for by taxes based on workers' earnings.

If you are employed, you and your employer share the tax equally. If you are self-employed, you pay the tax at a lower rate than the combined rate for an employee and his employer.

As long as you have earnings that are covered by the law, you continue to pay the social security tax regardless of your age and even though you may be receiving social security benefits.

How Taxes Are Paid

If you are employed, your tax is deducted from your wages each payday. Your employer sends it, with an equal amount as his own share of the tax, to the District Director of Internal Revenue.

If you are self-employed and your net earnings are $400 or more in a year, you must report your earnings and pay your social security self-employment tax each year when you file your individual income tax return. You may have to file an income tax return and pay the social security self-employment tax even if you are not required to pay any income tax.

Your wages and self-employment income are entered on your individual record by the Social Security Administration. This record of your earnings will be used to determine your eligibility for benefits and the amount you will receive.

The maximum amount that can count for social security and on which you pay social security taxes is:

$3,000 a year for 1937–50
$3,600 a year for 1951–54
$4,200 a year for 1955–58
$4,800 for 1959 and thereafter.

Although amounts over the maximums may have been reported to your social security account and may show up on your earnings statement, they cannot be used to figure your social security benefit payments.

When you work for more than one employer in a year and pay social security taxes on wages over $4,800, you may claim a refund of the excess taxes on your income tax return for that year. Questions regarding these refunds should be directed to your District Director of Internal Revenue. If you work for only one employer and he deducts too much in taxes, you should apply to the employer for a refund.

The law does not provide for a refund of the social security taxes properly paid. A refund is made only when more than the required amount of taxes has been paid.

This table shows the present tax rates and scheduled increases:

Calendar Year	*Employee*	*Employer*	*Self-Employed*
1961	3%	3%	4.5%
1962	3⅛%	3⅛%	4.7%
1963–65	3⅝%	3⅝%	5.4%
1966–67	4⅛%	4⅛%	6.2%
1968 and after	4⅝%	4⅝%	6.9%

This schedule of tax rates is designed to meet the future obligations of the program and keep it on a self-supporting basis.

THE TRUST FUNDS

The social security taxes collected by the Internal Revenue Service are credited to the Federal Old-Age and Survivors Insurance Trust Fund and the Federal Disability Insurance Trust Fund. They are used to pay the benefits and administrative expenses of the program and may be used for no other purpose. Funds not required for current benefit payments and expenses are invested in interest-bearing U.S. Government securities.

Chapter 5

KINDS OF WORK COVERED

Almost every kind of employment and self-employment is covered by social security. Some occupations, however, are covered only if certain conditions are met, as explained below.

Family Employment

Work done by a parent as an employee of his son or daughter, in the course of the son's or daughter's trade or business, is covered beginning January 1, 1961. Domestic work in the private household of a son or daughter is not covered.

Military Service

For Active Duty in 1957 or Later

If you perform active duty or active duty for training as a member of the uniformed services of the United States after 1956, your service counts toward social security protection for you and your family. Your base pay is credited to your social security record.

For Active Duty After September 15, 1940, and Before 1957

Free social security credits of $160 a month may be given under certain circumstances. When credits are given, they count the same as wages in civilian employment. These credits are not actually listed on your record; however, if this credit is needed when an application is filed on your account, the people in the social security office will ask for proof of your military service.

Farming

You can receive social security credit as a farm operator or rancher if your net earnings from self-employment are $400 or more in a year. If you are a self-employed farmer, you must report your net earnings from self-employment as a part of your income tax return. You may be able, however, to use either your actual net earnings or an amount figured under an optional method. An explanation of this optional method, along with facts about how to report farm earnings and other information for farmers, is given in a booklet called "Social Security and Farm Families." Ask your local social security office for a copy. It's free.

Ministers and Members of Religious Orders

Ordained, commissioned, or licensed ministers performing services in the exercise of their ministry, Christian Science practitioners, and members of religious orders who have not taken a vow of poverty can secure social security coverage by filing a waiver certificate (Form 2031) with the Internal Revenue Service indicating their desire to be covered as self-employed persons.

All clergymen have until April 15, 1962, to file this certificate. Generally speaking, after April 15, 1962, only newly ordained clergymen may elect coverage.

Farm Employees

If you work for a farmer or ranch operator, you are entitled to social security credit:

If an employer pays you $150 or more in cash during the year for farmwork, or

If you do farmwork for an employer on 20 or more days during a year for cash wages figured on a time basis (rather than on a piece-rate basis).

Household workers employed on a farm or ranch operated for profit are covered under the same rules as other farm employees.

Cash wages paid to members of a farm labor crew are covered by the social security law under the same rules that apply to other farm-workers.

Agricultural work performed by foreign workers admitted to the United States on a temporary basis to do agricultural work is not covered by the law.

American Citizens Working Abroad

U.S. citizens employed by American employers in foreign countries or aboard vessels or aircraft of foreign registry are covered by social security. (Seamen and airmen employed on American vessels or aircraft are ordinarily covered regardless of citizenship.)

U.S. citizens working abroad for a foreign subsidiary of an American corporation may be covered by the law if the parent corporation makes an agreement with the Secretary of the Treasury to see that social security taxes are paid for all U.S. citizens employed abroad by the foreign subsidiary.

Household Workers

A domestic worker's cash wages (including carfare if paid in cash) from an employer for work in a private household are covered by the law if they amount to $50 or more in a calendar quarter.

If you employ a household worker who will come under the law and you are not receiving the forms for making the tax reports, ask your social security office or your Internal Revenue Office for a copy of Leaflet OASI–21, "Social Security and Your Household Employee." This leaflet explains how to get the forms and make the reports.

Employees of State and Local Governments

State and local government employees may be covered by social security under voluntary agreements between the individual State and the Federal Government.

If you work for a State or local government and are not getting social security credit for your earnings, you can find out more about this

by asking your social security office for a booklet called "OASDI for Employees of State and Local Governments."

Employees of Nonprofit Organizations

Employees of nonprofit organizations are covered by the law only if they earn $50 or more in wages in a calendar quarter. Employees of nonprofit organizations operated exclusively for religious, charitable, scientific, literary, educational, or humane purposes, or for testing for public safety may be covered by the law only if—

The organization files with the Director of Internal Revenue a certificate (Form SS–15) waiving its exemption from the payment of social security taxes, and

Those employees who wish to be covered indicate their desire to participate in social security by signing the Form SS–15a that goes with the certificate.

Employees who sign the form and employees who are hired or rehired after the waiver certificate is filed are covered.

Railroad Employment

Benefits based on work for a railroad are ordinarily paid by the Railroad Retirement Board instead of the Social Security Administration. However, if you have less than 120 months of railroad service (10 years) when you retire or become disabled, your earnings for railroad work after 1936 are considered in figuring your disability or old-age payments under the social security law.

Earnings for railroad work are reported to the Railroad Retirement Board and not to the Social Security Administration. Your social security record will not include earnings for any work you may have done for a railroad.

A retired worker who has a least 120 months (10 years) of railroad service and who has also done enough work under social security to

qualify for social security payments may receive retirement benefits under both the railroad retirement and old-age, survivors, and disability insurance systems.

Survivors of a worker can be entitled under one system only, either railroad retirement or old-age, survivors, and disability insurance, even though the worker may have been entitled during his lifetime under both. Regardless of which program will pay the benefits, records of the deceased worker's railroad earnings after 1936 and his earnings under social security will be combined to determine whether he is insured and the amount of any payments to survivors.

Railroad workers or their survivors may get further information from the nearest social security or railroad retirement office, or they may write to the Railroad Retirement Board, 844 Rush Street, Chicago 11, Illinois.

Federal Employment

Most employees of the Federal Government not covered by another Federal retirement system are covered by social security.

Chapter 6

WORK NOT COVERED

The principal kinds of work not covered are self-employment as a doctor of medicine and employment in Federal jobs covered by a Federal retirement system.

Any household work or work not in the course of a trade or business done by a parent as an employee of his son or daughter is not covered. Also not covered is work done by a child under 21 for his parent, by a husband for his wife, or by a wife for her husband. This applies also to foster or steprelationships.

ACCOUNT NUMBER CARDS

If your work is covered by the Social Security Act, you must have a social security account number. This account number, which is shown on your social security card, is used to keep a record of your earnings. You should use the same account number all your life.

There are more than 135 million individual accounts in the social security records, and some of them may be under names exactly like yours. Your social security account number keeps your account from being confused with the social security account of anyone else.

Both your name and account number are needed to make sure you get full credit for your earnings. If you are employed, show your card to each employer so that he may use your name and account number exactly as they appear on the card when he reports your wages. If you are self-employed, copy your name and account number on the form you use to report your net earnings for social security credit.

Your nearest social security office will issue you a social security card or a duplicate card to replace one that has been lost. If there is no social security office in your town, ask at the post office for an application blank.

If your name has been changed, ask your social security office for a new card showing the same account number and your new name.

CHECKING YOUR ACCOUNT

Each employer is required by law to give you receipts for the social security taxes he deducted from your pay. He must do this at the end of each year and also when you stop working for him. These receipts (Form W–2) will help you check on your social security account because they show not only the amount deducted from your pay but also the wages paid you. For some kinds of work, your wages paid in forms other than cash—for instance, the value of meals or living quarters—must generally be included. For domestic work in a private household or for farm work, however, only cash wages count.

You should keep a record of the amount of self-employment income you have reported.

You may check the official social security record of wages and self-employment income credited to you by writing to the Social Security Administration, Baltimore 35, Maryland, and asking for a statement of your account. You can get an addressed post card form at your social security office for use in requesting this information.

You should check on your account at least once each 3 years since there is a limit to the period within which certain corrections can be made.

But remember, your statement of earnings shows the amount of earnings reported for you. It does not show the amount of taxes you or your employer paid. Benefits under the old-age, survivors, and disability insurance program are based on earnings from work covered by the law, not on the amount of taxes paid.

If Your Records Do Not Agree

If your own record of your earnings does not agree with the amount shown on the earnings statement you get from the Social Security Administration, get in touch with your social security district office promptly. If you write to your district office, give your social security number, information as to the periods of employment in question, wages paid to you in each period, and the employer's name and address. If the earnings in question were from self-employment, include the date the report was filed and the address of the District Director of Internal Revenue to whom the report was sent.

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
SOCIAL SECURITY ADMINISTRATION

JANUARY 1962
OASI-35a

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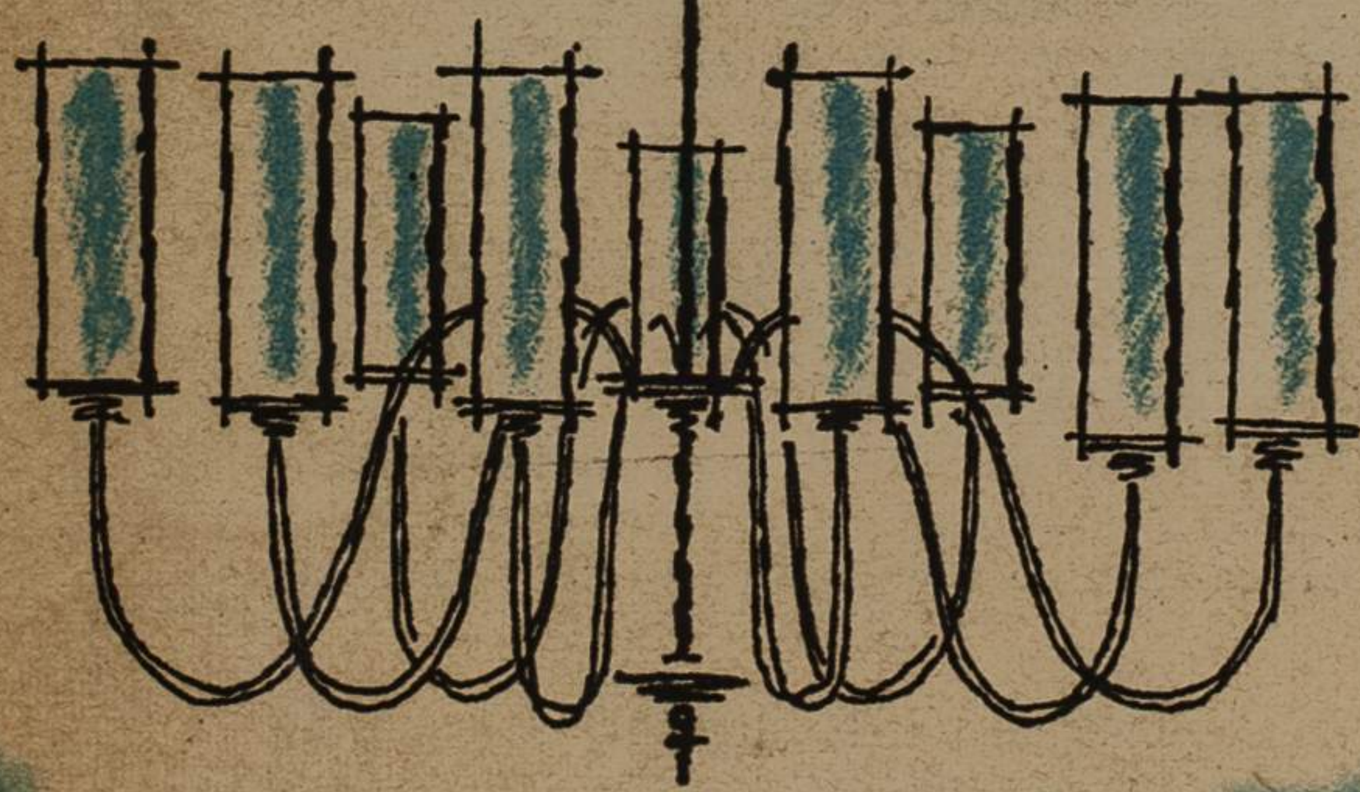
SEE YOUR HOME IN A NEW LIGHT



enjoy LIGHT FOR LIVING
in your light-conditioned home
(fourth edition)

LIVE BETTER ELECTRICALLY
IN A LIGHT-CONDITIONED HOME

Light conditioning makes our homes visually satisfying, irrespective of the sun, just as air conditioning gives us physical comfort regardless of the season.

Both permit us to use more of our living space, and to move about with greater comfort, freedom and convenience. When the Franklin stove and central heating more effectively pushed back the cold, there could be more use of furniture groupings away from the fireplace. The first Edison electric light bulb more conveniently pushed back darkness. Today's technical knowledge from General Electric lighting laboratories pushes it back still further Light conditioning makes it possible to live in all parts of your home—at any time. It adds a convenience, visual comfort, beauty, and living flexibility never before so easy to achieve.

Just as we air condition complete rooms or areas (instead of a spot) so do we light condition complete rooms or the entire home. This is done by applying a combination of these tested, easy-to-follow lighting recipes* which help you put the right light in the right places.

More than 14 million copies of this basic lighting recipe book have been used by homemakers, schools and the lighting industry to create light-conditioned homes. Use it to determine your lighting needs. Take it with you to make shopping and selection of equipment easier. Check recipes again before fixtures are installed, or when portable lamps are being grouped with furniture.

When you light condition your home you see with ease—you SEE YOUR HOME IN A NEW LIGHT. Rooms seem larger, colors appear richer, you and your furnishings look more attractive. Valuable space has better use. The environment matches changing moods and changing activities. Light-conditioning offers a better way of living and of enjoying our homes. It gives you

LIGHT FOR LIVING

**Developed by General Electric residential lighting engineers at Nela Park, Cleveland, Ohio*

COMBINE EASY-TO-FOLLOW LIGHTING RECIPES

The recipes prescribe lighting for every-day living activities which depend upon good, accurate seeing.

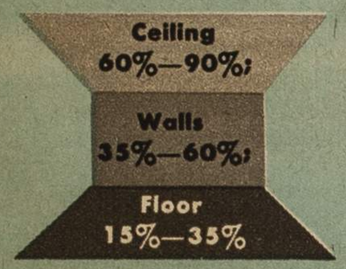
They consider: average eye heights and eye positions of the family; dimensions of widely used furnishings and equipment.

They recommend: types of lighting equipment; *minimum size dimensions* and *maximum placement dimensions*; types and sizes of lamp bulbs and tubes best for that equipment.

From them you select: an appropriate combination of recipes that best serve your family.

Flavor according to taste: select styles and materials in accordance with personal taste and income.

RECOMMENDED REFLECTANCES



All parts of a room absorb and reflect light, so the room itself (from walls to accessories) is a secondary lighting source. Interiors are visually more pleasant if very dark colors are not placed on large or major surfaces. Wherever dark colors are used compensate with other colors of recommended reflectances.* More light is reflected and less absorbed, and you reduce the harsh contrast of lighted equipment viewed against a dark background.

USE TWO LIGHTING ARRANGEMENTS

GENERAL, OR "FILL-IN" LIGHTING (5 TO 10 FOOTCANDLES)**

A low, though not even, amount of light throughout an area. It is light for moving about, for most housekeeping, and for softening pools of *local* light. You will need: ceiling fixtures; lighted valances or wall-brackets; or groupings of open-top, white lined portable lamps. Combinations of types are desirable.

LOCAL, OR FUNCTIONAL LIGHTING FOR VISUAL TASKS

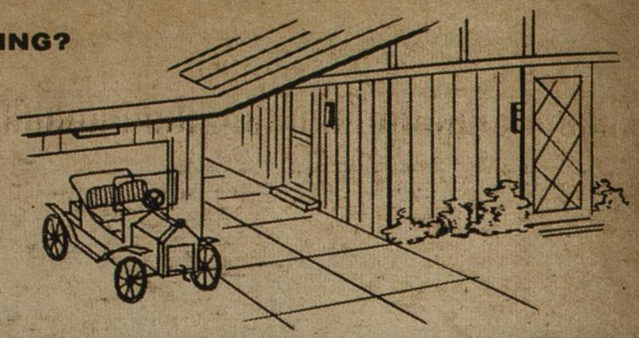
Usually provided in living areas by portable lamps close to user, and in utility areas by fixtures. Wherever possible, the local source should also be contributing to *general* lighting.

Rec. Footcandles (min.)	Visual Task
10-20	Card playing.
20-30	Casual reading; good type on white paper. Easy sewing, such as basting with contrasting thread. Facial make-up. Easy musical scores.
30-50	Household activities in kitchen and laundry.
40-70	Prolonged reading. Study. Sewing on medium-colored fabric. Machine stitching. More difficult musical scores. Shaving. Benchwork.
100-200	Fine sewing. Hobbies with small details.

** The percentage of light reflected from a surface, to the light falling on it.*

***Lighting research scientists specify min. levels of light measured in units called footcandles. Recipes provide needed amounts when colors are within recommended reflectance values.*

HAVE YOU "MODEL T" LIGHTING?



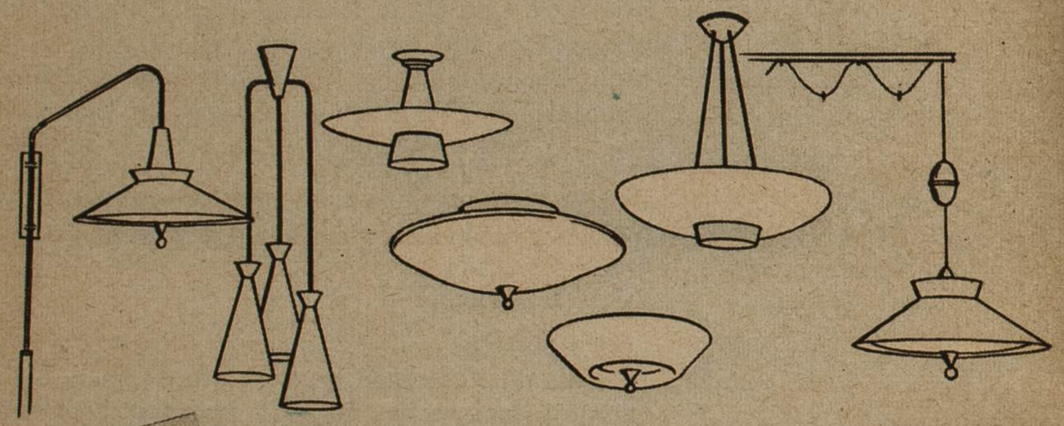
Most homes have kept pace with electrical living in their kitchens and laundries. But in too many homes the type of lighting equipment has not been improved since the Model T was bright and new in the backyard garage.

Outlets were in the center of the ceiling, without reference to use. Fixtures were usually decorative ornaments and bare bulbs glared in the eyes. Then later the ceiling outlet may have been closed, and light from too-few and usually poorly designed table lamps couldn't reach to all walls. Sharp pools of light contrasted with gloomy corners. Convenience outlets were also too-few and too far apart to be convenient. "Octopus" outlets had their start.

Today fixtures and lamps are *both* decorative and functional. They are related to the space, integrated with the furnishings, and planned to serve changing activity.

This basic recipe book can give you assurance in appraising your present lighting and in selecting equipment. You can acquire the same ability, have the same confidence, as in your selection of furnishings, menus and clothing. When you add lighting to your home management "know how" you increase the pleasure and satisfaction to be found in homemaking.

If you would like further professional information on decorating and lighting, we recommend HOW TO DECORATE AND LIGHT YOUR HOME*, by E. W. Commery and C. Eugene Stephenson. This best seller among decorating books is available at decorating, lighting equipment, and home furnishings salesrooms.



FIXTURE ENSEMBLE Selecting an appropriate style need not increase a fixture's cost. You add further value, again without extra cost, if you will harmonize your entire fixture group from front hall to bedroom. Although types will vary they can show a relationship in style and materials—in the same degree of formality or informality.

* *Inexpensive pocket-size, soft cover edition (complete) G-E booklet 409-6231*

DESIRABLE LIGHTING DESIGN

LIGHTING FIXTURES

It is lighting design (the way a fixture controls and distributes the light) which determines its value and usefulness. It will look as well lighted as unlighted. The purpose of the designer is defeated if glare from exposed bulbs and inadequate shielding prevents the design from being seen and appreciated. Bulbs should never show above, below, or through a shield. It's sensible when buying a fixture to view it by itself, lighted with the same size bulbs you will need at home.

INCANDESCENT SHIELDING

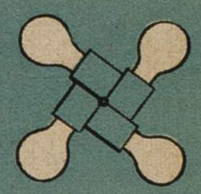
A. Multiple sockets—horizontal bulbs: For quality as well as quantity, spread the light smoothly through a large, luminous shield. It will be more attractive, perform more comfortably than the same wattage in a smaller shield. Horizontal position of multiple bulbs permits the shield to be shallow for close-ceiling mounting. This is desirable on today's eight-foot and lower ceilings and the unit seems a part of the ceiling, rather than an afterthought.

B. Bulbs shielded from view:
Translucent materials should shield bulbs by
SHAPE: slightly curved at outer edge.
POSITION: about ¾" below nearest bulb.
DENSITY: highly diffusing material but not needlessly dense. Flashed opal, ceramic-enameled glass, or some plastics are best. Etched crystal, configurated and frosted glass suitable only for fluorescent and very low-wattage incandescents.

C. Both upward and downward light: *Opaque* shield should never interfere with up-and-down light distribution. Downward light should be diffused, but diffuser should *not be below* bottom of shade.

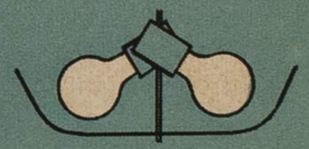
Multiple sockets — horizontal bulbs

A.



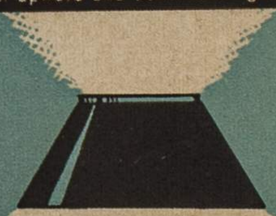
Bulbs shielded from view

B.



Both upward and downward light

C.



A suspended fixture will usually be in your line of vision, so be very aware of its design. Both the contour, and the top and bottom shielding, should provide visual comfort at standing and seated levels.

FLUORESCENT SHIELDING

For best appearance it is desirable to shield fluorescent tubes. Because of their low brightness the plastic or glass should not be as diffuse or dense as for incandescents.

WALL LIGHTING (Please see Pages 16-19)

PORTABLE LAMPS

A well-designed portable lamp slights neither its functional nor decorative role. It will provide the amount of light needed for a seeing task, and at the same time be decoratively correct in its setting. The warmth and graciousness it radiates is not to be had from any other light source. Following the recipes protects your eyes from too little light or glaring bulbs, and saves you from slouching to get below a shade. They are based upon these *average* eye heights.

WOMEN: 40″ seated in lounge chair; 61″ standing.
MEN: 42″ seated in lounge chair; 64″ standing.

POINTS TO CHECK

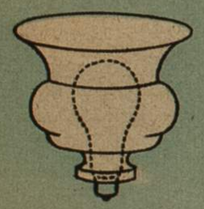
Height to shade: measure *floor lamp* from floor to bottom of shade. Measure *table lamp* from table to bottom of shade. Use on a table whose height combines with this base measurement to position bottom of shade at eye level.

Socket: single socket slightly below or at lower edge of shade. Multiple sockets (D type) low in shade. (More light downward, in a wider spread.) Shades over 10″ deep can be lifted by metal riser.

Shade: *white* on the inside, *open* at the top. (Drum types preferable for wide top.) Test translucent types. The recommended bulb-s should not show a glare spot through the shade. An opaque shade is best if a bright or dark color is desired, or if a lamp is to be placed against a dark wall.

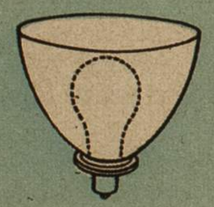
DIFFUSERS SPREAD AND SOFTEN THE LIGHT

A CLM GLASS DIFFUSER (Certified Lamp Makers)



8″ top dia.
50/150w, or 50/250w
or 10″ top dia.
100/300w (mogul)
Design shields bulb from top viewing

B BOWL-SHAPED GLASS DIFFUSER (Various Designs)

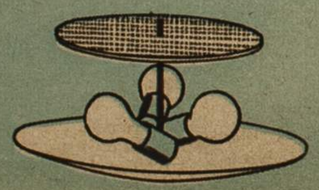


White glass preferable
8″ top dia. 50/150w, or 50/250w
or 10″ top dia.
100/300w (mogul)

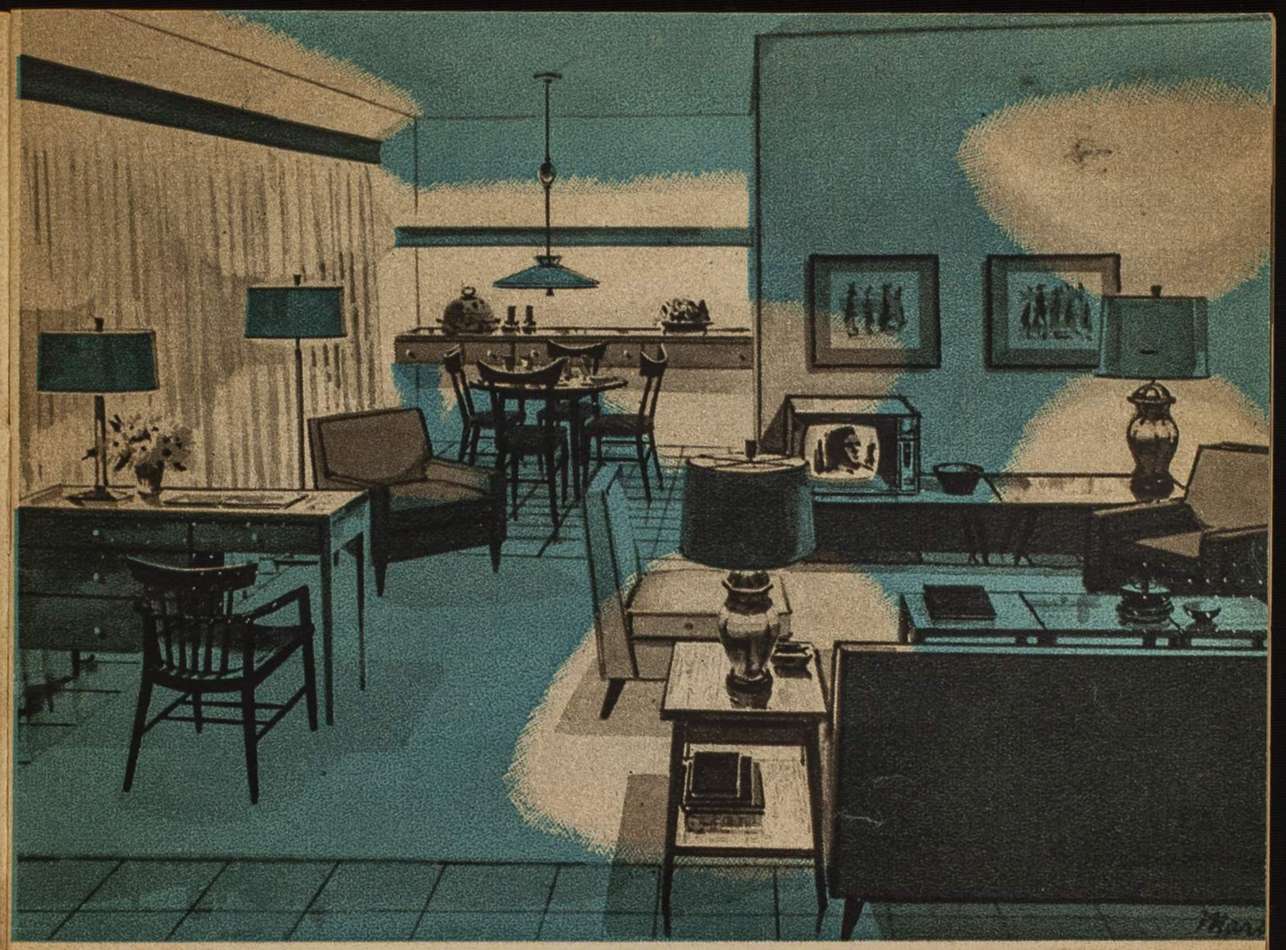
C R-40 Soft-White Indirect Bulb in Wide Harp, 50/150w

Large size and whiteness of bulb helps diffuse the light

D PLASTIC DIFFUSING DISC (Multiple Socket)



Total 180w—3-step switch desirable
Disc about 1″ above shade bottom
Also shield at top if upper edge less than 58″ above floor



SET YOUR STAGE FOR LIVING

Light conditioning makes daily living more enjoyable. You can use it, as in the room above, to set the stage for the way you want to live . . . to look . . . to feel.

A lighted valance and wall-bracket give spaciousness and drama. Light from the suspended fixture varies to match the mood of the diners. A three-lite portable lamp placed with each furniture grouping provides a place where each member of the family can pursue his own interests. At high levels they are right for reading, desk work, sewing. At lower levels the atmosphere is conducive to relaxing, visiting, listening to music. At any level the lamps are contributing to the room's beauty and decorative balance. It is a room to make the most of family life - - together.

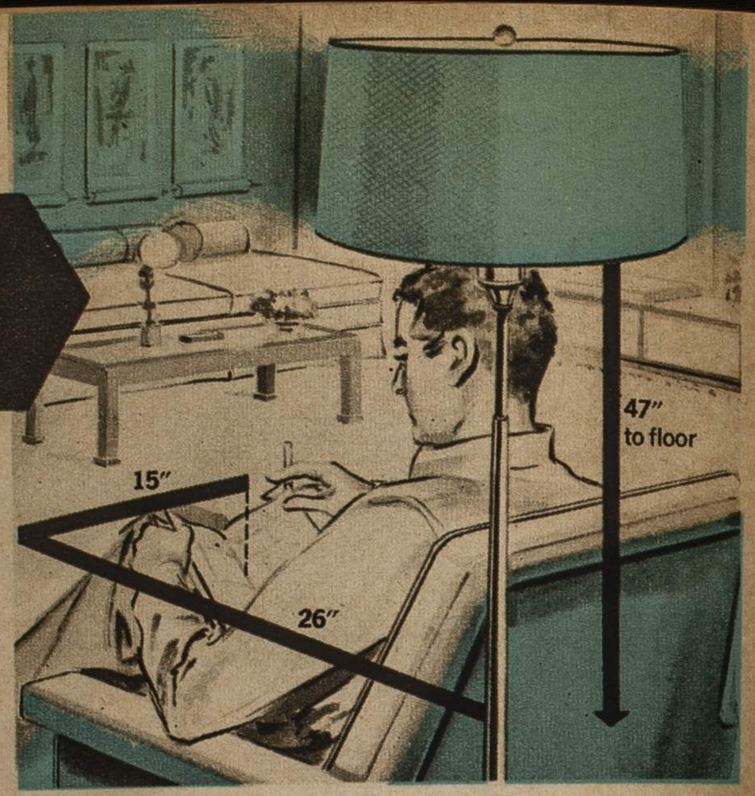
PORTABLE LAMP ENSEMBLES

A lamp spreads its light over a limited area - - about 40 to 50 sq. ft. About five lamps are needed to serve the people and the room. To give your home this same decorative value (without additional lamp cost) ensemble the lamps to harmonize with the furnishings and each other. You do this in several ways - -

- harmonizing styles, colors, materials and scale
- matching bases and matching shades (lamp types and sizes will vary)
- matching shades, with individual bases (usually one pair included)

lighting recipe 1

READING
USING A FLOOR LAMP



Pleasure from reading and easier concentration are appreciated benefits of lighting that is not distracting but truly "just right." The quantity of light and the quality of the diffusion depend upon the type you select.

SENIOR LAMPS: Standard or Double swing-arm:
DIFFUSER: A or B—10″. BULB: 100/300w (300w for reading).
HEIGHT TO SHADE: 47″. SHADE: top 10″, depth 10″, bottom 18″.*

JUNIOR LAMPS: Standard, Double swing-arm or Bridge:
DIFFUSER: A or B—8″ BULB: 50/150w, 50/250w, or C. BULB: 50/150 R-40 (High level for reading).
HEIGHT TO SHADE: 47″.
SHADE: Standard or Double swing-arm: top 10″, depth 9″, bottom 18″.
Bridge: top 8″, depth 8″, bottom 13″.
DIFFUSER D: (usually not in swing or bridge types) multiple bulbs 180w.
HEIGHT TO SHADE: 45″. SHADE: top 14″, depth 6″, bottom 16″.

WHERE TO PLACE

Since bottom of shade is above eye level, lamp stem should be about 10″ behind shoulder, near rear corner of chair.* (Measure 15″ left or right of book center; then back 26″.) For chair and sofa against wall see Recipes 2, 3 and 3A.

VERY LOW LAMPS—If a lamp is too low for this recipe (and the lower edge of shade is no more than 42″ from floor) it may be moved forward in table lamp position. See Recipe 2.

**Size dimensions always minimum; placement dimensions maximum.*

lighting recipe 2

READING
USING A TABLE LAMP

The table lamp recipe is one you can easily fit to your own family and their favorite chairs. The lower edge of the shade should be at eye level when seated. Measure your table height. Then fit the lamp to this formula.
Table height + lamp base height = eye height.

WHAT TO USE

Avgal
3 Lamps
Living room

END TABLE LAMP
DIFFUSER: A or B—8″ BULB: 50/150w, 50/250w, or C. BULB: 50/150 R-40 (High level for reading).
HEIGHT TO SHADE: 15″ on 23″-27″ high table; 19″ on 20″-23″ table.
SHADE: top 8″, depth 10″, bottom 16″ BULB: 50/150w, 50/250w.
DIFFUSER: D, multiple bulbs 180w.
HEIGHT TO SHADE: same as above. SHADE: top 14″, depth 6″, bottom 16″.

SENIOR TABLE LAMP suitable for 21″ to 25″ high tables:
DIFFUSER: A or B—10″. BULB: 100/300w (300w for reading).
HEIGHT TO SHADE: 18″. SHADE: top 14″. depth 13″, bottom 16″.

WHERE TO PLACE

Base about in line with shoulder. Measure 20″ left or right of book center; then 16″ to rear of chair or sofa.

CORNER TABLE—Senior Table Lamp will light a corner seating arrangement. It can remain centered toward back of the table and need not be moved each time it's used. However, distance is increased between bulb and reader, so the recipe is for casual use.

VERY TALL LAMPS—If it is desirable for decorative effect to use an extremely tall table lamp, placed it at the back of a low table, in floor lamp position. For chair or sofa against wall see Recipes 3 and 3A.

lighting recipe 3

READING
USING A WALL LAMP

Wall lamps are good:—
- *in small rooms*
- *with furniture next to doors and windows*
- *where a lamp pair is desired, and end tables are unequal height*
- *with youngsters and frisky pets*

WHAT TO USE

WALL LAMP

DIFFUSER: A—8″ **BULB:** 50/150w, 50/250w, or C. **BULB:** 50/150 R-40; (High level for reading).

SHADE: top 8″, depth 8″, bottom 13″.

DIFFUSER: D, usually in pull-up and-down type. **BULBS:** multiple, 180w.

SHADE: min. depth 6″, bottom 14″. Usually needs shielding at top and always diffuser at bottom, *not extending below shade.*

WHERE TO PLACE

Types A or C diffusers: bottom edge of shade 48″ above floor, located 15″ to left or right of book center and approx. 26″ back to socket center.

Type D diffuser: bottom of shade 42″ above floor, 15″ to left or right. (illus.)

FOR SOFA—Double the recipe and position lamps with relation to persons seated at each end of the sofa.

OTHER APPLICATIONS—Use wall lamps in halls, storage areas, over tack-up boards. They are especially serviceable wherever children store their clothing and toys as the child's and lamp's height can "grow" together.

Warning: If temporarily instead of permanently mounted, wall lamps should not be used in kitchens or bathrooms where they might ever fall into water.

lighting recipe 3a

READING
USING A SUSPENDED CEILING FIXTURE

When suspended ceiling fixtures are unified with furniture groupings their uses are the same as portable lamps. Selected according to recipe specifications, they will provide light for casual reading and over game tables.

WHAT TO USE

SUSPENDED FIXTURE—14″ min. dia. (16″ preferable)

BULBS: multiple sockets totaling 180 watts.

SHIELDING: *If translucent*: material must have exceptionally good diffusing qualities, *If opaque*: contour of fixture should allow some upward light. (illustrated). Usually needs shielding at top and always a diffuser at bottom, *not extending below shade.*

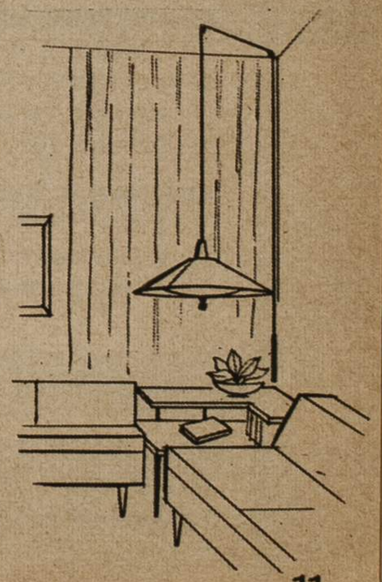
WHERE TO PLACE

PREFERABLE—at height and position of *floor lamp* shade; 47″ from floor to shade bottom. Center 10″ behind shoulder, near rear corner of chair. (illustrated)

OR—at height and position of *table lamp* shade. (Necessary when furniture is placed against a wall.) Measure 20″ left or right of book center; then 16″ to rear of chair or sofa.

OVER CORNER TABLE—Select larger 18″ min. dia. fixture. Multiple sockets totaling 180 watts; 3-effect preferable. Center over the table, with shade bottom at eye level.

Portable ceiling type which plugs into convenience outlet.



lighting recipe 4

HAND SEWING
USING A FLOOR OR TABLE LAMP

With recipe lighting you'll take a stitch in less time—with less effort. Even occasional sewing requires twice as much light as for casual reading, if you are to stitch or thread needles with ease and a minimum of nervous strain.

WHAT TO USE

SENIOR DOUBLE SWING-ARM FLOOR LAMP—preferable because only the shade, not the entire lamp, is moved forward from reading position, or,

SENIOR STANDARD FLOOR LAMP
DIFFUSER: A or B—10". BULB: 100/300w 3-Way (300w for sewing).
HEIGHT TO SHADE: 47". SHADE: top 10", depth 10", bottom 16".

SENIOR TABLE LAMP
DIFFUSERS: A or B—10".
BULB: 100/300w.
HEIGHT TO SHADE: 18" on 21"—25" table. SHADE: top 14", depth 13", bottom 16".

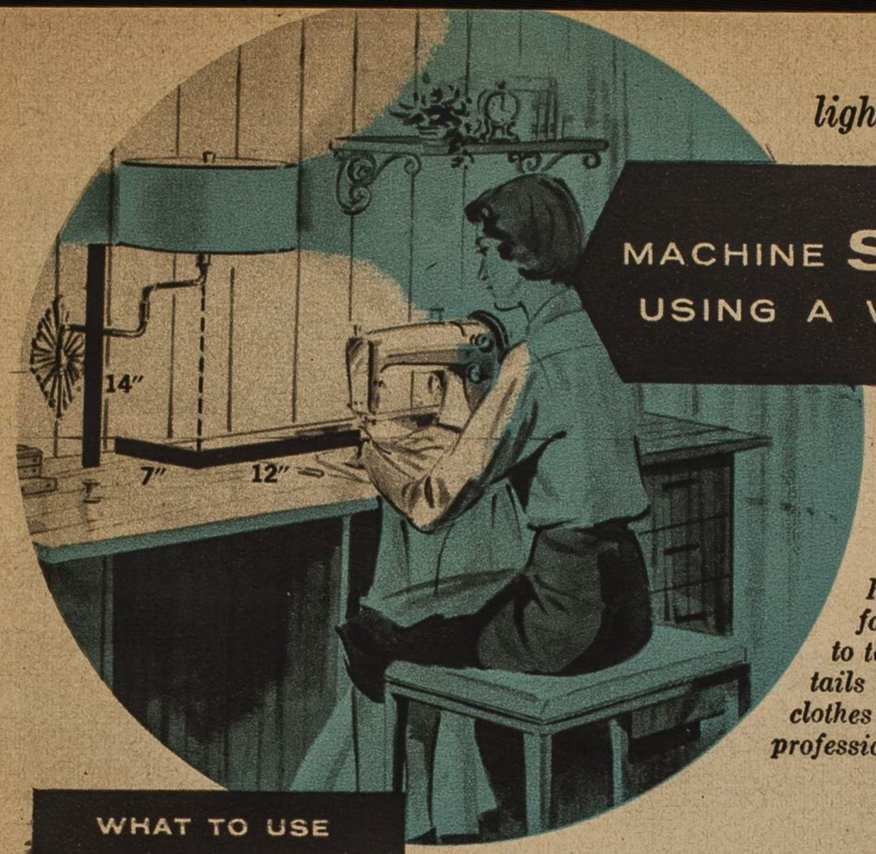
ADDITIONAL LIGHTING—For prolonged sewing, or for fine detail.
BULB: R-30, 75w spot lamp
EQUIPMENT: Adjustable clamp-on holder fastened to stem of lamp, or pole lamp.

WHERE TO PLACE

From center of sewing measure 15" to left (if person is righthanded).
FLOOR LAMP—Place center of shade 12" back from this point.
TABLE LAMP—Center the shade only 6" back from this point.

lighting recipe 4a

MACHINE SEWING
USING A WALL LAMP



To "sew a fine seam" you need more than the light from the tiny bulb supplied in the machine. Recipe lighting delays fatigue; encourages you to take the time fine details require if your clothes are to have the professional touch.

WHAT TO USE

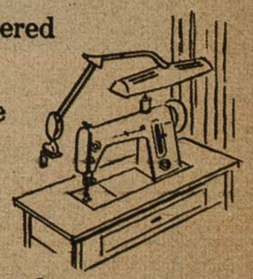
WALL LAMP: (only the mounting device need be permanent.)
DIFFUSER: C, BULB: 50/150 R-40 Soft-White Indirect.
SHADE: top 8", depth 8", bottom 13".

WHERE TO PLACE

Mount lower edge 14" above table. Center 12" to left of needle, 7" back.

ALTERNATES: Bullet reflector for R-30 75w flood, or for more confined and higher levels—R-30 75w spot. Requires additional surround lighting.

Placement: Adjusted by user to keep light out of eyes, and centered on needle area.



FLEXIBLE ARM FLUORESCENT LAMP: two 15w DeLuxe Warm White tubes.
SHIELDING: light colored metal reflector with slots for upward light. **Placement:** lower edge of shield just below eye level.

CEILING—BULB: PAR 38, 150w flood or spot.
EQUIPMENT: adjustable bullet reflector, recessed or surface mounted.

Placement: 13" left of needle, 7" toward user, and tilted toward needle.

DESK WORK—*These three recipes for lighting desks will conserve precious eyesight. They encourage concentration and good posture. Very dark or bright surrounding colors would be a distracting contrast to reading and writing materials. You get the best results if:*

- *Desk tops are light (add a large, light blotter)*
- *Adjacent walls are light, too (tackboard can be used)*
- *Lamp shades are fairly dense; or opaque in a light but not strong color.*

lighting recipe 5

DESK WORK
USING A TABLE OR FLOOR LAMP

WHAT TO USE

Table Lamp: Straight or Swing-arm type (only 15" to shade bottom).
For serious study: DIFFUSER: A or B—8".
BULB: 50/150w (150w for desk use) or 50/250w.
SHADE: top 8", depth 10", bottom 16".
DIFFUSER: D. BULBS: multiple, 180w. SHADE: top 14", depth 6", bot. 16".
For casual use: HARP: C. BULB: 50/150w R-40 (150w for desk use).
SHADE: same as for A and B.

WHERE TO PLACE

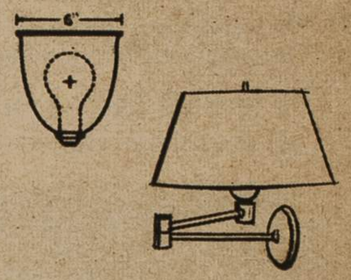
Center of lamp shade 15" left of work center; 12" back from front edge of desk. If left-handed, reverse first measurement, place lamp right.

DROP LEAF—Use a floor lamp, preferably the double swing-arm type, which can remain at side of desk while shade is moved into needed position.
For study: senior types; bowls A and B — 10".
For casual use: junior types: A and B — 8"; C and D.
(Height, bulb, and shade dimensions as Recipe 1).

Placement—shade center 15" to left of work center; 10" in from front edge of desk.

lighting recipe 6

DESK WORK
USING WALL LAMPS



WHAT TO USE

Pair of Wall Lamps: ideal for child's study center. BULB: 100w each.
DIFFUSER: 6" plastic bowl (see diagram); or flat plastic diffusing disc below bulb.
SOCKET POSITION: 2" below shade. SHADE: top 6", depth 7", bottom 10".

WIDE DESK—If desk is more than two feet deep, select types with an extending or swing arm by which you can move the center of the shade forward.

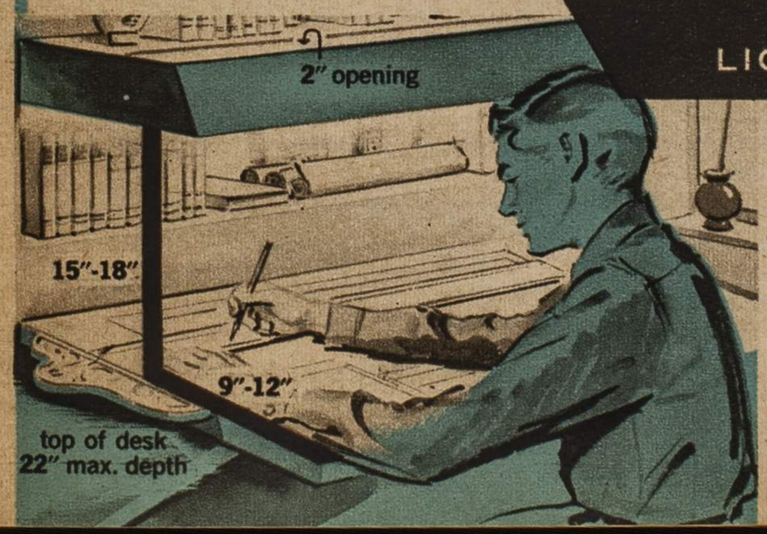
WHERE TO PLACE

Center the shades 30" apart; no more than 17" back from front edge of desk, preferably 6"-12" from front. Mount bottom edge 15" above desk.

TELEPHONE STAND—Use half the recipe—one lamp. Center 15" above area.

lighting recipe 7

DESK WORK
USING LIGHTED SHELF



(*Custom made*)
Unit is space-saving and space-producing. White enameled channel with 36" - 30w DeLuxe Warm White tube is mounted on lower front edge of light-colored wood shelf.

WALL LIGHTING *can provide the most glamorous form of general room lighting—or combine duty with beauty and be a local lighting unit.*

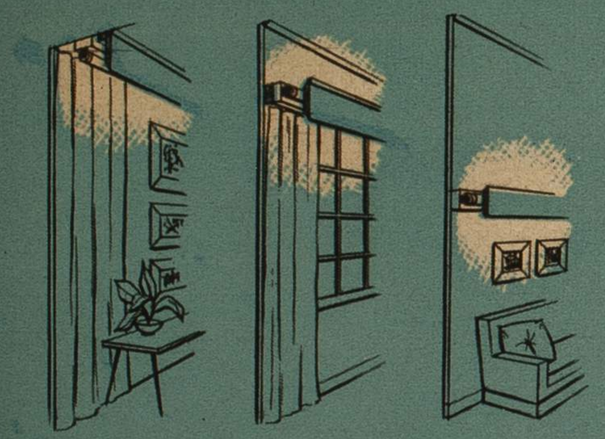
WALL LIGHTING UNITS ARE FORMED OF THREE BASIC PARTS:

1) Baked White Enamel Channel-s: pre-wired, with ballast and starter. Sockets (also white) should be at extreme ends so tubes can be as close as possible. Fit channels end to end, using least number of largest sizes to fill desired length. Divide unlamped space equally at both ends, each not to exceed 9″ in length.

2) DeLuxe Warm White Fluorescent Tubes: to fit channels. Usually T-12 (1½″ dia.) 18″-15w; 24″-20w; 36″-30w; 48″-40w.

3) Faceboard designed to conform to the interior, but always *white* on the inside. If approach or viewing angle exposes tubes from below, add louvers for shielding.

TYPES The room's proportions, the lighting needs, and the effect desired, all determine whether the unit should be mounted as a—



CORNICE—*(with or without draperies). attached to the ceiling above any wall area, usually extending wall-to-wall.*

VALANCE—*over windows and draperies.*

WALL-BRACKET—*not related to windows, usually on interior wall (min. length 36″).*

Faceboard Design: harmonize the faceboard with the style of the interior.

WOOD: straight edged, or cut in formal or informal patterns
Finishes: natural, paint, wallpaper, fabric edging below, or upholstering

METAL: including designs of small perforations

PLASTIC: often with impregnated colorful designs

FRAMES: holding mirrors, pictures, transparencies, or cut-out designs in heavy foil.

Amount Needed: living areas, including recreation and family rooms (up to 250 sq. ft.) require a minimum of 16 or more feet for general lighting.

In rooms over 250 sq. ft. use one foot of channel for approximately each 15 sq. ft. of floor area.

RECIPES FOR OTHER AREAS INCLUDE:

- *Entrance and hallway*—Page 36 • *Bedrooms*—Pages 29, 31
- *Dining Room*—Pages 22-23 • *Kitchen*—Pages 25-26

DeLuxe Warm White Fluorescent tubes compliment color. Everything will look better; the home—furnishings—you. They create a warm atmosphere, enhance complexions and food, and blend without conflict with incandescent bulbs.

Quick Starting Obtained for T-12 15w and 20w tubes when the ballast is Trigger Start. In the 30w and 40w size *both* the tube and ballast should be suitable for rapid start operation.

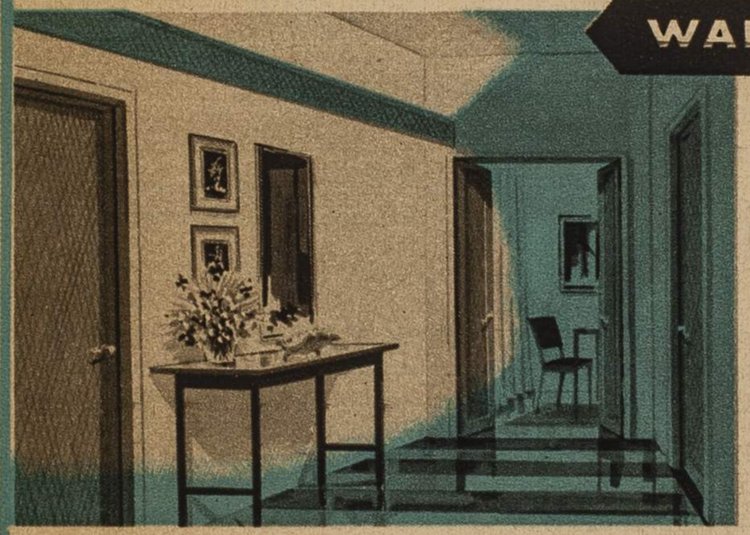
Dimming Flexibility of lighting level is added by using a dimmer control. Several systems are available, but not interchangeable.

MOST PRACTICAL:

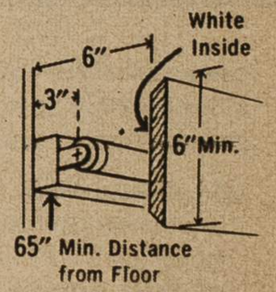
1) All 30w Rapid Start tubes with dimming ballasts.
2) All 40w Rapid Start tubes with dimming ballasts.

(*Do not mix 30w and 40w tubes on same dimmer circuit*)

WALL-BRACKETS



Wall-brackets supply an upward and downward wash of light never before practical to obtain on inner walls.



LOW WALL-BRACKET PATTERN

WHAT TO USE

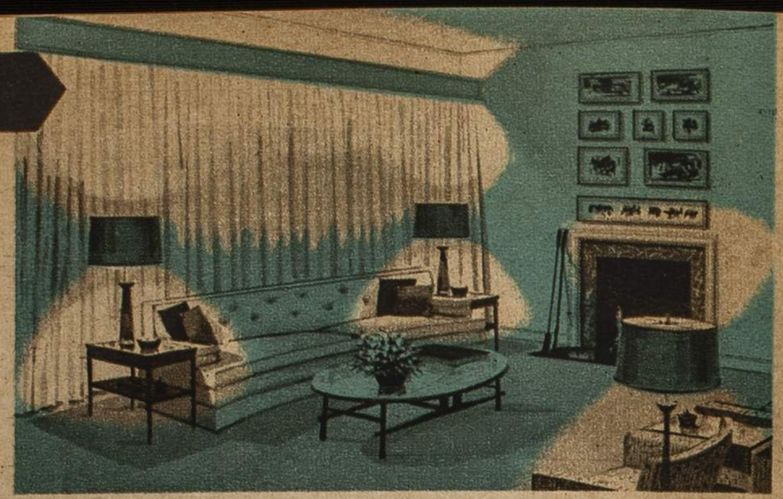
For General Lighting: Design as in pattern and position with bottom edge at least 65″ from floor. Exception occurs when the unit is mounted at the same height as a valance. (Page 18). Top of channel is then at *top* of faceboard. Min. total length 16′ unless combined with valance or cornice. Wall switch essential.

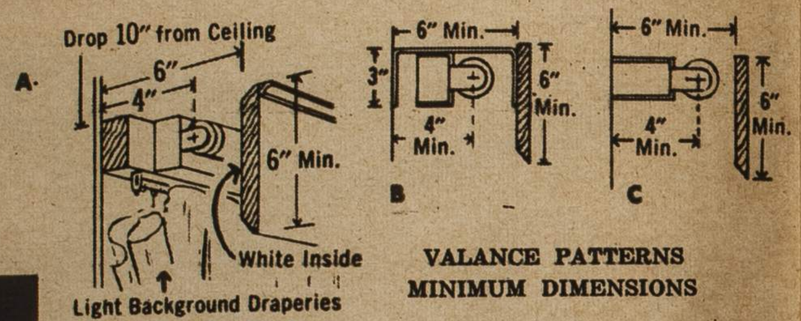
For Local Lighting: *Sofas*—bottom edge no less than 55″ above floor.
Buffets and small serving tables—Pages 22-23.
Beds—special recipe pattern on Page 31.
Kitchen range—special recipe pattern on Page 26.

LUMILINE: A bracket whose function is mostly decorative can be lighted with tubular incandescent bulbs. Use a continous row to fit space. (40w—12″; 60w—18″.)

VALANCES

With a lighted valance across the top of draperies, the beauty of the window treatment and its part in room balance continue without benefit of the sun. Since valances are mounted at least 10" down from the ceiling, they provide both the upward and downward lighting needed to make an interior harmonious and visually comfortable.





VALANCE PATTERNS
MINIMUM DIMENSIONS

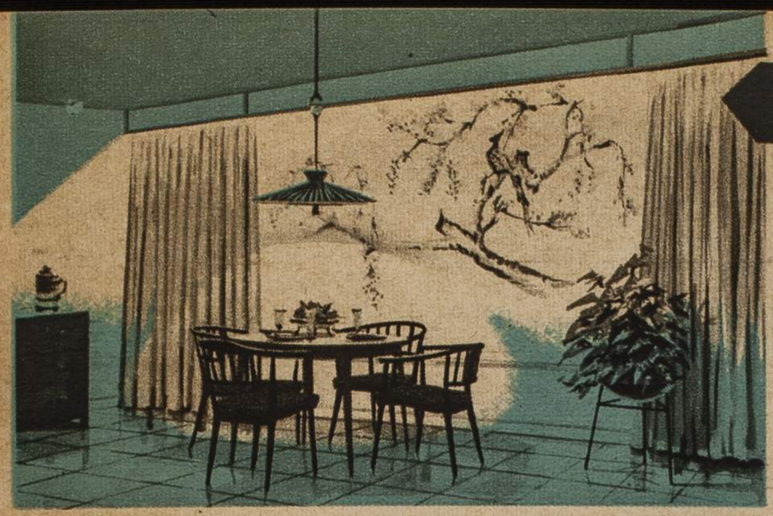
WHAT TO USE

Commercial Pre-Fabricated Units: purchased ready to mount, with or without a faceboard. These units have a device for positioning the center of the tube out a necessary 4" from the wall. Each manufacturer includes instruction sheet.

OR—Custom-Made Units: from pre-wired white channels, tubes, and faceboard.
A—STANDARD CHANNEL: *wood blocking places center of tube 4" out from wall,*
B—*or use 2-12" metal angle brackets each channel. Vertical or slanted faceboard.*
C—SIDE MOUNTED CHANNEL: *minimizes the amount of wood blocking needed to position tube 4" out from wall.*

MOUNTING TIPS. • Top of channel in line with top of faceboard.
• Channels are usually mounted directly above window frame or opening. If frame is extremely deep, mount channel on frame (top edge to top edge) and make faceboard to cover bottom edge. (max. depth 11".)
• Check to make sure that channel and tube cannot be seen from outside. Lower edge of faceboard showing outside is *usually* not objectionable.
• Inside the room make sure that faceboard covers frame and drapery top.
• Except at the ends, place supports only where lamp sockets occur.
• Wall and woodwork behind draperies should match their basic color for harmony when draperies are open.

See page 19 for important drapery information



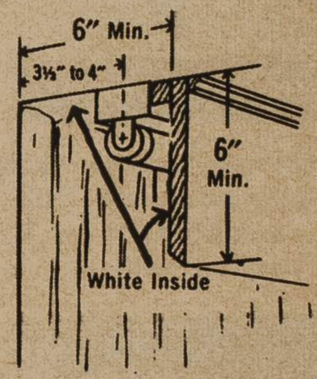
CORNICES

Lighted cornices are mounted on the ceiling and send all their light downward on the wall. This intensifies the wall treatment and is especially effective over wood, stone, brick and flock wallpaper. They are usually applied the full length of a wall, but draperies need be used only where the unit crosses windows.

Cornices have best application

• in low rooms — to increase the apparent ceiling height.
• if window height prevents a space of 10" between top of faceboard and ceiling.
• over murals and scenic wallpaper—so as not to block any part of the design.

The lack of upward light suggests the use of open-top lamps, a fixture, valance or wall-bracket in the same room.



CORNICE PATTERN

WHAT TO USE

It is easiest and less expensive to custom-make the cornice using standard white channel, (wall switch essential) see pattern.

DRAPERIES are always part of the valance installation, and are frequently used with cornices. Avoid dark colors. Select those that cooperate in reflecting light generously.

Any type heading may be used, if it is pinned or hooked at the extreme top so that none of the fabric falls forward in front of the tube. Box or cartridge pleating gives a trim, architectural effect. If French pleating is preferred be sure faceboard is deep enough to cover the line where the pleating is stitched.

TRAVERSE TRACK — As close to wall as possible. (about 1")
Use ceiling-mounted type with (1) cornices; (2) custom-made valances with standard channel and wood blocking; (3) custom-made valances with side-mounted channel.
Use wall-mounted type with (1) pre-fabricated units; (2) custom-made valances of standard channel with angle irons.

lighting recipe 8

READING MUSIC

AT THE PIANO OR ORGAN

Play better because you see better. This recipe lights the score and the keyboard, helps synchronize the eye and hand. Relaxation and enjoyment supplant the subtle annoyances of eyestrain and tension.

WHAT TO USE

PREFERABLE—Senior Double Swing-Arm Lamp
DIFFUSER: A or B—10". BULB: 100/300w (300w when reading scores).
HEIGHT TO SHADE: 47". SHADE: top 10", depth 10", bottom 16"; neutral color in a material which transmits light generously.

WHERE TO PLACE

Center of shade (socket) 13" in front of lower edge of music rack, 22" to left or right of keyboard center.

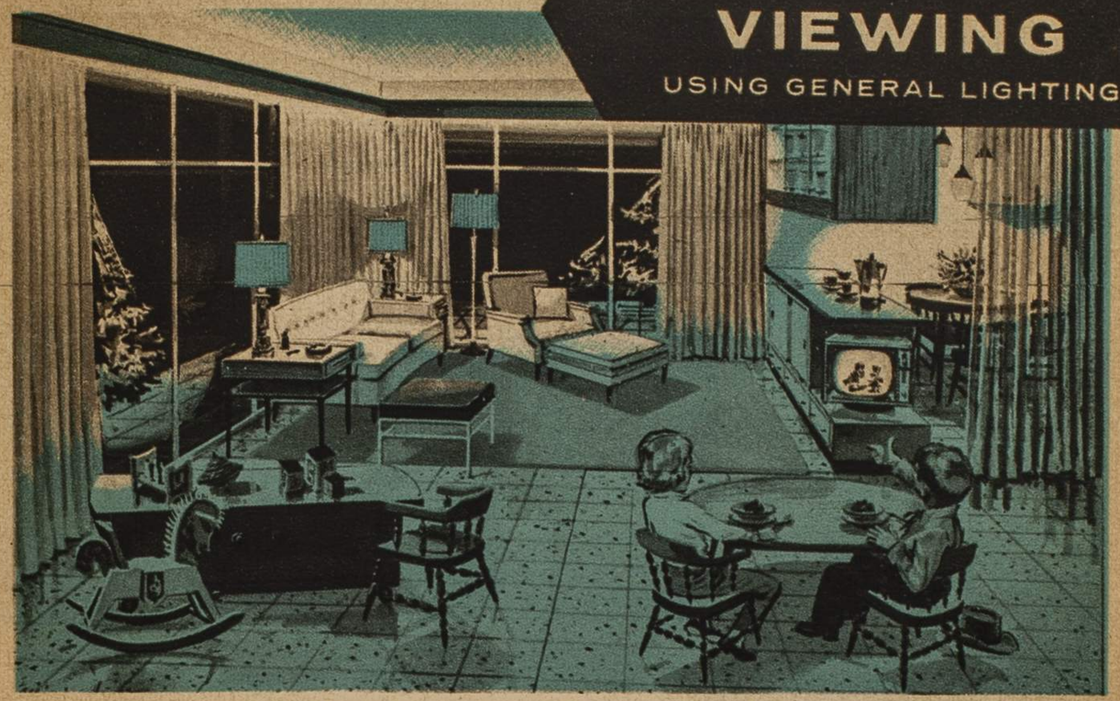
ALTERNATE—Senior Standard Floor Lamp: same dimensions and shade as above.
Place 3" in front of lower edge of music rack, 34" left or right of keyboard center.
OR—Two Torcheres: (light ceiling essential)

HEIGHT: min. 66" tall. BOWL: 12"—16" dia.
BULB: 100/300w (300w when reading scores).
MATERIAL: opaque, or dense glass; shallow design.
Placement: align with lower edge of rack; 34" left and right.
CEILING LIGHTING—BULB: 150w PAR Flood.
EQUIPMENT: adjustable; surface or recessed mounting.
Placement: on ceiling, centered 24" in front of music rack, and tilted toward it.
WALL LIGHTING—*See preceding pages.*

lighting recipe 9

TELEVISION VIEWING

USING GENERAL LIGHTING



A television screen, unlike a motion picture screen, is not designed to be viewed in a darkened room. The strong contrast between bright screen and dark surroundings is extremely tiring to the eyes. Relaxation and enjoyment increase with a moderate lighting level.

WHAT TO USE

The Ensemble of Four or Five 3-Way Table and Floor Lamps that serve the room. You may wish to turn to medium or low level.

WHERE TO PLACE

Position the set or lamps so that the lamps do not form reflections in the screen at the viewing positions. If this is unavoidable, opaque or dense fabric shades will reduce the reflection.

Or—Torcheres with opaque or dense translucent bowls.

WALL LIGHTING

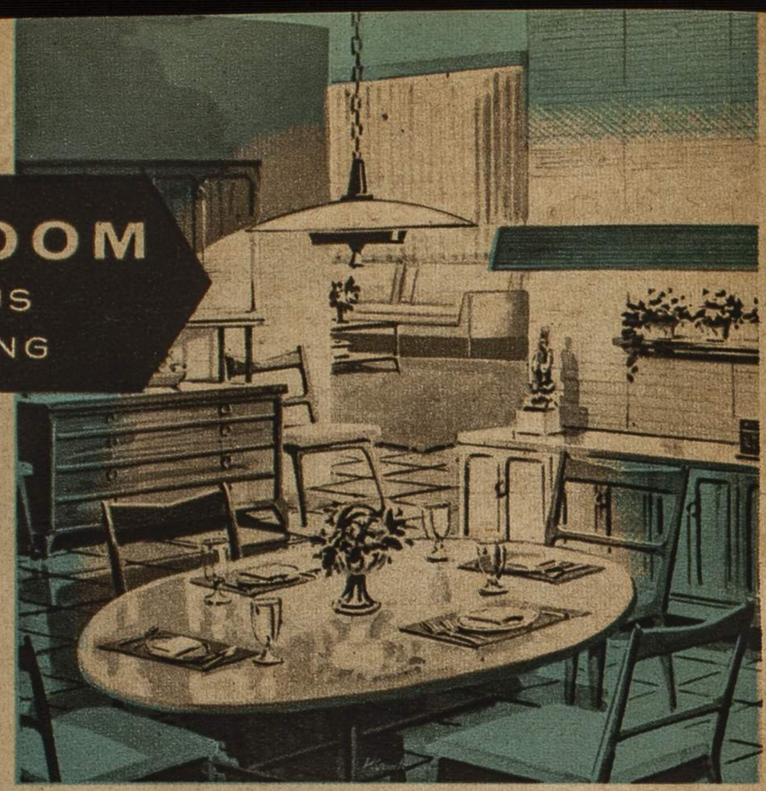
Used alone, wall lighting creates a delightful environment for watching television, for listening to music, for conversation. (Pages 16-19)

For Television Position set so that lighting units are behind or at the side of the viewers. If the lighting should be above the set, consider using a dimming system. (Page 17)

lighting recipe **DR**

DINING ROOM

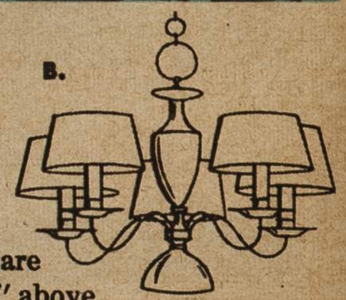
FIXTURE PLUS WALL LIGHTING



Create your own environment Your room can be as relaxing, dramatic, gay; useful or practical as you wish.

A.

B.



WHAT TO USE

CEILING FIXTURE—directing light up and downward. Min. 18″ diameter.* BULBS: 4 or more sockets, 40w each. Center over table.
SHIELDING: **A.** Single shield: (ceramic-enameled glassware preferable), close-to-ceiling type, or pendant (about 36″ above table) or **B.** Multiple shielding of four or five bulbs (min. 5″ dia. shades) plus center downlight (pendant). Reel-type fixture shown in feature illustration, (ceiling track available); min. three 60w or one 150w bulb (three-effect preferable).

PLUS WALL-BRACKET—mounted over buffet or serving area (illustrated).

OR VALANCE OR CORNICE—min. length one 48″-40w DeLuxe Warm White tube. Long units create a more spacious background; see pages 16-19.

OR PORTABLE LAMPS—pair of small table lamps—on the buffet or serving chest; or torcheres with opaque or diffusing reflectors.

IF ROOM IS LIMITED TO DINING—Ceiling Fixture with single or multiple shielding of four 40w or five 25w. Down light not essential but preferred.
If the fixture distributes only down light, add a valance or wall-bracket.

* *For large rooms, decorators often use this scale: Fixture dia. in inches = room diagonal in feet. Multiple-arm chandeliers can be even larger.*

lighting recipe **KD**

DINING

IN KITCHEN AREA

A unit to light the dining counter or table also helps separate it from work centers. The area is important and inviting.

A.

B.

C.

WHAT TO USE

CEILING FIXTURE — centered over table or counter; directing light both up and downward.

A. *Close-to-Ceiling Pendant* (about 36″ above surface) *Reel-Type* (illustrated).

B. or—each bulb separately shielded, 4″ min. dia. each shield.
BULBS: Three or four sockets, min. 120 watts.
SHIELDING: 14″ min. diameter, glass or plastic.

C. *Pendant*, or *reel-type*: BULB: one 150w.
SHIELDING: 14″ min. dia., if opaque, have open top for upward lighting.

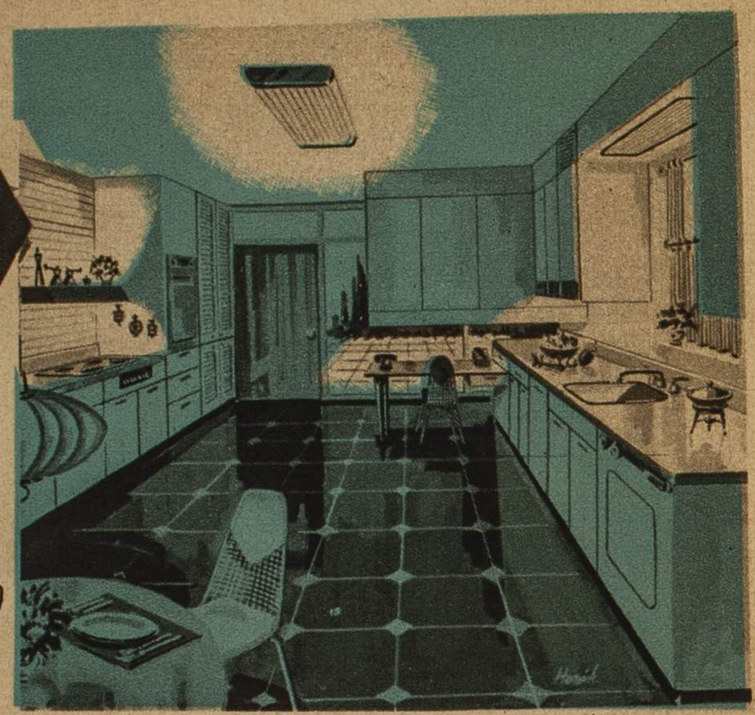
WALL LIGHTING
Wall-bracket: (see sketch at right) one 36″-30w DeLuxe Warm White tube, or
Wall Lamp: extended arm type, multiple sockets, total 120 watts, min. 14″ dia. shade.

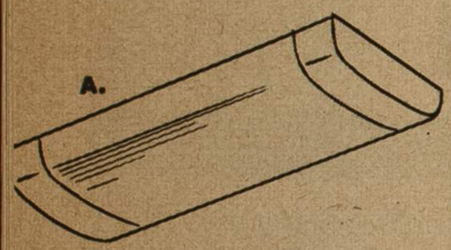
KITCHEN light conditioning recipes are as tried and tested for you as your cooking recipes. When you blend the lighting ingredients with the design of your work areas, you will have a kitchen that is cheerful at all times, that saves time and energy, is easy on the disposition.

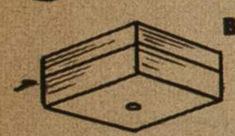
lighting recipe K

GENERAL LIGHTING FOR KITCHEN

This gives you convenient, over-all lighting. You can see into drawers and cabinets, read labels easily.*







WHAT TO USE

CENTER CEILING FIXTURE

Fluorescent: DeLuxe Warm White, two 48″-40w (feature illustration) or, two 36″-30w or, four 24″-20w, see sketch **A.**

SHIELDING: complete shield preferable, highly translucent plastic or glass.

Circline: three-lamp unit; 40w, 32w, 22w; or double unit, 40w, 32w.

Incandescent: one 150w; or two 75w; or three 60w.

SHIELDING: ceramic-enameled or opal glassware; plastic. 12″ min. dia.

B. closed bowl or square types. **C.** open pan types with deep side.

Silvered-bowl incandescent: one 200w louvered unit; 14″ min. dia.

SERVICE HALLS—use smaller sizes of kitchen type. Recipes on Page 37.

**Fluorescent fixtures can provide Trigger or Rapid Starting. See tubes, Page 38.*

lighting recipe 10

PREPARING FOOD AT KITCHEN COUNTER

Lighting over work counter erases shadow from recipes to be read, ingredients to be measured and blended.

WHAT TO USE

Fluorescent Bracket: with DeLuxe Warm White tube-s. Fluorescent tubes provide economical lighting over wide areas because of their high light output in a linear shape. Their more diffused light also lessens reflected glare.

A. *Commercial type* complete with shield, or **B.** *Standard channel* (white enamel.)

LENGTH: 24″—36″ counter—20w
36″—48″ counter—30w
48″—60″ counter—40w

HEIGHT: 50″ to 58″ from floor. SWITCH: usually at right.

SHIELDING NOT NEEDED on standard channel and tubes, **B**, if they are

- below a cabinet less than 58″ above the floor, and
- could not be in the line of vision of a person seated nearby.

MOUNT: on underside of cabinet near front edge, (tube toward wall). This front position essential if cabinet is less than 52″ above floor or, on back wall just beneath the cabinet (tube toward front) **B.**

SHIELDING DEVICE ESSENTIAL if—

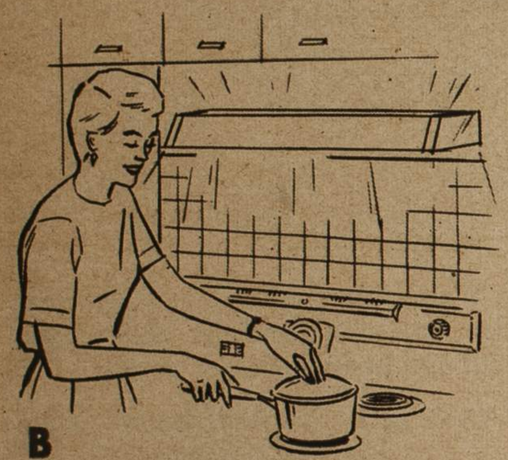
- counter is against plain wall (not below cabinet), or
- tube is in line of vision.

A

lighting recipe 11

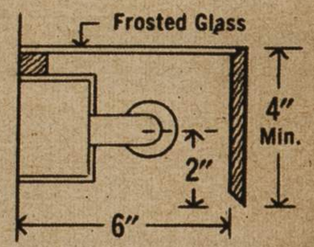
COOKING AT **RANGE**

ON FLAIN WALL OR UNDER HIGH CABINET (ALSO SINK)



B

This recipe lets the cook really see down into pots and pans. Lamps on the range usually light only dials or push buttons.



PATTERN A

2" x 4" horizontal outlet box 60" above floor.

WHAT TO USE

PREFERABLE—Fluorescent Wall Bracket

LENGTH: min. 36"-30w DeLuxe Warm White.

SHIELDING: essential, some upward lighting desirable. SWITCH: local.

TYPES: **A.** *Custom-made bracket*: white channel and tube with faceboard and frosted glass shelf as in pattern. Also use over counter, Recipe 10.

B. *Commercial bracket*: plastic, or metal with flat, perforated top.

PLACE on wall, center above range, bottom of shield 58" above floor.

Alternate: If wall-bracket is inappropriate, mount units on soffit or ceiling. See Recipe 12.

Metal Hood over Range: Select type with one or two sockets for one 100w or two 60w Soft-White bulbs centered inside front edge of hood.

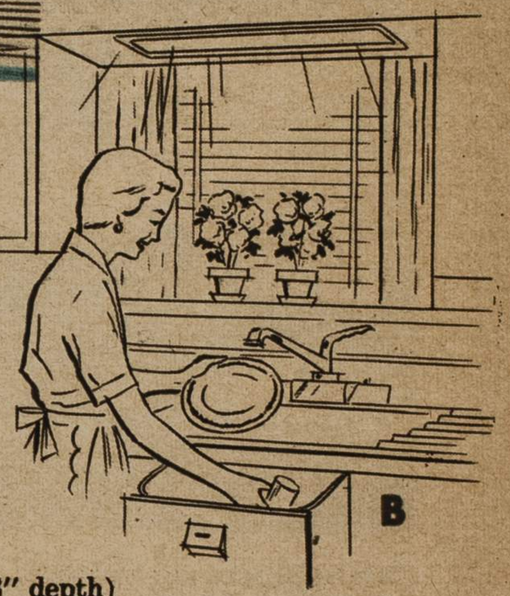
A

lighting recipe 12

CLEANING FOOD AND UTENSILS AT **SINK**

FLANKED BY CABINETS. USUALLY UNDER WINDOW (ALSO RANGE)

Lighting above the sink supplements unreliable daylight—assures easy and accurate seeing.



B

WHAT TO USE

A. When Faceboard Joins the Cabinets (min. 8" depth)
bare tubes or bulbs shielded by the faceboard:

FLUORESCENT: DeLuxe Warm White: two 36"-30w tubes mounted beside each other immediately behind board.

INCANDESCENT: two R-30, 75w reflector flood lamps, or two 75w inside frosted bulbs; space 15" apart. Mount on ceiling or front edge of soffit, behind faceboard.

B. Without Faceboard (also over projected and island units)

Recessed fixture:

FLUORESCENT: DeLuxe Warm White: two 36"-30w tubes, or three 24"-20w tubes. Shielding: louvers or frosted glass.

INCANDESCENT: increase recipe to three 75w inside frosted bulbs. Shielding: opal or ceramic-enameled glass.

Surface mounted fixture: repeat fixture used in center of area, see Page 24; or, two metal cones 15" apart, R-30, 75w flood or inside frosted bulbs.

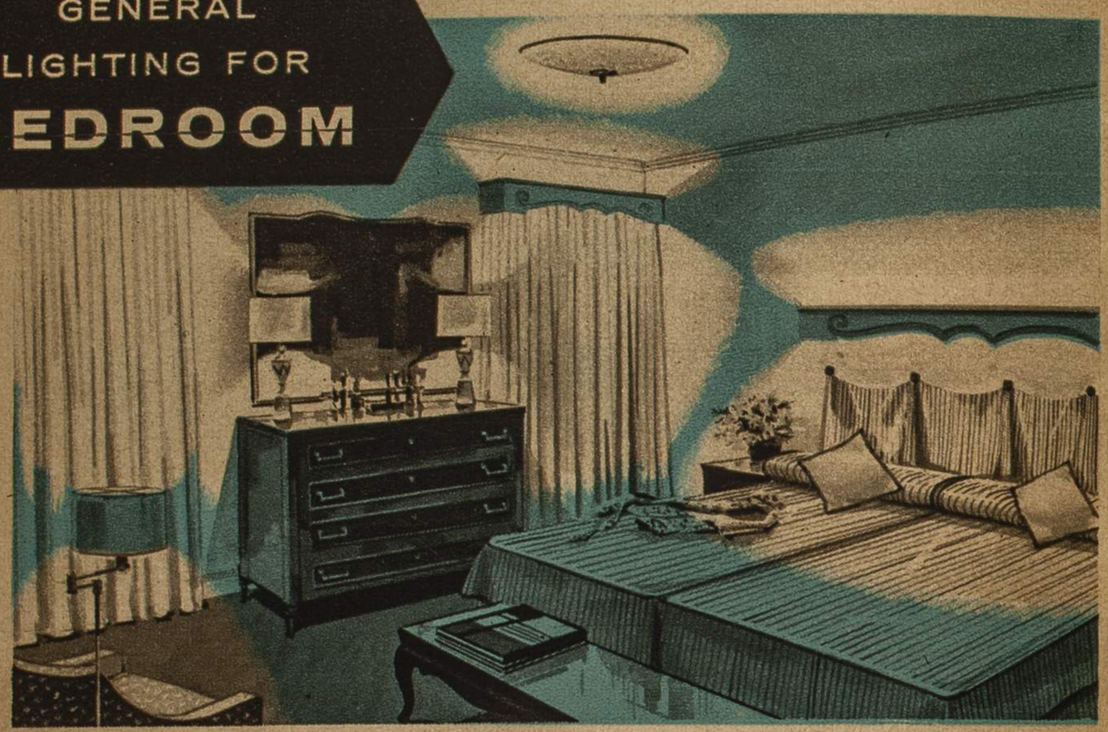
SWITCHING: wall switch essential.

Alternate: if sink is not in front of window, use wall-bracket. See Recipe 11.

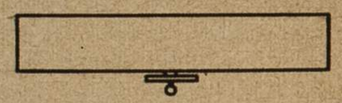
With light conditioning you "live" in your BEDROOM—instead of just sleeping and dressing. Combining the recipes to make the best use of space creates a relaxing, personal sitting room. You will look better and live better.

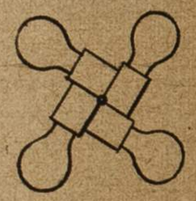
lighting recipe BR

GENERAL LIGHTING FOR BEDROOM



This recipe gives you convenient, instant lighting when you enter the room. It is an aid to good grooming, good housekeeping, and care of the sick.





Multiple lamp bulbs in a horizontal position permit the fixture to be shallow.

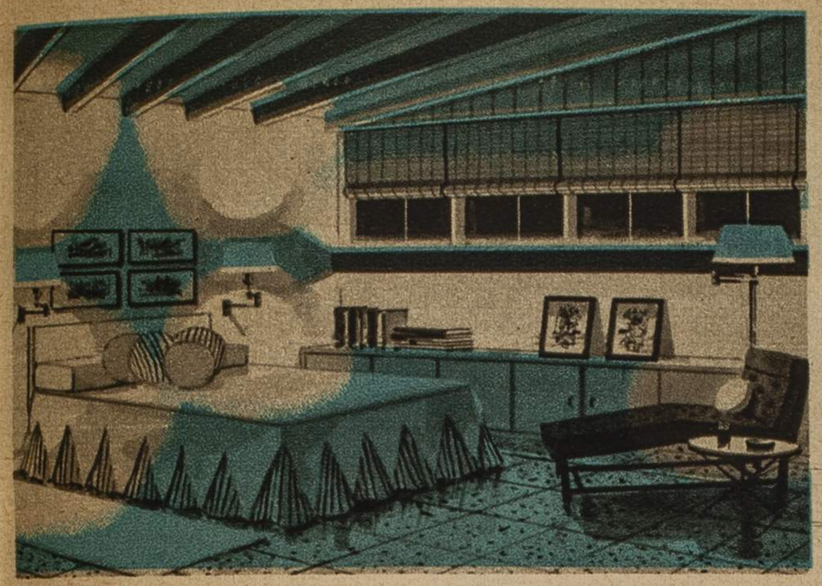
WHAT TO USE

A Shallow, Close-to-Ceiling Center Fixture
(Pendant fixtures are often desirable with high 9′-10′ ceilings.)

SHIELDING: ceramic-enameled glass, or plastic with good diffusing qualities.

SIZE:
- *Very small room* (less than 125 sq. ft.) min. 15″ diameter; three 40w bulbs or one 100w bulb.
- *Average sized room* (125 to 225 sq. ft.) min. 17″ diameter; four 50w bulbs or (preferable) five 40w bulbs.
- *Very large room* (over 225 sq. ft.) Omit ceiling fixture and use same wall lighting recipe as for living room.

Wall Lighting as supplement, or alternate, *see opposite page.*



The sitting room atmosphere is most easily captured by wall lighting. Light the draperies first, or preferably an entire window or storage wall. This forms a lovely background for a seating area, just right for conversation or watching television.

WHAT TO USE

Valance, Cornice or Wall-Bracket as illustrated on Pages 16-19, using DeLuxe Warm White tubes. (This is preferable for lighting rooms with slanted ceilings.)

- *Very small room* (less than 125 sq. ft.)
  SUPPLEMENT TO CEILING FIXTURE: 36″-30w wall-bracket (min.)
  ALTERNATE TO CEILING FIXTURE: 6′ of wall lighting; two 36″-30w, or three 24″-20w tubes.
- *Average sized room* (from 125 to 225 sq. ft.)
  SUPPLEMENT TO CEILING FIXTURE: 48″-40w tube (min.).
  ALTERNATE TO CEILING FIXTURE: 8′ of wall lighting; two 48″-40w.
- *Very large room* (over 225 sq. ft.) min. 16′ of wall lighting—as for a living room. Plus, if desired, a decorative *accent* ceiling fixture (shielded bulbs).

SWITCH: If *alternate* is used, a wall switch is essential at entrance.

ADD A PORTABLE LAMP ENSEMBLE

The recipes you combine from the next three pages determine how effectively you use your space.

Reading in Bed: If you want more bed table space, use wall or ceiling lighting.

Make-Up: The right lamps here free the bathroom mirror. Save you steps.

Chair: The right lamp adds reading and sewing to its uses (Pages 8-12).

Desk: Make life easier by having your own spot for personal bookkeeping and correspondence. (Pages 14-15).

- Arrange the furnishings so that lighted lamps on several walls add to the room's decorative balance.
- Add decorative value by ensembling the lamps in relation to the furnishings and each other.

READING IN BED

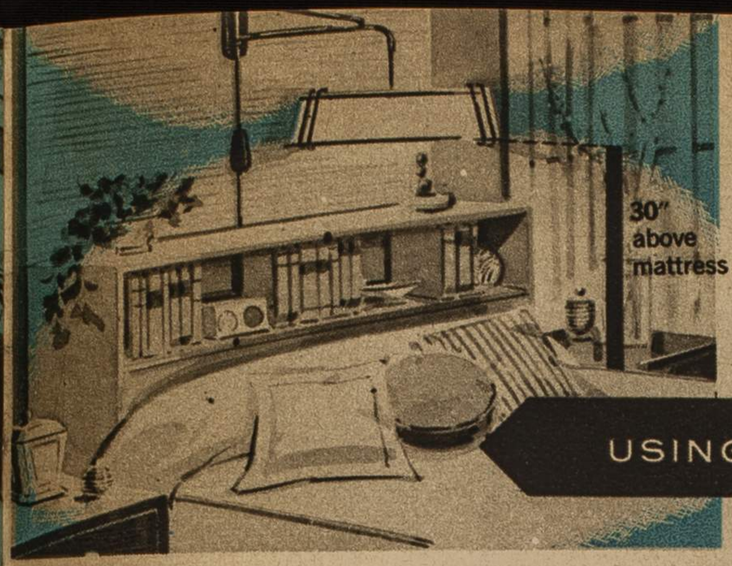
Reading in bed is a relaxing pleasure when there is a sufficient spread of light to permit both body and eye comfort.

lighting recipe 13

USING A TABLE LAMP

lighting recipe 13a

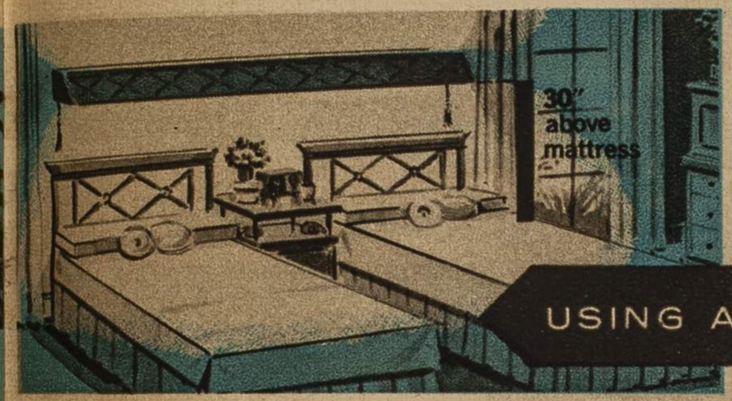
USING A CEILING FIXTURE



Extended arm-type wall lamps span wide headboards to bring the light over pillows.

lighting recipe 14

USING A WALL LAMP



This is the best recipe to light the entire width of a double bed, or decoratively unify twin beds.

lighting recipe 15

USING A WALL BRACKET

WHAT TO USE

13. End Table Lamp

DIFFUSER: A or B—8", or C. SHADE: top 8", depth 10", bottom 16".
BULB: 50/150w, 50/250w. 50/150 R40 Soft-White Indirect for C (high level for reading).

DIFFUSER: D. BULBS: multiple, 180 watts.
SHADE: top 14", depth 6", bottom 16". HEIGHT TO SHADE: 15"-17" above 26"-28" bedside table. Table height, plus lamp base height, should locate lower edge of shade about 20" above mattress—at eye level.

Even Better—Senior Table Lamp

DIFFUSER: A or B—10". BULB: 100/300w (300w for reading).
HEIGHT TO SHADE: 18". SHADE: top 14", depth 13", bottom 16".

13A. Suspended or Reel-Type Fixture

SIZE: 14" dia. or larger. BULBS: multiple sockets, total 120 watts.
SHIELDING: luminous with comfortable diffusion, or opaque with upward light.

WHERE TO PLACE:

13. Measure 22" from center of book out to table. From this point measure 16" back to wall. Center lamp here (about in line with shoulder).
Twin Beds: Repeat the recipe at far side of both beds; don't compromise.

13A. *Suspended*: Close to wall, 2' above mattress, 20" left or right of person.
Reel Type: Pull down so that lower edge of shade is at eye level.

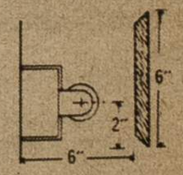
WHAT TO USE

14. Wall Lamp

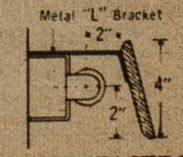
DIFFUSER: A—8". BULB: 50/150w, 50/250w or C. BULB: 50/250w (High level for reading). SHADE: top 8", depth 8", bottom 13".

DIFFUSER: D—(usually in pull-up and down type) BULBS: multiple, 180w total.
SHADE: Min. depth 6", bottom dia. 14". Usually needs shielding at top, and always diffuser at bottom, *not extending below shade*.

15. Wall-Bracket of approximate bed width (see patterns).
SINGLE BED: one 36"-25w DeLuxe Warm White tube.
DOUBLE BED: one 48"-40w DeLuxe Warm White tube.
EXTRA WIDE, or twin beds: two 36"-30w units.
OUTLET BOX: 2" x 4" horizontal type; 32" above mattress, usually 53" above floor. SWITCHING: local.



STRAIGHT FACEBOARD



SLANTED FACEBOARD

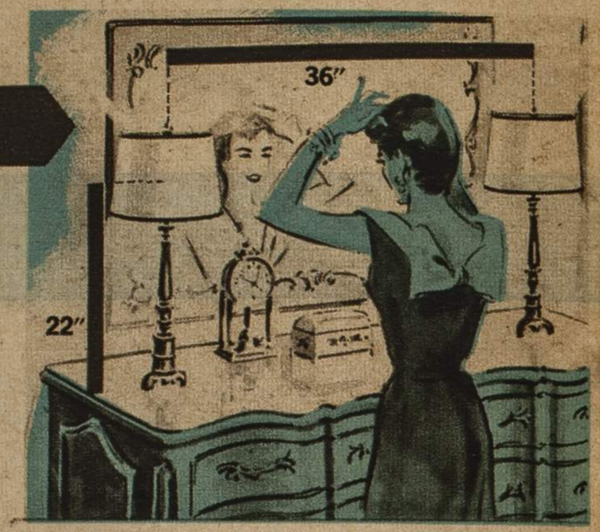
WHERE TO PLACE:

14. Bottom of shade 30" above top of mattress. Center over bed, or each side of double bed, if preferred.

15. Bottom edge of faceboard 30" above top of mattress.

MAKE-UP *It takes two to make-up. The two lamps in this recipe aid you in applying make-up smoothly and discreetly. They give you light evenly distributed to both sides of the face (at face height)—undistorted by color from the shade.*

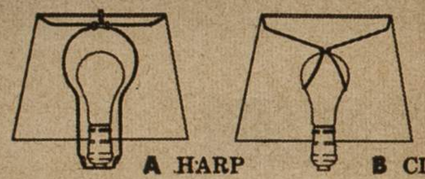
STANDING AT DRESSER



lighting recipe 16

lighting recipe 17

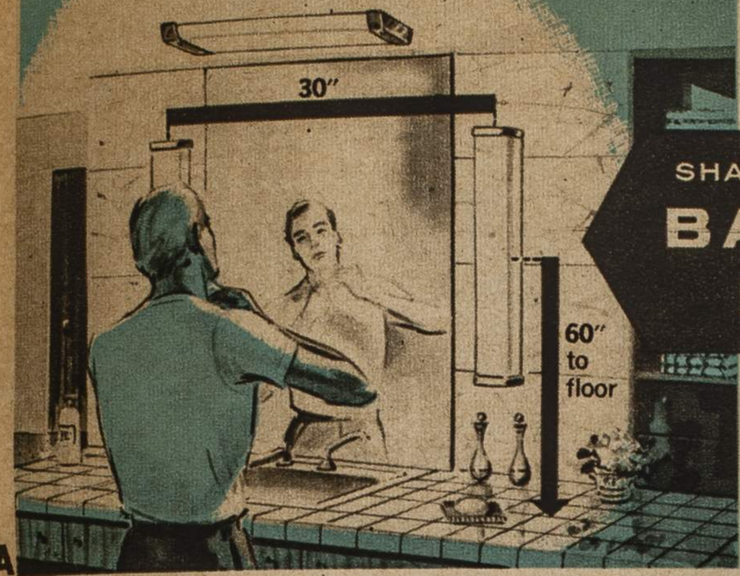
SEATED AT DRESSING TABLE



WHAT TO USE

Pair of Lamps with white or ivory translucent shades.
A *type preferred*, OR **B.**
BULB: 30/100w 3-Way, or 100w Soft-White (top of bulb at least 2" below shade top).
SHADE: top 7", depth 7", bottom 9", (larger preferred).
LAMP HEIGHT: **Dresser Recipe 16:** shade center 22" above 36" high dresser.
Dressing Table Recipe 17: shade center 15" above 30" table.

WHERE TO PLACE
Position 6" out from wall; 36" between shade centers.
DOUBLE DRESSER OR DRESSING TABLE—Select larger lamps of the **A** type.
SHADES: min. 12" bottom dia. BULB: 50/150w 3-Way.
POSITION: up to 48" between shade centers.
WIDE MIRROR AND COUNTER—Extend a shielded DeLuxe Warm White fluorescent unit over counter. Surface mount or recess in soffit a double row of tubes to fill space. Center 15" out from wall.
Or on wall: unit with single or double row of tubes.
DESIRABLE PLUS—Add vertical fluorescent brackets each end of mirror.

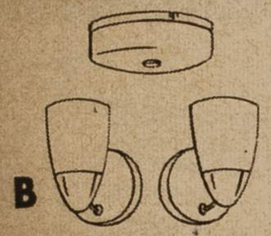


A

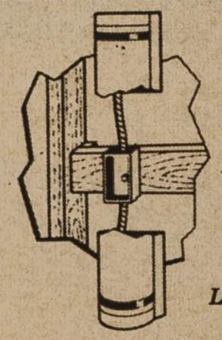
lighting recipe 18

SHAVING OR MAKE-UP AT BATHROOM MIRROR

This three-fixture recipe gives the right lighting for grooming, and at the same time will light the average-sized bathroom. There is ample light on top of the head, both sides of the face, and (by reflection from the washbowl) even under the chin. No shadows will interfere with a clean shave or precise make-up.



B



Location of 2" x 4" outlet box.

WHAT TO USE

SET OF THREE FIXTURES
A. Fluorescent: DeLuxe Warm White tubes, shielding preferable (illustrated).
Ceiling: two 18"-15w tubes, or one 32w circline.
Wall: one 24"-20w tube on each side.
TRIGGER STARTING BALLASTS available in 15w and 20w fixtures; also circlines.

OR—B. Incandescent: always shielded by opal or ceramic-enameled glassware.
Ceiling and Wall, MINIMUM: one 60w each unit; min. 6" dia. shielding on wall; 8" on ceiling. PREFERABLE: two-socket unit, 40w each socket. Min. length 10" or longer. Four-socket type, 25w each.

WHERE TO PLACE
Ceiling: centered with wash bowl, above front edge. (12"-18" from wall).
Wall: centered 60" above floor, 30" apart.
SWITCHING: the three units should be controlled by one wall switch.

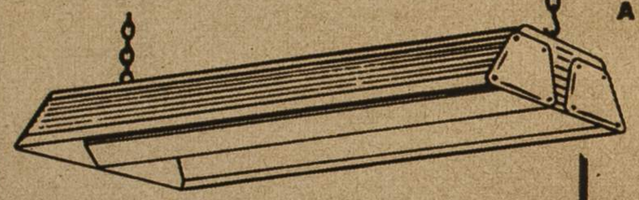
ALSO ESSENTIAL
For Separate Compartment: wall or ceiling unit, 75w bulb, shielded.
For Shower: vapor-proof ceiling unit, 60w, switch on outside.

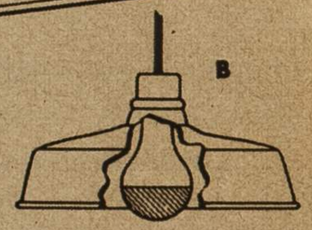
AND TO MAKE LIFE EVEN MORE PLEASANT
Pedicure Light: swivel unit under front of counter. R-30, 75w bulb.
Night-Lite: plastic unit with 7C7 bulb; or electroluminescent.
RS Sunlamp and Infrared Heat Lamp: timers available.

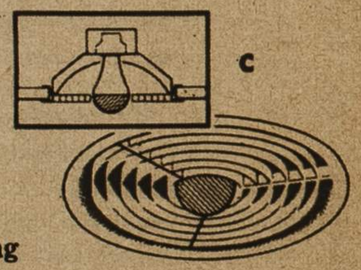
lighting recipe 19

LAUNDRY
AT WASHER, DRYER, TUBS

Lighting keeps pace with modern laundry equipment to end the washday blues. The right light helps you dial, sort, starch—and, if you use a wringer, you are certainly much safer.







WHAT TO USE

Fluorescent: A.
Rectangular Ceiling Fixture:
TUBES: two 48"-40w Cool White.
SHIELDING: plastic or metal at sides.

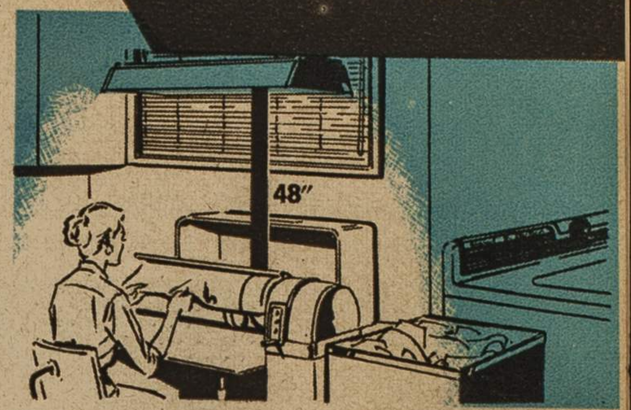
Incandescent: B.
Circular Pendant Metal Reflector:
12"-14" dia.
BULB: one 150w silvered-bowl.
Available as an adaptor which screws into socket.

WHERE TO PLACE
Center over laundry center. Bottom edge of shielding 48" above top of equipment.

LAUNDRY CENTER—When the laundry is near the kitchen or bathroom it is desirable for the lighting fixtures in the area to blend or match.
Use any of the flush-mounted or recessed types shown on Pages 24 and 27.
Or (**C**) *one 100w A-21 silvered bowl* bulb in recessed louvered unit.

lighting recipes 20 and 21

HAND AND MACHINE IRONING



Ease of seeing lets the eye and hand take full advantage of technical improvement in irons and ironers. You'll work faster; avoid scorching and wrinkling.

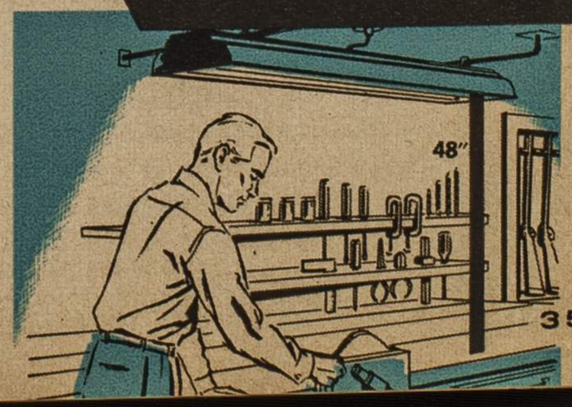
WHAT TO USE **Fixture A or B on opposite page.**

WHERE TO PLACE
Hand Ironing: Recipe **20:** bottom of shielding 48" above board center.
Machine Ironing: Recipe **21:** bottom of shielding 48" above ironer; center 5" back from front edge.

lighting recipe 22

CARPENTRY, HANDCRAFT AT WORKBENCH

Here's how the handyman can see his homework in the right light. Amateur or craftsman can work with accuracy, speed, safety and comfort.



WHAT TO USE
Fixture A or B on opposite page.

Preferable: Ceiling convenience outlet and fixture with extension cord (as illustrated). Unit slides on rods.

WHERE TO PLACE
Center over front edge of bench; lower edge 48" above work.

ADDITIONAL EQUIPMENT: adjustable clamp-on holder, or bullet reflector (**D**). BULB: R-40 150w Flood or Spot. Use spot type for maximum concentration of light.

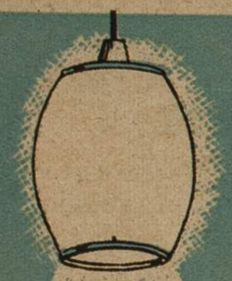
HALLS

The entrance hall is a revealing glimpse into the home. Use light to show the area and yourself to advantage, and to help you impart graciousness and hospitality.

WHAT TO USE

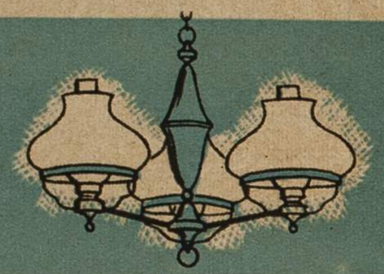
Select fixtures in accordance with the size of the area and style of furnishings. Use these to keynote the style of fixtures to be seen in adjoining rooms. (Types with closed tops are needed if bulbs are visible from stairs).

FOR ENTRANCE HALL—*Ceiling Fixture*: three sockets, 40w each. 12″ min. dia. shielding; or 4″ dia. shielding of each bulb; Or 100w, 14″ dia. shield.



PENDANT
(TOP SHIELDING)

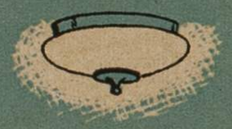
CLOSE-TO-CEILING
(OPEN PAN
OR CLOSED BOWL)



ABOVE:
MULTIPLE SHIELDING
BELOW:
OPAQUE SIDE SHIELDING

Or, three 50w GA bulbs, unshielded.

VESTIBULE—*Ceiling Fixture*: one socket, 60w - 8″ min. dia. shield

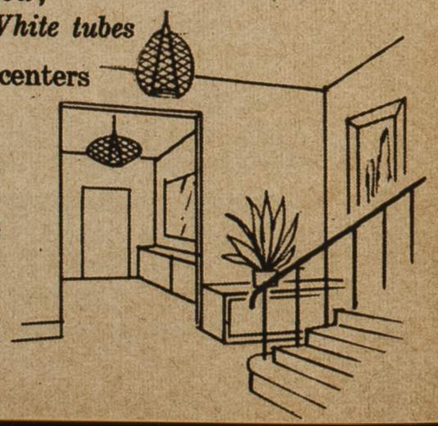


Or, two 50w GA bulbs, unshielded
Or, Wall-Bracket; shielded Incandescent, one 60w,
Or, Fluorescent: two 18″-15w DeLuxe Warm White tubes

PASSAGEWAY—repeat Vestibule Recipe at 8′ centers

SERVICE HALLS—styles related to kitchen.
INCANDESCENT: one 75w, 8″ dia., shielded, or one 100w or two 50w GA bulbs.
FLUORESCENT: DeLuxe Warm White, one 32w circline; or two 18″-15w tubes.

CLOSETS—(over 9′ sq. or 2′ deep) 60w min. Walk-in areas usually 100w min.



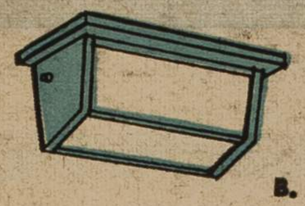
ENTRANCES

A light-conditioned entrance expresses cheerfulness and welcome. There is convenience and safety for yourself and others.

WHAT TO USE

A Group of Fixtures selected and positioned in accordance with your types of entrances; also the length and location of steps, walks and driveway. A coordinated group related to the style of the house adds to a harmonious appearance; suggests care and integrity in design and construction.

A.



B.

C.

D.

A. Wall-Bracket
On each side of main entrance.
On lock side of other entrances.
66″ above standing level.
Min. 6″ dia. shielding. 40w each.

B. Overhead Wall-Bracket
Over garage or house entrances.
One 60w or two 40w each.

C. Ceiling Fixture
Center on porch or breezeway ceiling. Min. 10″ dia. shielding
Two sockets, 40w each.

Small Portico:
Min. 6″ dia. shielding. One 40w

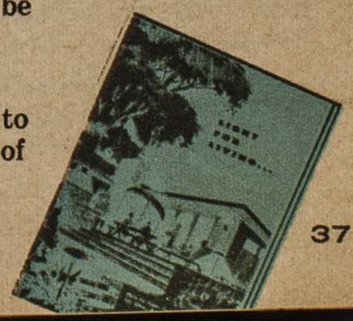
D. Post Lantern
One 60w min.

Avoid clear glass, or bulbs will glare into eyes. Opaque top, and open or glass bottom, directs light downward to foot level.

YARD LIGHTING
Projector lamps conveniently and inexpensively light driveways and large areas. Use 150w flood type in weather-resistant holder. Mount high on house, under eaves, or on trees or poles.

GARAGE LIGHTING.
In 1-car garage use 100w SOFT-WHITE bulbs in two sockets. Locate on ceiling at each side of car spaced approximately midway in length of garage. This recipe provides safer, surer seeing for getting in and out of cars. In 2-car garage add a third ceiling socket and 100w SOFT-WHITE bulb, in line with the other two sockets. A fourth outlet may be on wall between garage doors.

LIGHT FOR LIVING—OUTDOORS
Use the Outdoor Lighting Recipes to add more space to your home. They make possible more and better use of your investment in land and outdoor furnishings.
(Booklet 1.5-5229R)



THE LIGHT SOURCE

The great variety in lamps that STAY BRIGHTER LONGER gives you the exact bulb or tube required for best service in each type of lighting and household equipment. A cupboard for spares is a convenience and an aid to good housekeeping.

FLUORESCENT

DELUXE WARM WHITE tubes and circlines are designed for the residential interior and are complimentary to furnishings and complexions

TUBES: T-12 (1½" dia.)—15w-18"* 20w-24"* 30w-36"*** 40w-48"**
T-8 (1" dia.)—15w-18" 30w-36"*

CIRCLINES: T-9—22w 8¼"*** T-10—32w-12"*** 40w-16"***

Quick starting: *when used with a trigger start ballast.
**tube marked "rapid start" is used with a rapid start ballast.
***always rapid start.

INCANDESCENT

Single Filament

INSIDE FROSTED:
A19—25, 40, 50, 60, 75, 100w
A-21—150w A-23—200w

SOFT-WHITE: A-19—40, 60, 75, 100w

SOFT-WHITE INDIRECT: R-40—150w

COLORAMIC BULBS—
(complimentary to furnishings and complexions)
A-19—75w A-21—100w A-23—150w
Dawn Pink, Spring Green, Sun Gold and Sky Blue

REFLECTOR: Spot and Flood
R-20—30 and 50w R-30—75w R-40—150w

COLORED REFLECTOR: R-30 and R-40
Pink, Yellow, Blue-White, Blue, Red, Green, Amber

SILVERED-BOWL: (porcelain socket over 100w)

PROJECTOR: (weather resistant) Spot and Flood PAR-38

INFRARED: (heat and drying)
R-40/1—250w (inside frosted)
R-40/10—250w (heat resistant red filter)

SUNLAMP: for year 'round tanning
RS—275w (fits standard socket)

NITE LIGHT:
C-7—7w (fits plug-in unit)
7½S—7½w (fits standard socket)

Three-Way (base down)

INSIDE FROST or SOFT-WHITE
A-21—30/100w
PS-25—50/150w
PS-25—50/250w

G-30—100/300w (mogul)

R-40—50/150w

They absorb some light, so use next higher wattage than "recipe." For prolonged critical seeing, indications are that white light is preferred.
PS-25—50/150w (all 4 colors)
G-30—100/300w (Pink only)

Decorative

GA: for unshaded fixtures (base up)
GA-25—50w (Ivory and Dawn Pink)
FLAME SHAPED:
F-10—15w F-15—25, 40w
TUBULAR: T-10—25, 40w (both 5⅝")
T-8—40w (11⅞")
LUMILINE: T-8—40w (12") T-8—60w (18")

Household Equipment

SEWING MACHINE: T-7—15w
VACUUM CLEANER: T-8—25w
OVEN: A-15/22—40w
REFRIGERATOR: inter. base T-6½/2—40w
st. base S-11/102—15w or 40A-15/1—40w
INDICATOR: inter. base C-7—10w
miniature G-3½

Letter in a bulb designation indicates its shape.
Number indicates its approx. diameter in eighths of an inch.

DO YOU HAVE THE HOUSEPOWER?

You can only Live Better Electrically when your home is wired for the job.

Start with a 3 WIRE (100 ampere) service entrance.

Make certain you have ENOUGH BRANCH CIRCUITS

For lighting—only—you will need about 6000 watts.*
(This doesn't include wattage for any electrical item plugged into living area outlets). You will need at least . . . .
Four circuits with 15 ampere fuses or circuit breakers (1800 watts each circuit) or
Three circuits with 20 ampere fuses or circuit breakers (2400 watts each circuit)

Other than lighting, you also need . . . .
Two circuits for small appliances, refrigerator, plus
Separate circuit for each major appliance, plus one outdoors.

Check that you have ENOUGH OUTLETS.

Lighting outlets:
One for a ceiling fixture or wall unit in each room or area; also
One in each closet over 9′ square or over 2′ deep

Convenience outlets (floor line in living areas; counter height in kitchen-utility area.)
One outlet on walls 3′ to 12′ long
One outlet for each 12′ of longer walls (Consider probable furniture arrangements)
Kitchens need outlets at shorter 4′ intervals, including one at each work area. Specify one near mirror in bathroom

Special outlets:
One for each major appliance, plus wall clock.

Weatherproof outlets:
One near front entrance. Two close to outdoor living area.

Plan your SWITCHES FOR CONVENIENCE.

One essential at latch side of all doorways
Multiple switches — at all entrances over 10′ apart. Also at head and foot of stairs
Mercury switches — for silence

Remote Control System—for greatest flexibility and convenient master control

Dimming System—to reduce light output of either fluorescent or incandescent units

Know your CIRCUIT BOX.

Add a wiring diagram and labels. Have service telephone numbers and new fuses nearby.

More HOUSEPOWER information is available through free professional wiring layout service and inspection, usually from your electric service company, a local Adequate Wiring Bureau, or an electrical league. Electrical contractors provide expert advice and service.

**Based on a 1200 sq. ft. house; 3 bedrooms, 1½ baths. (5 watts per sq. ft.)*

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House Cleaning

Management and Methods

FARMERS' BULLETIN No. 1834
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This bulletin is a revision of and supersedes Farmers' Bulletin 1180, Housecleaning Made Easier

House Cleaning Management and Methods

By CAROL WILLIS MOFFETT, Collaborator,
Bureau of Home Economics

Every homemaker has a standard of cleanliness for her home. She may not be conscious of her standard, but if it is high she feels uncomfortable when her house is disordered or dirty. The pressure of preparing meals, doing the laundry, caring for children, or working at personal or professional interests outside the home may make it impossible to keep her home up to the standard she wishes to attain. Sometimes working out a definite but flexible plan and checking on methods and equipment makes cleaning easier and simpler.

Planning a Cleaning Schedule

Cleaning is the removal of dirt from the paint, varnish, fabric, enamel, glass, metal, and other surfaces in the home.

Dirt has been described as matter out of place. Just as weeds in a garden are plants out of place which may eventually choke out flowers and vegetables, so dust from the earth, soot, and oily smoke, which filter into the house or come from heating and cooking equipment, may eventually ruin the hardiest surfaces.

A thin film of dirt is easily and quickly removed. If it is permitted to accumulate, it cakes and hardens. Surfaces then may be damaged by the more drastic measures that are necessary to clean them. Many surfaces require only brushing or light treatment with soap and water if they are cleaned frequently; but if they are neglected until abrasives must be used to grind off the dirt on painted or varnished surfaces and the corrosion on metals, the surfaces are permanently affected and the job becomes difficult, time-consuming, and fatiguing. The economic value of frequent, light cleaning is important because it reduces the cost of refinishing and replacements.

Keeping out dirt

The management of household cleaning revolves around prevention of the accumulation of dirt. It includes plans for keeping as much of it as possible out and for systematic and frequent removal of what inevitably gets into the house.

In rural sections and small towns, where roads are not hard-surfaced, homemakers will find it to their advantage to urge that they be oiled or regularly sprinkled wherever it is possible to obtain this service. Smoke- and dirt-abatement campaigns in cities are making some progress; greater emphasis upon this phase of community life would cut down on house-cleaning labor and costs.

Walks should lead to the doors most used in farm homes, as they usually do in small town and city homes. Mats at outer doors help to prevent tracking dirt into the house. Daily sweeping of walks and porches takes less time in the end than cleaning up dirt after it has been tracked in, and saves wear on rugs

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and floors. If dirty or muddy clothes can be removed in an entrance hall or vestibule, much cleaning may be avoided.

Frequent brushing of outside window sills and the use of cloth-covered screens in windows that are open continually in pantries or halls help to keep out dirt. In some localities, covered screens may be used in windows at night to filter out both dirt and dampness.

Removing dirt systematically

Even more important than measures for keeping dirt out of the house are plans for its systematic removal. The easiest way to manage house cleaning is to schedule all the cleaning on a year-round basis. Letting many things go until there is need for a semiannual upheaval is uncomfortable for the entire family, extremely fatiguing for the homemaker, and an outmoded way of keeping house.

While every woman has some sort of routine for her day's work, few have taken the time to write down the jobs to be done and made a plan for distributing them through each week and month. Planning a work schedule takes much less time in the end than trying to work without one. Like budgeting the family income, a perfect time budget for house cleaning cannot be developed all at once. It grows out of experience and practice. But just as no seed produces vegetation until it is planted, so no systematic work schedule grows out of thin air. It requires thought, planning, and readjustment to meet varying situations. Once it is launched, house cleaning becomes more interesting. A cleaning schedule is a guide to freedom, not a chain to drudgery.

While the work schedule is being devised, every member of the household who is at home all day, even the young children, may be invited to participate. It then becomes a game of family cooperation in which each may choose the part best suited to the individual's tastes and capacities. Children like promotions. They may be induced to take responsibility for small tasks every day, such as cleaning toilet basins after using them, hanging up their own clothes, making their beds, cleaning the bathroom, or sweeping the walks, if they know they may be promoted later to other things they may prefer to do. When children help with the work they are more likely to realize how keeping dirt out of the house lightens daily duties.

Where there is paid help in the home, a cleaning schedule helps the work to run more smoothly and induces harmony in the relationship between the homemaker and her assistants. Employees should be shown a schedule of what they are expected to do when they are hired, in order that there may be no later misunderstandings. If the employee knows what is expected of her each day or week, and if the more fatiguing work is distributed through the week or month, she is likely to work more efficiently and happily. It is well to remember that household employees are human, that perfection is more often an ideal than a fact, and that they cannot do good work if too much is expected of them during each day.

Drawing up a work schedule

The first step in drawing up a work schedule is to list all the cleaning jobs that must be done about the house. These are then grouped under headings of work to be done daily, weekly, monthly, semiannually, and annually. The fundamental fact on which the schedule is based is that frequent light cleaning is the most economical of time, energy, cleaning supplies, and household surfaces.

Each homemaker's schedule must be adapted to her particular household and the dirt-producing conditions of her locality. In households where the laundry and cooking are done by the homemaker, her cleaning schedule must mesh with these daily and weekly tasks; for example, if Monday is washday, only light dusting of the home should be planned. In cities, where smoke and dirt accumulate on walls and wood trim more quickly than in the country, more frequent dusting and washing of surfaces is necessary. The following suggestions for a high standard of cleaning efficiency may serve as a point of departure in preparing a plan which suits the particular homemaker's general scheme of living. Some of the daily duties will be omitted where dirt-producing conditions are not extreme or where other duties require considerable time. Cleaning efficiency should endeavor to strike a happy medium between the expenditure of time and energy and the results obtained.

Daily.—Sweep walks and porches; dust furniture, wood floors; brush upholstered furniture; clean rugs; wash bathroom toilet fixtures and floor. Clean sinks and fittings, and stove surfaces after each use.

Weekly.—More thorough cleaning, moving of each piece of furniture that has not been moved during the daily dusting and cleaning behind it; dust radiators, baseboards, door and window woodwork, pictures, mirrors, lighting fixtures and bulbs, closets; brush outside window sills and venetian blinds; wash all the metal on bathroom fixtures; clean stove, burners, oven, refrigerator; polish silver and other metals.

Monthly.—There are two possible procedures that make semiannual house cleaning unnecessary and spread the work throughout the year. The first is to do one or more of the following in several rooms on the same day: Brush window shades or venetian blinds, or wipe blinds; brush curtains, draperies, walls and wood trim, or wash them if necessary; wipe pictures; wipe or wash windows; clean box springs and mattress; clean under side of rug and floor beneath it; clean closets and drawers; polish wood furniture; clean upholstered furniture where soiled. Use of the same tools and routines in several rooms at stated intervals will insure doing the same amount of cleaning in a year and may take less time than the second procedure.

The second procedure is to thoroughly clean one room at a time, including the basement and storeroom in the schedule, by adapting the things listed above to each room's requirements.

In addition, each month the carpet sweeper should be oiled. Other equipment should also be oiled if the manufacturer so directs. Where directions have been lost, ask the manufacturer or local dealer for them and write them into the schedule.

Semiannually.—Have household appliances checked and reconditioned where necessary; wash mattress covers; clean draperies.

Annually.—Furnace cleaned and reconditioned in early summer; if needed, have water heater drained and cleaned; catch basin cleaned; furniture washed and waxed; rugs washed.

One month during the year should be free of any special cleaning, so the homemaker may have a holiday from routine even if the family does not go away on an annual vacation.

Household notebook

One of the easiest ways to record the work schedule is in an alphabetically arranged household notebook, where also may be kept the addresses and telephone numbers of those who supply goods and services, an inventory of things stored in boxes and trunks, and bits of information on management and methods gleaned from magazines and books. Additional information to be entered in the notebook may be jotted on small slips of paper and put in a pocket on the back cover until a convenient time for recording them is at hand.

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Conserving Time and Energy

After the work schedule is in operation, the homemaker may turn her attention to reducing time and energy required for cleaning. Studies have disclosed that oftentimes cleaning is the most disliked household work, due probably to several causes. Cleaning is fatiguing. It often is done without adequate tools or the knowledge of better and easier methods. A job performed haphazardly is both tiring and uninteresting.

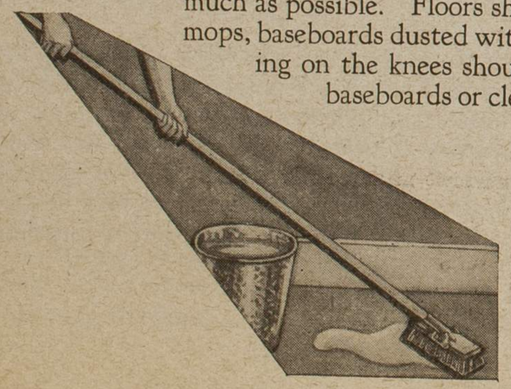
Modern equipment—systematic methods

Orderliness in the household and in working plans are fatigue-reducers in themselves. There is no need to worry about the many things that must be done when one knows that each will receive attention according to a systematic and flexible plan. With modern equipment and systematic methods, fatigue is reduced and there is greater satisfaction in the performance of cleaning tasks. Thoughtfully planned arrangements of storage places with articles located nearest the place of use makes house cleaning easier, quicker, and more orderly. If the children are trained to take care of their personal possessions and share in the responsibilities of the household, work, worry, and friction are lifted from the homemaker.

Habits of work are not always easy to change, but if a homemaker really wishes to make her work lighter, she will find compensation in a gradual readjustment to better methods. Experience has shown that the best method for doing a job not only produces the best results but also is most economical of time and energy. Hence she may find it fruitful to ask herself, "How do I do this task?" Then she may observe the motions she goes through in doing a particular job and experiment with ways to reduce their number; watch the number of steps she takes and avoid retracing them as much as possible; combine parts of a job, such as rearranging furniture while dusting it; select and arrange her equipment with the thought of saving time and energy through its use. The savings may be only in minutes on a specific task, but the total may provide a rest period during the day or more leisure for enjoyment of the family and personal activities.

It takes less time and energy to continue one cleaning process as long as possible, such as dusting the rooms on one floor, then cleaning the rugs. Dropping one tool frequently to pick up another causes some nervous readjustment. For this reason, too, it is best to complete one job and put the tools away before taking up another household task. Where there are very young children it often is difficult to avoid interruptions and distractions, but careful planning helps to relieve even this problem.

Stooping and bending are tiring. Hence long-handled tools should be used as much as possible. Floors should be wiped with long-handled mops, baseboards dusted with a long-handled brush, and working on the knees should be only a last resort to wash baseboards or clean a dirty corner.



A long-handled scrub brush saves the knees.

Selection and Care of Cleaning Equipment

In general, well-selected, good-quality tools pay for their extra cost in their efficiency and in the time and energy they save. They are more economical in the end because they do not have to be replaced so often. It is equally true that moderately good tools well cared for will give longer service than the best that are carelessly handled.

With such a wide variety of cleaning equipment on the market, there may be a temptation to buy more than is actually needed. It is well to consider not only the cost of a tool in relation to how durable and useful it is, but also whether it is adaptable to several kinds of work. The problem of storage is simplified, and cleaning is less burdensome, if only a few pieces of equipment must be carried from room to room.

Before buying equipment, and especially before selecting expensive tools, it is well to answer such questions as: Will this be used enough to justify the cost? Will it really save time and energy? How many kinds of jobs will it do? How much care in cleaning and storing will it require?

Brooms

Brooms come in various weights and sizes, and are made of fibers that differ also in kind and quantity. A broom that suits the purpose does a better cleaning job.

Fiber brooms cost more than those of broomcorn, but last several times as long and are more satisfactory to use. They do not flip up the dust during sweeping, and they wear down more evenly. Water preserves them, while it deteriorates broomcorn. They have been found especially useful on farms in scrubbing dairies and other buildings.

Chinese palm is one of the best, cheapest, and most durable of the fibers used for brooms. It is grown in water and therefore water helps to preserve it. The fibers in brooms of this type are always set in a metal jacket, which is attached to the handle. The metal binder or rows of stitching below the jacket may be removed as the broom wears down and so lengthen its period of usefulness. Some fiber brooms have a rubber or leather jacket over the metal jacket; these protect furniture but make the broom somewhat heavier to handle. Fiber brooms come in several weights and fiber lengths, the lighter weight being the most satisfactory for housework; the longer fibers make the longest-wearing brooms. The better brooms have maple handles, shellacked, varnished, or enameled. Pine is satisfactory on the cheaper ones, but birch handles are to be avoided because they break more easily.

Dipping fiber brooms in water once a week and hanging them up immediately keeps them in good condition and increases their durability. They should never be stored resting on the fiber end. Either hang them or rest them on the end of the handle.

Broomcorn brooms of satisfactory quality have a mixture of curly and rough fibers. Curly broomcorn curls even more when wet, and the ends of broomcorn fibers are often split. A good broom has comparatively few split ends and these splits should be short. The stitching cannot be removed as the broom wears down because the fibers will flare. Handles should be smooth finished, and the broom should be sturdy but light in weight. When stored these brooms like others should be hung or rested on the end of the handle.

Tampico fiber brooms have about 4 inches of these tough vegetable fibers extending from a hardwood block. They are more efficient and durable than the broomcorn type, but more expensive than either palm fiber or broomcorn.

Brushes

Brushes tend to gather and hold dust instead of scattering it, and for this reason are especially useful in cleaning. The types to be selected depend upon the household furnishings. Where there are no walks or rugs to be swept, homemakers may prefer floor brushes to brooms because they gather up the fine dust from smooth-finished surfaces more efficiently. A wall brush is essential in every home for dusting walls, ceilings, curtains, and draperies. For cleaning a toilet bowl, a brush is more sanitary than a cloth. For upholstered furniture and lamp shades, a well-chosen brush is better than a whisk broom. A separate brush is needed for stairs, baseboards, and window sills. It is difficult if not impossible to clean radiators without a good brush made for this purpose. Some radiator brushes are also adapted to dusting carved furniture and decorative iron work. Households usually need a scrub brush.

In selecting brushes it is well to examine as many types and qualities as possible, in order to understand quality differences and find the brushes best adapted to the household's furnishings. Brushes are made of pig and boar bristles, horse and goat hair, and palmetto, palmyra, or Tampico fibers. The bristle brushes are the most durable, and most satisfactory where a stiffer brush is desirable. Hair is softer. Vegetable fibers are stiffer and coarser than either of the others. Although palmetto, naturally brown in color, is the most durable, the majority of fiber brushes are made of the softer Tampico fiber. Vegetable fibers sometimes are mixed with hair in some types of the less expensive brushes in order to keep the price down, but do not hold dust as well as hair or bristles. The bristles, hair, or fiber of the brush may be stapled or cemented in wood or twisted in wire. When wire is used, it should be rustless galvanized steel, with the twists close together so the stock will be full; the wire used in some brushes will rust.

Price alone is little guide to the quality of a brush because some methods of marketing are much more expensive than others and are reflected in the price to consumers.

A few simple principles should be followed in the care of brushes. All of them should be washed frequently enough to keep them clean, using warm water and soap, rinsing thoroughly in clear water, and shaking to straighten the bristles or fibers. Brushes twisted in wire should be hung to dry; those set in wood blocks should be dried with the bristle side down so water will not soak into the wood; and all brushes should be hung on hooks when not in use.

Floor brushes of the best quality for household use are made of grade A horsehair, with full tufts stapled firmly in a hardwood block. Sizes for household use have blocks 12, 14, 16, and 18 inches long and about 3 inches in width. In most brushes the handle can be changed from one side of the block to the other each week so the hair will wear down evenly.

Wall brushes of the best quality are made of soft, white hair from the side or beard of the goat, twisted in rustless galvanized wire. Hair from under the goat's body is used in a lower-grade brush. Wall brushes should be very full and fluffy. Those with a handle set in a flexible spring socket will lie close against the wall. Some of the less expensive wall brushes are made of horsehair. These are efficient in cleaning walls but are stiffer and may snag delicate draperies.

Wall dusters made of wool fleece do satisfactory cleaning when new, but they soil quickly. It is very difficult to keep them from matting when they are washed, and they may soon become so hard surfaced that they will smear the walls, unless they are cleansed with a dry-cleaning fluid rather than soap and water.

Radiator brushes having the greatest usefulness are long-handled, cylindrical in shape, and made of bristles twisted in rustless wire. Those tapered toward the end get into the corners with less manipulation; those with flared ends are somewhat more expensive. Another type has a narrow, flat wood back into which hair about 2½ inches long is set. It is less adaptable to a variety of uses than cylindrical brushes, requires more manipulation, is less efficient in cleaning some types of radiators, but is durable.

Upholstery brushes are made with bristles or hair. There are many shapes and sizes with varying degrees of firmness in the stock. Where upholstery fabrics are not too delicate, a bristle brush is desirable. Silk lamp shades and upholstery fabrics require a soft brush. Some are twisted in wire in the shape of a large clothes brush, or are cylindrical and tapered to be used also on carved furniture. Others of various shapes, such as counter brushes, have bristles or hair set in wood. The counter brush type with a long handle is most useful for brushing stairs, window sills, and baseboards.

Venetian-blind brushes of the best quality are made of gray or white goat hair twisted in rustless wire. They come with two to five prongs, so that more than one slat may be dusted at a time; the three-prong are the most popular. The stock should be very full or the brush will not dust well.

Toilet-bowl brushes that are easiest to keep sanitary are made of stiff bristles or of Tampico fibers twisted in rustless wire, in either circle or ball shapes. The bristle brushes are more expensive but do not drip after the water is shaken out. Although Tampico fiber mats down much sooner than hair, these brushes are cheap to replace. Some types of cement used to fasten the wires into the handle give off odors. Handles should always be enameled to make them less absorbent of water. A toilet-bowl brush also is made with the bristles or fibers fastened around a wood ball, but wood absorbs water and is more difficult to keep sanitary.

Scrub brushes usually are made of Tampico fiber and are inexpensive. More durable brushes are made of palmetto fibers, but the homemaker may find it more sanitary to use the Tampico fiber brushes and replace them when the fibers soften and mat. Scrub brushes with long handles, which do away with the necessity for getting down on the knees, are the most desirable. If the type without a handle is selected, it is well to get one that feels comfortable in the hand.

Polishing brushes for use on waxed floors are of two types, the electric and the hand-operated. Both have stiff vegetable fiber stock for polishing. One of the least expensive electrically operated types has a brush-covered drum. Others have one circular brush which whirls flat on the floor, or two circular brushes revolving in opposite directions. Those with two brushes are more expensive but are considered the most efficient. Some electric machines have a device for applying the wax, either by dripping it from a container or forcing it out with an electric pump. Those with a pump require care to keep the pump from sticking. Two sets of brushes are supplied with those that apply wax, one for spreading it and one for polishing. The durability of electric polishers depends upon the motor.

Hand-polishing brushes have fibers set in heavy blocks weighing about 5 to 15 pounds. The handle is hinged so it may be swung more easily. These require considerable strength to operate but are very inexpensive in comparison with electric polishing machines.

Wax applicators may be cotton yarns twisted in wire or lamb's wool which can be detached from a block for cleaning. The latter absorb less wax. The wool will stay soft longer if it is washed with dry-cleaning fluid. Both types come with long handles.

Mops

Mops should be washed in suds as often as necessary to keep them clean and sanitary, then rinsed and dried in the sun. Dry mops, including those of the "dustless" type, require washing. Mops should be hung by the handle when not in use.

Wet mops come in a variety of styles. The cheapest, called yatch mops, have yarns wired around a handle. Some are devised so they may be wrung without putting the hands in water. Others have yarns held in a clamp. The more durable and satisfactory mops are made of four or more ply yarns of long-staple cotton, and are lintless. They should be very absorbent. If stray ends of yarn are kept trimmed, baseboards are not so easily splashed.

Dry mops also are made in a variety of styles and shapes. Satisfactory ones have long-staple four-ply cotton yarn twisted in rustless wire. These are easier to clean than those with the yarns attached to a collar that slips over an iron frame, unless the mop can be removed for washing. Some have a spring to facilitate dusting and shaking. Triangular mops are popular because they cover as large a floor space as the oval mops and are easier to push into corners. Dry mops should be full and soft, with all metal protected by lamb's wool bumpers, rubber sockets, or other devices to keep it from scratching the floor. Some dry mops are impregnated with oil to make them "dustless"; they get dirty quickly and require frequent washing, which gradually takes out the oil.

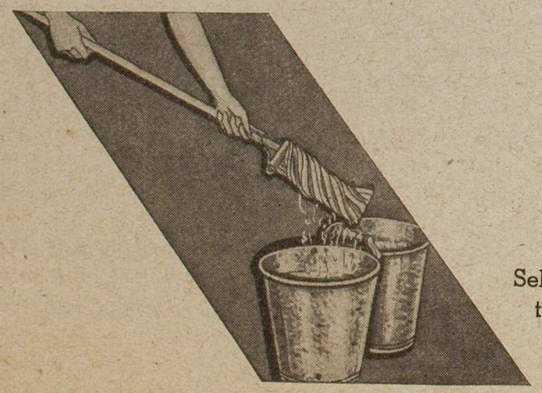
Dusters

Dusters may be made from clothing or household fabrics. Pieces of fine, soft wool make the most satisfactory dusting cloths; next in usefulness are soft cotton, especially knitted materials, or cheesecloth, and linen. Silk and rayon do not hold the dust well, nor are they as satisfactory for other types of cleaning as soft woolen, cotton, and linen fabrics.

Chamois

Chamois is excellent for washing windows because it cleans and polishes at the same time. It is made of sheepskin, oil tanned. French chamois costs more than domestic of a like quality and size, but is heavier and more durable. The quality of chamois can be judged by the elasticity. Those having the most stretch wear best and stay soft longest. The best are of even thickness throughout and lintless. They may be obtained in several sizes, the large being more satisfactory for washing windows.

Chamois should be washed in lukewarm suds, rinsed thoroughly, squeezed until as much moisture as possible is removed, and dried in the shade. Gentle pulling after drying will make it soft again.



Self-wringing mop with twin pails, one for soapy and one for clear water.

Sponges

Sponges are better than cloths for washing walls, woodwork, and upholstery. Natural sponges, the most satisfactory type for house cleaning, are a marine fiber and are available in many grades and sizes. Those called sheep's-wool sponges are the best quality for household use, and next in desirability are velvet and yellow sponges. It is cheaper and more satisfactory to buy two small sponges than to buy one large one and cut it. Like chamois, sponges should be washed in lukewarm suds, thoroughly rinsed, as much moisture as possible squeezed out, and dried in the shade. A heavy thread or string run through sponges and tied at the ends makes it possible to hang them on hooks when drying or storing.

Artificial sponges (regenerated cellulose) are also used for cleaning purposes, but are more expensive than natural sponges.

Dustpans

Dustpans with long handles that eliminate stooping are the most desirable. They should be made of metal heavy enough to prevent easy denting, and with a pan high enough in the back to hold the dirt when the front edge tilts upward in carrying. The edge should come in direct contact with the floor throughout the entire length of the pan.

Pails

It is desirable to have two pails for use in cleaning, one for water with soap and the other with clear water for rinsing. Small twin pails fastened together at the handle are the most convenient because both may be carried in one hand or set together on a stepladder. Galvanized-iron pails are the most durable, but fiber pails are lighter and cheaper.

Vacuum cleaners

A vacuum cleaner is one of the most useful household tools because it removes dust and litter without scattering them. It also is one of the most difficult pieces of equipment to select because it is a complicated piece of machinery.

Differences in manufacturing efficiency and marketing practices result in a wide range of prices that may have only an indirect relation to the value of the cleaner. No one factor, such as suction or motor speed, should be used as a basis for selection.

In general the efficiency of a vacuum cleaner may be judged by its ability to remove the most dirt with the least expenditure of the operator's time and energy. The dirt that gets into rugs varies in different parts of the country, but usually is a combination of dust, larger gritty particles like sand, oil, and rubber left on pavements by automobiles and tracked into the house, and soot and oil from heating and cooking equipment. The heavier particles sink into the pile tufts. As the rug is walked on the sharp gritty particles cut the rug fibers and when the rug is cleaned the loosened fibers are sucked into the cleaner bag. Few if any cleaners remove firmly bound nap from floor coverings. The dirt in a rug may contain as much as 4 percent or more of oily matter, which binds the dust particles together and makes them more difficult to dislodge. An efficient vacuum cleaner should remove these deep-seated particles as well as surface litter and dust.

Suction, sweeping, and agitation are employed in the various types of vacuum cleaners to remove dirt. The straight-air cleaner depends largely on suction for dirt removal. The motor-driven brush machine uses suction plus sweeping and agitation, and because of the other factors the suction may be considerably lower than that used by the straight-air cleaner.

The suction of the cleaner depends upon the design of the fan as well as the speed with which it is driven by the motor. A well designed fan will produce

sufficient suction with a lower motor speed. The motor determines durability more than any other part of the machine. A good heavy motor is likely to wear longer than a similarly designed lighter one.

"Junior" cleaners, which are about half the size of the standard household machines, are lighter to handle but have much less cleaning power. There are also small hand cleaners for use on stairs and upholstery. Attachments may be bought with the large cleaners for about the same price as the small cleaners, and they are adapted to use on many surfaces such as upholstery, curtains, high moldings, and walls.

Good cleaners that need only a thorough renovating often are turned in for credit on new ones. It is wise before trading in an old cleaner to have it inspected by a competent repair man and be certain that it cannot be put into satisfactory condition for a nominal sum. In buying a reconditioned cleaner as an original purchase, however, it may or may not be worth the price asked. Though the original manufacturer may put it into the condition in which it was first sold, it is important to know whether the model includes desirable improvements.

The care given a cleaner greatly affects its efficiency and durability. Four points in particular need to be remembered: care of the bag; adjustment of the nozzle and brush; protection of the fan; oiling of the motor.

The bag acts as a filter, catching the dirt and letting out the air that is drawn through the nozzle by the fan. For a cleaner to be efficient the bag must be kept clean. No matter how hard the motor and fan work to create suction, they can produce only the flow of air that can escape through the bag. Dust clogs the pores of the bag and it should be emptied after each use and shaken vigorously to dislodge this oily deposit. Periodically the bag needs to be turned inside out and brushed thoroughly but carefully so as not to injure the fabric. Some manufacturers recommend a semiannual dry cleaning.

If the lips of the nozzle are not adjusted to the proper height above the surface of the nap on the rug, the cleaner cannot do a good job. Some of the newer types have automatically adjusting nozzles; others require that the operator turn an adjustment screw. The proper adjustment may be judged by placing a dime on the rug about a foot from the nozzle and adjusting the height until the dime dances and moves toward the nozzle.

Brushes should be kept free from hair and threads. They wear down in time and need readjustment. Most cleaners provide for several adjustments of the brush. The bristles should extend to approximately one thirty-second of an inch below the lips of the nozzle. They may be checked by placing a ruler or other flat object across the nozzle.

The fan may be thrown off balance or nicked and the belt that drives it may be cut if metal objects, such as pins, nails, and coins are drawn into the cleaner. These should always be picked up by hand.

The motor should be kept clean and oiled according to the manufacturers' directions. For some cleaners this may be done at home; for others it is advisable to send them to experts every 6 months to have the mechanism checked and oiled where necessary.

Nonelectric vacuum cleaners resemble the electric type in appearance, except that there is no motor. The revolving brush in the nozzle and the fan are operated by the action of the wheels as the cleaner is pushed across the floor covering. The dirt is drawn into a bag similar to that of electric cleaners. It combines

some of the suction of an electric cleaner with the sweeping action of a carpet sweeper, and its cost lies between the two.

Carpet sweepers

Carpet sweepers are useful in sweeping the dust and litter from floor coverings. They have been described as a broom on wheels with its own dustpan. Some are made to adjust automatically to carpet pile of various heights with a minimum of pressure. Good Chinese bristles should be used for the brush and the sweeper should be easy to push. Rubber bumpers around the case save the furniture. Some have pans that empty by pressing a lever; in others, the handle is placed on the floor, the top lifted, and a pan taken out for emptying, which requires more time. There are cases in modern design, although the best mechanism is also used in the more traditional type of case at a somewhat lower cost.

Unless the sweeper is emptied after each use, lint and dust will, of course, drop back on the rug as the sweeper is operated. Unless the brush is kept clean, its efficiency is seriously impaired and the sweeper is harder to push. To remove string, hair, and ravelings without injuring the brush, it is better to clip them first with scissors. The brush should be wiped occasionally with a dry-cleaning fluid when it gets sticky from oil in the dust or wax on floors. The sweeper should be oiled regularly each month.

Carpet beaters

The beating of carpets and rugs is not recommended because it loosens the pile tufts and may injure the backing of the rug. However, in homes without vacuum cleaners where it is impossible to send floor coverings to a good cleaner once a year, it may be necessary to use a beater. Those made of rattan are less injurious to rugs than wire beaters. Rugs should be placed nap down on grass or snow, but should never be beaten while hung over a clothesline.

Selection of Cleaning Supplies

Water, soap, alkalis, acids, abrasives, waxes, and a few other substances are needed in addition to tools to keep surfaces in the home free from dirt and to preserve finishes.

It is convenient to have a basket or box with a handle, large enough to hold the brushes, dust cloths, sponges, and supplies that must be carried from one room to another. Running back and forth for tools and supplies is tiring, annoying, and wasteful of time. In some houses an additional supply of some of the materials used most frequently may be stored on the second floor.

Water

Water, especially warm water, is a good cleansing agent. When it is uncomfortably hot to the hands it is likely to injure the finishes on which it is used. Although it loosens dirt it should always be used sparingly and wiped off at once. It should never be allowed to stand on floors, walls, furniture, or wood trim, nor soak into seams and cracks.

The degree of hardness in water varies with each water source. Certain minerals make water "hard" and react with soap, forming a scum or film of insoluble lime soaps. It is very difficult to rinse this scum from fabrics, and hard surfaces need to be rinsed and rubbed to get it off. It is not so necessary, however, to soften water for scrubbing and washing hard surfaces as for cleansing fabrics. An abundant water supply piped through the house, with a good drainage system to carry away the waste, is of first importance in making house cleaning easier.

Soap

Soap emulsifies the oil and grease that make dirt cling to fabrics and finished surfaces, and helps to carry it away. There are in general two types of soap. One is the mild, neutral type used for toilet purposes and on fine fabrics. The other contains varying proportions of alkaline salts to produce a better suds in hard water and to aid in the cleansing action. The latter type is commonly used for laundry and dishwashing.

Most surfaces in the home should be washed only with mild, neutral soap. Soaps containing free alkali or large amounts of alkaline salts may be even more injurious to linoleum, paint, varnish, and lacquer than they are to the skin. Ordinary laundry soap and home-made soaps often contain sufficient free alkali to make their continued use on hard surfaces inadvisable. If more drastic cleaning action is needed than neutral soap and water alone supply, it is safer to add a small quantity of one of the alkaline salts, which also have value as cleansing agents.

In hard-water localities, it may be advisable to use one of the sulfated fatty alcohols in place of soap, or a hexametaphosphate or tetrasodiumpyrophosphate detergent mixture (sold under brand names) with soap for washing upholstery and rugs, although they are more expensive than mild, neutral soap alone.

Alkalis

Many of the alkali cleaning materials are less expensive when bought as such in bulk.

Trisodium phosphate is a moderately strong alkaline salt and one of the most effective in cleansing action. It is seldom sold by its chemical name, so it is well to ask grocers who carry cleansing agents to find out which contains trisodium phosphate. When bought in drug stores or chemical supply houses it may be more expensive. A half tablespoon to a gallon of water generally is sufficient to remove any dirt that cannot be loosened with mild soap and water alone. A larger amount will injure surfaces on which it is used; trisodium phosphate in strong, hot solutions is used as a paint remover. Hence some authorities are reluctant to advise it for household use because some persons act on the assumption that if a little is good a lot must be better.

Washing soda (also called modified soda) is a mildly alkaline salt combining sodium bicarbonate and sodium carbonate. Two tablespoons to a gallon of water are sufficient. Sal soda (sometimes called washing or soda crystals) contains about 40 percent of sodium carbonate and about 60 percent of chemically combined water. It will liquify at high temperatures or humidity, and is expensive when its high water content is considered.

Borax is a mildly alkaline salt and is not very efficient as a cleaning agent. Four tablespoons to a gallon of water are required.

Ammonia may be bought at a drug store in liquid form which is a solution of the gas in water. If water equal to three times the volume of the strong ammonia water is added to it, the same strength will be obtained as household ammonia. The latter is mostly water and the cloudy appearance usually results from the addition of a small amount of soap; it is an expensive way to buy ammonia for cleaning purposes.

Lye, which commonly is caustic soda, is often used to clean drain pipes. However, to prevent the caustic soda from combining with grease and forming hard soap that will clog the pipes, the pipes must be flushed immediately with plenty of hot water. Lye will also damage the glaze on most vitreous china plumbing fixtures and on enameled iron, even that with an acid-resisting finish. Lye is poisonous and injurious to the skin and must be handled with great care.

Acids

Bisulfate of soda is used in some preparations for removing the deposits that discolor vitreous china toilet bowls and render them unsanitary. Hydrochloric acid also may be used for this purpose in a 10- to 15-percent solution. These are strong acid compounds and like lye are poisonous, and must be kept out of the reach of children. They will injure enameled iron that is not of the acid-resisting type.

Abrasives

Scouring powders and metal polishes owe their effectiveness largely to the action of abrasives. Any abrasive wears down the surface on which it is used, the wear increasing with the amount of pressure applied in rubbing, the type and fineness of the abrasive, and the frequency of application. Consequently, it is well to try first to remove dirt and grease with warm water, soap, trisodium phosphate, or one of the other alkaline salts. Then it is a good rule to start with the finest and mildest abrasives and use a more severe one only when the polishing cannot be accomplished with less drastic action.

The mildness of an abrasive is determined both by the shape of the particles and by their fineness. Some abrasives, such as diatomaceous earth and feldspar, have particles smooth enough in shape to diminish their abrasive action. Diatomaceous earth in a fine grade is well adapted to polishing a soft metal such as silver, while a similarly fine whiting has less abrasive action and takes much longer to do the same polishing job. Such abrasives as volcanic ash, pumicite, and the coarser silicas are much more severe.

Metal polishes on the market combine abrasives with other substances. Thin polishes are wasteful. Silver polishes usually are pastes made with diatomaceous earth, soap, water, and perhaps a little wax, scented oil, and coloring matter. Some metal polishes are made with fine silica, which has sharper particles than diatomaceous earth, combined with such ingredients as water, soap, glycerin, ammonia, oil, or a flammable petroleum product. Sometimes acids are added to loosen the tarnish, and these ruin some metals and will damage most of them unless thoroughly washed off. Since acids cannot be packaged in tin, a polishing compound in a tin container assures freedom from them.

Some manufacturers claim that their polishes can be used on all metals. If they are adapted to cleaning copper and brass, they are generally too abrasive for silver because it is a softer metal. While a silver polish may be used on other metals, it usually takes longer than a polish adapted to the particular metal. Special polishes are made for silver, copper and brass, and pewter. These are the only metals in the home on which polish needs to be used.

Many recipes are in circulation for compounding polishes and similar household supplies in the home, but they do not always give satisfactory results. When the ingredients are bought in small quantities they are likely to be expensive, and some, such as diatomaceous earth, are known by a variety of names and are difficult to obtain in local stores. Abrasives are graded in the wholesale trade by fineness, and the homemaker has no way of knowing whether she is getting as fine an abrasive as is necessary for making polishing compounds.

Scouring powders may be of feldspar sold under a brand name, or the commoner volcanic ash or pumicite. Feldspar in a fine grade is less abrasive to the surfaces of plumbing fixtures and metals than the volcanic-ash preparations. Many scouring powders have soap and an alkaline salt added to the abrasives.

Steel wool is another type of abrasive, consisting of fine strands of steel. The finest is No. 00 and is adapted to cleaning some kitchen utensils. It is often sold with a cake of soap, or as steel wool mixed with soap. When straight steel wool is used, the hands may need protection with old gloves to prevent the fine strands from penetrating the skin. Stainless steel wool does not rust

but is more expensive. Copper and other metal sponges may be used in place of steel wool.

Polishes and waxes

Waxes protect floor and furniture finishes and keep them looking well with less time and effort than do other types of polishes. If the wax on the floors is renewed often enough, particularly in the paths of heaviest traffic, the finish remains intact. Since waxes readily mix with dirt and oil, surfaces should be washed before they are rewaxed.

Furniture and floor polishes often contain oil that attracts dirt unless they are thoroughly rubbed off after each application. It is common practice to put polish on a dust cloth and rub it on the furniture, without following with another rub with a clean cloth. Many furniture polishes are mixtures of mineral and sulfated oil in water, mineral oil and citronella (sometimes called lemon oil), or mineral oil and boiled linseed oil. Emulsified polishes contain water, oil, and an emulsifier. Mineral oils have a tendency to "sweat out." When any oil is used on furniture or floors it should be rubbed off as completely as possible.

Self-polishing waxes are emulsions of wax in water. The wax used is mostly carnauba, which makes a tough film. These preparations have great covering power and are inexpensive for frequent application. Manufacturers of linoleum, cork, mastic tile, and rubber floor coverings advise the exclusive use of this type of wax on their products, since the solvents in other types may damage these floor coverings. Self-polishing waxes are also used to some extent on furniture.

Liquid and paste waxes are made for use on both floors and furniture. Paste waxes contain about 20 to 35 percent of wax and give a heavier film, but require more polishing than the liquid products, which have about 10 to 15 percent of wax.

When waxes are used to preserve finishes it is cheaper to buy them in large quantities, for example, a gallon of self-polishing wax for the kitchen linoleum.

Since waxes must be melted and mixed with flammable turpentine and gasoline, it is hazardous to make these preparations in the home. There are many grades of waxes, and it often is impossible for the homemaker to obtain a satisfactory grade for home compounding.

Other cleaners

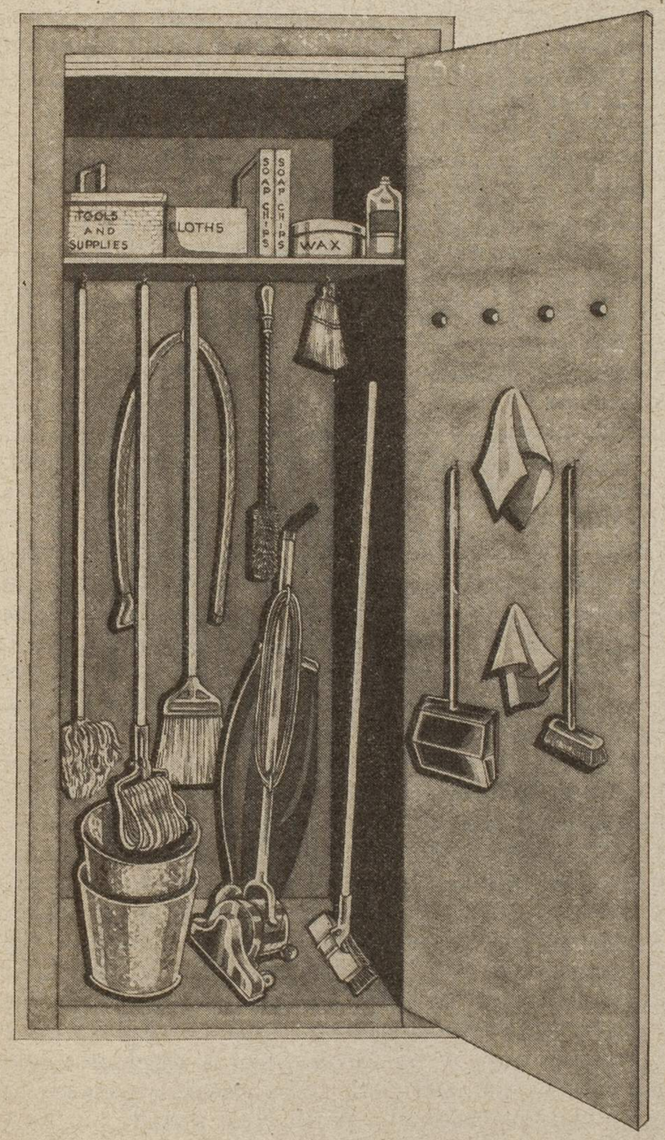
Denatured or wood alcohol, which is poisonous, is used for cleaning piano keys because it does not yellow them as water does. It may also be used sparingly to rub over scratches on varnished furniture. Dry-cleaning fluid will remove chewing gum, tallow dripped from candles, dirt from lightly soiled upholstery fabrics, wax from polishing brushes, and old coats of wax that have become impregnated with dirt.

Storage of Tools and Supplies

A cleaning closet

Ideally, cleaning tools and supplies should be stored together in a special closet designed for them, and sometimes it may also include space for table leaves and for a stepladder. In houses where no such closet was built in, it is often possible to adapt space near the kitchen and with easy access to other parts of the house. For example, a rear entrance hall may have one corner converted into a cleaning closet, or a movable metal cabinet may be bought and placed in an entrance hall or a large closet. Whatever the space there should be hooks high enough to hold brushes, brooms, and mops off the floor, and shelves high enough to hold bottles and jars without wasting space and yet not so deep that the supplies in front have to be moved every time to get at those in the rear.

The tools also should be so arranged that none has to be moved to take another out. Brushes, brooms, and mops should be hung by the handle so weight never rests on the bristles or fibers. The dustpan is hung with the edge toward the wall to avoid denting it. Hand-operated waxing brushes may have the handle removed and be laid with bristles up. If cloths used in waxing are not washed



Every house needs a cleaning closet where tools and supplies are stored ready for use

Note that brooms and brushes hang, rather than rest on their bristles . . . an easy - to - carry basket holds small tools and supplies . . . and holes in the door aid ventilation.

before they are put away, they must be kept in cans to eliminate fire hazards and odors. Carpet sweepers should rest on a side to keep pressure off the bristles. Vacuum cleaners may rest flat on the floor with the hose hung on a wall hook and the attachments laid on a shelf or hung up in a bag made for the purpose.

Dust cloths, mops, and brushes should be put away clean, dry, and ready for use, in order to save time, eliminate odors, and avoid storing dirt. Dusters and wet mops are easy to keep clean and sweet-smelling if they are washed out after each use and dried before storing. It takes only a few minutes to wash them if they are not allowed to become badly soiled. Dirty dust cloths and mops are unpleasant to use and cannot do a good job.

Methods of Cleaning

Cleaning methods may be remembered and their logic understood most easily when they are considered according to the kinds of surfaces to which they are applied. General principles are few and simple, but important.

The home should be kept clean, not made clean heroically at infrequent intervals. Frequent and systematic cleaning reduces immeasurably the ultimate time and energy required, preserves surfaces, and makes the job more interesting and the home a more pleasant place in which to live.

Frequent brushing of walls, woodwork, curtains, draperies, and upholstered furniture postpones the use of soap and water, and takes much less time than washing. Rugs cleaned daily wear longer. Dust and dirt are abrasive; they cut the fibers on rugs and grind off the finishes on floors.

Dirt should always be removed, not scattered from one place to another. A vacuum cleaner is one of the most helpful tools in accomplishing this.

Insects and rodents may get into the best ordered homes. Part of the job of cleaning is to watch for signs of them and bring them under control. Methods for speedy elimination are available in bulletins issued by this Department and by the State colleges of agriculture.

Paint and varnish

It is easier to clean and care for painted, varnished, and lacquered surfaces if the types of finishes in use today are understood. Each coating applied to wood and plastic is only a few thousandths of an inch thick, and repeated washing soon wears it away.

Wall paints may have a base, or binder, of oil or varnish, emulsified resins, casein, or glue. The oil or varnish types have little or no water in them, and they withstand cleaning with soap and water better than the others. The glossier the paint, the more it will withstand cleaning. The emulsified resin type contains water as a thinner, but the dry film becomes insoluble in water and develops satisfactory resistance to cleansing agents. Casein and glue (calcimine) bound paints are thinned with water and remain more or less readily affected by it. Casein paints may be gently washed, but cannot withstand severe scrubbing. Calcimine may be brushed but cannot be washed. Whitewash is essentially a mixture of slaked lime and water, and cannot be washed.

Varnish is a solution of resin or film-forming material in a solvent. Shellac is made from exudate of the lac insect dissolved in alcohol. Lacquer is a nitrocellulose solution in organic solvents, usually modified by the addition of resins.

The procedure for washing painted, varnished, or lacquered surfaces is the same whether they are on furniture, wood trim, walls, or floors. Make a light suds with a mild, neutral soap such as that used for fine fabrics. Wash the surface no harder than is necessary to wash off the dirt. Rinse away every trace of soap with clear water, because soapy water leaves a film to catch and hold dirt. Wipe the surface dry with a clean, soft cloth. Use water as sparingly as though it were an expensive cleaning material. Wash only a small area at a time so water will not be left standing on the surface any longer than is absolutely necessary. Floors should never be flooded with water. The best linoleum can soon be ruined if harsh soap or too much water is used on it, and cheap linoleum can be made to wear a long time if the surface is protected.

When painted walls, wood trim, or wood floors are very dirty, it may be necessary to add a little trisodium phosphate, or other alkaline cleansing agent to the soap and water. These alkaline materials never should be used on furniture or on linoleum or similar floor coverings.

Walls and wood trim should be washed from the bottom up. When water runs down on a soiled surface it leaves streaks that are difficult or impossible

to remove. It will not stain a wall that has already been moistened and cleaned.

It is easier to wash and rinse these surfaces with soft sponges than with cloths, because good sponges are more absorbent. Two pails should be used, one for suds and one for rinse water. The water should be changed frequently, for it is impossible to cleanse anything with dirty water.

After painted walls have been washed, a thin coat of ordinary laundry starch may be applied with a paint brush. The next time the wall needs washing, the job is much easier because the dirt washes off with the starch. Any flat finish will have more gloss after it is washed, for it is impossible not to exert some polishing action.

Varnished, shellacked, and lacquered surfaces, as well as linoleum and cork, are preserved and made easier to care for if they are kept waxed. All waxes should be applied in thin coats. Traffic lanes need rewaxing more frequently than other parts of a room. Kitchen linoleum may need a coat of self-polishing wax every 2 weeks where traffic is heaviest, and once a month over the rest of the floor. On other floors, liquid or paste wax should be applied once in 4 to 6 months depending on the wear they get. Liquid wax is easier to use on furniture; finger marks can be rubbed off with a clean cloth and ordinarily the wax needs to be applied only once a year.

Fabric surfaces

Upholstery, window shades, and rugs all may be cleaned in the home by the same method. First, remove all the dust possible with a vacuum cleaner, brush, or if necessary from upholstery and rugs by beating. Make a thick suds of mild, neutral soap, so thick that the pail seems to be full of suds with almost no water. This will help to keep moisture from soaking through the fabric. For upholstery and window shades, apply the suds to a small area at a time with a sponge or with a piece of turkish toweling or other very absorbent cloth. On window shades a soft bristle brush may be used instead of a sponge. Remove every trace of soap with a sponge squeezed in clear water and let window shades dry before rolling. (Window shades are most easily cleaned on a large table.) In cleaning rugs, a Tampico fiber scrub brush with a long handle may be used. Clean a small area at a time. The rinsing will have to be done on the hands and knees with a sponge, and the nap should be brushed along its original flow with a dry cloth.

It is advisable to have rugs cleaned once a year by a good rug cleaner. Every effort should be made to select a thorough and dependable cleaner. When possible several plants should be visited and the procedures observed. There is a great difference in the cleaning services of different companies.

Leather surfaces

Upholstery-leather cleaning is similar to that for fabric surfaces. Use a thick suds of mild, neutral soap with as little water as possible; wipe off all traces of soap with a damp cloth; then dry and polish the surface with a soft, dry cloth. Never use furniture polish, furniture oils, or varnish on leather. Many of these preparations contain solvents that may soften the finish on upholstery leather and cause it to become sticky. A special commercial leather cleaner and preservative is made of water, wax, and alcohol in a thin solution.

Book bindings may be preserved by working animal or vegetable oils (such as lanolin or castor oil) into them with the hands, especially along the back binding. Mineral oil must never be used on book bindings. A commercial preservative compounded on a formula used in large libraries contains purified lanolin, Japan wax, neat's-foot oil, sodium stearate, and water. It is difficult to obtain the special grades of ingredients necessary for compounding these formulas in the home.

Wallpaper

Although many wallpapers are sold as washable, the degree of washability varies considerably even on glossy finished paper and once paper is on the wall, there is no marked difference to distinguish washable from unwashable finishes. Therefore, it is wise to proceed with caution and to remember that the pigments and other materials applied to wallpaper are not impervious to rubbing.

Before attempting to wash any wallpaper, it is important to try suds on a scrap of the paper or in an inconspicuous spot. After determining by test that colors will not run and that the paper is washable, the procedure for washing is much the same as that for fabric surfaces: Apply thick suds with a soft sponge to a small space at a time, rubbing as lightly as possible, and rinse with a sponge squeezed out of clear water. Because paper is always absorbent, it is important to use as little water as possible.

Puttylike wallpaper cleaners are safer than soap and water on most finishes. These are made with water and a high-gluten flour to which salt, soda, coloring matter, and a scent are added. Art gum also may be used. They will remove light soil and sometimes will erase finger marks. Walls need to be brushed before and after their use. Grease spots sometimes may be removed with a paste made of Fuller's earth and cleaning fluid applied to the spot, allowed to dry, and then brushed off. There are several preparations for surfacing wallpapers to keep them from absorbing dirt and grease so readily.

Glass surfaces

Windows and mirrors ordinarily can be cleaned with clear warm water. Soap should never be used on them. Four tablespoons of dilute ammonia to a gallon of water helps remove oily dirt that accumulates in some localities. In cold climates vinegar, or ammonia, added to the water prevents freezing, or either a weak alcohol solution or one of the various preparations now on the market for cleaning glass surfaces may be wiped on with a cloth or sponge or sprayed on with an atomizer. In using any fluid containing ammonia or alcohol, care must be taken not to spill the cleaning solution on painted, varnished, or lacquered surfaces.

Chamois may be used for both washing and polishing glass. Dip it in warm water and squeeze it as dry as possible. If the window is very dirty, the chamois may have to be rinsed again before the final polishing. Soft lintless cloths may be used instead of chamois, but with them it takes more time to dry the glass. Rubber squeegees save time and labor in drying windows and are inexpensive. When windows are only dusty, they may be wiped with soft tissue or newspaper. Sometimes moistened newspaper is used to remove dirt before polishing with chamois or dry cloth or paper.

China and enamel surfaces

Vitreous china and enamel surfaces when new have a smooth, glazed finish. The use of coarse abrasives on them develops tiny scratches that make them harder to keep clean. Soap and water often are sufficient cleansing agents. If an abrasive must be used, it is desirable to select a fine one such as feldspar. Yellow stains on vitreous china plumbing fixtures, caused by iron in the water, may be removed by applying an acid, such as hydrochloric, sparingly on the stain and rinsing it thoroughly at once. Trisodium phosphate may be used on nonacid resisting enamel.

When food sticks on enamel cooking utensils, it may be soaked loose with water or by boiling a weak soda solution in them. A feldspar abrasive may be used lightly, but enamelware should not be scraped with sharp-edged instruments or coarse abrasives.

Tile and marble surfaces

Tile, marble, and granite surfaces should be cleaned with soap and water and a mild abrasive used only where necessary. Water on tile should be wiped up immediately or it may loosen the tiles.

Cement may be flushed with clear water, or scrubbed with a trisodium phosphate solution after wetting the surface first with clear water.

Metals

Metal surfaces include not only silverware, metal trim, and ornaments about the house, but also the kitchen pots and pans. In general, highly polished metal surfaces require the use of fine abrasives. Less highly burnished surfaces, such as aluminum and iron, may be cleaned with fine steel wool or a feldspar abrasive.

Silver requires more care than any other household metal because sulfur compounds in the air cause it to tarnish readily. If soap is not rinsed off after washing silver, it tarnishes more quickly. Silver bags and chests sometimes are treated with various salts to retard tarnishing. Air should be kept away from stored silver as much as possible in order to reduce the need for frequent polishing.

The easiest and quickest method for removing tarnish is electrolysis, although this does not produce as bright a luster as a good silver polish. By the electrolytic method the tarnish corroding the silver is removed, leaving a mosslike surface that does not reflect light so readily as a smoother surface. The "moss" can be reduced by rubbing the silver as it is dried. If the electrolytic method is used regularly, it may be advisable to use a silver polish about every fourth time the silver is cleaned. In the electrolytic method there is practically no loss of silver, whereas with polishes a small amount of the surface is rubbed or abraded away. In time this abrading action may be serious with some plated ware. Electrolysis cannot be used on silver where oxidation (the dark indented portions) is part of the beauty of the design because it removes the oxidation. Also, ware with hollow handles attached with cement may be ruined by this method because the hot water may dissolve or loosen the cement.

For cleaning silver by the electrolytic method, fill an aluminum vessel with hot water, or use an enamel pan with a sheet of aluminum or zinc in the bottom. An aluminum pan will be corroded in the process, so unless an old vessel that is no longer used for cooking or a very heavy cast aluminum vessel is available, it is better to use an enamel pan and aluminum sheet. The aluminum needs to be cleaned by boiling in a weak vinegar solution to keep it bright and active.

Add to the hot water in the vessel a teaspoon of salt and a teaspoon of baking soda for each quart of water. Bring the water to a boil and drop in the pieces of silver. If the water is kept boiling, the silver will be brighter. In a few seconds, the time depending upon the degree of tarnish, the silver will be bright. It must then be washed in soapy water, rinsed, and polished with a soft, dry cloth.

Silver polishes on the market vary in their abrasiveness. Quick-acting polishes usually are the most abrasive. It is well to observe carefully how much a polish scratches the silver, and adopt one that seems to scratch it the least. Hard pressure in rubbing will increase abrasive action. Silver pastes should be applied with a soft cloth or brush, thoroughly washed off with soap and water after the tarnish has been removed, and the silver carefully rinsed and dried.

Chromium plating used on modern plumbing fittings and metal dishes is one of the easiest metals to keep clean and stainless; it requires only frequent wiping with a damp cloth or washing with soap and water. The plating is very thin and an abrasive soon will wear it away. Some metal polishes may damage it, and none should be used.

Nickel, stainless steel, and nickel-copper alloy may be kept in good condition with soap and water. If they become dull and need polishing, a light rubbing with a feldspar cleaner will restore the finish. Coarser abrasives damage all these surfaces, and soon wear through thin nickel plating on the older type

of plumbing fittings. Some metal polishes contain materials that discolor the nickel-copper alloy.

Copper and brass utensils and ornaments may be polished with a product made for the purpose, or with salt on a piece of lemon. The salt and lemon will remove the tarnish but they must be rinsed off completely. Some polishes contain wax, which may prevent these metals from tarnishing again quite so readily.

Pewter is a soft metal and should be polished only with a fine powder or with a product made for this purpose. Silver polish will keep it bright if used regularly.

Zinc, the coating on galvanized-iron water, scrub, and garbage pails, may be cleaned with soap and water and a volcanic ash or similar abrasive. Feldspar is not quite abrasive enough.

Tin cooking utensils discolor with use and it is unwise to try to keep them bright. The foundation of these utensils is iron and the tin coating is relatively thin. When it is scratched off, the utensil will rust. Burnt-on food stains may be removed by rubbing gently with feldspar powder, or by heating for a few minutes in a weak soda solution and then washing thoroughly with soap and water.

Aluminum and iron utensils may be kept clean and stainless with steel wool or feldspar powder. Strong soaps and scouring powders that contain alkaline salts discolor aluminum and should not be used. Discoloration on aluminum may be removed by boiling it in water to which vinegar or cream of tartar has been added. Rust on iron may be removed with steel wool. If iron utensils that are not used very often are dried thoroughly and oiled lightly with mineral oil, rust will be prevented from forming again.

Refrigerators

Refrigerators must be cleaned every week to keep them sweet and sanitary. As soon as anything is spilled in a refrigerator it should of course be wiped up immediately.

Mechanical refrigerators require periodic defrosting of the freezing unit because moisture from the air and from foods is drawn to the unit. Some manufacturers recommend defrosting every 2 weeks, but this may not be often enough in humid climates or during summer weather. Immediately after the refrigerator has been defrosted, the food may be removed, the shelves taken out and washed in suds to which a little mild alkali may be added, and the interior including the evaporator should be washed thoroughly with the same suds. Both shelves and interior should be rinsed with clear water until all traces of soap are removed, and wiped dry. If the interior is free from spots where food has been spilled, it may be washed with clear warm water in which soda has been dissolved. The use of soda or other equally mild alkali helps to remove odors.

Ice refrigerators may be cleaned when the ice supply is low. Even if the ice is always washed off before it is placed in the refrigerator, the ice compartment and pipes need to be cleaned thoroughly at least once a week. The procedure for the interior is the same as that for mechanical refrigerators. In addition, the drain pipe must be detached, washed carefully to remove the slime in which organisms thrive, the drain trap washed, and the pipe itself scalded.

Stoves

Stoves should be wiped after each meal. They also need careful cleaning every week, or they become so caked with soot and grease that it is impossible to restore them to their original condition.

Gas and electric stoves usually are finished with enamel, which is easily kept clean with a cloth wrung out of soapy water. Since enamel is a glasslike coating, the stove must not be wiped with a cold wet cloth while it is hot or the coating may crack. Abrasives roughen the enamel and metal trim, and their use will not be necessary if the stove is wiped after each meal, and if food that boils over is wiped up immediately. In modern stoves many parts are detachable. These

should be removed first and washed. Trisodium phosphate may help to remove stubborn spots. If some abrasive must be used, it should be fine like feldspar. Wiping cast-iron gas burners and oven racks with light mineral oil or kerosene may help to keep them from rusting.

When food is spilled on an electric heating element, it should be allowed to char and then be brushed off. The charring may be done while cooking over the burner, to save electricity.

Coal and wood ranges need to have ashes emptied every day. Soot must be brushed from the bottom of the lids and from the inside of the fuel box each week. About once a month the flues should be cleaned, especially those over and under the oven, so the heat will circulate satisfactorily. The outside of the stove and oven should have grease washed off with soap and water and when cold should be rubbed with a cloth moistened in kerosene or light lubricating oil. Stove blacking gives a higher polish, but it should be used sparingly and rubbed off well; otherwise it will blacken the bottom of pans.

Kerosene and gasoline stoves, in addition to regular washing with soap and water, need to have the wicks cleaned and the fuel tank drained and cleaned. Wicks should be wiped off once a day. To do this remove the chimney, outside collar, and flame spreader, turn the wick even with the top of the wick tube and wipe it from the center outward until the charred edge is removed. After the fuel tank is removed uneven wicks may be burned down and then wiped off. Loose threads may be clipped with scissors, which should not be used for other trimming. If the wick has a beveled edge, this may be maintained by the way the wick is wiped. Fuel tanks usually need to be drained and cleaned every 3 months, and oftener if water gets into the fuel and causes the flame to sputter. The fuel tank is tipped back, the cap removed from the fuel line, the stove tipped to drain out the fuel, and the pipe cleaned with a stiff wire. It is then washed out with a little clean fuel.

Lighting fixtures

Lighting fixtures need frequent cleaning or the light they are intended to provide is seriously diminished. They should be dusted frequently. Electric light bulbs, diffusion bowls on semi-indirect and indirect fixtures, and portable bowls should be dusted weekly and washed once a month. Cloth or similar types of shades need a regular rubbing off with cleaning fluid.

Kerosene lamps should have the chimneys washed daily and char rubbed off the wicks. Glass shades should be dusted daily and washed once a month or oftener.

Cleaning a room

Daily cleaning consists chiefly of dusting. In bedrooms, the beds, which have been airing while the family was at breakfast, are made first. Then in all rooms inside sills may be dusted, then furniture, wood floors, and finally rugs are cleaned. If a broom is used, upholstered furniture is brushed first and covered, then rugs swept, and finally floors, woodwork, and furniture dusted.

Weekly cleaning follows the same general procedure but is more thorough. Pictures and mirrors, light bulbs and lighting fixtures, closet floors, backs of furniture, and window shades and venetian blinds are dusted. Baseboards are brushed, and if much dirt has blown in it may be advisable to wipe the floor and baseboard with a damp cloth. Furniture should be moved so that every inch of the floor is cleaned. Every other week upholstered furniture is cleaned with a vacuum cleaner if possible. Mattresses are turned side for side one week and end for end the next. Light bulbs, enclosing globes, and diffusing bowls and shades in a few rooms are cleaned each week so that all are included once a month. The brushing of walls, wood trim, and draperies, and washing of windows, mirrors, and pictures may be rotated in the same manner.

Thorough cleaning is more like the old-fashioned house-cleaning procedure. Some homemakers may find it easier to do a little along with the weekly cleaning; others may prefer to use the following procedure with one room each month.

Take down the curtains and draperies, brush them if they do not need washing, and lay them in another room. Remove window shades and brush them, or brush venetian blinds and wipe them when necessary.

Brush the radiator. If there is a register, lift it out and brush it on a newspaper; clean the screen and the pipe. If the register needs washing, wipe it off with kerosene and dry it thoroughly with a clean cloth.

Remove the pictures. Brush the walls with a wall brush, beginning at the bottom and working up toward the ceiling, brushing it last. Dust hangs down and by lifting it up with the brush it will not be rubbed in and smear the walls. The wood trim may be brushed as one comes to it in cleaning the walls.

Clean the closet, removing everything, brushing the walls and wood trim, and wiping the shelves and floor.

Dust picture frames. Wash the glasses over pictures, the mirrors, and windows. Wipe light bulbs, enclosing and diffusing bowls with damp cloth and brush lamp shades.

Remove things from drawers and wipe them out; replace, or dust and turn the paper linings.

Dust and polish furniture. If the furniture is very dusty, another cloth should be used for polishing; waxed furniture will need only rubbing unless it is time to wash it and give it the yearly coat of fresh wax.

Turn the rug back and wipe under it. Clean the under side of the rug as well as the upper. Underlays may be cleaned on both sides with a vacuum cleaner, detaching the belt that revolves the brush if the cleaner has a brush; the brush will tear up the loose fibers. After the rug and floors are cleaned, place the furniture in order and hang the curtains and pictures.

In cleaning a bedroom the mattress and box springs should be brushed or vacuum cleaned, and the bed made before the furniture is dusted. If a broom is used instead of a vacuum cleaner or carpet sweeper, the furniture should be dusted and polished last.

In cleaning a room as well as any of the other jobs of house cleaning, the purpose of spending time to experiment with systematic work schedules and better methods is to increase leisure, relieve the mind of worry caused by the pressure of things to be done, and create a more restful, pleasant home. The homemaker with a schedule and sound methods is better equipped not only to do the work at hand, but to teach and guide her assistants, whether they be members of the family or paid employees. The objective is to make the job more interesting and less fatiguing by controlling it, rather than letting it control her.

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Stain Removal FROM FABRICS

home methods

FARMERS' BULLETIN
NO. 1474
U.S. DEPARTMENT OF AGRICULTURE

To Remove Stains Successfully

TREAT THE STAIN while it is fresh.

KNOW YOUR CLOTH—What is it made of? Does it wash well?

WORK CAREFULLY but quickly.

TRY SIMPLE METHODS FIRST.
For a nongreasy stain, sponge with cold water.
For a greasy stain, try carbon tetrachloride.

AVOID HOT WATER on an unknown stain. Hot water sets many stains.

TEST FOR COLOR CHANGE on a sample of the cloth before using any stain remover.

USE REMOVERS SPARINGLY. Many brief applications are better than one long one.

USE LIGHT, BRUSHING MOTIONS—never rub a remover into the stain.

NEUTRALIZE acids with alkalies; alkalies with acids.

RINSE WELL—never let a chemical dry on the cloth.

SPREAD a liquid remover unevenly into the cloth around the stain.

DRY RAPIDLY to help prevent rings.

Washington, D. C.

Issued August 1926
Revised September 1942

STAIN REMOVAL FROM FABRICS

HOME METHODS

by

MARGARET S. FURRY, Assistant Textile Chemist

OFF with stains! Keep clothes and home fabrics spotlessly clean. It is smart and thrifty to take best care of your clothing and household fabrics so they will look well and last as long as possible.

Many stained and spotted articles are needlessly thrown away each year. Many others are needlessly ruined by unsuccessful attempts to remove stains. It is possible to remove practically any stain at home by following a few simple rules. To take proper care of your fabrics, you will find it worthwhile to learn enough of the "know-how" skill so that you can do a good job.

One of the most important rules is to remove the stain promptly. Stains that become old usually require a remover so strong that it sometimes injures the cloth.

Another important rule is to select a remover that will not harm the cloth. If you can find out what caused the stain, this also will guide you in choosing the remover best suited for the job.

Work carefully, patiently, quickly. Often the way in which cleaning is done is as important as the kind of cleaning materials used, in getting good final results.

The following pages not only tell how to remove many kinds of stains but describe as well the general principles of stain removal.

Steps to Success in Stain Removal

Treat Stains Promptly

First rule for success in removing a stain is to start while it is fresh, even before it dries if possible. Hot soapsuds or the heat of an iron sets some stains too, so that it takes strong treatment to loosen them. The professional cleaner always "spots-out" stains before he gives a garment a general cleaning or pressing.

Suit the Remover to the Cloth

Before starting to treat a stain, be sure you know what the cloth is made of—whether cotton, wool, silk, rayon, or a mixture. A stain remover successful on one kind of cloth may ruin another. Naturally, you want the method that will do the least possible damage to the cloth.

Cotton and linen

Strong acid removers destroy cotton and linen cloth; even mild acids, such as lemon juice and vinegar, may injure cotton and linen if allowed to remain too long on the cloth. If you use a mild acid to remove a stain, apply a weak alkali such as ammonia water or washing or baking soda immediately to stop the action of the acid. Wash the material in water after the treatment. (See p. 10.) Strong alkalies harm these materials also, but weak alkalies are safe to use if you rinse the article well in water afterwards.

All bleaches will rot cotton and linen if allowed to remain on the stain for more than a minute or two and will remove the color, too. Sodium perborate and hydrogen peroxide are the safest bleaches to use.

Wool and silk

Strong acids and alkalies destroy wool or silk materials. Mild acids, except nitric, which weakens the material and turns it yellow, are safe to use. Even mild alkalies such as weak solutions of ammonia water, borax, or washing soda, must be used with care on wool. Bleaches that contain chlorine, such as ordinary bleaching powder, also destroy wool and silk. Sodium perborate is a good bleach to use, particularly on wool. Use lukewarm water—hot water turns both wool and silk yellow, shrinks wool, and injures the finish of silk.

Rayon and synthetics

Here are a few safety rules to follow in removing stains from rayon material. Never use strong acids or alkalies; they injure the material. Mild acids or alkalies usually do not harm it if properly rinsed. Water weakens rayon; do not pull or twist it when it is wet. Sodium perborate and hydrogen peroxide are the safest bleaches to use, but mild chlorine ones can be used with success.

Three kinds of rayon are made in this country—viscose, cuprammonium, and acetate. In removing stains from viscose and cuprammonium rayon, treat the material like cotton or linen. But acetate rayon is different. It dissolves in acetone, alcohol, or chloroform, so test a sample of any rayon material before using these liquids to remove a stain. Mixtures of alcohol and ether, or alcohol and benzene also are unsafe to use on acetate rayon or on colored material. Always mix alcohol with 2 or 3 parts of water before using it. Pressing with a hot iron may melt acetate rayon.

Synthetic materials, such as nylon and vinyon, are not harmed by either acids or alkalies. Water does not weaken them, as it does the rayon. They take up very little moisture, and as a result, stains such as coffee, tea, and fruit juice, remain on the surface and wash off easily. You may use bleaches safely on nylon or vinyon. But vinyon, like acetate rayon, dissolves in acetone and

chloroform, so test a sample of the material before using either of these to remove a stain. Press nylon with a warm (not hot) iron.

Other synthetic materials are made from peanut, corn, soybean, milk casein, and fish protein, but as yet they are not common and are not generally recognized. Treat them as you would silk and wool in removing stains.

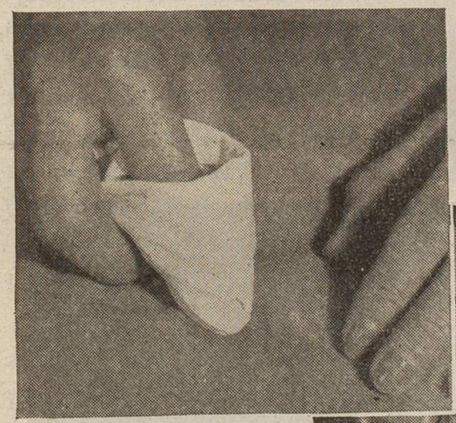
Suit the Remover to the Stain

Find out what the stain is, if possible, before trying to remove it. The wrong treatment may set a stain so that it is impossible to take it out. Always test water or any chemical stain remover on a sample of the cloth or on a hidden part of the garment (seam or hem) to be sure it will not change the color. You may have to choose between the stain and a faded spot.

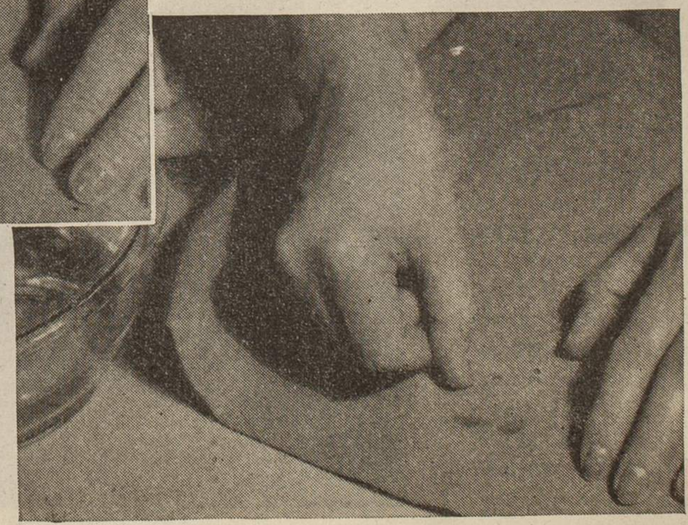
Water

If the stain is not greasy, first try to remove it with cold water. Hot water sets many stains and makes them harder to remove. Always test a sample of the cloth to see if water spots it. If not, place a pad of clean cloth underneath the stain, with the stain face down. To sponge, use a soft cloth, dampen it with cold water, and cover with a layer of dry cloth so that it is not too moist. Then sponge the stain with light, brushing motions, working from outside of stain to the center. Spread the moisture into the cloth around stain to keep a ring from forming.

The trick is to spread, or "feather-out," the liquid around the stain until there is no definite edge when the material dries. It may help to go over the spot with a cloth wet with alcohol mixed with 2 parts water. As alcohol changes some colors and dissolves acetate rayon, use it sparingly. Finally pat the spot with a dry cloth. Dry rapidly to prevent water rings.



Left.—Sponge a nongreasy stain with water. Work from the outside of the stain to the center. Spread moisture unevenly into the cloth around the stain.



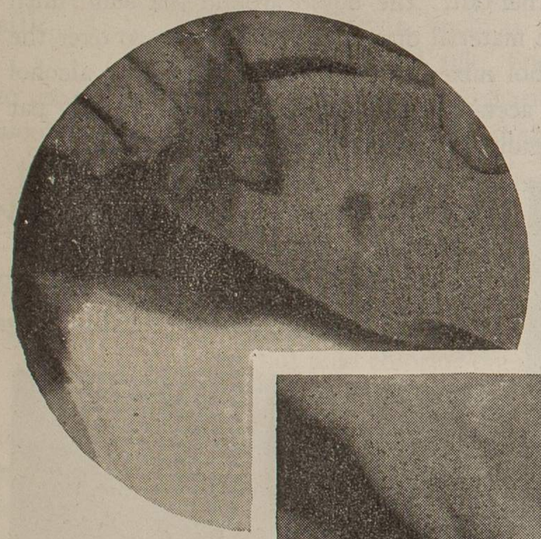
Right.—To remove a water ring, rub the cloth between the hands; then scratch with the fingernail.

If a ring has formed, remove it either by sponging the material with clean water or by shaking it in the steam from a briskly boiling teakettle. Scratching with the fingernail or a stiff brush or rubbing the cloth between the hands will sometimes remove a ring.

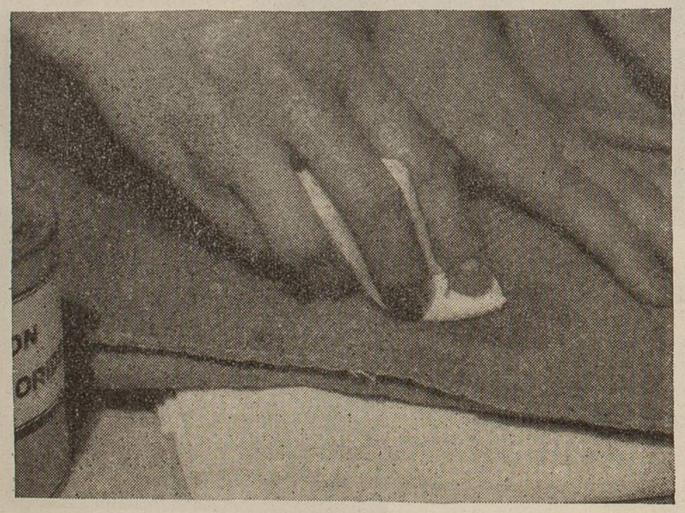
If a stain seems to be greasy, try a grease solvent, such as carbon tetrachloride, Stoddard solvent, gasoline, benzene, turpentine, ether, acetone, or alcohol. Most of these do not change the color of fabrics, but ether, acetone, and alcohol are apt to. So use them carefully on colored materials; always mix alcohol with 2 parts water. Either sponge the stain with the solvent or dip into a bowl of the liquid.

Other solvents

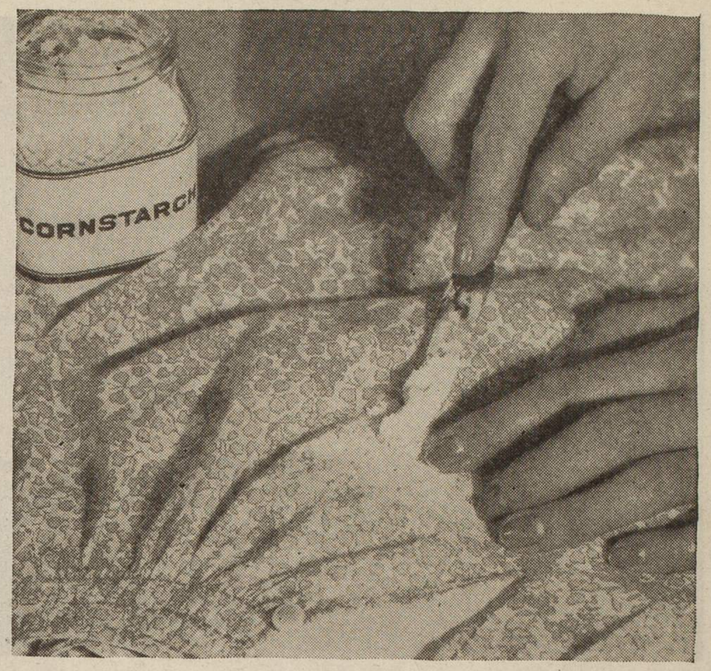
To sponge a grease spot, lay the stained material, wrong side up, on a pad of soft cloth. Apply the remover to the back of the cloth, so that the stain is washed from the material without having to pass through it. Sponge with a clean, soft, lintless cloth. Dip the cloth in the liquid and wring out most of the moisture. Sponge with light, brushing motions, working from the outside of the spot to the center. Work rapidly and use the solvent sparingly. It is better to apply the solvent several times quickly than to apply it once and leave it on for a long time.



Left.—Sponge a greasy stain with carbon tetrachloride, gasoline, or benzene. Lay the stain face down on a pad of cloth.



Right.—Use light brushing motions, working from the outside of spot to the center. Change the pad as it becomes soiled.



Sprinkle talcum, cornstarch, or chalk on a fresh grease or oil stain. Rub it in well, and let stand until it absorbs the grease; then brush off.

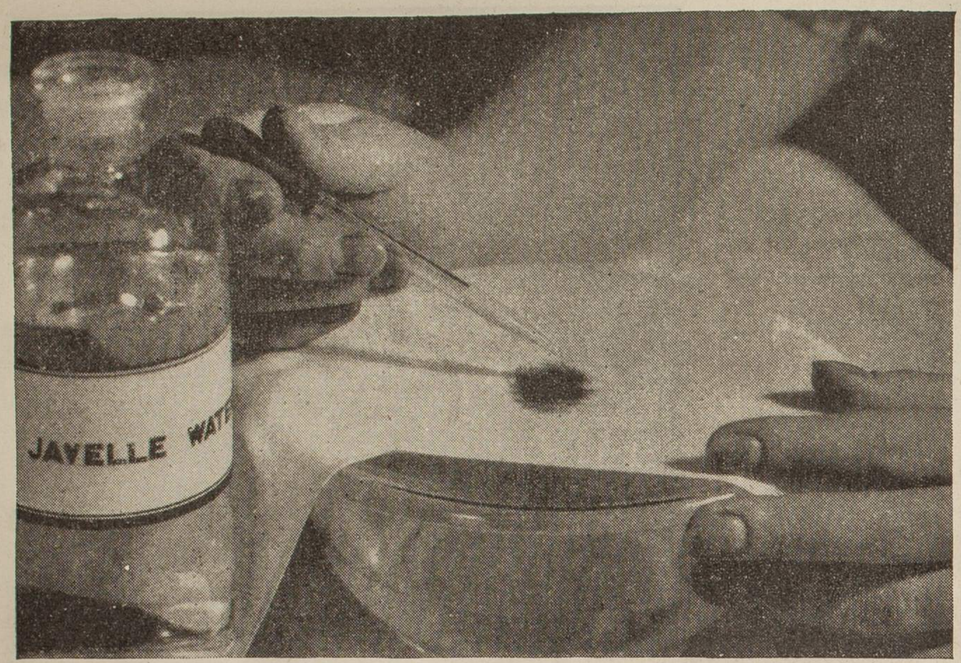
Avoid rings by spreading the cleaning fluid into the area around the stain and at the same time blowing lightly on the spot to dry it quickly. Do not rub—rubbing may cause light and worn-looking spots that are as bad as the stain. Change the pad as it becomes soiled. Finally pat the material with a dry cloth.

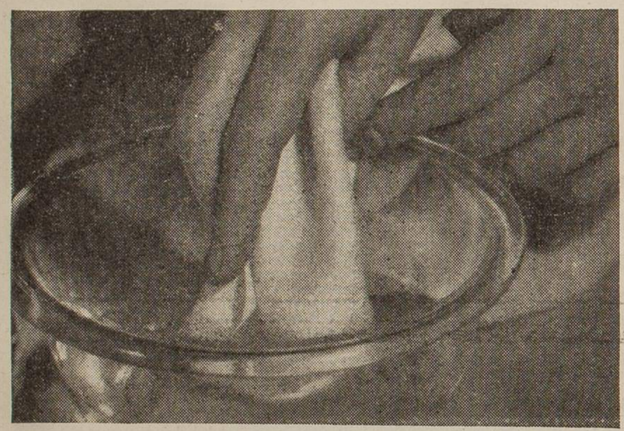
Always use these solvents out of doors or in a well-ventilated room, as it is harmful to breathe the vapors. Gasoline, naphtha, and ether catch fire easily and often explode, so never use them near a fire. Sometimes just rubbing a garment that is soaked with gasoline will cause it to burst into flames. Benzene, turpentine, alcohol, and acetone also are inflammable. For this reason, cleaning with large amounts of these fluids at home is not recommended. Grease-spot removers made entirely or in large part of carbon tetrachloride will not catch on fire.

Absorbent powders—chalk, talcum, corn meal, cornstarch—work well on light, freshly made stains such as grease spots or splatters of salad oil. Also such powders brush off readily and are safe to use on all materials. This method is not always successful, however, if the stain is very large or has become set or dry.

Absorbent powders

To remove a stain with an absorbent powder, lay the stained article on a table and sprinkle a layer of the powder over the stain. Spread the powder around, and when it becomes gummy, shake or brush it off. Repeat this several times or until the stain disappears. If after several treatments the stain still shows, place the stain between clean blotting papers and apply a warm (not hot) iron for several minutes. Stains made by solid fats, such as butter, must be melted before the blotters can absorb them.





Use Javelle water to bleach stains from uncolored cotton or linen. Apply with a medicine dropper; rinse quickly in water. Apply a few drops of "hypo," vinegar, or oxalic acid to stop the action of the chlorine.

Use bleaching chemicals carefully because most bleaches remove the color as well as the stain, besides weakening the cloth. Colored material in particular must be treated rapidly and rinsed well in water afterwards.

Bleaches

Javelle water and other chlorine bleaches (sodium hypochlorite solutions) remove certain stains from uncolored cotton, linen, or rayon cloth. Do not use them on colored materials or on silk or wool.

To prepare Javelle water: Mix ½ pound washing soda in 1 quart of cold water. Add ¼ pound of bleaching powder (commonly called chloride of lime). Strain this liquid through a piece of muslin and store in a bottle with a tight cork or stopper ready for use.

To remove a stain with Javelle water, stretch the stained part of the cloth over a bowl filled with cold water and drop the Javelle water on the stain with a medicine dropper. (If the stain is large, dip the entire garment in the Javelle water). Never let the Javelle water remain on the stain for more than 1 minute;

it rots even linen and cotton materials if allowed to remain on them longer. Rinse quickly by dipping in the water.

Next apply a few drops of a solution made up of ½ teaspoon of sodium thiosulfate and 1 to 2 teaspoons of vinegar in 1 pint of water. This stops the action of the chlorine remaining in the cloth after the treatment with Javelle water. Then rinse the cloth well in clean water. You may use vinegar alone or oxalic acid solution (1 teaspoon oxalic acid to 1 pint water) instead of the thiosulfate solution, but they are not so satisfactory. To remove the stain completely you may have to repeat the Javelle water-thiosulfate treatment several times.

Sodium perborate is one of the safest bleaches for all types of materials The treatment must be rapid and the sodium perborate well rinsed from the material, however, or it will take out the color. It will not remove some ink stains, iron rust, dyes and running color, or metal stains.

For small, fresh stains, sponge with a liquid made up of 4 tablespoons sodium perborate to 1 pint lukewarm water. Or stretch the stained cloth over a bowl of hot water, dampen the stain with water, and dust the powdered sodium perborate on it. Let stand a minute or two; then sponge or rinse well with water.

For a large stain, soak the entire garment for a half hour or longer in sodium perborate and soapsuds (4 tablespoons perborate to a pint of soapy water). To remove grass, beverage, mud, scorch, and some perfume stains, mix 1 level teaspoon sodium perborate with 1 pint hydrogen peroxide. But use this mixture immediately, as it soon loses its strength. Rinse in water.

Sodium perborate is particularly good to use on white woolens; it leaves them soft and fluffy.

Hydrogen peroxide, obtained at drug stores, is a good bleach for light scorch stains. The action of hydrogen peroxide is quicker if a few drops of ammonia water are added just before use. Or you can add 1 level teaspoon of either borax or sodium perborate to 1 pint of peroxide. Apply it to the stain with a medicine dropper, a glass rod, or sponge the stain with it. Follow by careful sponging or rinsing with water.

Oxalic acid is poisonous and should be handled carefully. Label it **"Poison"** and **keep it out of the reach of children.** Prepare a solution as follows: Dissolve about 3 tablespoons of the crystals of the acid in a pint of lukewarm water. Put in a bottle, stopper tightly, and use as needed. Stretch the stained cloth over a bowl of clean water and apply the oxalic acid to the stain with a medicine dropper or glass rod. Allow it to remain for a few minutes; then rinse quickly by dipping in the water. Apply a weak solution of ammonia water, borax, or sodium perborate to neutralize the action of the acid and rinse again. Never use oxalic acid on weighted silk.

Hydrosulfites are very useful to remove dye stains, iron rust, ink, mildew, grass, and fruit stains. Sodium hydrosulfite, the one most often used, may be bought at drug stores under many trade names as a dye or color remover for preparing cloth for redyeing. It should be stored in a tightly closed can so it will not become damp. To use, dissolve 2 teaspoons of the sodium hydrosulfite

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in 1 pint of warm water and either sponge or dip the stained article in it. Or sponge the stain with water first, sprinkle the powder on the stain, and work it in well with the fingers. Rinse quickly. If used on colored material, hydrosulfites are apt to remove the color; so apply the treatment quickly and rinse well in water afterwards. Do not use on weighted silks.

Pepsin and other enzymes

Enzymes will remove certain stains from all kinds of materials. You can buy pepsin, the best known of the enzymes, at the drug store. It softens stains containing albumin (found in blood, gelatin, glues, certain medicines, eggs, milk, and ice cream), so that they wash out in water easily. Pepsin will soften these stains, even after they have been set by heat or alcohol. First be sure there is no soap or other alkali on the stain, or the enzyme will not react. Then dampen the stain with lukewarm water and sprinkle with pepsin powder. Let it stand for half an hour, keeping the spot damp. Or mix the pepsin with water (2 teaspoons to 1 pint lukewarm water) and sponge the stain with it. Sponge or rinse well with water.

Soaps and soaplike washing agents

Soaps and other soaplike cleaners are helpful in removing grease and food spots, blood, and many other stains. Select a mild soap for washing silks and woolens because an alkaline soap may cause the colors to run and the cloth to become stiff and harsh. Also use a mild soap on all other delicate materials and on cotton, especially on those that are not guaranteed colorfast. If you are washing in hard water, add a water softener or one of the special phosphates—sodium hexametaphosphate or pyrophosphate (sold under brand names)—which prevent the formation of hard-water scum. This scum is caused by the reaction of the soap and the calcium and magnesium compounds in the water. It settles on the clothes in gray or brown specks that are hard to remove.

Synthetic soaplike cleansing or washing agents are now on the market. These are commonly called soapless oils, shampoos, or lathers and may be obtained in powder, chip, or liquid form. They are intended especially for shampooing hair or for washing upholstery, blankets, and sweaters.

These soaplike washing agents have several advantages over soaps. They are mild (not alkaline) and so are excellent for washing silks and woolens and all delicate materials. With them there is less danger of colors running or of materials shrinking or becoming harsh. They suds and lather well and do not form a scum when used with hard water.

There are also special dry-cleaning soaps or benzene soaps, which, added to dry-cleaning fluid, aid in softening the stain and removing the dirt. Or, to soften a heavy grease or wax stain, put these soaps directly on the stain, especially on silk and wool cloth. Then rinse well in carbon tetrachloride, Stoddard solvent, gasoline, or benzene.

Stain-Removal Supplies

Keep all stain removers together on a handy shelf, but out of the reach of children. Label all the jars and bottles; be sure to mark *"Poison"* plainly on the poisonous ones. To have a complete shelf, you will need to keep at least three kinds of cleaning agents—bleaches, absorbent powders, grease solvents.

Absorbent powders—for grease spots or ink stains.
Chalk, corn meal, talcum powder, or cornstarch.

Acetic acid—10-percent solution. (Vinegar is about 5 percent acetic acid and can be used to remove alkalis, to stop the action of Javelle water, and to restore some colors.)

Ammonia water—10-percent solution.

Bleaches
- JAVELLE WATER—for white cotton, linen, or rayon only.
- SODIUM PERBORATE—for any material, particularly good on white woolens.
- HYDROGEN PEROXIDE—a mild bleach for any material.
- OXALIC ACID—never use on weighted silk. Label **"Poison"**.
- HYDROSULFITES—never use on weighted silks.

Pepsin—stain softener available at drug stores.

Sodium thiosulfate, or photographer's "hypo"—removes iodine stain; use with Javelle water to remove chlorine from cloth.

Solvents
- TURPENTINE—for paint stains.
- DENATURED ALCOHOL—be sure to mix alcohol with 2 parts water when using on acetate rayon or colored material.
- CARBON TETRACHLORIDE, GASOLINE, OR BENZENE—for grease and oil stains.
- ACETONE OR FINGERNAIL-POLISH REMOVER—for fingernail-polish stains. Never use on acetate rayon or vinyon.
- GLYCERINE—for tannin stains; also to loosen or soften other stains.

Washing agents
- SOAP.
- SOAPLESS SHAMPOOS, OIL, OR LATHER—powder or liquid.
- DRY-CLEANING SOAP—to use with dry-cleaning fluid.
- WASHING SODA.

Equipment
Cloth, white blotting paper, or cleansing tissues; medicine dropper; glass rod; bowls.

Removing Individual Stains

Acids

Act quickly when an acid has been spilled, for it may damage the cloth or destroy the color. First, wash the stain with cold water to stop the action of the acid. Rinse several times in cold water; then apply ammonia water baking soda. Water alone will not restore color, but ammonia water may.

Baking soda.—Sprinkle soda on both sides of the stain, moisten with water, and allow to stand until the bubbling stops. Rinse well with water.

Ammonia water.—Hold the dampened stain over an open bottle of strong ammonia water; or if the material doesn't water-spot, put a few drops of ammonia water, diluted to half strength on the stain. Since ammonia water affects some dyes, have white vinegar ready to apply quickly if the color changes. Rinse well with water.

Adhesive Tape

Sponge or soak the stain in carbon tetrachloride, benzene, or kerosene. Kerosene will make the cloth oily, so wash in warm suds after the treatment.

Alcoholic Beverages and Soft Drinks

Alcoholic beverages and soft drinks may cause tannin stains. Fresh tannin stains are almost colorless, but if they are allowed to stand or are washed in soap and water or heated as in ironing and pressing, they turn brown and are almost impossible to remove. Fresh stains can be removed as follows:

Cold water and glycerine.—Sponge the stain with water or with a mixture of equal parts alcohol and water. Then pour glycerine on the stain and rub between the hands. Let stand for a half hour and rinse with water.

Acetic acid.—If the above treatment does not remove the stain, apply a 10-percent solution of acetic acid with a medicine dropper and let stand a few seconds. Rinse and repeat if necessary. Stop the action of the acid with baking soda or ammonia (see above) and spread the garment in the sun.

Bleaches.—The last traces of stains on white materials can sometimes be removed by bleaching. Use one of the following:

Hydrogen peroxide or sodium perborate.—Sponge lightly with hydrogen peroxide or with a mixture of 1 level teaspoon sodium perborate to 1 pint hydrogen peroxide. If this does not remove stain, cover dampened spot with powdered sodium perborate and let stand an hour. Rinse in water.

Javelle water.—For stains on uncolored cotton or linen material, dip in Javelle water for 1 minute (no longer), remove the chlorine from the cloth with a sodium thiosulfate solution, rinse well in water. (See p. 6 for more detailed instructions.) Do not use Javelle water to remove stains from colored materials or from silk or wool.

Alkalies

Remove alkali spots at once; they may destroy not only the color but the material as well. First sponge or rinse the spot thoroughly with cold water. This generally is sufficient for mild alkalies such as washing soda and weak ammonia water. But to be on the safe side and to help restore color, apply an acid—this stops the action of the alkali. Then rinse or sponge the spot thoroughly with water. Use any of the following mild acids:

Lemon juice.—Squeeze the juice on the stain, and allow it to remain until the juice loses its bright yellow color. Sponge or rinse well with water.

Vinegar.—Sponge with vinegar; then rinse in cold water.

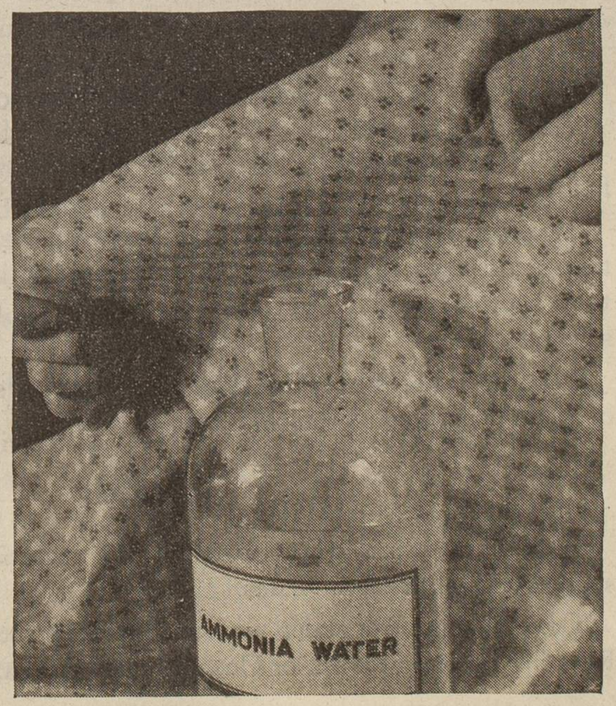
Acetic acid.—Apply a few drops of a 10-percent solution of acetic acid with a medicine dropper or a glass rod and remove the excess by rinsing or sponging with water.

Argyrol

Argyrol stains must be treated while still fresh. Proceed as follows:

Pepsin.—Sponge with warm water to remove any argyrol that has not soaked into the cloth. Then sprinkle powdered pepsin over the dampened stain. Work it well into the cloth, let stand a half hour or longer, then sponge with water.

Iodine and sodium thiosulfate ("hypo").—After the above treatment, put a few drops of tincture of iodine on the dampened stain with a glass rod. Let stand for 10 or 15 minutes; then sponge with a solution prepared by dissolving several crystals of sodium thiosulfate in ½ cup of water. Rinse well in water.



To bring back the color changed by an acid, hold the dampened stain in the fumes from an open bottle of ammonia water.

Blood

Blood stains will usually come out if sponged or washed in cold or lukewarm water first. Never use hot water; it sets the stain.

Cold or lukewarm water.—For stains on silk or wool, sponge with cold or lukewarm water. For washable material, soak the stains in cold water until they turn light brown in color; then wash in warm soapy water. If the stain is an old one and has dried, it may help to add 2 tablespoons of ammonia water to each gallon of water used for soaking. Strong salt water (about 2 cups of salt to 1 gallon water) is also good to loosen the stain.

Hydrogen peroxide and sodium perborate.—If the above treatment does not completely remove the stain, sponge with hydrogen peroxide. Or sponge with a mixture of 1 level teaspoon sodium perborate to 1 pint hydrogen peroxide. If the stain still shows, cover the dampened spot with powdered sodium perborate and let stand an hour. Rinse thoroughly. These bleaches will not harm the cloth, but before using test for colorfastness on a sample of cloth or on an inner seam of the garment. If the color fades, do not use the bleaches; just dampen the stain and spread in the sun to bleach.

Starch.—Use a starch paste to remove stains on thick materials, such as flannel and blankets, which cannot be soaked in water. Mix raw starch to a paste with cold water, apply the paste thickly to the stain, and brush it away when it dries. Repeat the treatment until the stain disappears.

Bluing

Soak fresh stains or rinse them in cold water. Or wash the stained article with plenty of warm soapy water, rubbing thoroughly.

Candle Wax, Colored

Scrape away as much wax as possible with a dull knife. Then treat as follows:

Blotting paper.—Place the stain between clean white blotters, cleansing tissues, or paper towels, and press with a warm iron, changing the blotters as they become soiled. Then sponge with carbon tetrachloride or other grease solvent.

Denatured alcohol.—If a color stain remains, sponge with liquid made up of 1 cup denatured alcohol and 2 cups water.

Candy

Launder in warm soapy water if the material is washable. Otherwise, sponge with clear warm water.

If dye or chocolate stains remain, follow instructions given under Dyes and Running Colors, page 14, or Chocolate and Cocoa, page 13.

Carbon Paper

Carbon-paper stains usually can be removed by washing in a heavy suds of soap and water. Sponge unwashable materials with a liquid of 1 cup alcohol and 2 cups water; then sponge with cold water.

Chewing Gum

Use one of the following methods:

Ice.—If the material will not water-spot, rub the gum stain with ice. Then scrape and rub the hardened gum out of the cloth. This method is particularly good for rugs and other heavy materials.

Egg white.—If the material is washable, soften the gum stain with egg white and then wash.

Carbon tetrachloride, kerosene, or turpentine.—Soak the stain in carbon tetrachloride, kerosene, or turpentine. If kerosene is used, wash in warm soapy water afterwards.

Chocolate and Cocoa

It may be necessary to try more than one method to remove chocolate and cocoa stains, since they usually contain other substances such as fat, milk, starch, and sugar. First scrape off as much of the stain as possible with a dull knife; then try one of the following:

Soap and warm water.—If the material is washable the regular laundering in warm soapy water will often remove this stain.

Hydrogen peroxide and sodium perborate.—Sponge stubborn stains with hydrogen peroxide. Or use a mixture of 1 level teaspoon sodium perborate to 1 pint hydrogen peroxide. If the stain still shows, cover the dampened spot with powdered sodium perborate and let stand an hour. Rinse thoroughly. Be sure to test for color change on a sample of the cloth or on the inside of hem or seam of the garment before using these bleaches on the stain.

Carbon tetrachloride and pepsin.—If the cloth is not washable sponge with carbon tetrachloride to dissolve the grease. Dry thoroughly, then sponge with warm water, and dust with pepsin powder. Work the powder into the cloth, let stand for 30 minutes or longer, then sponge with water.

Cod-liver Oil

Fresh cod-liver oil stains are almost colorless and are easy to remove. But old stains, especially if the material has been washed or ironed, are a light brown and are almost impossible to remove, even with bleaches. Treat fresh stains with either of the following:

Grease solvents.—Sponge or dip fresh cod-liver oil stains in carbon tetrachloride, benzene, Stoddard solvent, or gasoline. When the cod-liver oil has been removed, sponge with warm soapy water.

Glycerine.—For washable materials, pour either glycerine or one of the soapless shampoos on the fresh stain. Rub lightly between the hands to loosen the stain, rinse well in water, and then wash in warm soapsuds.

Coffee and Tea

Water and glycerine.—If the stains are on wool or silk, sponge with lukewarm water. Then apply glycerine and rub lightly between the hands. Let stand for half an hour and rinse thoroughly with water. If a grease spot from cream remains, sponge with carbon tetrachloride.

Boiling water.—Remove fresh stains from washable materials by pouring boiling water on the stain from a height of 2 or 3 feet, then wash in warm soapy water. If a trace of stain remains, dry in the sun or bleach with hydrogen peroxide and sodium perborate.

Hydrogen peroxide and sodium perborate.—Sponge with clear water and then with a solution of 1 teaspoon sodium perborate to 1 pint hydrogen peroxide. If the stain still shows, sprinkle powdered sodium perborate on the stain and let stand half an hour. Rinse well with water.

Dyes and Running Colors

As there are many different kinds of dyes, no one remover will successfully take out all dye stains. In fact, it may be impossible to remove some of these stains completely. Proceed as follows:

Water and sunlight.—If the material is washable, rinse the stains in cold or lukewarm water (soak for 10 to 12 hours if necessary), wash in heavy soapsuds, and then dry in the sun. Spots on wool or silk materials sometimes come out by soaking or washing in cold water.

Bleaches.—If a stain remains, try one of the following:

Hydrosulfite.—Apply one of the hydrosulfites available at drug stores as a color remover. Follow directions on the package.

Javelle water.—For stains on uncolored linen, cotton, or rayon, dip in Javelle water for 1 minute (no longer), remove the chlorine from the cloth with a sodium thiosulfate solution, rinse well in water. (See p. 6 for more detailed instructions.) Do not use Javelle water to remove stains from silk or wool.

Hydrogen peroxide.—For stains on any white material, add a few drops of ammonia water to hydrogen peroxide. Soak the stains until they disappear and rinse thoroughly in water. One teaspoon sodium perborate added to 1 pint hydrogen peroxide makes a good bleach, but it must be made fresh, as it soon loses its strength.

Egg

Scrape away as much of the stain as possible with a blunt knife. Then sponge with cold water. Never use hot water—heat makes egg stains harder to remove.

Pepsin.—If cold water does not remove the stain completely, sprinkle pepsin powder over the spot. Work it in well and let stand for half an hour. Rinse well.

Grease solvents.—For nonwashable materials, sponge first with cold water. Let dry and then sponge with carbon tetrachloride, gasoline, or other grease solvent.

Fingernail Polish

Acetone or nail-polish removers.—On any material except acetate rayon or vinyon, sponge the stain with acetone or a commercial nail-polish remover.

Grease solvent and banana oil (amyl acetate).—Use this treatment on any material including acetate rayon and vinyon. First wet the stain well with carbon tetrachloride or gasoline; then apply a drop of banana oil to the stain. Brush lightly with a soft cloth, using an upward motion to pick up the dissolved polish. For heavy stains use dry-cleaning soap with the banana oil.

Bleaches.—To remove any color remaining after the polish itself has been dissolved, apply a bleach. Test the cloth for change in color first.

Hydrogen peroxide and sodium perborate.—Sponge with clear water and then with a solution of 1 teaspoon sodium perborate to 1 pint hydrogen peroxide. If the stain still shows, sprinkle powdered sodium perborate on the stain and let stand half an hour. Rinse well with clear water.

Hydrosulfite.—Apply one of the hydrosulfites available at drug stores as a color remover. Follow directions on the package.

Fish Slime

Soak or sponge the stain with a solution made of ½ cup salt and 1 cup vinegar in 2 quarts of water. Rinse well in water; then wash in warm soapsuds.

Flypaper, Sticky

Sponge the stain with carbon tetrachloride or benzene. If the material is washable, soak in kerosene and then wash in warm soapy water.

Fruits and Berries

Treat fruit and berry stains immediately, if possible; they are hard to remove after they dry. Boiling water (if it does not harm the cloth) or sometimes even warm water will remove most fruit stains. It is better not to use soap, as alkalies set some fruit and berry stains. Use the same methods for removing stains from cooked fruits and berries as from fresh.

Washing in warm soapy water sometimes removes stains from citrus fruits, such as grapefruit and lemon. But if the stain is old or the cloth has been pressed before washing, use one of the bleaches described below. If the acid in citrus fruit changes the color of the cloth, restore it with ammonia water or baking soda. (See Acids, p. 10.)

Cold water and glycerine.—For fresh peach, pear, cherry, and plum stains on cotton and linen and for any fruit stain on wool or silk materials (either white or colored), first sponge the stain well with cool water; then work glycerine or a soapless shampoo into the stain, rubbing lightly between the hands. Do not

use soap, as soap sets the stain. Let stand several hours, then apply a few drops of vinegar or oxalic acid, allow to remain for a minute or two, then rinse thoroughly in water.

Boiling water.—Boiling water removes from cotton and linen most fruit stains except peach, pear, plum, and cherry. Never use boiling water on silk or wool. Stretch the stained part over a bowl, fasten it with string, and pour boiling water on it from a teakettle held at a height of 3 or 4 feet so that the water strikes the stain with force. Rubbing alternated with the boiling water is also helpful. If a stain remains, squeeze a little lemon juice on it and place in the sun to dry, or use one of the chemical bleaches.

Bleaches.—If a stain remains, try one of the following:

Hydrogen peroxide and sodium perborate.—Sponge with hydrogen peroxide-sodium perborate mixture (1 teaspoon sodium perborate to 1 pint peroxide). Rinse thoroughly. If the stain persists, sprinkle powdered sodium perborate on the dampened area and let stand for half an hour. Finally rinse well. Always test for change of color on the inside of a hem or seam before using these bleaches. If the color fades, do not use them—just dampen the stain with water and spread in the sun to bleach.

Hydrosulfite.—Hydrosulfites available at drug stores as dye removers are satisfactory for removing fruit stains from any white material. Follow directions on package.

Javelle water.—For stains on uncolored linen or cotton material, dip in Javelle water for 1 minute (no longer), remove the chlorine from the cloth with a sodium thiosulfate solution, rinse well in water. (See p. 6 for more detailed instructions.) Do not use Javelle water on silk or wool.

Glue and Mucilage

Water.—If the material is washable, soak the spot in warm water, or if it is a stubborn stain you may have to boil it. If the stain is known to be casein glue, soak it in cold water.

Acetic acid.—For nonwashable materials, sponge the spot with water, then with acetic acid (10-percent solution) or white vinegar. Rinse well.

Grass and Other Fresh Garden Foliage

Hot water and soap.—If the material is washable, use hot water and soap, rubbing the stain well. If this does not completely remove the stain, use a bleach.

Bleaches.—Try one of the following:

Javelle water.—For stains on uncolored linen, cotton, or rayon, dip in Javelle water for 1 minute (no longer), remove the chlorine from the cloth with a sodium thiosulfate solution, rinse well in water. (See p. 6 for more detailed instructions.) Do not use Javelle water to remove stains from silk or wool.

Hydrogen peroxide and sodium perborate.—Sponge with clear water and then with a solution of 1 teaspoon sodium perborate to 1 pint hydrogen peroxide. If the stain still shows, sprinkle powdered sodium perborate on the stain and let stand half an hour. Rinse well with clear water. Always test for change of color on a sample of the cloth before using these bleaches.

Hydrosulfite.—Hydrosulfites available at drug stores as dye removers are satisfactory in removing grass stains from any white materials. Follow directions on the package.

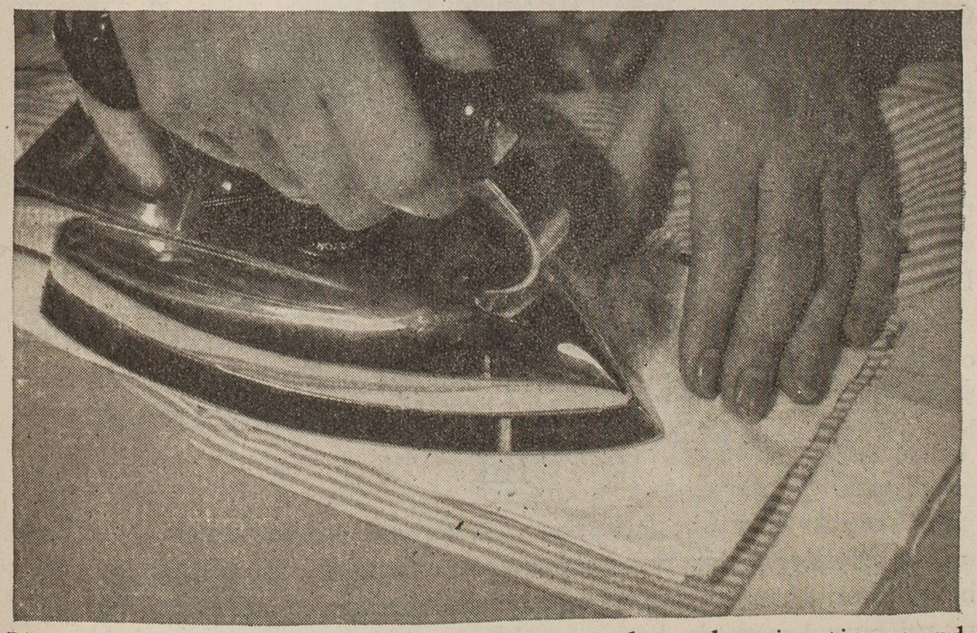
Benzene or denatured alcohol.—On materials that soap and water might injure, sponge the stains with benzene or alcohol. Test them first to be sure they do not change the color of the material. Do not use alcohol on acetate rayon or vinyon unless you dilute it—1 cup denatured alcohol with 2 cups water.

Grease and Oils

Fresh grease spots usually are the pure fat or oil. Old grease spots or stains from automobile, wheel, or machine greases usually contain also more or less dust, dirt, or fine bits of metal. (For road oil and axle grease, see p. 27.) First scrape or wipe off as much of the grease as possible; then treat the stain by one of the following methods:

Soap and water.—If the material is washable, wash in warm sudsy water. Be sure to use plenty of soap on the stained part and rub well between the hands. The soaplike washing agents (soapless shampoos, oils, and lathers) are good to soften grease stains.

Absorbents.—Use cornstarch, French chalk, or white talcum powder for fine materials; corn meal or salt for carpets, rugs, and other coarse materials.



Place a grease or oil stain between paper towels or cleansing tissues and press with a warm iron.

Dust the powder or salt over the spot, let stand until it absorbs the grease or oil, then brush off. Another method is to place the stained part between blotting papers and press lightly with a warm iron. Change the blotting paper as it becomes soiled. Or use cleansing tissues or paper towels in the same way. The advantage of using absorbents is that they do not wet the material or leave rings as water or grease solvents are apt to do.

Grease solvents.—Remove common grease and oils with carbon tetrachloride, gasoline, or benzene. Place a pad of clean cloth or a white blotter beneath the stain and sponge with a clean cloth, moistened with the grease solvent. Work from the wrong side of the material in order to push the dirt and grease out rather than to rub it into the material. Use light, brushing motions, work from the outside of the spot toward the center and spread or "feather out" the solvent into the cloth around the stain until there is no definite edge. Then pat dry with a clean, dry cloth.

If the grease spot contains dirt or fine bits of metal, first loosen the stain by rubbing a little lard, vaseline, or dry-cleaning soap into it. Then sponge with the grease solvent or dip the stain into a small bowl of the solvent.

Another method is to make a paste by mixing cornstarch or talcum with carbon tetrachloride or other dry-cleaning fluid. Spread the paste over the spot; when dry brush it off. Repeat if necessary. The solvent does not spread and is less likely to form a ring if used in this way.

Ice Cream

Ice cream stains contain milk or cream, sugar, sometimes egg, and often coloring. If after trying the following methods, a fruit or chocolate stain remains, follow instructions under Fruits and Berries, page 15, or under Chocolate and Cocoa, page 13.

Cold or lukewarm water.—If the material is washable and the stain contains no highly colored fruit or chocolate, sponge with cold or lukewarm water; then wash in warm soapsuds.

Carbon tetrachloride.—For nonwashable materials, sponge with carbon tetrachloride to remove the greasy part of the stain. Let it dry; then sponge with cold water to remove any stains from the egg and sugar in the ice cream. If this does not remove the stain completely, follow with a pepsin treatment.

Pepsin.—First sponge the stain with cold water, then sprinkle pepsin on the dampened stain, and let it stand half an hour. Brush it off and rinse the spot well. For best results, be sure the material is free from soap or other alkali before applying the pepsin.

Ink

Because inks differ in composition, it is impossible to find removers that are equally effective for all types of ink spots. Each of the methods mentioned below is satisfactory with some type of ink. For most ink spots, it is necessary to try several methods, beginning always with the simplest and that least likely to harm the cloth.

India or drawing ink

Denatured alcohol, carbon tetrachloride, and benzene.—Place a pad of cloth or blotter under the stain and sponge with one of these solvents. Then rub glycerine (use glycerine only with alcohol) or a dry-cleaning soap into the stain and finally rinse out with the solvent. If this does not remove the stain, let the stain dry; then wet with water and rub in some soapless shampoo or soapless lather (soaplike washing agent) to help soften the stain. Or use strong soapsuds to which a few drops of ammonia water have been added. Alcohol must not be used on acetate rayon or colored materials.

Printing ink

Use one of the following agents for removing printing-ink stains:

Lard or vaseline.—Rub the stain with lard or vaseline and work it well into the cloth. If material is washable, wash with plenty of soap and water; otherwise sponge with carbon tetrachloride, gasoline, or other grease solvent.

Turpentine.—Soak the stain for a few minutes in turpentine and then sponge with carbon tetrachloride, alcohol, or other dry-cleaning fluid. Do not use alcohol on acetate rayon or colored materials.

Kerosene.—To remove printing from flour bags and other bags, soak in kerosene for several hours. Then wash thoroughly in soap and hot water and spread on the grass in the sun to dry.

Writing ink

In removing writing-ink stains it usually is necessary to try various methods. Always start with the simplest method and the one least likely to harm the cloth.

Absorbents.—If the stain is still wet, spread corn meal, salt, French chalk, cornstarch, or talcum powder on the stain to remove any excess ink and to keep it from spreading. Work the powder into the stain. Shake it off as it becomes soiled and repeat the process. When the dry absorbent fails to take up more ink, make the absorbent into a paste with water or with a mixture of 1 part water and 1 part alcohol and apply again. Let dry and brush off.

Glycerine and water or soap and water.—If the material is washable, pour either glycerine or one of the soapless shampoos on the fresh stain. Rub lightly between the hands, rinse, and apply glycerine again as long as any ink comes from the stain. Rinse with clear water. Washing with soap and warm water will remove some types of ink.

Bleaches.—If the above treatments do not remove the stain, try a bleach. But use bleaches sparingly on colored materials.

Oxalic acid.—Soak the stain for a few seconds in a solution of oxalic acid (3 tablespoons of the crystals of the acid to a pint of water). Or sponge the stain well with cold water, then stretch the stain over a bowl of hot water, and apply crystals of oxalic acid directly to the stain. Rinse by dipping in the hot water and finally in water to which a few drops of ammonia water have been added. Do not use on weighted silk.

Hydrosulfite.—Sponge with a hydrosulfite solution and rinse quickly.

Iodine

Soap and water.—If the material is washable, soap and water will often remove a fresh stain. Or moisten with water and place either in the sun, over a warm radiator, or hold in the steam from a boiling teakettle.

Denatured alcohol.—On materials that water would injure, sponge with alcohol. On acetate rayon and colored materials be sure to dilute the alcohol—1 cup denatured alcohol to 2 cups water.

Sodium thiosulfate ("hypo").—Sponge the stain or dip in a solution of 1 tablespoon of the "hypo" to 1 pint of water. Rinse well in water.

Iron Rust

Use any of the methods given below to remove iron-rust stains from white materials. Test remover on sample of cloth before using on colored materials.

Lemon juice.—Spread the stain over a pan of boiling water and then squeeze lemon juice on it. After a few minutes rinse; then repeat the process. This method is rather slow, but does not harm delicate white cottons or linens. Another method is to sprinkle the stain with salt, squeeze lemon juice on it, and spread in the sun to dry. Add more lemon juice if the stain still shows. Rinse well.

Oxalic acid.—Spread the stained article over a bowl of hot water and apply a few drops of oxalic acid solution (3 tablespoons of the crystals to 1 pint of water). Or put the crystals of acid directly on the stain and moisten with hot water. Rinse in hot water, and repeat until the stain disappears. Do not use on weighted silk.

Cream of tartar.—Boil the stained article in a liquid made up of 4 teaspoons of cream of tartar to 1 pint of water. Rinse thoroughly.

Hydrosulfite.—Hydrosulfites available at drug stores as color removers or dye-stripping agents also will remove rust stains. Follow directions given on the package. Do not use on weighted silks.

Linseed Oil

Sponge with carbon tetrachloride or benzene. Treat as for cod-liver oil stains.

Lipstick and Rouge

Vaseline and carbon tetrachloride.—If water spots the cloth, work vaseline or lard into the stain. Then either sponge with carbon tetrachloride or dip the stained part in a bowl of the solvent. If a trace of color remains sponge with denatured alcohol. On acetate rayon and colored materials, dilute the alcohol—1 cup denatured alcohol to 2 cups water.

Glycerine, soap, and water.—If the material is washable, first loosen the stain as above with glycerine or vaseline. Then launder as usual. If soap or other alkalies are applied before the stain is loosened, they are apt to set it.

Hydrogen peroxide and sodium perborate.—Sponge with sodium perborate–hydrogen peroxide mixture (1 teaspoon sodium perborate to 1 pint peroxide. Rinse thoroughly. If the stain persists, sprinkle powdered sodium perborate on the dampened area and let stand for half an hour. Finally rinse well. Be sure to test the cloth for colorfastness before using these bleaches.

Meat Juice or Gravy

Sponge meat-juice or gravy stains with cold or lukewarm water. Never use hot water; it sets the stain. If a grease spot remains, launder washable materials in warm soapy water. If the cloth is not washable, use an absorbent powder or a grease solvent.

Absorbents.—Dust the powder over the stain, let it stand until it absorbs the grease, then brush off.

Solvents.—Sponge with carbon tetrachloride, gasoline, or benzene.

Medicines

Because of the great number and variety of substances used in medicines, it is not possible to give methods for removing all such stains. If you know what the medicine is made of, it will aid in choosing the remover. For instance, a tarry or gummy medicine can be treated in the same way as a tar spot (see p. 27); a medicine containing much iron can be removed in the same way as iron rust (see p. 20). Medicines in a sugar sirup usually can be washed out with water; those dissolved in alcohol sometimes can be removed by sponging the stain with alcohol. Many of the medicines used in swabbing sore throats contain silver nitrate and should be sponged with a solution of sodium thiosulfate ("hypo")—1 teaspoon of the crystals in 1 cup of water.

If you cannot find out what kind of medicine caused the stain, you may have to try several methods to find one that will do the job. Each of the following methods will remove certain medicine stains.

Boiling water.—For washable materials, pour boiling water on the stain from a height of 3 or 4 feet, as for fruit stains, or launder in warm soapy water.

Denatured alcohol or carbon tetrachloride.—Some color stains can be sponged or soaked out with alcohol. Sponge greasy stains with carbon tetrachloride. A dry-cleaning soap helps to loosen them. Finally sponge with fresh carbon tetrachloride.

Bleaches.—Use bleaches only on white materials. Try one of the following:

Hydrosulfite.—Use one of the hydrosulfite dye-stripping agents available at drug stores. Follow instructions on the package.

Javelle water.—For stains on linen, cotton, or rayon, dip in Javelle water for 1 minute (no longer), remove the chlorine from the cloth with a sodium thiosulfate solution, rinse well in water. (See p. 6 for more detailed instructions.) Do not use Javelle water on silk or wool.

Mercurochrome

Mercurochrome stains are very hard to remove unless you treat them promptly. Proceed as follows:

Denatured alcohol, glycerine, and laundering.—First sponge the stain well with a liquid made of equal parts of alcohol and water. (On acetate rayon and colored materials use 1 part alcohol and 2 parts water). Next work glycerine into the cloth to help loosen the stain, and continue using as long as any color bleeds from the stain. Then wash well in soapsuds, and rinse with water to which a few drops of ammonia water have been added.

Acetic acid.—If a stain remains after the above treatment, apply 10-percent acetic acid with a medicine dropper; then rinse well in water.

Bleaches.—If the above treatments do not completely remove the stain, use a bleach.

Javelle water.—For stains on uncolored linen, cotton, or rayon, dip in Javelle water for 1 minute (no longer), remove the chlorine from the cloth with a sodium thiosulfate solution, rinse well in water. (See p. 6 for more detailed instructions.) Do not use Javelle water on silk or wool.

Sodium perborate.—Sponge with a sodium perborate solution (4 tablespoons of the perborate in a pint of lukewarm water) or dampen the stain with water and dust the powdered sodium perborate on it. Rinse thoroughly. Always test for the effect on the color of the cloth before using bleaches.

Sodium hydrosulfite.—This color remover is available at drug stores. It may be used safely on most white materials. Follow directions on the package.

Metallic Stains

The tarnish of copper, brass, tin, and other metals often stains textiles. To remove, apply vinegar, lemon juice, or a 10-percent solution of acetic acid. Rinse well as soon as the stain has dissolved. Do not use chlorine bleaches or sodium perborate to remove these stains.

Mercury or quicksilver removes lead or solder stains from rugs or clothing. First scrape off as much of the lead as possible with a dull knife. Then pour mercury on the stain and work with a stick until the mercury absorbs the stains.

Mildew

Mildew spots must be treated when fresh, before the mold growth has a chance to weaken the cloth.

Soap and water.—On washable material, soap and water will remove very fresh stains. Drying on the grass in the sun helps to bleach the spots.

Bleaches.—Try a bleaching agent if soap and water do not remove the stain. Be sure to test for colorfastness on a hidden part of the garment.

Lemon juice.—Moisten the stain with lemon juice and salt and place in the sun. This often removes slight stains.

Javelle water.—Old stains on cotton, linen, or rayon may be bleached out with Javelle water. Dip the stain in the Javelle water for 1 minute (no longer), remove the chlorine from the cloth with a sodium thiosulphate solution, rinse well in water. (See p. 6 for more detailed instructions.) Do not use Javelle water on silk or wool.

Sodium perborate.—Soak the stain in a sodium perborate solution (4 tablespoons perborate to 1 pint lukewarm water). Or dampen the stain with water and sprinkle the perborate powder directly on the stain. Rinse after either treatment.

Milk and Cream

See Ice Cream, p. 18.

Mimeograph-Correction Fluid

Follow instructions given under Fingernail Polish, page 15.

Mucus

Soak in lukewarm salt water (about 2 cups salt to 1 gallon water) or in weak ammonia water (2 tablespoons ammonia water to each gallon water). Rinse well with cold water and launder as usual.

Mud

Let the mud stain dry, then brush well. Sponge with clear water, or use soap and water if it will not harm the cloth. Sponging with alcohol will help to remove the last traces of the stain. On colored materials and acetate rayon dilute the alcohol—1 cup denatured alcohol to 2 cups water.

Mustard

Glycerine and soap and water.—If the material is washable, work glycerine into the stain, rub lightly between the hands, and then wash the article in soap and water.

Denatured alcohol.—If water spots the cloth, sponge the stain with alcohol. Since alcohol makes some colors run, test a sample of the cloth to be sure it does not harm the color. On acetate rayon sponge with dilute alcohol—1 cup denatured alcohol to 2 cups water.

Bleaches.—Try one of the following, but use sparingly on colored materials and do not use on weighted silks.

Hydrosulfite.—Sponge with a hydrosulfite solution (2 teaspoons in 1 pint of warm water) and rinse quickly.

Oxalic acid.—Apply oxalic acid solution with a medicine dropper (see p. 7) and rinse well with clear water. Sponge with weak ammonia water, borax or sodium perborate solution, to neutralize the acid.

Paints—Oil Paints, Varnishes, Enamels

Treat oil paint, varnish, and enamel stains quickly, since a dried or hardened paint stain is almost impossible to remove. Scrape off as much of the paint or varnish as possible before using any remover. If the stain has hardened, apply a solvent on both sides and give time for it to soften. Do not rub too hard; rubbing roughens the cloth. Use one of the following methods:

Soap and water.—If the material is washable, remove fresh stains by washing with plenty of soap. If the stain has dried, soften it first by rubbing oil, lard, or vaseline into it.

Turpentine or other solvents.—Sponge the stain with pure turpentine or, if the spots are large or scattered, wash the whole article in it. Or soak in a liquid of equal parts ammonia water and turpentine, rinse several times in fresh turpentine, wash in soapy water. Carbon tetrachloride, kerosene, alcohol, or benzene may be applied in the same way as turpentine. Benzene is good for the usual type of spar varnish. Alcohol will remove stains of shellac varnish, but never use alcohol on acetate rayon or vinyon.

Paint and varnish remover.—Equal parts of benzene, carbon tetrachloride, and amyl acetate (banana oil) make a very good paint remover. Apply the remover and rub in a dry-cleaning soap to help loosen the stain. Finally rinse out with carbon tetrachloride.

Pencil Marks

Indelible pencil

Do not use water on indelible pencil marks as this spreads the dye and makes the stain harder to remove. Use one of the following:

Denatured alcohol.—Soak the stain in alcohol. If carbon marks remain, sponge with soap and water. Do not use alcohol on acetate rayon. Test all dyed cloth for colorfastness.

Bleaches.—Remove the dye with a bleaching agent.

Javelle water.—For stains on uncolored cotton, linen, or rayon, dip in Javelle water for 1 minute (no longer), remove the chlorine from the cloth with a sodium thiosulfate solution, rinse well in water. (See p. 6 for more detailed instructions.) Do not use Javelle water on silk or wool.

Hydrogen peroxide and sodium perborate.—For other materials sponge with a mixture of 1 teaspoon sodium perborate to 1 pint peroxide. Rinse well.

Lead pencil

A soft eraser sometimes will remove the marks, especially on stiff or starched materials. If the material is washable, rub soapsuds into the stain and launder as usual. Sponge woolen materials with clear water or with a solution of equal parts alcohol and water.

Perspiration Stains

Perspiration of the body is usually acid, so you can sometimes restore colors changed by a perspiration stain by treating with an alkali. Dampen the stain with water and hold it over the fumes from an open ammonia water bottle. (See Acids, p. 10.) Old stains may be alkaline; then try vinegar. (See Alkalies, p. 11.) However, colors changed by perspiration cannot always be restored, particularly if the stain is an old one.

To remove perspiration odors, sponge the stained part with warm water to which a few drops of vinegar have been added, sprinkle powdered pepsin over the stain, work it well into the cloth, and let stand 1 to 2 hours, keeping the spot moist. Then brush off the powder and rinse well.

Yellowish perspiration stains on white material can be removed by:

Soap and water.—If the material is washable, bleach in the sun after washing in soap and water.

Bleaches.—For a stubborn stain, try a bleach.

Hydrogen peroxide.—Sponge with hydrogen peroxide or a mixture of 1 teaspoon sodium perborate to 1 pint peroxide. Rinse with water.

Sodium hydrosulfite.—Quickly dip the stain into a sodium hydrosulfite solution (2 teaspoons sodium hydrosulfite to 1 pint water). Rinse immediately. First test the colorfastness of the cloth to this bleach.

Rubber Cement

To remove rubber cement either sponge or dip the cloth in carbon tetrachloride, Stoddard solvent, gasoline, or benzene. If the stain has dried, rub in vaseline or dry-cleaning soap to loosen it. Then apply the carbon tetrachloride or other solvent.

Salad Dressings

The acid of the vinegar or lemon juice in salad dressings may injure the color of the material. Apply a mild alkali such as baking soda or weak ammonia water immediately to restore the color. (See Acids, p. 10.) Then use one of the following to remove the stain:

Soap and water.—Sponge delicate, washable materials with lukewarm water. Do not use hot water if egg or cream was used in making the salad dressing. Use soap if it will not harm the cloth.

Grease solvents.—Sponge the stain with lukewarm water, let dry, and then sponge with carbon tetrachloride, Stoddard solvent, gasoline, or benzene.

Absorbents.—Absorbent powders are particularly good for splatters of salad oil. Dust cornstarch or talcum powder over the spot, allow it to absorb the oil or grease, then brush off. Or make a thick paste by mixing the powder with carbon tetrachloride or other grease solvent, spread it on the spot, let dry, and brush off. Repeat if necessary. Another method is to put the stained cloth between cleansing tissues and press with a warm iron.

Scorch

You can usually remove light scorch stains from cotton and linen materials, but wool and silk can seldom be restored to their original condition. Brushing with emery paper may improve wool, however. Try the following:

Soap and water.—If the cloth is washable, soap and water will remove very slight stains. After washing, place the article in the sun for a day or two; it may bleach out any remaining traces of the stain.

Hydrogen peroxide.—If the stained material is white, use hydrogen peroxide. Dampen a white cotton cloth with the peroxide and lay it on the stain. Cover with a clean dry cloth; then press with a medium warm iron. If the hydrogen peroxide soaks through the top cloth, replace with a dry one. Ironing directly on the cloth moistened with peroxide or on the dampened stain itself, after the cloth has been removed, will cause rust stains on the garment. Repeat the treatment, until the stain is completely removed. Rinse well.

Light scorch stains may be removed also by sponging with hydrogen peroxide to which sodium perborate has been added (1 teaspoon sodium perborate to 1 pint peroxide. Rinse well with water.

Shoe Dressings

Soap and water.—If the material is washable, remove fresh stains from one of the paste dressings by sponging or washing thoroughly with plenty of soap. For spots caused by white dressings, sponge first with water, then with soap and water.

Solvents.—Sponge well with carbon tetrachloride or turpentine. Glycerine, lard, or vaseline worked into the stain first helps to loosen it. For liquid dressings and for stains on wool, sponge with denatured alcohol. Do not use alcohol on acetate rayon or colored cloth.

Bleaches.—If a dye stain remains, remove with a bleaching agent.

Hydrosulfite.—Apply one of the hydrosulfites available at drug stores as a color remover. Follow directions on the package.

Hydrogen peroxide or sodium perborate.—Sponge the stain with hydrogen peroxide or with a sodium perborate solution (p. 7) or sprinkle sodium perborate powder on the moistened stain directly. Rinse well.

Soap

Ironing material from which the soap has not been well rinsed may cause a stain much like iron rust. Washing with soap and water usually removes it. Be sure to rinse well. Bleaching in the sun afterwards is sometimes helpful.

Soot and Smoke

Absorbents with solvents.—First brush the stain; then sprinkle with an absorbent powder—French chalk, cornstarch, corn meal, or salt. Work the

powder around until soiled and brush it off. Then if the material is washable, sponge or wash with soap and water. If water harms the cloth, first use an absorbent; then sponge the stain with one of the grease solvents—carbon tetrachloride, Stoddard solvent, or gasoline.

Another method is to make a paste by mixing an absorbent powder with carbon tetrachloride or other solvent, spread it on the stain, then brush it off when dry.

To remove the odor of smoke from a garment, have it dry-cleaned.

Sugar Sirups

If the material is washable, wash out sugar-sirup stains with soap and water. For more delicate materials, sponge with clear water.

Tar, Road Oil, Asphalt, Axle Grease, Pitch

Stains made by tarlike substances are hard to remove, especially from cotton material. First rub in vaseline or lard to soften the stain, then sponge with one of the grease solvents—carbon tetrachloride, Stoddard solvent, gasoline, benzene—or dip the article in the liquid and rub lightly between the hands. Repeat the treatment until the stain is removed. If the material is washable, use warm soapy water after rubbing in the vaseline or lard.

For stains on carpets or rugs, scrape off as much as possible with a dull knife. Then sponge with the grease solvent, using a brushing motion so that you do not rub the stain into the carpet.

Tobacco

Treat stains from the tarry substances in the stem of a pipe in the same way as tar. Use one of the following methods to remove tobacco juice stains:

Cold water and glycerine.—Sponge with cold water; then work warm glycerine into the stain. Let stand for half an hour, and wash with soap and water. If the stain cannot be completely removed by washing, bleach it in the sun. Moistening it with lemon juice makes it disappear more quickly.

Wood or denatured alcohol.—To remove traces of color remaining on wool materials after the above treatment, sponge with alcohol.

Bleaches.—Try one of the following to remove remaining tobacco stains:

Hydrogen peroxide or sodium perborate.—Sponge with hydrogen peroxide or with sodium perborate solution (4 tablespoons to a pint of water). Or sprinkle powdered sodium perborate on the moistened stain. Rinse thoroughly.

Javelle water.—For stains on cotton or linen, dip the stain in Javelle water for 1 minute (no longer), remove the chlorine from the cloth with a sodium thiosulfate solution, rinse well in water. (See p. 6 for more detailed instructions.) Do not use Javelle water on silk or wool materials. Be sure to test the cloth for colorfastness before applying this bleach.

Tomato Juice and Catsup

Cold water and glycerine.—Sponge the stain thoroughly with cold water to remove all the loose foodstuff. Next work glycerine into the stain, and let stand for half an hour. Then wash with soap and water.

Hydrogen peroxide or sodium perborate.—Remove any remaining stain by sponging with hydrogen peroxide or with sodium perborate solution (4 tablespoons to 1 pint of water). Sponge or rinse with cold water.

Urine

These stains differ so in composition that it is impossible to give methods which will be successful in all cases. If the color of the cloth is not destroyed but only changed, it may be restored. Normal human urine is usually acid, as is also that of all meat-eating animals. Therefore sponge such stains with a weak ammonia or soda solution. (See Acids, p. 10.) If the stain is alkaline, sponge with lemon juice or vinegar. (See Alkalies p. 11.)

Warm water followed by salt and water.—Sponge with warm water. Warm salt water may be used (about ½ cup salt to 1 quart water). Apply and let stand 15 minutes; then sponge with clear water.

Hydrogen peroxide or sodium perborate.—Apply a few drops of hydrogen peroxide (see p. 7) or sponge with a mixture of 1 level teaspoon sodium perborate to 1 pint peroxide. Powdered sodium perborate may be sprinkled on the dampened stain. Rinse thoroughly in water.

Vaseline

Grease solvents.—Sponge fresh stains with carbon tetrachloride, turpentine, or gasoline. Soaking in one of these solvents will usually remove an old stain.

Absorbents.—Spread cornstarch or talcum on a fresh stain, let stand until it absorbs the grease, then brush off. Or make a paste with the powder and carbon tetrachloride, spread the paste over the stain, brush off when dry.

Walnut (Black)

Soap solution.—Boil washable materials in soapy water (a half-inch cube of laundry soap to each cup of water). This will completely remove fresh stains on cotton or linen. If this treatment leaves a gray color, as it sometimes does with an old stain, treat with Javelle water as follows:

Javelle water.—Mix Javelle water with an equal amount of hot water. Soak the stained place for 1½ hours in this solution, and rinse thoroughly. Then treat with oxalic acid solution (1 teaspoon oxalic acid to 1 pint water), and rinse again. This will remove a week-old stain and will not seriously injure the material. Soaking the stain in Javelle water of full strength, however, rots the material. Do not use Javelle water on silk or wool.

Water Spots

Some silks, rayons, and wools are spotted by water. To remove such spots, dampen the entire material evenly, either by sponging with clean water or by shaking in the steam from a briskly boiling teakettle. Then press it while still damp. Scratching with the fingernail or a stiff brush or rubbing the cloth between the hands will sometimes remove the spot.

White Sauces, Cream Soups

If the material is washable, laundering in warm soap and water will remove these spots. For nonwashable materials, sponge with warm water, let dry, then sponge with a grease solvent—carbon tetrachloride, gasoline, or benzene.

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COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF KANSAS

KANSAS STATE UNIVERSITY OF AGRICULTURE
AND APPLIED SCIENCE
U.S. DEPARTMENT OF AGRICULTURE AND
GRAHAM COUNTY AGRICULTURE EX-
TENSION COUNCIL COOPERATING

EXTENSION SERVICE
COUNTY AGENT WORK
HILL CITY, KANSAS
MAY 14. 1963

Dear 4-Hers, Parents, and Leaders;

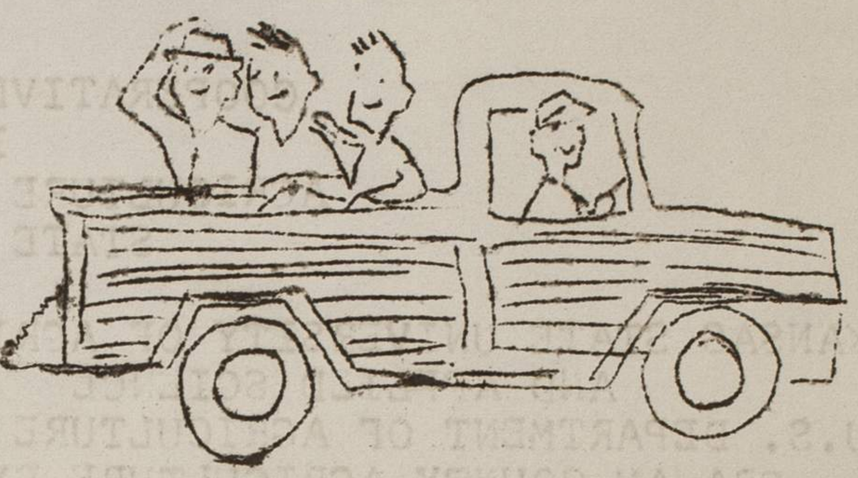
Important dates to mark on YOUR 4-H calendar are:

May 26----4-H Sunday at Penokee
May 28----District Livestock Judging in Rooks County
June 4-8---State Music Camp and Round-up
June 10---Jr. Leaders Meeting
June 19-22 County 4-H Camp
July 22---Style Revue and Best Groomed Boy Contest
July 24-27--State Health and Conservation Camp
July 30-Aug.3--Jr. Leadership Camp
July 31-Aug. 3--FAIR

With trying to wind up all the school activities and get off to a flying start on 4-H projects you are real busy about now. I hope you'll take just a few minutes to read your newsletter and learn about the activities and opportunities available for you.

plans are coming along nicely for county 4-H Sunday which will be May 26 at 2:30 p.m. . The services will be at the Methodist Church in Penokee. We hope those participating in the chorus for 4-H Sunday will cooperate with Mrs. Fink and attend the practice sessions. There will be two practices on Saturdays, May 18 and 25. Both will be at 2:30p.m. at the Methodist Church here in Hill City. Let's work together to make the chorus one of the outstanding features of the 4-H Sunday services.

COMMUNITY LEADERS: Will you please notify the County Extension Office of the names of your 1963 project leaders? Our list is not very up to date I'm afraid and often the information we send out to the leaders is not reaching them. This will be a big help to us and in promoting 4-H through speedy communications.



We're off to the Rock Springs Camp

ROUND-UP-------Kendall Grecian
Larry Farrell
Mary Schweitzer
Judy Wolf

MUSIC-CAMP----Dennis Bretz
Judy Cook
Cynthia Keith
Jerlyn Bashford

CONSERVATION CAMP-----Stanley Grecian
Frank Clark
Mary Jane Waggoner
Diana Keith

HEALTH CAMP-----Bessie Brown
Donna Lynn Keith

Junior Leadership Camp------Ronnie Davignon

Just a reminder about the district livestock 4-H and FFA judging school and contest at the Russ Angus Farm in Rooks County May 28. Registration is from 8:30 to 9:30 a.m. I hope you will plan to go. Graham County did real well at the Hays judging. Please let me know by May 22 if you plan to go.

JUNIOR LEADERS

[illegible] of bring[illegible] your [illegible] organization [illegible] life. [illegible] for Gene was real successful. [illegible]

You are doing a fine job of bring your Jr. Leadership organization back to life. The party for Gene was real successful. Iwas proud of you and a job well done. [illegible] We'[illegible] let you know later.

We are planning a meeting for the Jr. Leaders on June 10, so reserve this evening on your calendar. The time and place hasn't been set yet. We'll let you know later.