

CONVEX AND STREAMLINED BACKBOARDS

It remained for a rabid basketball fan, Leonard A. Maune, of St. Louis, Mo., and Mr. G. R. Chervenka, a research engineer of St. Louis, to introduce the convex backboard. This convexity of 4 inches begins at the median plane of the board and extends and curves outward to the sides of the board, which is 3 feet from the median plane. The original convex backboard has retained the 6-foot width dimension of playing surface and likewise the 4-foot height dimension. The inventors have assumed a 14-foot radius of curvature to be ideal, as the angle of incident and reflection on this arc does not vary greatly from the conventional flat plane. This radius, however, can be altered to meet conditions that may develop.

Since the latest change in the rules permits the extension of the end zone for an additional 2 feet, totalling 4 feet, practically all the new schools laying out basketball courts are taking advantage of this new ruling. This allowable increase in the end zone increases the blind spots, or "coffin corners", which while all owing greater freedom of movement or play, insofar as the offense is concerned, does markedly change the defense owing to the fact that the basket is now plainly set out so there is no mental hazard from the projecting straight side of the backboard.

It is the thought of the originators or inventors that this board will revolutionize the offensive play in the end zone. By increasing the scoring zone it must necessarily follow that the defense must spread out, resulting in more open and much faster play in the end zone.

The inventors cite the following points which they consider to be decidedly in favor of this type of bank:

1. For a straight shot to the goal the scoring zone is, figuratively, increased by 27 sq. ft.
2. For a bank shot contacting the bank 3 inches from the edge, the scoring zone is increased 720 sq. ft.
3. The mental hazard of attempting a shot from the sideline, directly parallel to the bank, is eliminated, owing to the recession of the vertical edge of the bank, allowing unobstructed visibility of the goal.
4. The visibility to spectators is greatly increased beyond the end zone due to the recession of the vertical edge, thereby opening up large areas which heretofore had been obscure.
5. The convex shape of the bank results in a unit of much greater strength and rigidity, thereby causing rebounds to land a greater distance from the basket and opening up the congested regions around the basket.
6. Present type bank mounting structure does not have to be materially altered to permit installation of this new type of bank.
7. This type of bank can be made of wood, glass, steel or any of the materials as used in present bank construction (cost of board no greater than flat backboard).

The inventors appreciate that in order to have this type of bank adopted for national scholastic or collegiate play there must necessarily be a change in the present rules. They believe, however, that the selection of either type bank could be specified. Since its inception, the rules of the game of basketball have been changed from time to time to allow more freedom, faster play and more interest to the spectator, but no change has been offered in equipment to achieve these points. They believe, however, that they have accomplished the desired results with this new type of bank, and likewise will have created a new interest in the game from the standpoint of both player and spectator.

The chairman of the Research Committee is doing research work with three of the convex backboards of different sizes. A streamlined convex board which has a foot cut off the top, 6 inches off the bottom and a foot off either side with the corners lopped off, will receive much attention from Mr. H. V. Porter. He is doing additional research on a flat board of this size. For the research work at the University of Kansas, this small streamlined board is placed at one end of the regulation playing court in Robinson Gymnasium, and at the other end is a convex board the normal size of 6 feet by 4 feet with the corners lopped off in a graduated scale. At one side of the court another 6 by 4 convex backboard with no alterations, is placed for research work on bank shots. At the New York meeting we will be able to give you some findings of the work done on this board.

ALL-STEEL BASKETBALL NETS

Mr. Joseph H. Bennett, of Worcester, Mass., has perfected an all-steel basketball net which he asks to have tested by the Research Committee. The argument in favor of the nets is their durability and construction. This type of net causes the ball to drop down directly through the basket rather than going out of bounds at times as heretofore when a high looping shot was made with such force that it carried the ball out of the court. With the cord net, a "swisher" was produced when a long goal was made, but with the all-steel net a "jingle" is produced.

The only objection that we can find to the steel net is the weight of it. When the steel net is attached to the "no-tie" loops, in one case already, the steel loop was broken loose from the mooring of the rim.

The price doubtless will be a determining factor should the nets eventually be approved.

There is one argument in favor of the white cord nets. With the white backboard and a white net the black rim is set off in a more definite contrast -- black against white -- than the shading of the metallic nickel. Perhaps the steel basketball nets could be made white. This will be a minor objection.

There seems to be no objection on the part of the players shooting through this type of net as over and against the traditional cord net.

Mr. Bennett states that he is using two different styles of hooks as fasteners, but until the plain hoops are outlawed completely this is the only fastener that can be used, as it must pass over the top of the old style basket. If the old style basket should ever be outlawed, then the tape or rawhide attachment could be used. Mr. Bennett further states that if the net should be approved he will then be in position to have special hooks made up to fit the "no-tie" basket which seems to be the most popular in all sections of the country.

BLACK AND WHITE ALTERNATE MARKINGS FOR THE BASKETBALL COURT

Many basketball playing floors with their dark stain are poor surfaces to carry a black marking which should set off the playing court from the out-of-bounds area. Many basketball courts are used for auditoria and assembly hall, and when the floor becomes over-used the light color of the wood is darkened by additional coatings of varnish or shellac.

On a white maple floor the black designated markings are plainly seen, but if the floor gets darker the black lines show less distinctly.

A scheme was tried this past winter at the University of Kansas which showed up wonderfully well. The black sidelines, end lines, free throw lines and jumping circles were broken every six inches by a two-inch square white line. This alternate black and white marking of contrasting colors showed to a decided advantage. The "make and break" of the white line set off the well-defined sidelines and end lines so definitely that it was possible for a coach, player or an official to tell whether a player was on or near the sideline at the other end of the court.

We suggest that other groups try this for a research problem in clarifying and making more distinct the sidelines. We believe that it will lessen the officials' problems, many times when an over-enthusiastic rooster takes issue with an official who calls the ball in or out of bounds.

TEAM-WORK ON THE PART OF OFFICIALS

It is the concensus of the coaches everywhere that officials are not cooperating with each other and with the scorekeeper in designating the proper offender and his number and the offended player who is to toss the foul.

It is suggested that it is the duty of the off official not calling the foul to report to the scorekeeper the foul, the offender, and to designate to the scorer the player who is to toss the foul shot. In other words, Official A calls the penalty. Official B walks over to the scorer while Official A is taking the ball down to the free throw line, gives the scorer the proper information, and immediately walks to the free throw line while the official who called the foul places the ball on the free throw line and then walks back under or near the basket for the throw.

SCOREBOOK

It has been recommended that the official scorebook remain at the scorekeeper's table from the start of the game to the finish, and that it not be removed to the dressing rooms of either team during the time between halves or at the quarter.

TWELVE-FOOT BASKET FOR COLLEGE AND INDEPENDENT TEAMS

Of late years there has been a protest on the part of the basketball public against these "mezzanine peeping goons" of the cage sport who actually come to the level of the basket rim when they reach for tip-in shots, or actually dunk the ball into the hoop instead of shooting it upward, as originally intended by Dr. James Naismith, the originator of the game. No other sport puts such an outlandish premium on height as basketball.

The only reason that the height of the basket today is 10 feet from the gym floor is because the indoor running track at Springfield, Mass., College was 10 feet from the floor, and Dr. Naismith attached his basket to this running track.

Twelve-foot baskets would be only for college players who have reached their growth and maturity, and not for high school players. It is just as easy to accommodate the muscles of the eyes, wrists, hands and digits to distance in height as it is to accommodate them to distance on a horizontal plane.

It is proposed that a field goal count 3 points and a free throw from the 20-foot line (now 15 feet) count one point. This would equalize the scoring ratio. It has long been a contention of Dr. Naismith that a field goal should count more than twice as much as a free throw. An argument might be advanced that if the field goal is increased in value there would be a tendency to foul an opponent to keep the field goal from being made. The answer to that is that 4 personal fouls will disqualify a player from the game. And again, there will not be the desire to work the ball in under the goal for lay-ups on a 12-foot basket because the most disadvantageous spot under the new scheme is directly under the basket. It is much easier to bank a shot 8 and 10 feet out from the basket near the 12-foot goal than it is to work it under the goal. Research has shown that nearly 90% of all the fouls are made in close proximity to the basket. This is on account of the desire of the players to work the ball in close to the basket for a lay-up shot.

Many adherents to the elimination of the center jump rule contended that the no jump rule at center would drive the exceptionally tall player from the game. This certainly has not been true, nor should any rule be made that would be discriminatory. The higher basket would require all players to shoot for goals, whereby now only the "second story peeping Toms" can bat the ball away before it reaches the cylinder of the basket, thereby preventing the goal. Never in the history of the game have there been so many exceptionally tall men under very low baskets, comparatively speaking. Men 6'10" tall are getting to be quite commonplace. The presence of so many long fellows has reduced basketball to a freakish demonstration and has put an almost unbearable handicap on the finer athletes of a normal 6-foot height. Certainly no discrimination is asked against an exceptionally tall player. Rather uniformity is asked so that discrimination against the little fellow will be removed.

Practically all the rules that now exist against the single or double post play, against touching the ball while it is on the rim or above the cylinder of the basket, the 3-second rule, the 1-yard defensive rule, the player being awarded two free throws when fouled under or near the basket -- all of these rules will be unnecessary after a higher basket is put into effect.

The higher goal will increase spectator enjoyment, and will decrease injuries under the goal from accidents by players when driving in hard for lay-ins.

We have seen tall players in many team line-ups who were born without any special gift in basketball, but who were on the team solely on the accident of extreme height. Some junior high school coach discovered this altitudinous Brobdingnagian, sky-scraping stepper oozing ethereally down the hall and straightway the coach made for him with a pair of shorts, the stimulus being mainly his altitude and not his ability. Only a severe cardiac insufficiency will permit that basketball monstrosity to escape the coach's tentacles. Therefore, it is beyond reasonable doubt but what we can expect players of this 6'10" altitude to become so numerous that they will be the rule rather than the exception.

An eleven-foot basket would not be out of reach of the exceptionally tall players. A twelve-foot basket would forever guarantee non-interference of the basket rim by players. In addition to this, the twelve-foot basket would contribute markedly in clearing up the congestion under the goal by increasing the arc of disbursement of the rebound of the ball much further out on the court and away from the basket. All modern gymnasias and auditoria have high ceiling clearances, but in schools that do not have high ceiling clearances ground rules could be permitted which would allow the use of the lower baskets until conditions could be corrected.

In 1934 Kansas State and Kansas played a home-and-home series using the elevated 12-foot basket. Neither team had practiced previously with the 12-foot goal, but the players seemed to have little difficulty in making goals and the spectators enjoyed the game very much. The players' only complaint was that they couldn't drive in and make their lay-up shots. On the other hand, they reacted quite favorably toward the elevated basket.

At the coaching school the following summer conducted by Allen of Kansas and E. J. Hickox of Springfield, Professor Hickox elevated the basket to 12 feet and the boys in the coaching school, without any practice whatsoever, played a match game. We asked Professor Hickox to write his impressions of that game. It seemed to be his opinion and that of the group who watched the game that the players had little difficulty in finding the range of the basket.

It seems to be a fair conclusion that certainly no one should criticize the elevated basket until he has at least tried it out. There are so many benefits and so few drawbacks that this experiment should be indulged in by more coaches than those who have tried it. It also seems reasonable that it might be fair to all concerned that if the 12-foot basket is found to be practical to advance the time of its possible adoption over a two year period so that none of the tall players now in college would be injured, but those oncoming players would have notice of it. This perhaps would remove an objection from coaches who might have tall men now.

The following are a number of reasons set forth in favor of the twelve-foot basket:

1. Arc of disbursement is greater, thus freeing congestion under basket.
2. Guards are forced further away from baskets to get rebound.
3. Forwards are forced further out from baskets to obtain rebound.
4. Will encourage more shooting account greater value of field goals.
5. Will definitely reduce foul shots because of no drive-in necessity.
6. Shots are easier made 8 or 10 feet out from basket instead of directly under.

7. Will eliminate the player's effort to draw two shots by being fouled.
8. The four foul disqualifying rule will still discourage too much fouling.
9. Will require all players to shoot upward for basket as originally intended by Dr. Naismith.
10. Present congestion of tall men under basket works a hardship on short men and makes the game rough.
11. Less handicap to a short man in shooting extra distance than by jumping extra distance.
12. Will discourage using a tall man who is not as active as a shorter man.
13. No other sport puts such an outlandish premium on height as does basketball.
14. A player accommodates muscles of eyes and hands to height the same as to distance.
15. The only reason the height of the present basket is 10 feet is because of the gymnasium running track at Springfield College.
16. A 12-foot basket is a blow to the zone defense account spreading defense.
17. A convex board with 12-foot basket is another impediment to the zone defense.
18. The speedier players could recover the ball before it goes out of bounds in the 4-foot zone, thereby reducing the number of out of bounds plays in a game.
19. Is a decided aid to officials - awarding 2 shots on fouls.
20. Will do away with single and double post plays.
21. Will do away with 3-second rule in the lane.
22. Will do away with rule regarding interference of ball on or above rim.
23. Will increase spectator enjoyment by high arch shots that hit.
24. Will increase visibility for spectators by raising basket 2 feet.
25. Will decrease number of accidents under goals, driving in, not so much hiping, nudging.
26. Will actually give more rebound playing space per player.
27. Four-foot zone behind basket another factor against zone defense.
28. Will make unnecessary all legislation around basket, such as 1-yard rule, etc.
29. Twelve-foot basket is coming, as sure as death and taxes.
30. An eleven-foot basket would still be within reach of 6'9" or 6'10" players.
31. Twelve-foot basket would forever guarantee non-interference.
32. In Olympic participation 12-foot basket would equalize height of two teams (desire of Olympic Committee); limited class 6'2" of under, unlimited class, any height.

3
Jan

January 11, 1939.

Mr. Oswald Tower,
Andover, Mass.

Dear Os:

I have an item which I feel should be placed on the agenda for the National Basketball Committee at its meeting this spring.

I believe there should be a discussion by the Rules Committee on a uniform interpretation of officiating over the United States and that the different representatives on the Rules body should take up the inhibitions and sectional differences in officiating to see if we can offer some suggestions that will break down the inter-sectional prejudice.

I am suggesting that the different commissioners of basketball take one outstanding official from each section, representing the teams that are playing, and that prior to each game they are to officiate these two outstanding officials get together and discuss their interpretations, and then publish these interpretation differences so that the spectators will know what to expect.

I should be glad to have your reaction on this suggestion.

Very sincerely yours,

Chairman, Fifth District,
National Basketball Committee.

FCA:AH

B

Lawrence, Kansas
January 17, 1939

Mr. Oswald Tower,
Andover, Mass.

Dear Os:

I have an item which I feel should be placed on the agenda of the National Basketball Committee at its meeting this spring. I believe that there should be a discussion within the Rules Committee on the best way to obtain a uniform interpretation of officiating in the United States.

The different representatives on the Rules body, I feel, should take up the problems concerning the inhibitions and sectional differences in officiating to see if we can offer some suggestions that will break down the inter-sectional prejudices that now exist.

I am cognizant of the fact that Dr. Frank P. Maguire, who is a member of our Rules body, is also president of the National Association of Approved Basketball Officials, and that Dr. John Brown, another member of our Rules body, is secretary of the Officials group. But most of the difficulty, so far as we are concerned, is that the members of the Association of Approved Basketball Officials are not our conference officials. It may be different in the East, but in our part of the country we have very few members who officiate our college games.

I was wondering if we could not at least have a discussion of this problem. I have suggested that the different commissioners of basketball in the various conferences take one outstanding official from each section, representing the teams that are playing, and that prior to each game they are to officiate these two outstanding officials get together and discuss their interpretations. And that also prior to the game these officials meet with the two coaches concerned, and then that these outstanding points on interpretation be published

prior to the game so that the spectators will know how the rules are to be interpreted by these two officials.

I further believe that there is an educational value to this procedure that will be far-reaching. Fifteen years ago this procedure was followed by the football officials of the country and good results were obtained. Prior to this experience by the football officials and coaches we had much lack of uniformity in football officiating. It was improved by this method, and it is through a similar method that I am suggesting that an attempt be made toward the improvement of basketball officiating.

I should be glad to have your reaction on this suggestion.

Very sincerely yours,

W. A. J. H.

Chairman, Fifth District,
National Basketball Committee.

Lawrence, Kansas
January 17, 1939

Dr. Frank P. Maguire,
Box 181,
Harrisburg, Pa.

Dear Dr. Maguire:

I am enclosing a copy of a letter I am sending to Mr. Oswald Tower in regard to the problem of uniformity in basketball officiating.

This is an item which I feel needs some discussion. I shall be glad to hear from you on this point.

With best wishes, I am

Sincerely yours,

Chairman, Fifth District,
National Basketball Committee.

FCA:AH

Lawrence, Kansas
January 17, 1939

Mr. H. V. Porter,
11 So. LaSalle St.,
Chicago, Illinois.

Dear Mr. Porter:

I am enclosing a copy of a letter that I am sending to Mr. Oswald Tower in regard to the problem of uniformity in basketball officiating.

I didn't know just exactly how to handle this item, but thought it ought to be brought up. We are sending this out to arouse some discussion of a point that needs further help. I shall be glad to hear from you.

With best wishes, I am

Sincerely yours,

Chairman, Fifth District,
National Basketball Committee.

FCA:AH

NATIONAL BASKETBALL COMMITTEE

of the UNITED STATES and CANADA

CHAIRMEN OF SUB-COMMITTEES

Executive
H. H. SALMON, JR.
Publication
OSWALD TOWER
Research
FORREST C. ALLEN
Questionnaire
H. V. PORTER
Game Administration
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Stanford Univ., Palo Alto, Cal.

TREASURER, FLOYD A. ROWE
Board of Education, Cleveland, Ohio

EDITOR, OSWALD TOWER
Andover, Massachusetts

January 19, 1939.

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Lawrence, Kansas

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Palo Alto, California

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High School
Desloge, Missouri

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H. H. Salmon, Jr.
40 Wall St.
New York, New York

Oswald Tower
Andover, Massachusetts

Willard A. Witte
Univ. of Wyoming
Laramie, Wyoming

Dr. F. C. Allen,
University of Kansas,
Lawrence, Kansas.

Dear Phog:

I am very much interested in the contents of your letter of January 17.

The question of uniformity of officiating ought to have an important place on the agenda of our annual meeting. Whether a discussion of the problem would produce any concrete solution may be open to doubt, but that doubt does not justify ignoring the issue. It is possible that a plan could be devised, or at least suggestions made, looking toward and bringing about real improvement in our officiating throughout the country.

It is my opinion that there has been a definite advance in the last few years in the matter of uniformity of interpretation and administration of the rules. This has come about through increased intersectional games, through more detailed and more widespread printed interpretations, and through the individual efforts of members of our committee. I am hopeful that the championship games among the colleges planned for the first time this year will be productive of good results, although I am not in touch with the plans for those events and do not know how they are progressing.

I am thinking of taking a trip across the country this summer and have given some thought to stopping off at a few of the summer coaching schools if any of them would be interested in having me take part in a discussion of the rules and their interpretation. It is possible, however, that by the time I have been able to make a decision about the trip it will be too late to make arrangements with any of the schools. Do you think anything could be accomplished in this way?

Sincerely yours,

Oswald Tower



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF PUBLIC INSTRUCTION

HARRISBURG

January 27, 1939

Dr. Forrest C. Allen
University of Kansas
Lawrence, Kansas

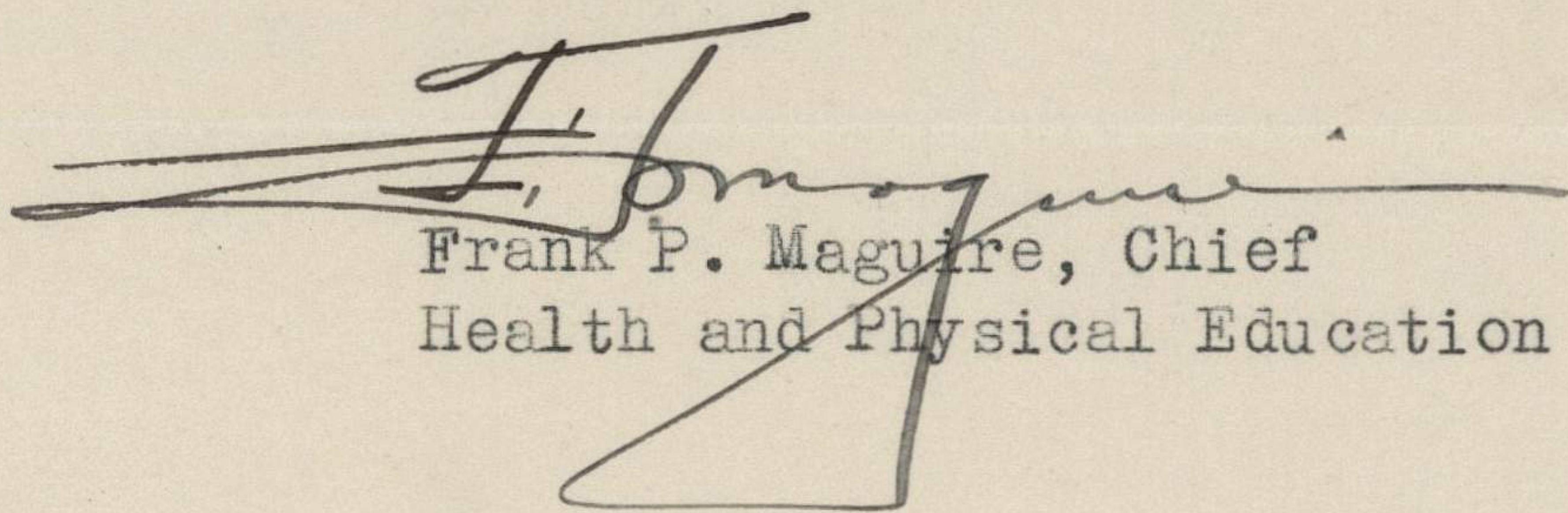
Dear Forrest:

I have your letter of January 17 with
copy of your letter to Oswald Tower.

I think the subject you raise is worthy
of our consideration and analysis. I shall be
glad to present the matter at the annual
meeting of our association of national chartered
boards of basketball officials in the spring.

With kindest personal regards and
continued good wishes, I am

Very sincerely yours,



Frank P. Maguire, Chief
Health and Physical Education

M p

C

Lawrence, Kansas
January 14, 1939

Mr. Floyd A. Rowe,
Board of Education,
Cleveland, Ohio.

Dear Floyd:

Thank you for your letter of the 6th instant.

I am interested in what you are doing with the white ball. However, I have not been so enthusiastic about the white ball because the backboard is painted white, and I have always thought that the white ball would not be as clearly set out against the backboard as a ball of any other color. Either a yellow or orange or any color, other than white, seemed to appeal to my fancy.

We have tried out the white ball, both in football and basketball, and we find that there seems to be a difference in the texture of the leather, which is probably due to the tanning. I presume tanning makes the leather tougher, and the white ball seems to be spongy, and has never made a hit with me personally.

With all good wishes, I am

Sincerely yours,

Director of Physical Education,
Varsity Basketball Coach.

FCA:AH

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40 Wall St.
New York, New York

Oswald Tower
Andover, Massachusetts

Willard A. Witte
Univ. of Wyoming
Laramie, Wyoming

Cleveland, Ohio
January 6, 1939

Dr. Forrest C. Allen, Chairman
Research Committee
National Basketball Committee
University of Kansas
Lawrence, Kansas

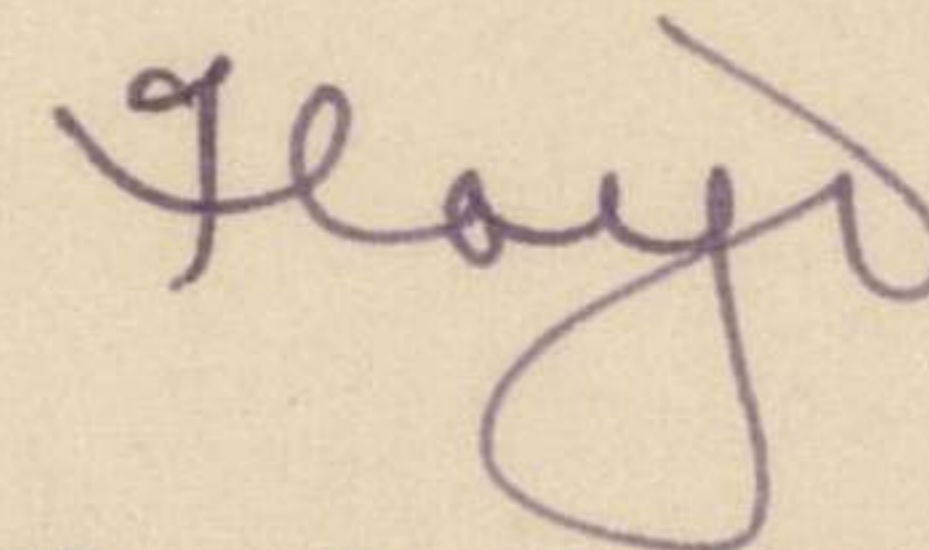
Dear Phog:

Replying to your letter of January 4, wish to say that I think your suggestion is very worth-while.

You will be interested to know that, while we haven't been doing anything with floor markings on poorly lighted floors, we have been experimenting with a white ball. Such experimentation would indicate that the players like the white ball and that it helps out with visibility of the game. If you want any data on it, will be glad to get it for you.

With personal regards, I am

Sincerely yours



Floyd A. Rowe

FAR:McG

Copy to: Members of Research Committee

12
May 9, 1939.

Mr. Oswald Tower, Editor,
Basketball Guide,
Andover, Mass.

Dear Os:

Pursuant to the request of the Rules Body, the chairman of the Research Committee was to furnish the editor of the Guide with an article on the convex backboards. I am sending that article to you today with a photograph of the new streamlined backboard; also a photograph of the four by six convex backboard with the photograph taken from underneath which would show the convexity of the board.

I thought that the photograph of the streamlined board taken in front and the convex board taken from underneath would enable you to make a couple of cuts to be inserted with the write up that would at least be ample evidence for the readers to somewhat visualize the construction of the new board. Will you be perfectly free to add or delete this description?

It was good to see you along with your colleagues in New York.

I am still putting the pressure on the individuals who are supposed to have their write ups in for the Guide, and I will continue to apply the pressure until they arrive.

With all good wishes, I am

Very sincerely yours,

Director of Physical Education,
Varsity Basketball Coach.

FCA:AH
Enc.

NEW TYPE BACKBOARDS TESTED

During the New York meeting of the National Basketball Committee of the United States and Canada, three new types of backboards were exhibited and tested in the gymnasium of New York University before members of this Committee.

One of the boards was of the conventional 4' x 6' size with a convex surface; the second board was substantially the same but with the four corners rounded; and the third board, which was built on specifications drafted by the research body of that Committee, differed considerably from the backboards in use today.

As illustrated, this 'fan shaped' board, which also has a convex surface, is approximately 48" wide x 27" high and has a curved 24" radius top. The latter board received considerable attention. Use of the convex surface increases the scoring zone for a straight shot to the goal by 27 sq. ft. and will undoubtedly overcome many of the complaints that have resulted from the optional use of the 4' end line in relation to the many offensive movements that have been developed in the past several years.

Likewise, the use of a rounded surface reduces considerably the mental hazard of a player in direct line with the edge of the conventional flat surface board. Increased visibility for spectators is likewise a favorable factor of this backboard. It is thought that much of the space in the conventional 4' x 6' backboard is seldom used and could be eliminated, by the possible adoption of a board approximately of the size mentioned above.

The clean cut, streamlined appearance of this new thought in backboards, received considerable favorable comment, and further investigation of the smaller and convex surface idea in backboards is being made by the research body of the National Basketball Committee.

Lawrence, Kansas
May 13, 1939.

Mr. Joseph H. Bennett,
20 Richards St.,
Worcester, Mass.

Dear Mr. Bennett:

I am writing you concerning the matter of the Rules Committee adopting your basket net. There was no objection to your chain net from most of the committee members, but they felt that the price of the nets would be prohibitive. For that reason they did not adopt them.

There might be an objection by the committee over their adopting a patented net that would prohibit any other manufacturer from making a similar net. The committee has never adopted or approved a single ball for the reason that all manufacturers of basketballs meet certain requirements that are approved.

I am wondering if you would have any objection to other manufacturers making a net of this kind. Of course, we do not know that any manufacturers desire to make such a net, but may I ask if you have a patent on this type of net.

I presented to the committee the fact that it would be necessary for you to receive \$12.00 per pair f.o.b. Worcester for your net. I stated further that you would guarantee to replace any broken parts for a period of five years. The committee members brought out the point that many high schools and colleges could not buy direct from you, but would have to go through their local dealer, thereby increasing the price of the chain net. They felt that the price would be a little out of reach of most high schools.

I want to thank you for your exceptional courtesy and kindness in working with the committee, and I am very sure that your net had a lot of friends among the committee members. With certain objections overcome there is still a possibility, in my opinion for you to win additional friends with your net.

Very sincerely yours,

FCA:AH

Chairman, 5th District, N.C.A.A.

Worcester, Mass.
April 23, 1939.

Mr. F.C. Allen,
University of Kansas,
Lawrence, Kansas.

Dear Mr. Allen:

Your letter received yesterday, and I am unable to determine just what was broken as in paragraph 1 it seems to be in the hoop and paragraph 2 seems to be in my net and to clarify this will you please send a pencil sketch of what really broke.

This is the first complaint I have had from any source, and if the breakage was in the hoop, that happens quite often with the string nets and most always happens where the lower supporting brace is welded to the bottom side of hoop. These hoops I understand will stand a working strain of over two hundred pounds and the total weight of my net is less than two pounds, and this weight being distributed over a fifty six inch area it should not weaken the hoop, at all, and after two full seasons in the Worcester Boys Club which is a very busy gym, there has never been a repair or service of any kind, and I believe this test is equal to several years in the average college gym.

If the breakage was in any part of my net it must have been a defect in the loop if you mean the U hook or may have been done in the straightening machine, or it may be because these hooks and links were formed by hand and closed by hand with heavy pliers, which will not happen when I assemble them on small presses and the loops on the links will be formed over a perfectly circular die which I could not have done on such a small order as my initial order had to be.

To use the grade and quality of steel which I am using, in any quantity and the fact that they will have to be assembled by hand they will be expensive and I must get twelve dollars per pair F.O.B. Worcester. I will guarantee to replace any broken parts for a period of five years. Comparing this with the cost of good string or cord nets in replacing them three times per season which seems to be the average life of a net in a busy gym, if you wish to have them looking respectable at all times this will cost you fifteen dollars plus the labor and inconvenience.

If the nets are approved I plan to manufacture and sell direct to colleges, schools and clubs direct as you can see if the jobber and retailer have to be considered the price will have to be around twenty five dollars at least

I would like to go to N.Y. next Sunday and return the same day to save expense if you think it will be worth while as I understand many will check in Sunday or I will come over on the midnight Sun. night to be there Monday morning. I will take your advice on this matter and stay home or go as you see fit to suggest.

Mr. Hickox does not think it will be necessary for me to have a basket at the meeting this year as Mr. Tower showed it to the group last year, however I will have a good picture as well as a section of the net waiting for you.

Win or loose I wish to thank you and the rest of the research committee which have all been courteous to me during this testing period.

Very sincerely yours

Joseph H. Bennett

20 Richards St., Worcester, Mass.

April 25, 1939.

Mr. Joseph H. Bennett,
20 Richards Street,
Worcester, Mass.

Dear Mr. Bennett:

I do not think it will be necessary for you to go to New York, unless you particularly desire to go to that expense. If you do decide to go I think Sunday night would be the best time. The members of the Rules committee will be quartered at the McAlpin Hotel.

The breakage that occurred here when we installed the steel nets was in the steel loop underneath the basket. Of course, it is possible that this was a defective loop. I agree with you that the loop will have to be heavier.

I might add that Mr. Porter, of Chicago, said that the boys like the nets very much. Our experience here shows that the net causes the ball to drop directly through the net, which is a very good point, but there might be a mental hazard of the boys getting their fingers in the net. Personally, I like them very much and have no objection to them. While perhaps the cord nets would not be outlawed, use of both types of nets might be permitted.

Sincerely yours,

Director of Physical Education,
Varsity Basketball Coach.

FCA:AH

April 19, 1939.

Mr. Joseph H. Bennett,
20 Richards Street,
Worcester, Mass.

Dear Mr. Bennett:

I desire to state that we are using your all-steel nets on some research work here, and there is only one objection that we find. It seems as if the weight of the net has apparently broken loose the mooring of one of the "no-tie" basket reinforced loops which carries the net. I am wondering if you have found that objection.

Of course, the way to correct that difficulty would be to make the steel loops stronger. And again, of course, there may have been a defect in this particular loop, but this was not pulled loose until after the attachment of the steel basket net.

The other possible objection might be that the backboard is white and the cord net is white, setting out the black rim for the player to shoot at by the contrast of black against white.

I wish you would write me fully setting forth any additional arguments you have in favor of its use and any objections that have been written in to you by other individuals that you have contacted regarding your net.

Now, I should like to know the most important item, and that is the cost of the net. This will be a determining factor in the possible adoption of the net. Would you write me at your earliest convenience, air mail, as to what you feel the net can be sold for at sporting goods houses. I should like to know what the net is costing you now and what you feel that it would have to retail for. Or, if you cannot answer that, if you could let me know about what you would have to have for it from the jobber or wholesaler, then we can estimate the other.

I am planning to leave for New York some time around the 27th or 28th of April, and if you find that you could not get the information to me before that time, send it to me at the Hotel McAlpin, New York City, where I will be quartered along with the Rules Committee. The Rules Committee meets on May 1 and 2 at the McAlpin, and if you should write the letter to me there please mark it - "Hold for arrival".

I assure you that your net will get every attention that it deserves.

Very sincerely yours,

Director of Physical Education,
Varsity Basketball Coach.

FCA:AH

Lawrence, Kansas
January 16, 1939

Mr. Joseph H. Bennett,
20 Richards St.,
Worcester, Mass.

Dear Mr. Bennett:

I acknowledge receipt of your favor of the 12th instant, and we will be glad to give your special hoops a thorough trial here at the University of Kansas. When they arrive we will have our superintendent refer to your instructions for attaching the Bennett All-Steel Net to the basket.

Very cordially yours,

Varsity Basketball Coach,
University of Kansas.
Chairman, 5th District.

FCA:AH

20 Richards Street
Worcester, Mass.
January 12, 1939.

Mr. Forest C. Allen,
University of Kansas
Lawrence, Kansas.

Dear Mr. Allen:

Your letter of July 8, 1938 with suggestions in reference to my all steel basketball nets and the right procedure to have same tested, I am pleased to say I have followed them carefully and Mr. E.J. Hickox of Springfield College has had a set installed since the first of December and have proved very satisfactory, and I think you will hear from him soon to that effect.

I therefor am shipping you prepaid under separate cover one pair of nets for you to test in your gym. We have tried out two different styles of hooks and the ones shipped with your nets are working perfectly, and until the plain hoops are outlawed completely this is about the only hook that can be used as it must pass over the top as you know the only other method would be tape or raw hide as they are now using in most cases.

If my nets should be aproved I will then be in a position to have special hooks made up to fit the no-tie-in style baskets which seems to be the most popular around here.

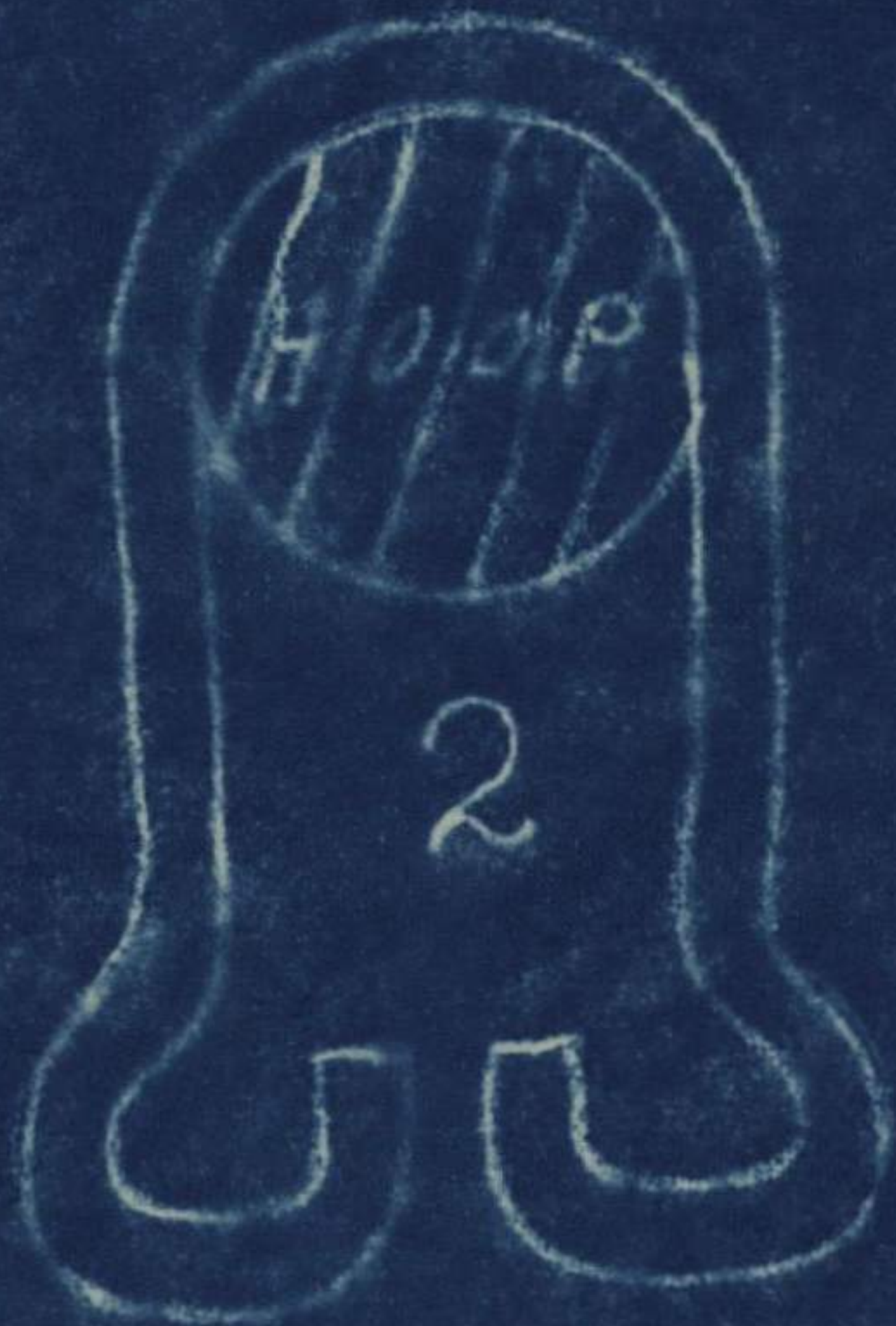
I am enclosing instructions and will you please see that the right party receives them and will read them before attempting to assemble nets.

Your letter indicates Mr. Tower altho a stranger to me must have done a good job at the Chicago meeting which I appreciate and take this opportunity to thank you for your courtesy extended me and any assistance, criticisms or suggestions will be more than appreciated.

Very truly yours

Joseph H. Bennett

20 Richards Street,
Worcester, Mass.



DIRECTIONS FOR ATTACHING THE BENNETT ALL STEEL NET TO BASKETS.

Place U hook on top of hoop as in blue print #1, snap U hook down on to hoop as in print #2, repeat until you have 12 U hooks on hoop about $4\frac{3}{4}$ inches apart. Now cut the cord which ties the top of net together and open up net, then start at right side of back brace and with all of net facing you start hanging net by slipping ring up and hang on one side of U hook continue clockwise until you have the 12 rings on the 12 U hooks. Now inspect to see that net hangs freely all around and evenly spaced. Next starting anywhere slip ring up on U hook about $\frac{1}{2}$ " and with fingers close U hook to position #3 and let ring drop down to position at bottom of U hook, continue until you have the 12 done likewise, now with a pair of pliers close all the small loops on bottom of U hooks and the net will be ready for use, and U hooks will look like spare which I have tagged and labeled spare sample.

On hoops which have the solid horizontal back brace the best method to attach centre U hook rear is to drill a $\frac{3}{8}$ " hole thru plate just behind hoop and pass one side of the U hook down and complete as before.

Caution, have all the link joints on outside of net instead of on the inside. Now play basket ball.

Joseph H. Bennett

20 Richards Street,

Worcester, Mass.