5. VENTILATION.

The ventilation of a room consists in bringing in pure air and expelling the foul air. In summer the open doors and windows are usually sufficient. In winter, for one story buildings, the stove should be encased with zinc or galvanized iron, leaving six inches of space all around, between the surface of the stove and the casing. The upper part of the encasement, above the stove, should be perforated, and the lower part, under the stove, furnished with a zinc flue, one foot in diameter, opening into a shaft communicating with the outside of the building. Then, as the stove becomes heated, the pure, cold air from outside rushes in, becomes warmed, and ascends through the perforations into the room. So much for the ingress of pure air.

For the egress of the foul air, the chimney flue should be built from the foundation up, and furnished with a register near the floor, so that the lower part of the opening in the register shall be on a level with the floor. This register furnishes an exit for the heavy, cold and foul air to escape, which is facilitated by the draft of the chimney flue. At the time of building, a flue 2 feet by 2 may be easily constructed in masonry, under the floor, with inner surfaces smooth, communicating with the outside of the building, and having an opening under the stove for the zinc flue of the encasement. The outside opening of the masonry should be guarded by iron bars or grate for protection. In this way perfect ventilation may be secured at very little expense.

No. 1. COUNTRY SCHOOL HOUSE.

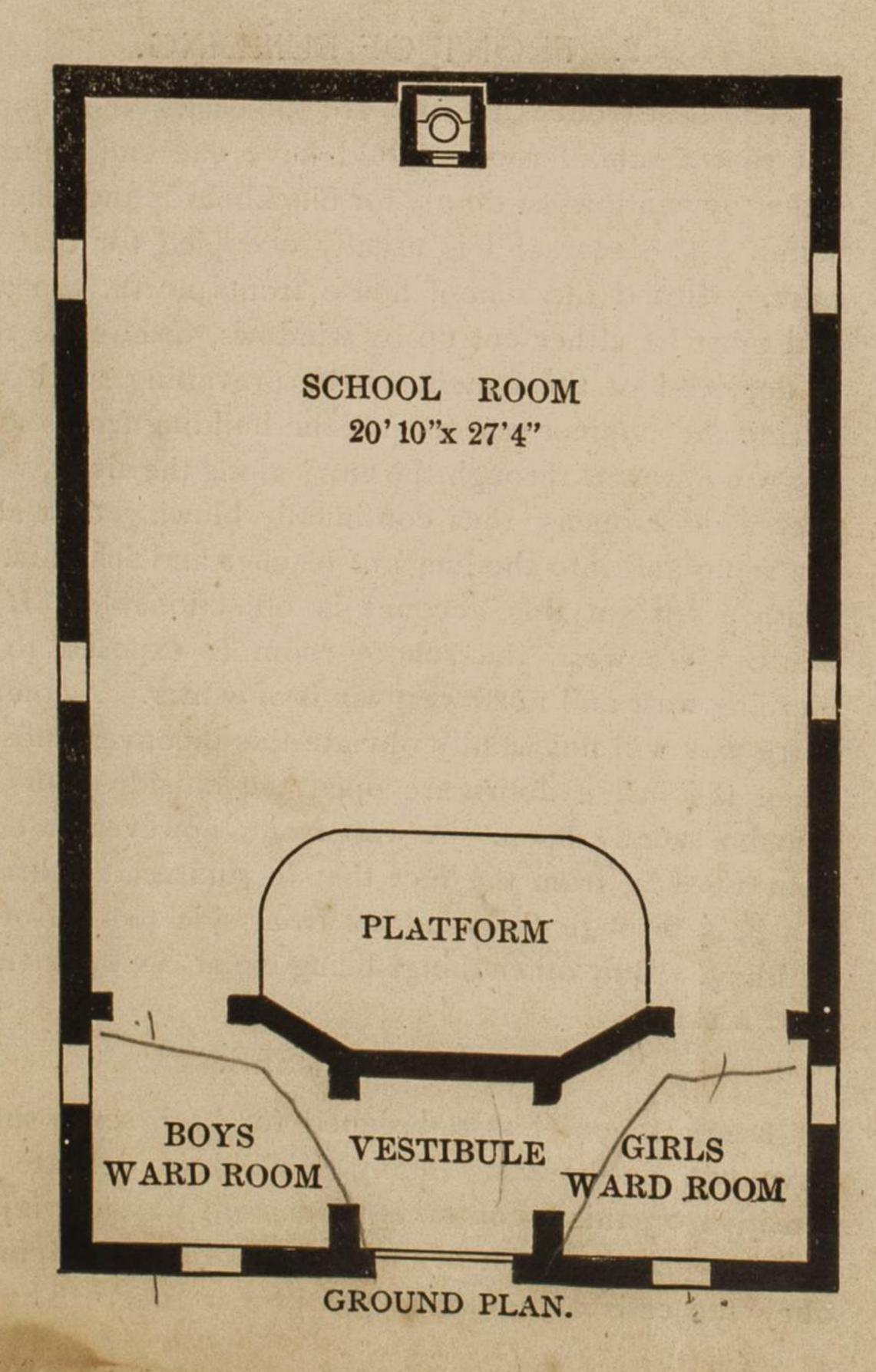
ONE ROOM. SCALE, 1/8 IN C.1 TO THE FOOT.



ELEVATION.

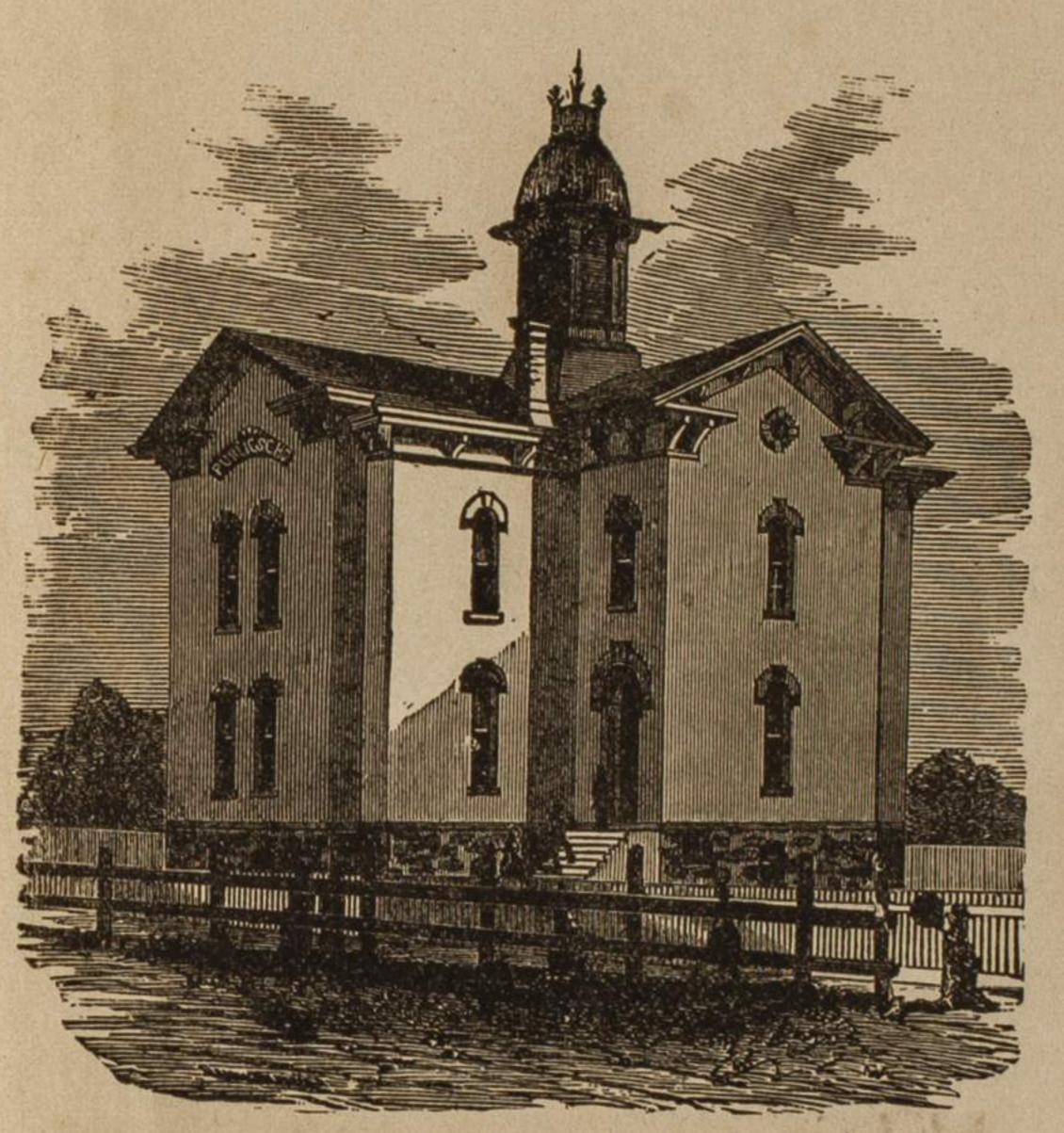
School House No. I is designed for Country Districts and suburbs of cities.

The school room is 20 feet 10 inches by 27 feet 4 inches, and capable of seating forty pupils. It is provided with a vestibule and separate ward room for boys and girls.



No. 2. VILLAGE OR WARD SCHOOL.

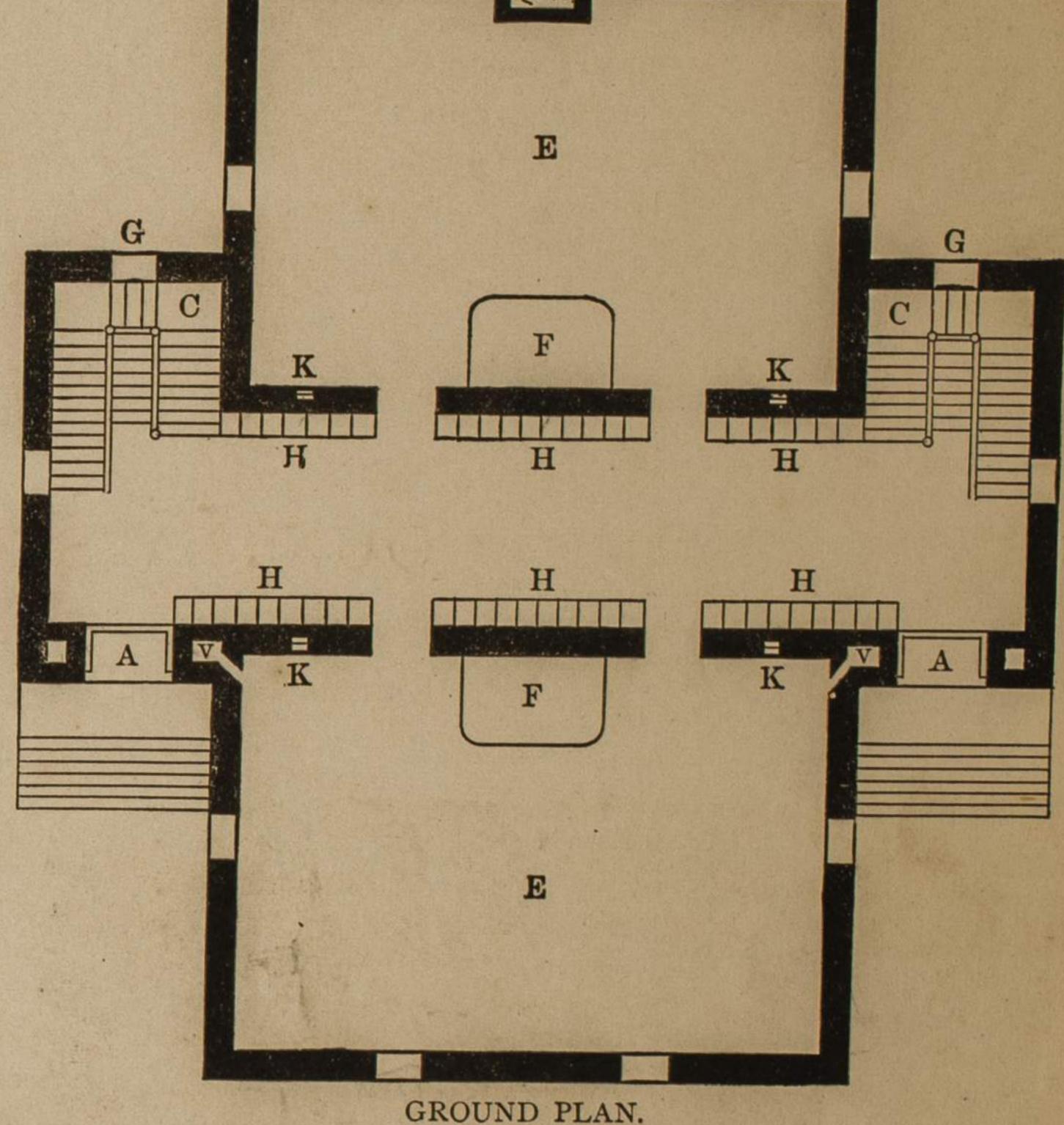
FOUR ROOMS. SCALE, 1-16 INCH TO FOOT.



ELEVATION.

DESCRIPTION OF GROUND PLAN.

AA. Entrance for each sex. BB. Hall or Corridor, 10 feet wide. CC. Stairs for each sex. EE. School Rooms, 25x36 feet. FF. Teachers' Platforms. GG. Rear Entrances. HH. Wardrobes. KK. Hot Air Registers. VV. Ventilating Shafts and Ducts.



This house contains all the elements of a High School, viz., entrances front and rear, and stairs for each sex; ample hall room, and a separate alcove in the wardrobes for each scholar, there being from two to four scholars for each closet, making it practicable, if desirable, for each one to put his or her clothing under lock and key.

Each room has three sides exposed, thereby securing ample circulation in warm weather, and a uniform distribution of light.

The house is warmed with one fire, and each room has two registers, so as to insure a current in adverse winds.

This one fire renders the administration economical.