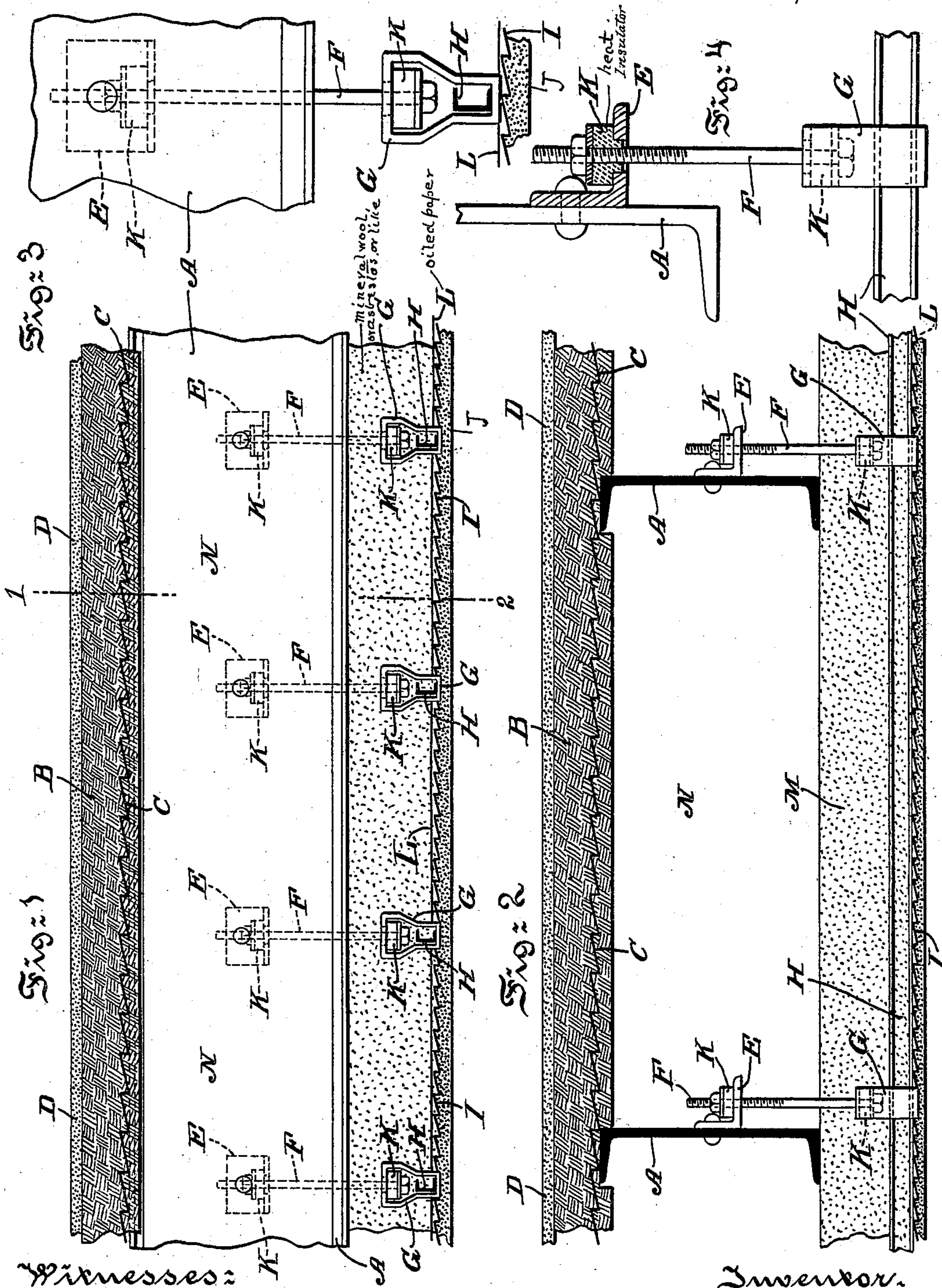


(No Model.)

J. S. MERRITT.
CEILING OR WALL CONSTRUCTION.

No. 599,721.

Patented Mar. 1, 1898.



Witnesses:
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UNITED STATES PATENT OFFICE.

JAMES S. MERRITT, OF PHILADELPHIA, PENNSYLVANIA.

CEILING OR WALL CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 599,721, dated March 1, 1898.

Application filed June 26, 1897. Serial No. 642,390. (No model.)

To all whom it may concern:

Be it known that I, JAMES S. MERRITT, a citizen of the United States, and a resident of the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Ceiling or Wall Construction, of which the following is a specification.

My invention relates to improvements in the construction of cold-storage houses or compartments, and more particularly to improvements in the construction of the ceilings of cold-storage houses connected with breweries or other establishments where a greater or less amount of moisture is present and is given off from the articles stored; and the object of my invention is to furnish a ceiling construction which will be entirely unaffected by moisture and which will at the same time be an excellent non-conductor of heat or cold.

While my invention is particularly designed for ceilings, it may with slight modifications be used advantageously in the construction of walls and to prevent the transmission of heat in either direction.

In the accompanying drawings, forming part of this specification, and in which similar letters of reference indicate similar parts throughout the several views, Figure 1 is a section through a ceiling of my construction; Fig. 2, a section through the ceiling at right angles to the section shown in Fig. 1, or on the line 1 2, Fig. 1; Fig. 3, an enlarged end elevation of one of the stirrups which carry the beams to which the ceiling proper is secured, showing also part of the ceiling and part of the main floor-beam, to which the supporting-rod of the stirrup is secured; and Fig. 4, a side elevation of Fig. 3.

A are main beams of any suitable size or section and preferably of metal, which extend from wall to wall or from column to column of the cold-storage room. These beams carry the floor, which is preferably formed by means of concrete B, in which is embedded a sheet or sheets C of expanded metal, which serves to increase the strength of the structure between the beams A. The top of the concrete is preferably covered with cement or asphalt D to make a smooth finish. While I prefer to use the form of floor above described, I do not desire to confine myself solely to its use,

for in many cases a wooden, tile, stone, or other floor may be used advantageously.

E are brackets secured by bolts or rivets to the sides of the beams A, which brackets carry rods F, the lower ends of which carry stirrups G, which support rods H, which run at right angles to the beams A and to which is secured the metal lathing I, which carries the cement ceiling J.

K are washers of vulcanized fiber or other suitable non-conducting material, one of which is carried by the brackets E and the other by the stirrups G. The rods F pass through these washers, and the heads or nuts of the rods bear against them and are thereby insulated from the brackets and stirrups. In some cases it would only be necessary to use washers K at one end of the rods F, the washers on the other end being done away with.

Upon the top of the cement ceiling I preferably place a layer of oiled paper or other fibrous material L, and upon the top of this I place a comparatively thick layer of some non-conducting material—such as mineral wool, asbestos, or the like—and between the floor or a partition specially built for the purpose and the top of the layer of non-conducting material M, I preferably form an air-space N, which assists in preventing the passage of either heat or cold.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a ceiling or wall construction, in combination, beams or joists, metallic lathing carried by but insulated from said beams or joists, cement plaster or other waterproof material carried by said lathing, and a layer of non-conducting material, as mineral wool, on top of said lathing.

2. In a ceiling or wall construction, in combination, beams or joists, beams or rods suspended from said beams or joists and insulated therefrom, metal lathing carried by said beams or rods, cement plastering carried by said lathing, and a layer of non-conducting material, as mineral wool, carried by the upper side of said lathing.

3. In a ceiling or wall construction, in combination, beams or joists, a floor or partition carried by said beams or joists, beams or rods

suspended from said beams or joists and insulated therefrom, metal lathing carried by said beams or rods, cement plastering carried by said lathing, and a layer of non-conducting material, as mineral wool, carried by the upper side of said lathing.

4. In a ceiling or wall construction, in combination, beams or joists, a floor or partition carried by said beams or joists, beams or rods running at right angles to said first beams or joists, rods carried by said first beams or joists by which said other beams or rods are supported, means for insulating said rods from said first or second beams, metal lathing carried by said second beams, cement plaster or other waterproof material carried by said lathing, a layer of non-conducting material, as mineral wool, resting upon the top of said metal lathing, and an air-space between the top of said non-conducting material and said floor or partition.

5. In a ceiling or wall construction, in combination, beams or joists, brackets carried by said beams or joists, rods depending from said brackets, stirrups carried by the lower ends

of said rods, means for insulating said rods from said brackets or stirrups, beams or rods carried by said stirrups, metal lathing carried by said beams or rods, cement plaster or other waterproof material carried by said lathing, a layer of non-conducting material, as mineral wool, carried on top of said lathing, and an air-space between said non-conducting material and the flooring or partition carried by said main beams.

6. In a ceiling or wall construction, in combination, beams or joists, a floor or partition carried by said beams or joists, beams or rods suspended from said beams or joists and insulated therefrom, metal lathing carried by said beams or rods, a covering of waterproof paper or similar material resting on top of said lathing, a layer of non-conducting material, as mineral wool, resting on said paper, and cement plaster or similar material carried by said lathing.

JAMES S. MERRITT.

Witnesses:

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