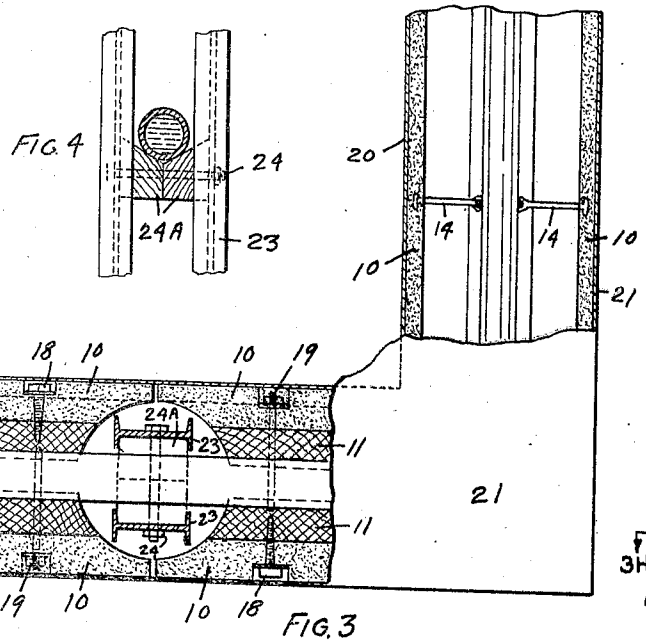
June 22, 1926.

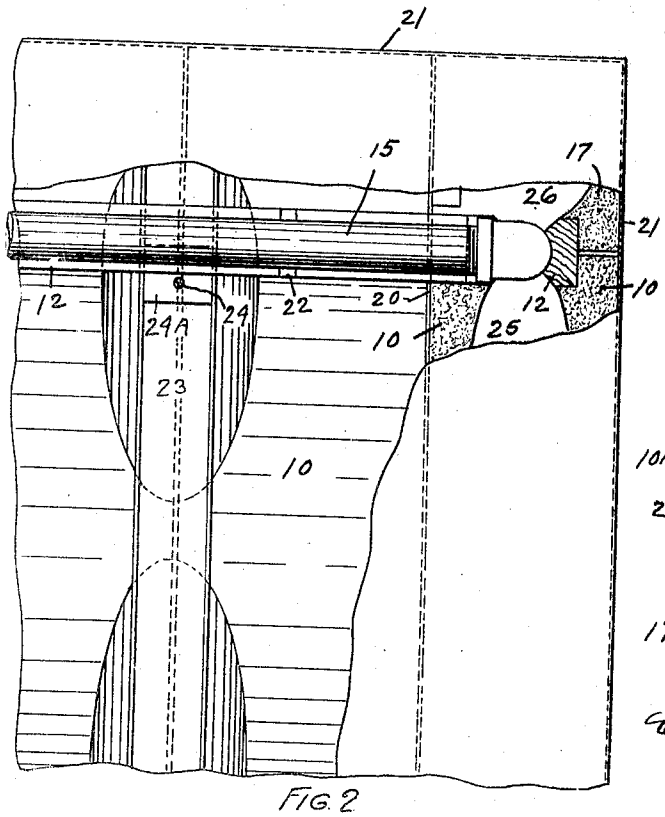
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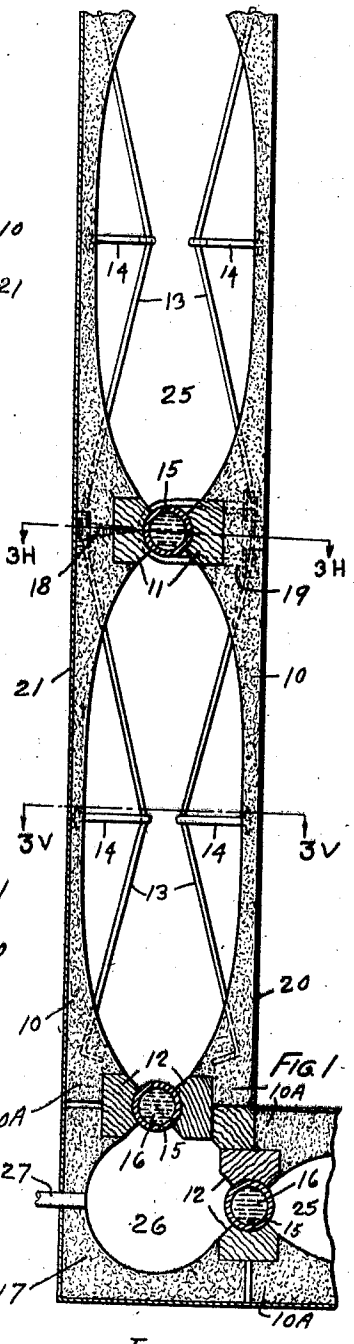
C. E. GLESSNER

REFRIGERATOR WALL

Filed March 8, 1922







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Patented June 22, 1926. 1,589,638

UNITED STATES PATENT OFFICE.

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REFRIGERATOR WALL.

Application filed March 8, 1922. Serial No. 542,181.

This invention relates more particularly to the structure of walls, floors and ceilings of refrigerating rooms.

The object of my invention is to provide an exceedingly simple and inexpensive and efficient means for preventing heat from passing through walls, etc., without filling same with expensive insulating materials.

I accomplish these results in the manner set forth in the following specification and illustrated in the accompanying drawing, in which:—

Figure 1 is a vertical section through a portion of a side wall and floor showing the construction and method of assembling the units. Figure 2 is an elevation of the upper portion of a side wall. Figure 3 is a plan of one corner of a refrigerating room with the upper or vertical portion of same cut away along the line 3^V—3^V in Figure 1 and the lower or horizontal portion being cut away along the line 3^H—3^H in Figure 1 disclosing the manner in which the supporting steelwork is contained within the walls. Figure 4 is a side elevation of a portion of the supporting steelwork showing the method of supporting the piping until the wall is completed.

Referring in detail to the drawing, I have constructed a refrigerating chamber from a plurality of concrete blocks 10 having the inside faces in the form of a double arch whose central portion rests on the wooden strips 11 and whose ends rest on the strips 12.

Reinforcing rods 13 and struts 14 support the arches at their thinnest sections. The strips 11 and 12 are concave on the side away from the concrete block and bear against the pipe 15 which contains a circulating cooling medium of brine or cold water 16. A pair of blocks 10 being opposed to each other, one forms the outside wall and the other the inside wall while the two blocks are insulated from each other by the cooling pipes 15. Corners are filled by the special sections 17 which also abut on the strips 12.

Lagscrews 18 and U bolts 19 placed in staggered relation hold the center of each section of block 10 to its strip 11 while the outer ends 10^A merely rest on the strips 12. The inside of the structure thus formed is hermetically sealed by the lagging 20 and its outside is covered by the lagging 21. It is preferable to leave small openings 22 between the various strips 11 and 12.

In order that structural shapes may be employed within the walls to support the structure itself, I have illustrated in Figures 3 and 4 the manner in which such shapes may pass through the walls and alongside of the cooling pipes 15 without conducting heat to or from same. It is preferable to use the I beams 23 and to place between same on the under side of the cooling pipes 15 the blocks 24^A which are held in place by the bolts 24. The object in making the blocks 24^A V-shaped, is to permit the pipes 15 to move and adjust themselves to the strips 11 and 12 when pressure is applied to the outside of the laggings 20 and 21.

The operation of my device is as follows: Air is pumped from the spaces 25 and 26 through the exhaust pipe 27 and the greater pressure of the atmosphere on the outside will force the opposite sides of the walls against the cooled pipes 15.

I am aware that many devices and materials are in use for insulating the walls of refrigerating rooms; I therefore do not claim my insulating means broadly but only within the limits of the following claims.

What I claim as new is:

1. A refrigerator wall consisting of a pair of spaced wall members each of which is adapted to withstand atmospheric pressure; heat-conducting pipes placed between said wall members and separating same; means for fastening said wall members to said pipes in a manner that said fastenings shall not pass from member to member and means adapted to be connected to a means for exhausting the air from between said wall members.

2. A refrigerator wall consisting of a pair of separated sectional wall members each of which is capable of withstanding atmospheric pressure, in combination with a plurality of spacing pipes placed between said walls; means for fastening the sections of each wall against their contacting spacer pipes; an air-tight covering on the outer side of each wall; means for conveying heat away from said pipes; and means adapted to be connected to a means for exhausting the air from between said walls.

CHARLES E. GLESSNER.