

No. 721,962.

PATENTED MAR. 3, 1903.

H. MARING.  
FIREPROOF PARTITION.  
APPLICATION FILED OCT. 27, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

Fig:1.

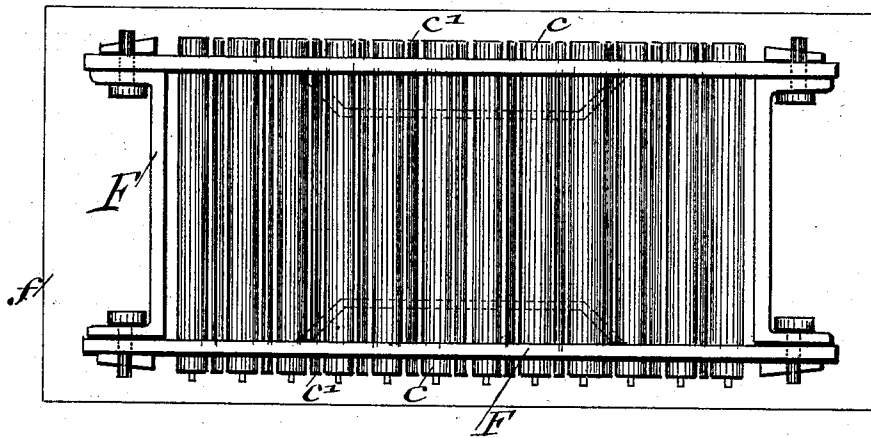


Fig:2.

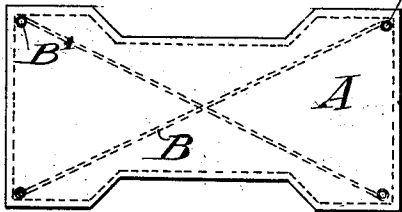


Fig:3.

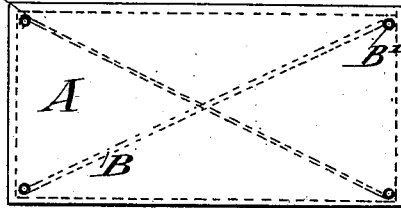


Fig:4.

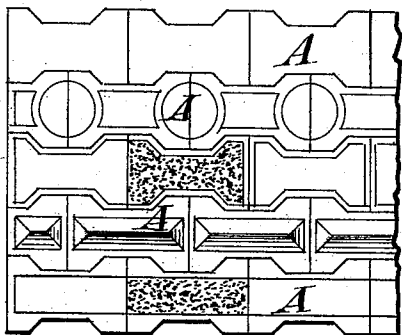
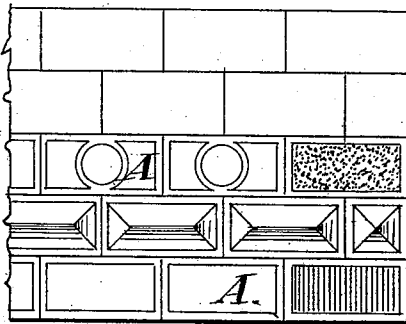


Fig:5.



WITNESSES:  
*Henry J. Schuber*  
*C. Bradway*

INVENTOR  
*Hermann Maring*  
BY *James Viles*  
ATTORNEYS

H. MARING.  
FIREPROOF PARTITION.  
APPLICATION FILED OCT. 27, 1902.

NO MODEL.

2 SHEETS—SHEET 2.

Fig:6.

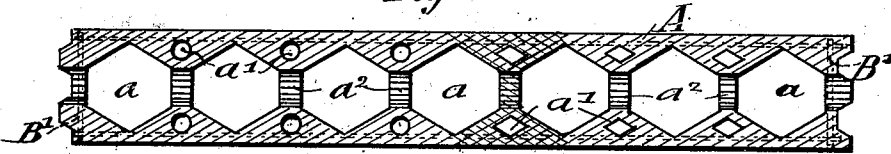


Fig:7.



Fig:8.



Fig:9.

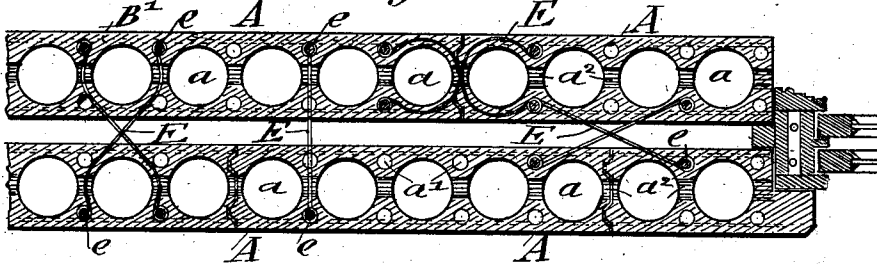


Fig:10.

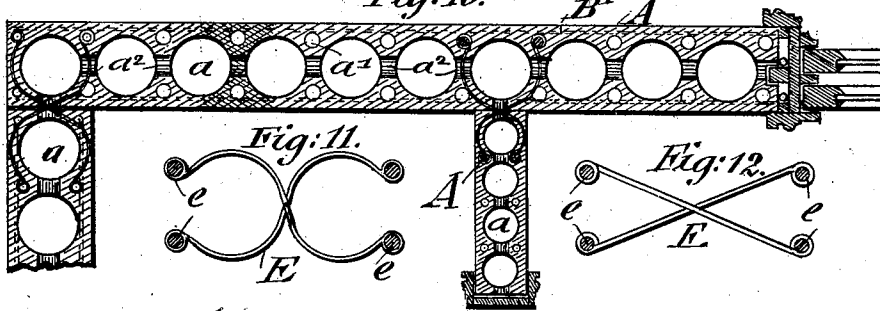


Fig:11.

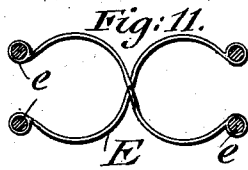
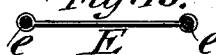


Fig:12.



Fig:13.



WITNESSES:

Henry J. Schrier  
E. Bradley.

INVENTOR

Hermann Maring  
BY  
Louis Miles  
ATTORNEYS

# UNITED STATES PATENT OFFICE.

HERMANN MARING, OF DARIEN, CONNECTICUT.

## FIREPROOF PARTITION.

SPECIFICATION forming part of Letters Patent No. 721,962, dated March 3, 1903.

Application filed October 27, 1902. Serial No. 128,986. (No model.)

To all whom it may concern:

Be it known that I, HERMANN MARING, a citizen of the Empire of Germany, residing in Darien, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Fireproof Partitions, of which the following is a specification.

This invention has reference to an improved fireproof partition which is built up of individual blocks that are connected with each other in such a manner that a comparatively light yet strong partition-wall is formed; and the invention consists of a fireproof partition made of partition-blocks formed of cement with longitudinal openings of large and small diameters, anchor devices for connecting said blocks, means in said small openings attached to said anchor devices, reinforcing-frames embedded in the side portions of said blocks, and corner-pins connecting said reinforcing-frames, as will be more fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a top view of a mold for making my improved blocks for fireproof partitions. Figs. 2 and 3 are side elevations of two different forms of block. Figs. 4 and 5 are portions of partition-walls built up from blocks shown in Figs. 2 and 3. Figs. 6, 7, and 8 are horizontal sections of partition-blocks provided with openings of different cross-sections. Figs. 9 and 10 are horizontal sections showing the anchor connections between blocks and partitions, and Figs. 11, 12, and 13 are detail views of the different anchor connections employed.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents my improved block for fireproof partitions, which block may be made in shape shown in Figs. 2 and 4, in which the blocks are alternately provided with grooves and projections in their horizontal sides, so as to form a connection in the nature of a groove and tongue, or the blocks may have rectangular faces, as shown in Figs. 3 and 5, in which case the blocks are superposed one above the other and connected by suitable mortar joints. Each individual block is preferably made of cement or other plastic material which sets after being molded into shape and provided with vertical open-

ings *a* of polygonal, round, elliptical, or other cross-section, as shown in Figs. 6 to 10. Intermediately between the larger vertical openings *a* are formed smaller openings *a'* of round, rectangular, or other cross-section, while the separating portions between the larger openings are provided with openings *a''*, extending longitudinally of the block, all of these openings being for the purpose of making the block as light as possible and forming air-spaces in the same. To impart the required degree of strength to the partition-blocks and protecting the same, so as to enable them to carry the pressure of the load which may be placed upon them, and for permitting the shipping and handling of the same without injury, the blocks are reinforced by means of skeleton frames *B* adjacent the side walls, that are formed of narrow metallic straps crossing each other and which are placed around the transverse metallic pins *B'* inserted into the corners of the blocks, as shown in Figs. 2 and 3. The skeleton frames, as shown in Figs. 6 to 10 by dotted lines, are embedded in the cement of the body of the block by being placed in position in the mold, the tubes *c c'* for forming the larger and smaller openings being also placed in position and supported by an oblong frame *F*, in which the cement is rammed into the spaces between the tubes within the spaces inclosed by the inner faces of the frame *F*. The frame *F*, with the molds, is supported on the bed-plate *f*, and when the cement is fully rammed around the tubes and skeleton frames the top is made level with the top of the frame *F* by means of a scraper, so as to produce thereby blocks of uniform size. After the material has set the tubes are withdrawn from the same, the blocks being then removed from the mold by opening the supporting-frame. In this manner fireproof blocks for partitions are obtained which are of great lightness and yet reinforced in their side portions, so that the blocks are capable of being shipped from the factory to the place of use and of being handled to be put up without injury. The metallic skeleton frames also increase the strength of resistance of the block against the pressure of the load on the same. By the construction of the block the individual portions of the same at both sides of the open-

ings form individual pillar portions, as indicated in the middle block shown in Figs. 6 and 7 by the cross-hatched portions, which individual pillar portions, however, are connected firmly together by the vertical reinforcing-frames in the side portions of the blocks, which are tied around the transverse collar-pins B'. When a thicker and stronger partition-wall is to be formed, two parallel partition-walls have to be connected together, in which case the walls are anchored by connecting-pieces E, secured by rods, dropped into the small openings of the blocks, as shown in Fig. 9, or S-shaped anchoring-straps may be used, as shown also in Fig. 9. The adjacent ends of individual blocks may also be connected by means of an anchor or intersecting straps which are applied to rods dropped into the smaller openings of the blocks, said anchor connecting the parallel as well as the individual blocks of the same. The connections are employed when partition-walls at right angles are to be connected, as shown in Fig. 10, the locking or anchoring straps E being either straight or of diagonally-intersecting S shape, as shown in Figs. 11, 12, and 13.

My improved fireproof partition-blocks have the advantages that they combine lightness with strength, can be made ready for use at the factory and shipped to the place of use, can be quickly erected and connected with each other by the anchoring connections described, and that they impart to the cement body increased resistance to the pressure by means of the metallic skeleton frames embedded in the side walls of the blocks.

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

1. A block for fireproof partition-walls, consisting of a cement body provided with vertical channels of suitable cross-section and transverse openings in the connecting por-

tions between said vertical openings, metallic reinforcing skeleton frames in the side portions of said blocks, and transverse corner-pins connecting said frames, substantially as set forth.

2. A block for fireproof partition-walls, consisting of a cement body, provided with large openings and with small openings intermediate the same and adjacent the sides of the block, the connecting portions of the block between said large openings being provided with transverse openings, reinforcing metallic skeleton frames, embedded in the sides of said block, and pins connecting said frames at their corners, substantially as set forth.

3. The combination, with individual partition-blocks provided with larger vertical openings and intermediate smaller vertical openings, of reinforcing metallic skeleton frames in the side walls of the blocks, and connections at the abutting ends of the blocks, said connections being formed of straps applied to metallic rods placed in the smaller openings of the blocks, substantially as set forth.

4. The combination of adjacent partition-walls formed of individual blocks provided with larger vertical and intermediate smaller openings, said blocks being reinforced by metallic skeleton frames embedded in the side portions, and anchoring connections extending from one to the adjacent wall, said connections being formed of straps applied to rods placed into the smaller openings at the adjacent ends of the blocks of the partition-walls, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

HERMANN MARING.

Witnesses:

HENRY J. SUHRBIER,  
C. BRADWAY.