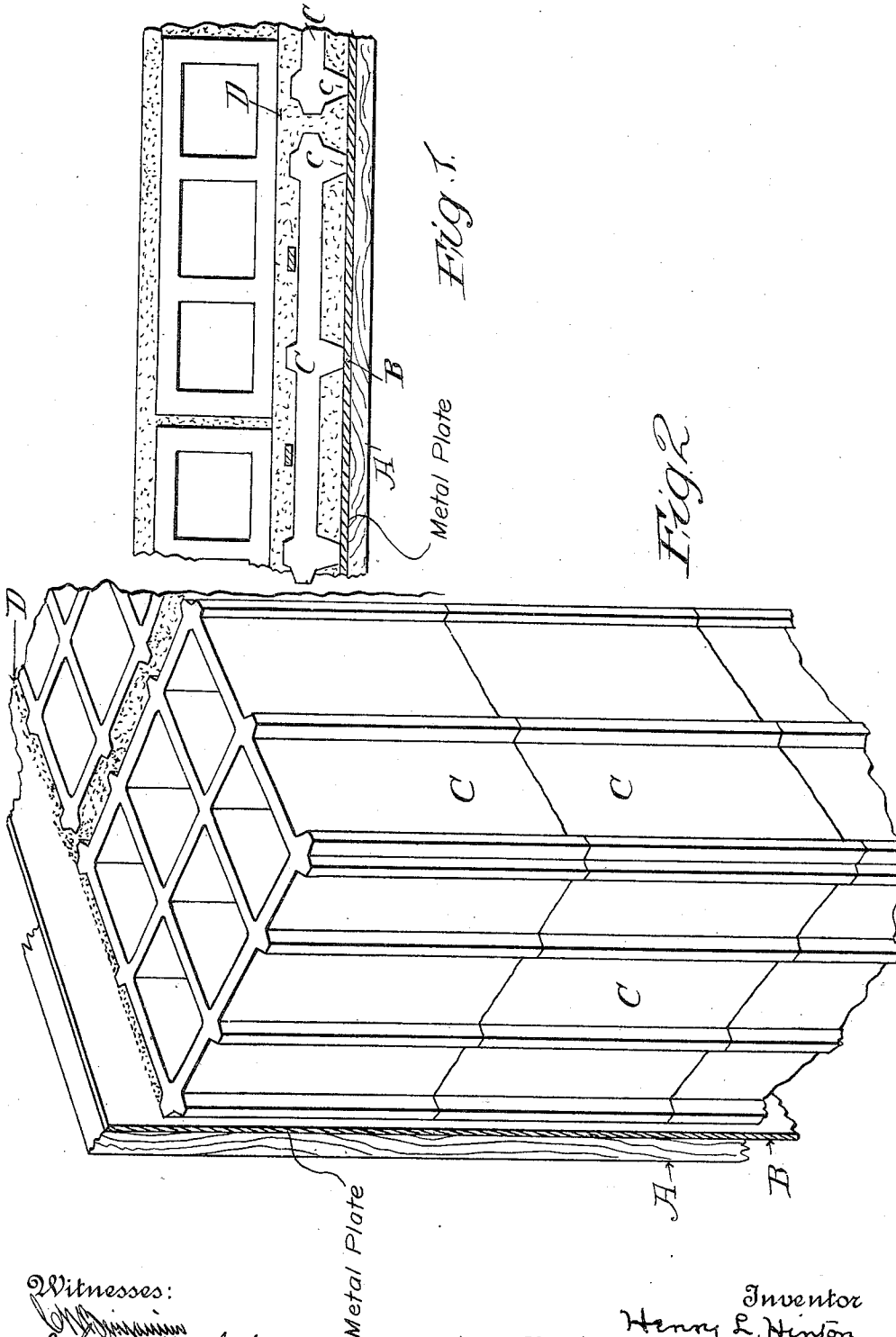


H. L. HINTON.
ART OF FIREPROOF BUILDING CONSTRUCTION.
APPLICATION FILED AUG. 10, 1908.

971,750.

Patented Oct. 4, 1910.



Witnesses:

John H. Mulchahy

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UNITED STATES PATENT OFFICE.

HENRY L. HINTON, OF NEW YORK, N. Y.

ART OF FIREPROOF BUILDING CONSTRUCTION.

971,750.

Specification of Letters Patent.

Patented Oct. 4, 1910.

Application filed August 10, 1908. Serial No. 447,698.

To all whom it may concern:

Be it known that I, HENRY L. HINTON, a citizen of the United States, residing in the city of New York, in the county and State of New York, have invented certain new and useful Improvements in the Art of Fireproof Building Construction, of which the following is a specification.

Heretofore sheet metal, usually iron, has been used as covering or face for walls and ceilings, being secured to the completed wall or ceiling by nails or similar means. Such sheet metal coverings, while supplying a desirable wall or ceiling surface, are expensive by reason of the method of application, and are not an element of strength, but an additional weight for the structure to which they are applied to carry.

The object of my improvements is, while retaining the desirable features of such a sheet metal surface, to reduce the cost of applying it, and at the same time utilize it as an element of strength in the completed structure.

To this end I take advantage of the fact that cement, such as is used in fire proof floor construction, forms a firm and durable bond with sheet metal, such as sheet iron.

In constructing a wall or ceiling in accordance with my invention, I support, in position to form the surface of the wall or ceiling to be constructed, the metal plates which are to form such surface, and then form back of such plates a course of cement or a course so constructed as to bring in contact with the back of the plates sufficient cement to form a supporting bond therewith. The construction of the remainder of the wall or ceiling is then completed in any usual or desired manner. In this way, when the wall or ceiling is completed and the centering or other supports are removed, the fire proof metal surface remains bonded to the wall or ceiling and forming a part thereof, and may then be painted or treated in any desired or usual manner for ornamental effect.

The metal plates thus form an integral part of the wall or ceiling, and add to the strength thereof, instead of adding so much dead weight. In the case of a wall, they act as stays, taking the place of the ordinary stay rods, and perform the function of tension members in fire proof floor construction,

taking the place of the light rods, wire netting or other materials used for this purpose.

The invention will be best understood by reference to the accompanying drawings, Figure 1 of which is a sectional view of a section of a fire proof floor, showing my method of applying the sheet metal plates thereto, and Fig. 2 illustrates the application of the metal plates as the interior face of a wall.

In the application of the invention to ceiling construction, a centering, A, is first erected in the usual manner. Upon this are laid the metal sheets, B, the edges of which may, if desired, be interlocked and neatly finished by being hammered together, and if desired, soldered. Upon the metal sheets is then spread a cement course, which, as shown in the drawings, is made by placing upon the metal sheets the ribbed tile plates, C, upon and between which is then poured thin cement or grout, D, which flows into and fills the spaces formed underneath the tile plates, C, by the ribs or projections *c*. In this form of construction a sufficient quantity of grout should be used to cover the plates, C, and form a bond with whatever materials are used to complete the floor construction above the cement course. After the cement has received its initial set, the floor construction is completed in any usual or desired manner.

In wall construction as illustrated in Fig. 2, the metal plates, B, are set in position to form the interior face of the wall, being held in place between the temporary wooden supports, A, and the ribbed tile wall plates or blocks, C, between which and the plates, B, is then poured grout, D, to form the bonding cement course. Additional metal plates and tile plates and blocks are placed one upon another as the wall is built up, and the remainder of the body of the wall is built up in any usual or desired manner.

It will be understood that the use of the tile plates or blocks, C, is not essential to my present invention; although I find them convenient and desirable especially in applying my invention to wall building, the essential feature of my invention in this respect being that, after the metal plates are temporarily secured in the position they are to occupy as the surface of the wall or ceil-

ing, a cement course shall be formed in contact therewith which shall bond both to the metal plates and to the remainder of the wall or ceiling construction.

5 After the wall or ceiling construction is completed and the temporary supports or centering are removed, the metal plates remain firmly secured in place by the bond with the cement, and may then be painted or
10 otherwise treated to give an ornamental surface.

In addition to providing a fire proof surface of a kind especially desirable in shops, factories and similar structures, the metal
15 plates applied in this manner serve to strengthen the structure to which they are applied, performing the function of stays in a wall and of tension members in a ceiling, in the same manner and to the same
20 extent as they would if embedded in the ceiling,

the advantage of which will be readily apparent to those skilled in the art.

What I claim as new and desire to secure by Letters Patent is:

In fireproof building construction the combination of thin metal plates, ribbed
25 blocks back of and in contact with said plates, and a cement course in the spaces between the ribs and in contact with said plates whereby the plates are bonded to and supported
30 entirely by the cement and present an interior metallic facing, substantially as set forth.

In testimony whereof, I have hereunto subscribed my name, this 7th day of August, 35
A. D., 1908.

HENRY L. HINTON.

Witnesses:

CLARKSON A. COLLINS,
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