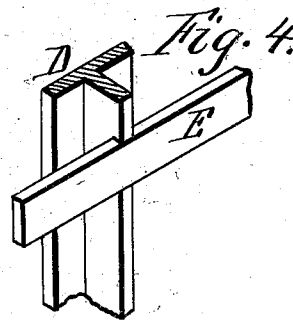
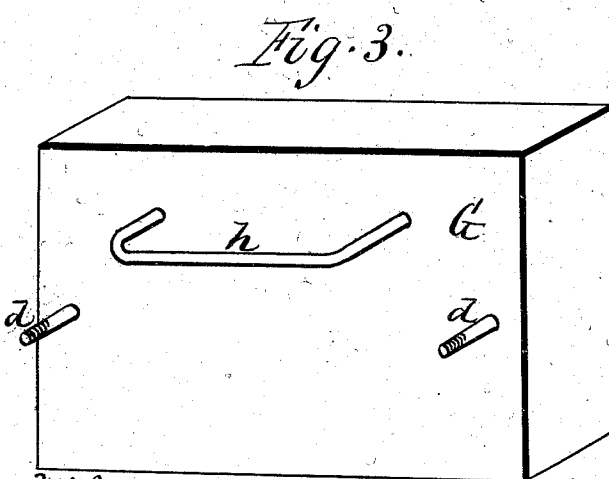
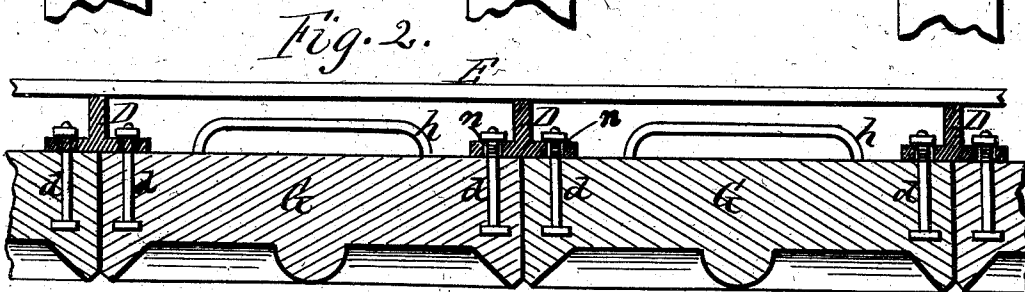
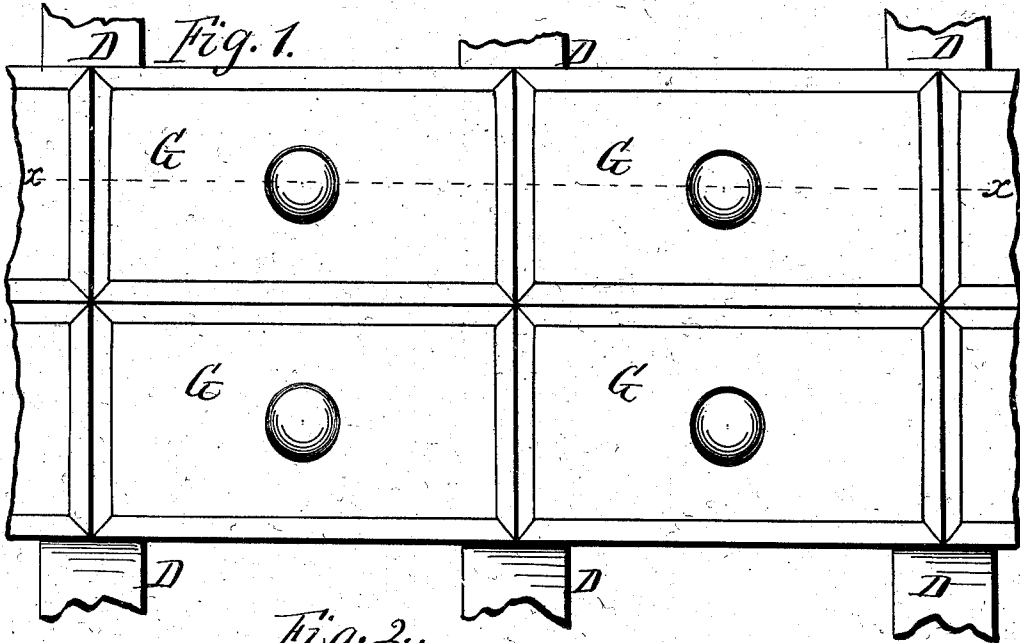


(No Model.)

J. McL. THOMPSON & J. C. BALL.
BUILDING.

No. 498,891.

Patented June 6, 1893.



Witnesses.
C. R. Osgood.
C. F. Crammell

Inventors.
John McL. Thompson,
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UNITED STATES PATENT OFFICE.

JOHN McL. THOMPSON AND JAMES C. BALL, OF ROCHESTER, NEW YORK.

BUILDING.

SPECIFICATION forming part of Letters Patent No. 498,891, dated June 6, 1893.

Application filed January 22, 1891. Serial No. 378,722. (No model.)

To all whom it may concern:

Be it known that we, JOHN McL. THOMPSON and JAMES C. BALL, of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Buildings; and we do hereby declare that the following is a specification of the same, referring to the drawings accompanying the application.

Our improvement relates to buildings composed of a frame work of iron, and in which T-shaped studding is used; and it also relates to that class in which composite blocks compose the outer covering, being laid up in sections and bolted to the T bars. The invention consists in the construction and arrangement of parts hereinafter described and claimed.

In the drawings—Figure 1 is an elevation of a portion of one side of the building showing some of the blocks in place. Fig. 2 is a horizontal, cross section in line *x x* of Fig. 1. Fig. 3 is a perspective view of one of the blocks. Fig. 4 is a perspective view of a portion of one of the studs and the bracing strip that is notched therein, looking on the back side.

The studs *D D* are composed of bars of T iron set up endwise, the flat side being placed outward to receive the composite blocks *G G*. These blocks are made of cement or any other suitable material, and of rectangular or square form, as shown. When fitted to place on the studs their abutting ends lap half way on the studs and meet in the center.

In the act of molding the blocks, bolts *d d*, with outer screw ends, are fitted in the mold and cast therein, said bolts serving as the means to attach the blocks to the studs. To accomplish this the flat faces of the T studs are provided with holes *n n*, through which the bolts pass, and nuts are screwed on the ends of the bolts on the inside. The blocks are also cast with loop-shaped handles *h h* projecting on the back side, by which means the blocks are readily handled.

E E are braces, consisting of flat bars notched into the flanges at the back of the studs, as shown in Fig. 4. These braces serve to hold the studs in firm position, so that they will not warp or twist, and also serve as the

floor supports. It is essential to hold the studs perfectly square, otherwise the building blocks will not fit accurately or make good joints, and the face of the building will present an irregular appearance. The braces hold them perfectly firm and prevent any such action. Furthermore the braces are essential to prevent spreading of the studs, which would disarrange the blocks, open the joints, and break the bolts from their hold in the blocks.

We are aware that the use of composite blocks is common; but, so far as we are aware, they have been attached to the flat sides of wooden or brick walls, or to wooden studs, or to simple iron bars. The design of this invention is to use T iron, which gives greater strength and stability, and to this end the fastenings of the blocks are of peculiar form, consisting of the screw bolts *d d* sunken in the blocks, and the holes prepared for them in the flat faces of the T irons. By this means each end of each block is clamped fast in place against a flat surface, and the ends make a perfect joint. The braces are also essential to hold the T studs square and prevent springing as before described.

Having described our invention, we do not claim, broadly, composite blocks; but

What we claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the T-shaped studs placed with their flat faces outward, and with the braces connecting the backs of said studs, of the composite blocks provided with projecting screw bolts entering holes in the flat faces of the studs and secured by nuts, as herein shown and described.

2. The composite block provided on its back side with screw bolts and a loop-shaped handle molded in the block, as herein shown and described.

In witness whereof we have hereunto signed our names in the presence of two subscribing witnesses.

JOHN McL. THOMPSON.
J. C. BALL.

Witnesses:

R. F. OSGOOD,
CHAS. A. WIDENER.