

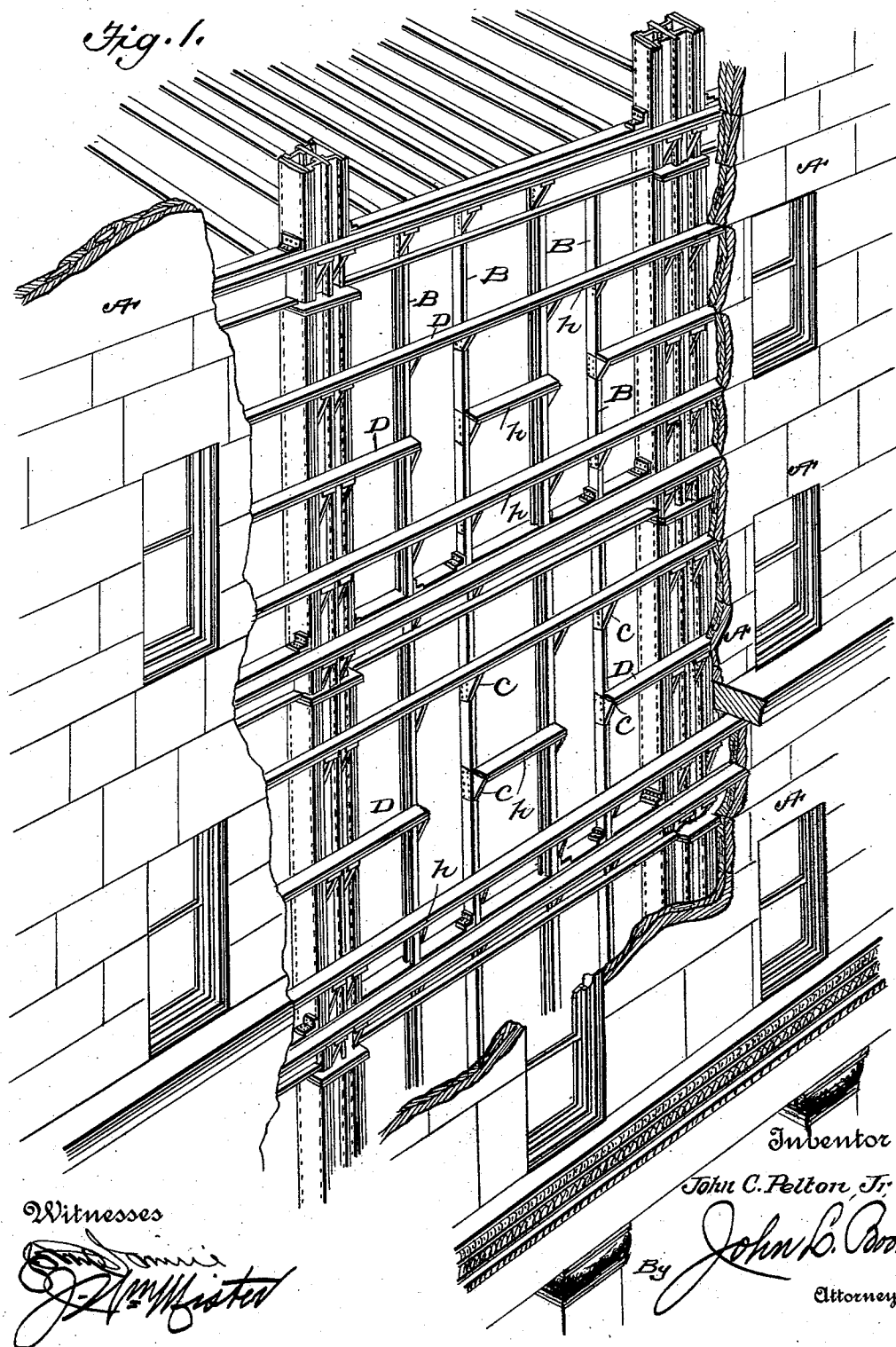
(No Model.)

2 Sheets—Sheet 1.

J. C. PELTON, Jr.
CONSTRUCTION OF BUILDINGS.

No. 542,203.

Patented July 2, 1895.



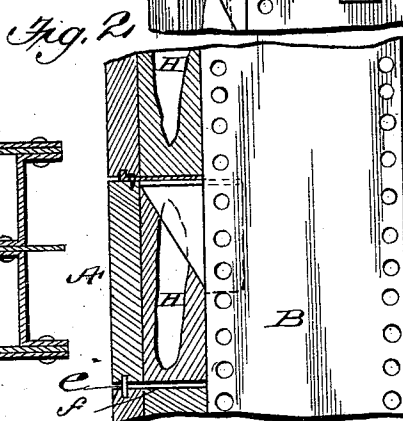
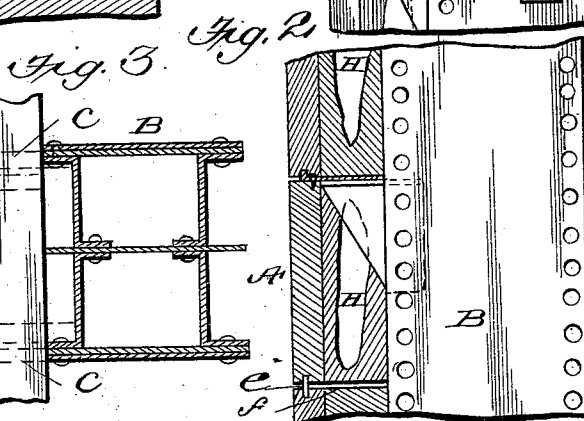
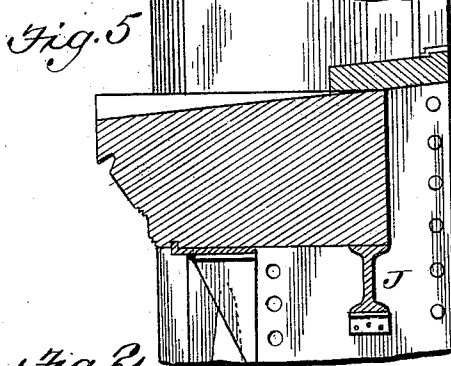
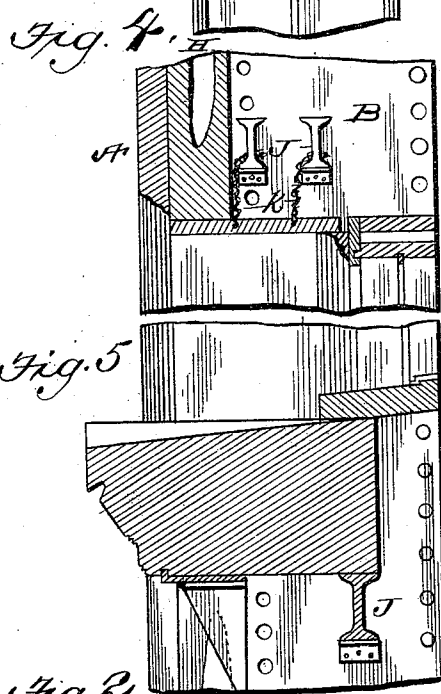
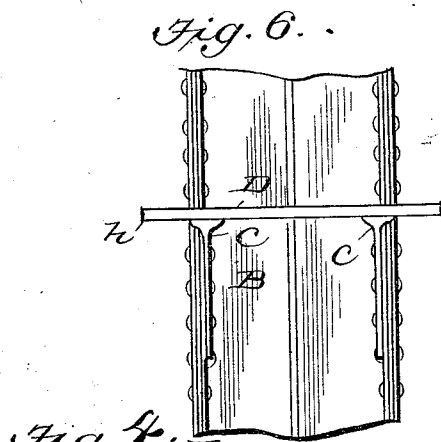
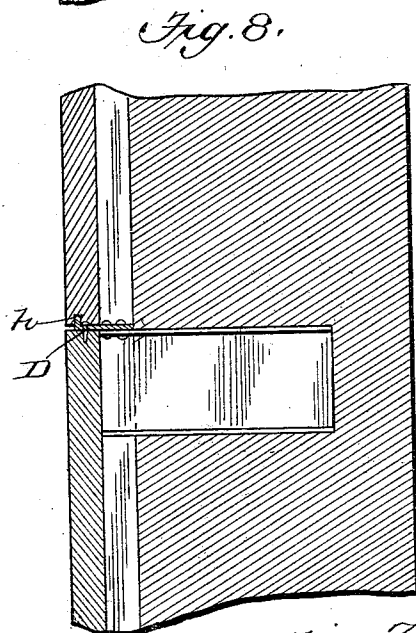
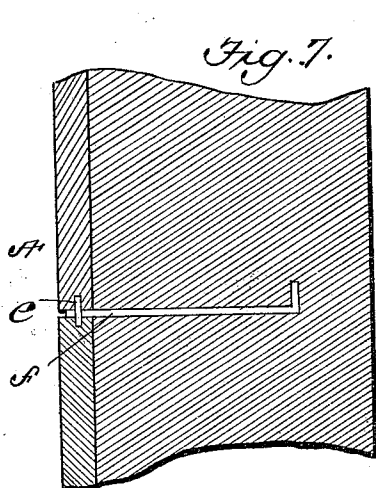
(No Model.)

2 Sheets—Sheet 2.

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CONSTRUCTION OF BUILDINGS.

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Witnesses
[Signature]
[Signature]

Inventor

John C. Pelton, Jr.

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Attorney

UNITED STATES PATENT OFFICE.

JOHN C. PELTON, JR., OF SAN FRANCISCO, CALIFORNIA.

CONSTRUCTION OF BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 542,203, dated July 2, 1895.

Application filed November 14, 1892. Serial No. 451,994. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. PELTON, JR., a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented certain new and useful Improvements in the Construction of Buildings; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

My invention relates to that modern construction of buildings in which a steel or iron frame is inclosed in a brick or other wall or casing, so as to form a composite structure having great strength, by reason of which it can be carried up to great heights. In this class of buildings the element of strength is contained in the steel or iron frame, while the outer wall or casing merely furnishes an inclosure and provides facilities for an architectural design and ornamentation.

The object of my invention is to provide an inclosure for such buildings that will materially reduce the thickness of the walls, and at the same time be equally as serviceable and substantial as walls of greater thickness, while the expense of construction will be measurably reduced.

It consists in attaching the walls directly to the steel or iron frame by means of peculiar connecting and fastening devices, so that the steel or iron frame will carry the wall or inclosure, and thus make the wall and frame an integral part of the structure. To do this I secure upon, attach to, or connect with the posts, beams, and girders of the metallic framework legs, brackets, or shelves at suitable and proper distances apart to receive, support, and secure in place the plates, sheets, blocks, or other material used in the wall construction, so that the sheets, plates, or blocks will be attached to and supported by the framework independently, either in separate series or in several layers or courses, thus forming an integral structure, all as hereinafter more fully described.

Referring to the accompanying drawings, Figure 1 is a perspective view of a composite structure with wall broken away in the middle of the figure, so as to show the framework with its projecting brackets and shelves.

Fig. 2 shows a section of an upright post with the bracket, shelf, and outer wall with hollow-brick filling between the frame and wall. 55
Fig. 3 shows a cross-section of an upright beam with plan of shelf and the brackets in dotted lines. Fig. 4 shows the manner of suspending a soffit or overhanging arch. Fig. 5 shows the manner of supporting a capstone 60 over an opening in the wall. Fig. 6 is a front view of a beam and shelf-edge. Fig. 7 shows the shelves anchored in a brick wall and supporting a facing of marble plate or stone; and Fig. 8 shows a brick wall with bracing- 65 bracket and a shelf fastened on the bracket to support the facing, the space between being necessary to permit the shelf being bolted to the bracket.

The steel or iron framework of the building is constructed in any of the well-known and customary styles, so as to provide a skeleton building bolted and riveted together in every part, and it may be constructed of any height. To inclose this frame and form a wall or inclosure for this skeleton structure, I employ any suitable material—such as marble, stone, terra-cotta, or even sheet or plate metal—and I secure the sheets, blocks, or pieces (constituting the wall inclosure) to the 80 metallic frame-work by means of bolts, shelves, brackets, or other fastening device.

For the purpose of this specification I will suppose that the building is to be inclosed with marble, and that each of the sheets or plates A represents a sheet of marble. Each of these sheets I prepare of the desired thickness, and I then secure them around the framework in courses, as shown at Fig. 1. 85

In the construction of the steel or iron frame-work I secure to the uprights B projecting brackets or supports C, and upon these brackets, after the framework is in place, I secure shelves D, as shown at the middle part of Fig. 1. These brackets and shelves are placed at suitable intervals apart, according to the nature of the wall material, so as to either support single courses or several courses of plates, sheets, or blocks, (constituting the wall,) as desired, and they are 90 secured in such a manner that the weight of the wall-material that rests upon each shelf is transferred to and borne by the framework. 95 100

- In building the wall, after the shelves have been secured in place I rest a course upon the shelf, always using care to tie the sheets or blocks of wall material to the framework, so that they will be firmly fixed and held in place. Any ordinary tie or anchor will serve this purpose, but I shall usually use wire or bar-iron rod with dowel-pins engaging the blocks, as represented at Fig. 2, Sheet 2.
- 10 If a single course only of wall material is supported on each shelf, the upper edge of each block will be tied to the frame with wire anchors; but if two or more courses are supported on a shelf then the bar or tie-rod *f*, with dowel-pins *e*, (shown at Figs. 2 and 7,) will be used.
- The shelves *D* will usually be constructed with an upturned outer edge *h*, and the edge of the block, sheet, or stone that rests upon it will be grooved to receive the upturned edge, thus securing the foot of the stone, block, or sheet and concealing the shelf and making an ordinary joint, that can be filled with mortar or cement.
- 25 In some cases the shelves will extend to a sufficient distance from the framework to admit of hollow bricks *H* or other filling substance or material being introduced between the wall-facing and the frame, as shown at Fig. 2, or the hollow bricks or other filling can be built into and between the framework, and thus give a greater thickness of wall without projecting the wall-surface beyond the framing.
- 35 Brick walls can be faced with sheets of marble or other stone or metal by employing the same system, only the shelves and ties will be anchored in the brick of the wall, as shown at Figs. 7 and 8.
- 40 Fig. 4 represents the means which I employ for suspending a soffit over a window or an

overhanging arch. It consists in securing I-beams *J* to the framework of the house, so that they will project over the place where the soffit is to be secured, and then suspending the soffit by wire hangers *k*.

By this construction tall structures—such as high buildings, chimneys, and the like—can be built up and walled in without greatly increasing the thickness of the wall beyond the framework, the framework and the wall being an integral part, the framework supporting the whole. The cost of construction will be greatly reduced, without in any degree affecting the substantial character and solidity of the structure.

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

1. A composite building having a steel or iron frame-work provided at intervals throughout with shelves projecting therefrom and having outer up-turned edges entering grooves in the bottom or lower surface of the facing stones or slabs, substantially as set forth.

2. A composite building having its steel or iron frame-work provided at intervals throughout with shelves projecting therefrom and having up-turned outer edges entering grooves in the lower surface of the facing stones or slabs, and tie-bars or anchors arranged between the meeting edges of said stones or slabs, and having dowel-pins in their outer ends, entering said meeting surfaces of the stones or slabs, substantially as set forth.

JOHN C. PELTON, JR.

Witnesses:

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