

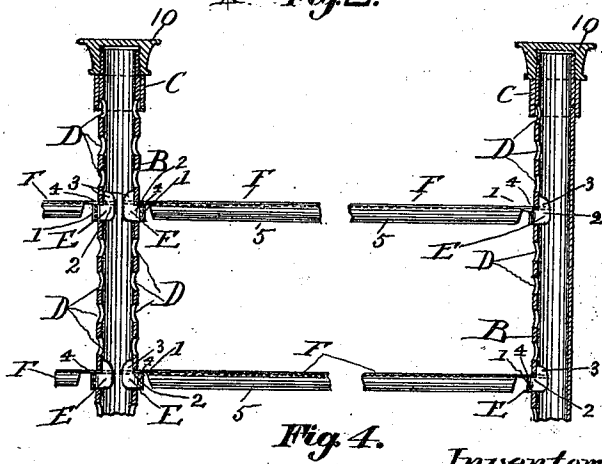
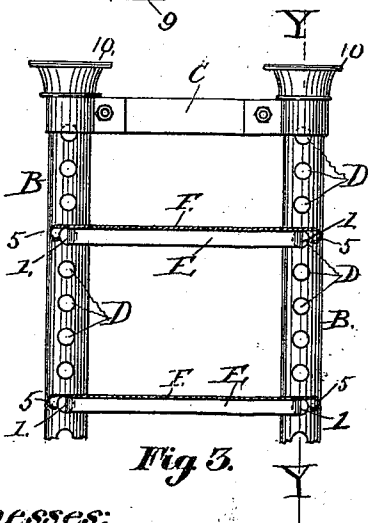
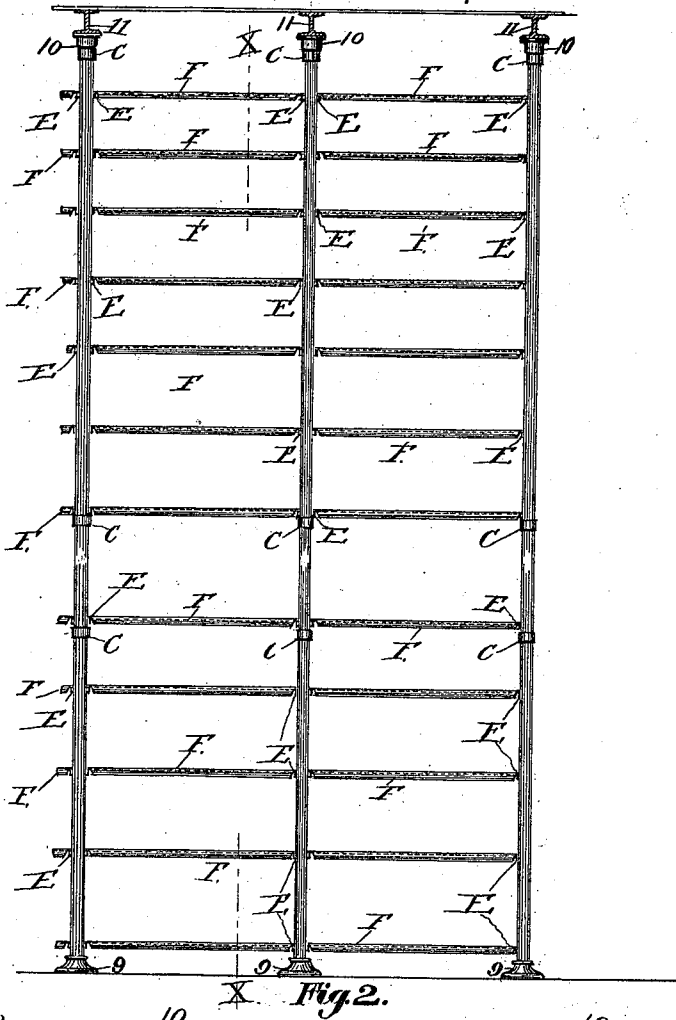
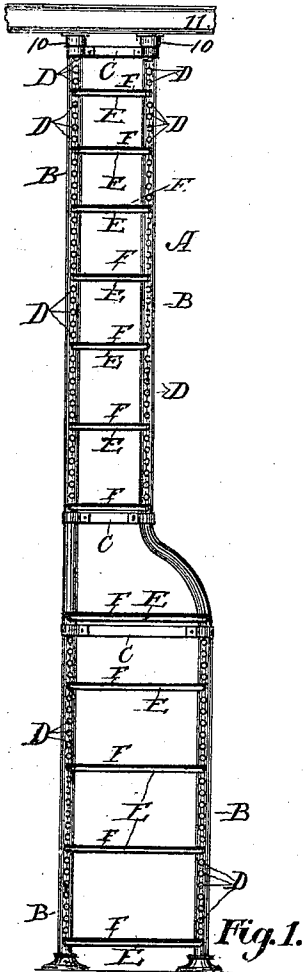
(No Model.)

2 Sheets—Sheet 1.

M. J. BRESLIN.
METALLIC SHELVING.

No. 510,562.

Patented Dec. 12, 1893.



Witnesses:

S. B. Bridges.

J. H. Blessing

Inventor:

Michael J. Brestin,

by William H. Low.

Attorney.

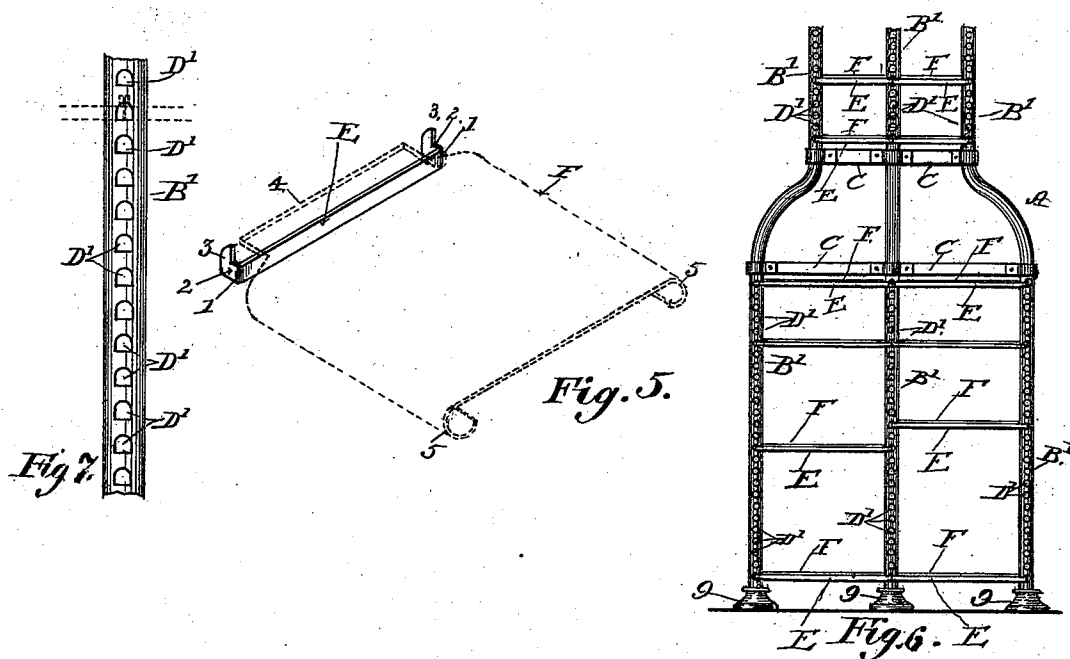
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Witnesses:

S. B. Brewer,
J. H. Blesing

Inventor:

Michael J. Breslin,
by William B. Low,
Attorney.

UNITED STATES PATENT OFFICE.

MICHEAL J. BRESLIN, OF ALBANY, NEW YORK.

METALLIC SHELVING.

SPECIFICATION forming part of Letters Patent No. 510,562, dated December 12, 1893.

Application filed June 2, 1893. Serial No. 476,414. (No model.)

To all whom it may concern:

Be it known that I, MICHEAL J. BRESLIN, of the city and county of Albany, in the State of New York, have invented new and useful
5 Improvements in Metallic Shelving, of which the following is a specification.

My invention relates to improvements in the construction of metallic shelving for libraries, and other purposes, wherein it is desirable to have the shelves adjustable in respect to their vertical spacing from each other so as to adapt them to receive books or other articles of different heights, said shelving being made entirely of metal so as to be practically fire-proof; said shelving consists of tubular uprights which are preferably connected together in pairs and are provided on diametrically opposite faces with a series of openings to receive supports for the shelves, said
15 supports being fitted to engage in either of said openings as occasion may require.

In the accompanying drawings, which are herein referred to and form part of this specification, Figure 1 is a transverse vertical section of a stack of my shelving at the line X X on Fig. 2. Fig. 2 is a front elevation of two stacks of my shelving. Fig. 3 is an enlarged transverse section of the upper part of a stack of my shelving. Fig. 4 is a longitudinal section of the same at the line Y Y. Fig. 5 is a perspective view of a removable cross-bar for adjusting the height of the shelves, one end of a shelf being indicated by dotted lines. Fig. 6 is an end elevation of the lower
25 portion of a double stack of my shelving; and Fig. 7 is a detached front elevation of the middle upright for the latter.

As shown in the drawings, A designates a stack of my improved shelves, consisting of
40 pairs of tubular uprights, B, which are connected together by means of cross-ties, C, so that a pair of said uprights will form an end for a stack of shelving; each of said uprights is provided—on diametrically opposite faces which are at right angles to the line of the
45 stack—with a series of spaced openings, D, preferably arranged at equidistant intervals, for the purpose of varying the vertical distance between the shelves. E designates a removable cross-bar for supporting the shelves;

said cross-bar is bent, as at 1, at each end of it to form an arm, 2, to enter either of the openings D, and each arm is provided with a hook, 3, at its inner end for the purpose of engaging in the tubular uprights for securing the
55 cross-bar in place.

F designates a metallic shelf adapted for use with the cross-bars E; said shelf is provided with a narrowed portion, 4, at its opposite ends, that will enter between the uprights B and prevent the shelf from being accidentally displaced from its position. The edges of said shelf are bent to form a rounded edge, as at 5, as indicated by the dotted lines on Fig. 5, said rounded edges giving strength to the shelf, and affording facilities for turning large volumes over the edge of a shelf without inflicting damage to the covers of the book.

Preferably each upright B is provided with a base, 9, and cap-piece, 10, and when so constructed several tiers of said shelving can be arranged—one above another—as may be required, beams, 11, being provided for holding a foot-way between each tier to afford means for attaining access to the upper tiers. The end sections being erected at the required places, and the shelves fixed thereon—in the manner hereinbefore described—the stacks of shelving are in condition for receiving the books or other articles.
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Two stacks of shelving can be placed back-to-back as shown in Fig. 6, so as to arrange the shelving clear from the walls of a room, and thereby the room can be more fully utilized than when the shelving is placed against the walls. When constructed in this manner, the ends of the stacks are formed of three uprights, B', the middle one of which preferably has the openings D' formed with a straight horizontal line, as illustrated in Fig. 7, so that two of the cross-bars E can be entered into said opening and extend in opposite directions as indicated by dotted lines in said figure.

What I claim as my invention, and desire to secure by Letters Patent, is—
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1. The combination, with tubular uprights, B, connected together by cross-ties, C, and provided with correspondingly spaced openings, D, of a removable cross-bar, E, having at each end a lateral arm, 2, fitted to enter
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said openings; each of said arms being provided with a hook, 3, formed integrally therewith and adapted to engage in the bore of the tubular uprights, as and for the purpose specified.

5 2. The combination, with tubular uprights, B, connected together by the cross-ties C and provided with correspondingly-spaced openings, D, a removable cross-bar, E, having at
10 each end a lateral arm, 2, fitted to enter the

openings D; each of said arms being provided with a hook, 3, adapted to engage in the bore of said tubular uprights, of a removable metallic shelf, F, having its longitudinal edges strengthened by rounded bends, as and for the purpose specified.

MICHEAL J. BRESLIN.

Witnesses:

RAYMOND BOOTH,
WM. H. LOW.