

(No Model.)

2 Sheets—Sheet 1.

F. A. WINSLOW.
ELEVATOR DOOR AND INCLOSURE.

No. 531,712.

Patented Jan. 1, 1895.

Fig. 3.

Fig. 1.

Fig. 2.

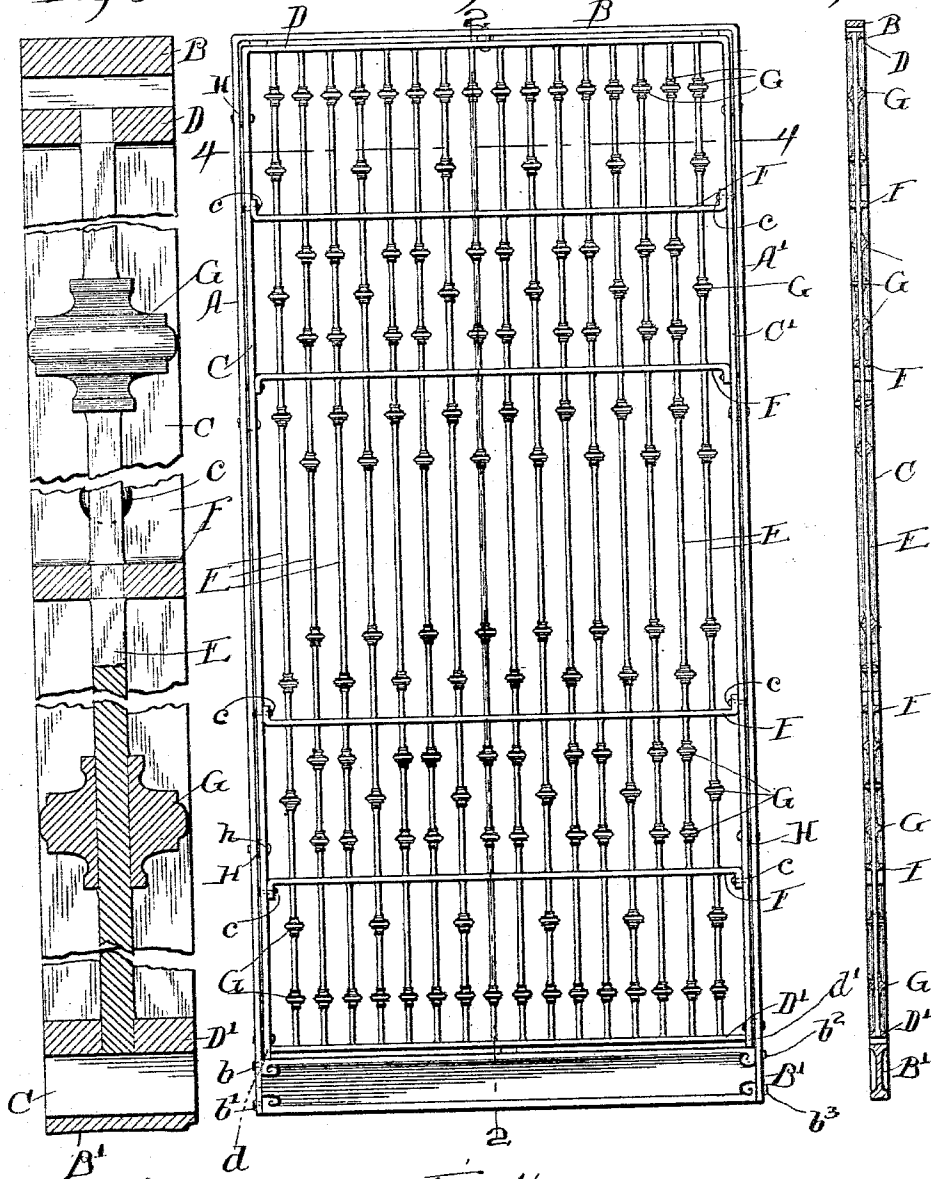


Fig. 4.



Witnesses: Charles C. Sherweg
A. H. Roberson

Inventor: Francis A. Winslow
by Miles Munster Citterer
Attys.

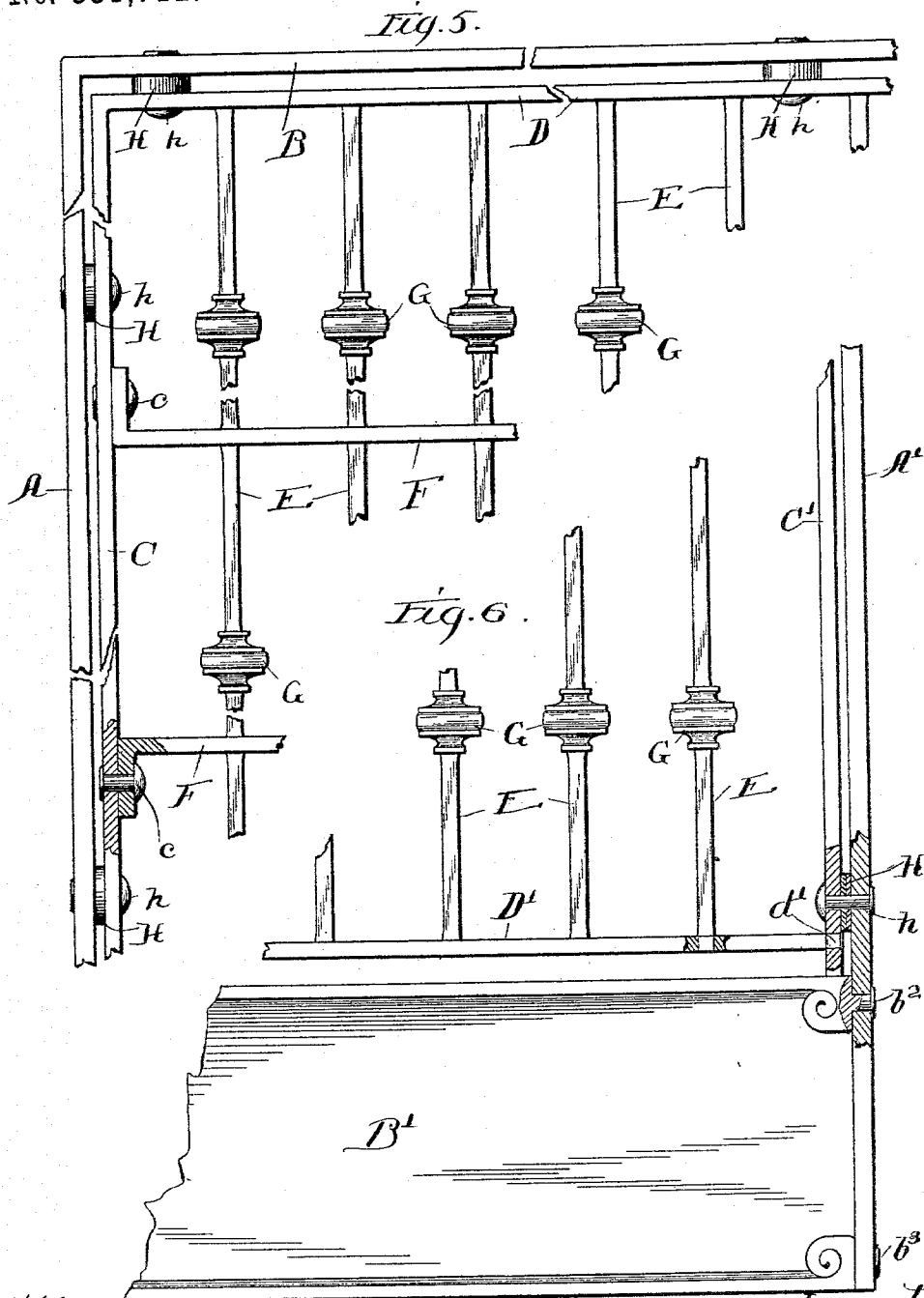
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Witnesses:
Charles Sherway
H. H. Hansen

Inventor:
Francis A. Winslow
by Miles M. Bitter
Attys.

UNITED STATES PATENT OFFICE.

FRANCIS A. WINSLOW, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE WINSLOW BROTHERS COMPANY, OF SAME PLACE.

ELEVATOR DOOR OR INCLOSURE.

SPECIFICATION forming part of Letters Patent No. 531,712, dated January 1, 1895.

Application filed April 13, 1894. Serial No. 507,393. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS A. WINSLOW, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in the Construction of Elevator Doors and Inclosures, of which the following is a specification.

My invention relates to certain improvements in the construction of elevator doors, inclosures, &c., the purpose of which is to construct an open lattice which shall be practically as stiff and strong as if it were made from a single piece of metal. The constant slamming and banging to which such inclosures and doors are necessarily subjected makes it of the utmost importance that they shall possess the greatest possible degree of stiffness or rigidity, and, at the same time, the minimum weight consistent therewith.

The invention is illustrated in the drawings by means of six figures, of which—

Figure 1 is a side elevation of a complete door. Fig. 2 is a section in line 2—2, of Fig. 1. Fig. 3 is a portion of the same section enlarged. Fig. 4 is a section in line 4—4, of Fig. 1. Fig. 5 is an elevation of one of the upper corners of the grille, the scale being larger than that of Fig. 1; and Fig. 6 is a similar view of one of the lower corners of the grille.

Said drawings show one of the preferred forms of my invention and in the following description I shall proceed to describe said form specifically, without, however, intending thereby to limit myself to the exact design, construction, or to any detail thereof, except as particularly pointed out in the claims at the end of the specification.

Referring to said drawings the completed grille consists of an outer rectangle made up of the upright members, A, A', and the top and bottom pieces, B and B', respectively, and an inner rectangle consisting of uprights, C, C', and top and bottom pieces, D, D', respectively. Within this frame are a series of uprights, E, and a series of cross bars, F, and it is to the fastening together of these different members and their relative arrangement that my invention pertains. In this preferred construction the uprights, A, A', and top

piece, B, are made of a single metal bar bent at right angles at the corners, and for the bottom piece, B', a metal bar having an I-shaped cross-section is used. This bottom piece is fastened to the uprights by means of tenons, b, b', b², b³, which extend through mortises in the uprights and are riveted down upon the outside.

The uprights and top piece of the inner rectangle are also preferably made of a single metal bar bent into the proper shape, and the bottom piece, D', which is here shown as a flat metal bar is secured to the uprights by means of tenons, d, d', mortised into the uprights and riveted upon the outside thereof. The inner and outer rectangular frames are spaced apart by blocks or struts, H, through which pass rivets, h, to fasten the outer and inner frames together. This makes up a trussed frame for the grille of great stiffness and rigidity, and when the same is still further braced by the ornamental lattice work within, it becomes next to impossible for the said work to sag or get out of shape.

The inner ornamental work here shown consists of uprights, E, cross-pieces, F, and ornaments, G. While the shape of these parts is to a certain extent immaterial, yet, I prefer that the cross-pieces shall be the wider and the same are here shown as flat metal bars secured to the uprights, C, C', of the inner frame by bolts, or rivets, c. The uprights are shown as square rods or bars, and said rods pass through holes in the cross bars of the proper shape, and of just sufficient size to permit of the slipping in of the rods in putting the door together. The ornaments G are likewise perforated to enable them to be slipped upon the rods. After the rods, E, cross-pieces, F, and ornaments, G, have been put together in the proper form I grip the uprights, E, firmly upon each side of the cross-pieces and of the ornaments, respectively, and by the application of great pressure upset the metal of the uprights sufficiently to enlarge the portion within the cross-bars so that such metal will be compelled to flow into the minute interstices or depressions in the metal of said cross bars and firmly unite the two portions as far as any independent motion of the one upon the other is concerned. If de-

sired, the compression may be continued so as to produce an imperceptible enlargement upon each side of the cross bars and ornaments, although I do not believe the same to be necessary. The uprights, E, are slipped into square holes in the top and bottom pieces, D, D', respectively, and secured to the same by like compression and enlargement.

While the several portions of my invention are preferably used in conjunction, yet certain parts thereof are capable of separate use in connection with other and different devices. Hence I claim such portions whether used all together, or separately, as will be seen in the following claims.

I claim as new and desire to secure by Letters Patent—

1. In a construction of the class described, the rectangular trussed frame consisting of the outer frame made up of the uprights, A, A', and top and bottom pieces, B, B', respectively, the inner frame made up of the uprights, C, C', and top and bottom pieces, D, D', respectively, the struts, H, and rivets passing through said struts and said frames and headed down upon the latter; substantially as described.

2. In a construction of the class described, the trussed frame made up of the outer frame having the uprights, A, A', and top piece, B, made by bending a metal bar into the proper

shape, and the bottom piece B', secured to said uprights by means of the tenons, b, b', b^2, b^3 , riveted in the uprights, the inner frame consisting of the bent bar C, D, C', and bottom piece, D', mortised therein and riveted thereto, the struts, H, and the rivets passing through said struts and the inner and outer frame and headed down upon the latter; substantially as described.

3. A grille consisting of a metal bar bent to form the uprights, A, A', and top piece, B, the bottom piece, B', secured to said uprights by means of the riveted tenons, b, b', b^2, b^3 , a metal bar bent to form the uprights, C, C', and top piece, D, the bottom piece, D', secured to the uprights, C, C', also by riveted tenons, the struts, H, interposed between said metal bars and riveted thereto, the perforated cross bars, F, secured to the uprights, C, C', and the uprights, E, fitted to and passing through the perforations in the cross-bars, F, and like perforations in the top piece, D, and bottom piece, D', and secured in said perforations by the metal of said uprights being expanded or enlarged adjacent to the cross bars; substantially as described.

FRANCIS A. WINSLOW.

Witnesses:

A. P. DAVIS,
W. E. CARR.