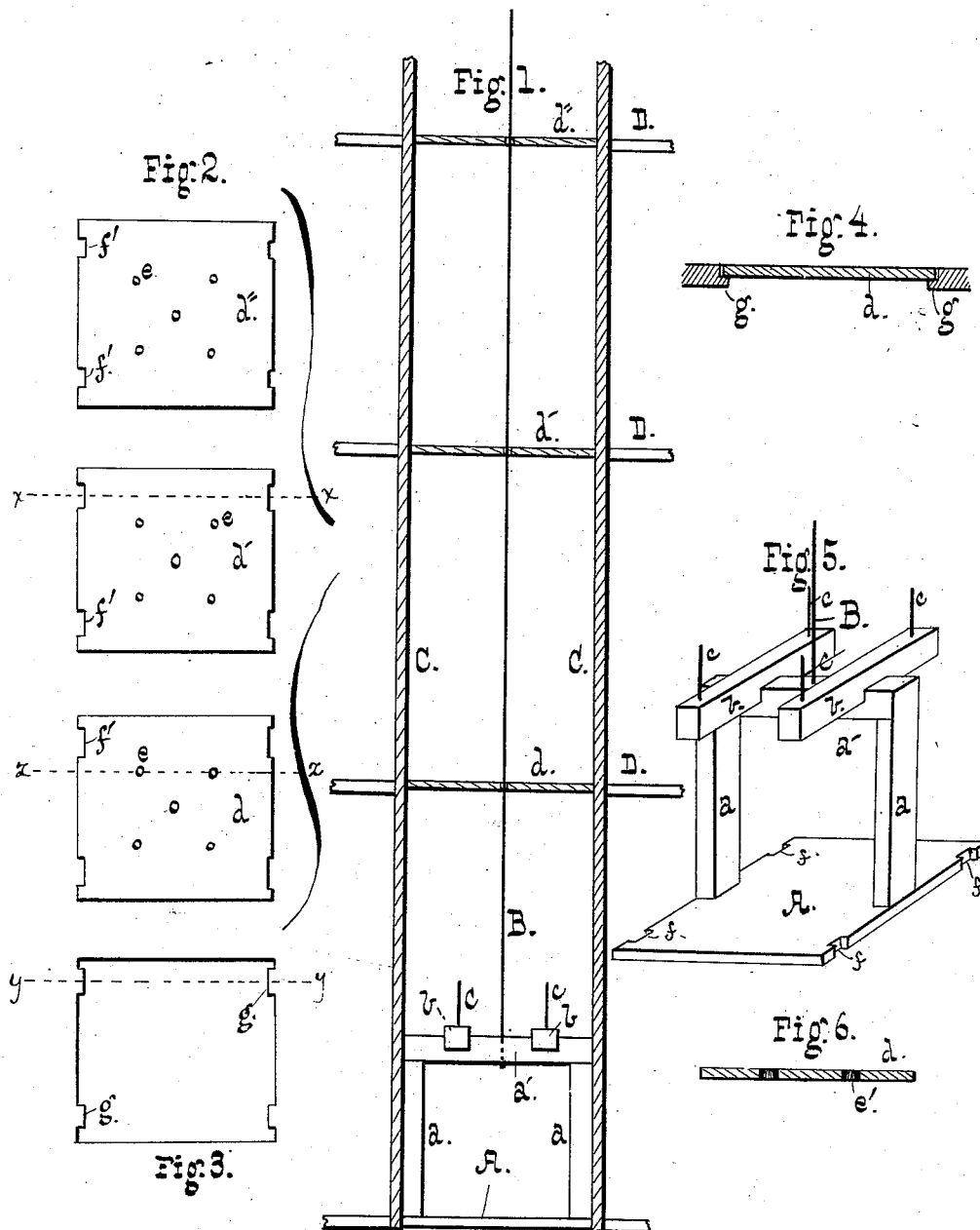


A. N. YERBY.
Elevator and Hatch.

No. 221,140.

Patented Oct. 28, 1879.



Witnesses,

W. A. Bertam
W. H. Barclay.

Inventor

ABNER N. YERBY

by

R. D. Williams.

Attorney.

UNITED STATES PATENT OFFICE.

ABNER N. YERBY, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN ELEVATORS AND HATCHES.

Specification forming part of Letters Patent No. **221,140**, dated October 28, 1879; application filed August 12, 1879.

To all whom it may concern:

Be it known that I, ABNER N. YERBY, of Baltimore city, State of Maryland, have invented certain new and useful Improvements in Elevators and Hatches; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical sectional view of the device. Fig. 2 illustrates plan views of the hatches. Fig. 3 is a similar view of a hatchway; Fig. 4, a sectional view on lines *xx*, Fig. 2, and *yy*, Fig. 3. Fig. 5 is a perspective view of the elevator; Fig. 6, a sectional view on line *zz*, Fig. 2.

My invention has reference, generically, to warehouse-elevators, and specifically to that class of the same in which the various hatches are successively lifted by the elevator in its ascent and replaced as the elevator descends; and it consists in certain features of construction, having for their object to insure a perfect registration of the hatches with the hatchways, and to insure perfect security of the hatches when in place, as hereinafter set forth.

In the accompanying drawings, A is the elevator, having posts *aa*, that slide in suitable guideways C C, and suspended from the cross-beam *a'* by means of a wire rope, B. Timbers *bb* are bolted to the cross-beam *a'*, as shown, and are provided near their extremities with strong pins *cc*, secured in a vertical position. D D are the upper floors of the building.

The hatchways are provided near each corner with strong lugs *gg*, (see Fig. 3,) upon which the hatches rest, the elevator being cut away at *ff*, so as to pass the lugs. These lugs *gg* are smaller in each hatchway than in the one next beneath it, and the hatches *dd'* are provided with slots *f'f'*, of such size that each hatch will readily admit of being lifted past all the upper lugs while it rests securely upon the lugs in its own hatchway.

The hatches are perforated centrally for the elevator-rope, and are also perforated at *ee* at points vertically over the rods *cc*.

Metallic thimbles *e'*, having tapering aper-

tures, as shown in Fig. 6, are let into the holes *e*, and are flush with the surface of the hatches, the orifices being made tapering, so as to insure the entrance of the rods *c*. The upper ends of the orifices are, however, of a size to fit closely on the rods *c*, whereby the hatches are prevented from being laterally displaced while on the elevator, and register perfectly with the hatchways when they are replaced, and the lifting of the hatches prevents the rods *c* from becoming bent, and straightens them should they by any possibility become so.

I am aware that heretofore hatches of this general class have been provided with conical knobs, which were designed to enter corresponding depressions in the bottom of the hatch above; but this feature is objectionable, as the knobs are an obstacle in placing heavy boxes and trucks on the hatches, and are greatly in the way in the ordinary use of the hatch as part of the floor of the apartment. Such construction I do not claim.

I also am aware that elevators in which the hatches are successively lifted by the ascending car are not new, and that in such the hatches have been held in true position by vertical pins upon the car, and also that the hatches were detained at their proper floors by lugs projecting from the edges of the hatchways. Such, therefore, I do not claim; but

What I do claim, and desire to secure by Letters Patent, is—

1. In combination with the elevator having rods *c*, the hatches provided with tapering thimbles *e* and slots *f'*, as described, and hatches having projecting lugs *g*, the parts being combined and operating substantially as set forth.

2. In combination with the elevator having timbers *bb* and rods *c*, the hatches *dd'*, having conical thimble *e'*, as and for the purpose described.

ABNER N. YERBY.

Witnesses:

R. D. WILLIAMS,
GEO. H. PISTEL.