(No Model.)

W. STEVENS.

ELEVATOR.

No. 261,880. Patented Aug. 1, 1882.

Fig. 1

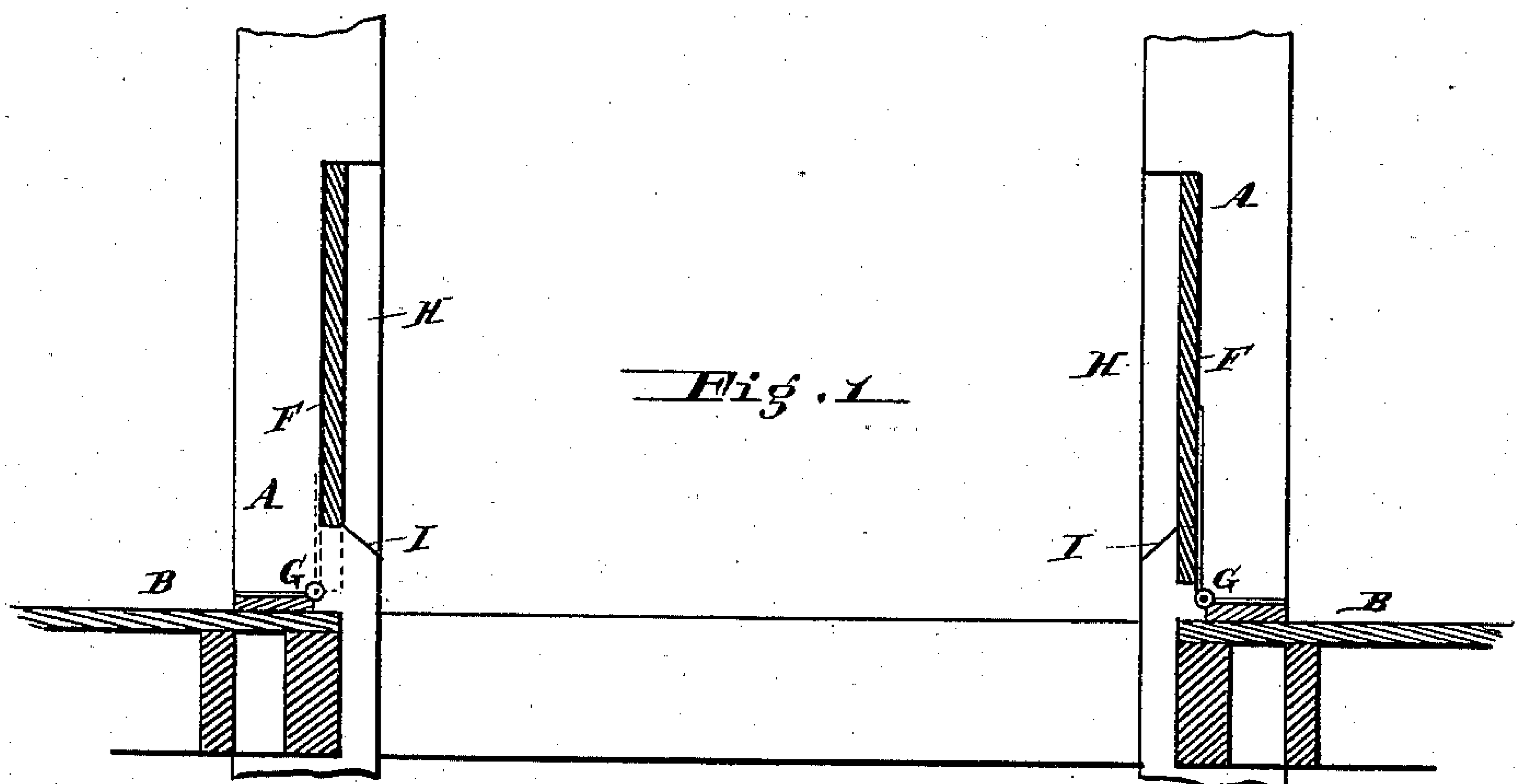


Fig. 2

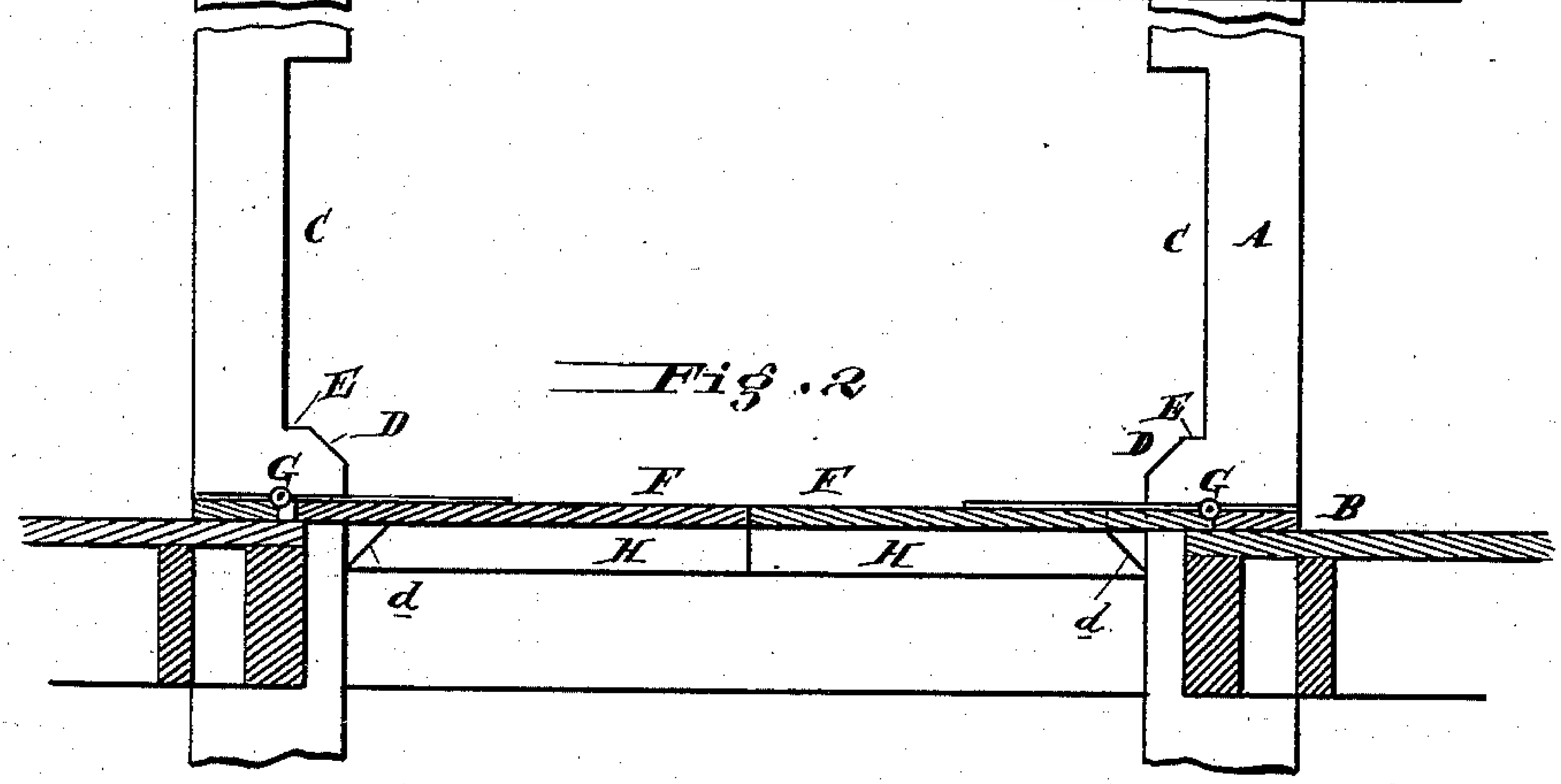


Fig. 3

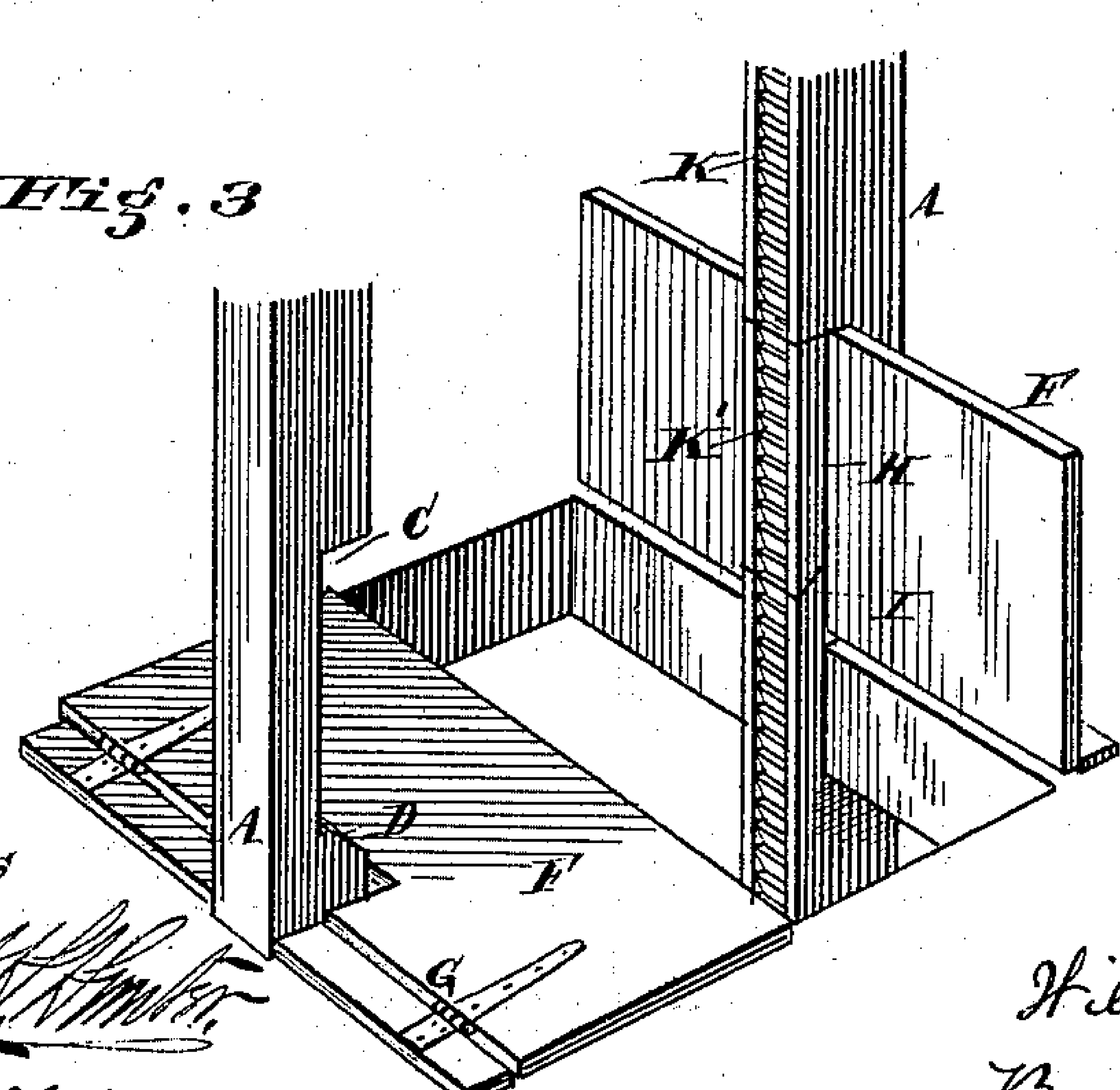
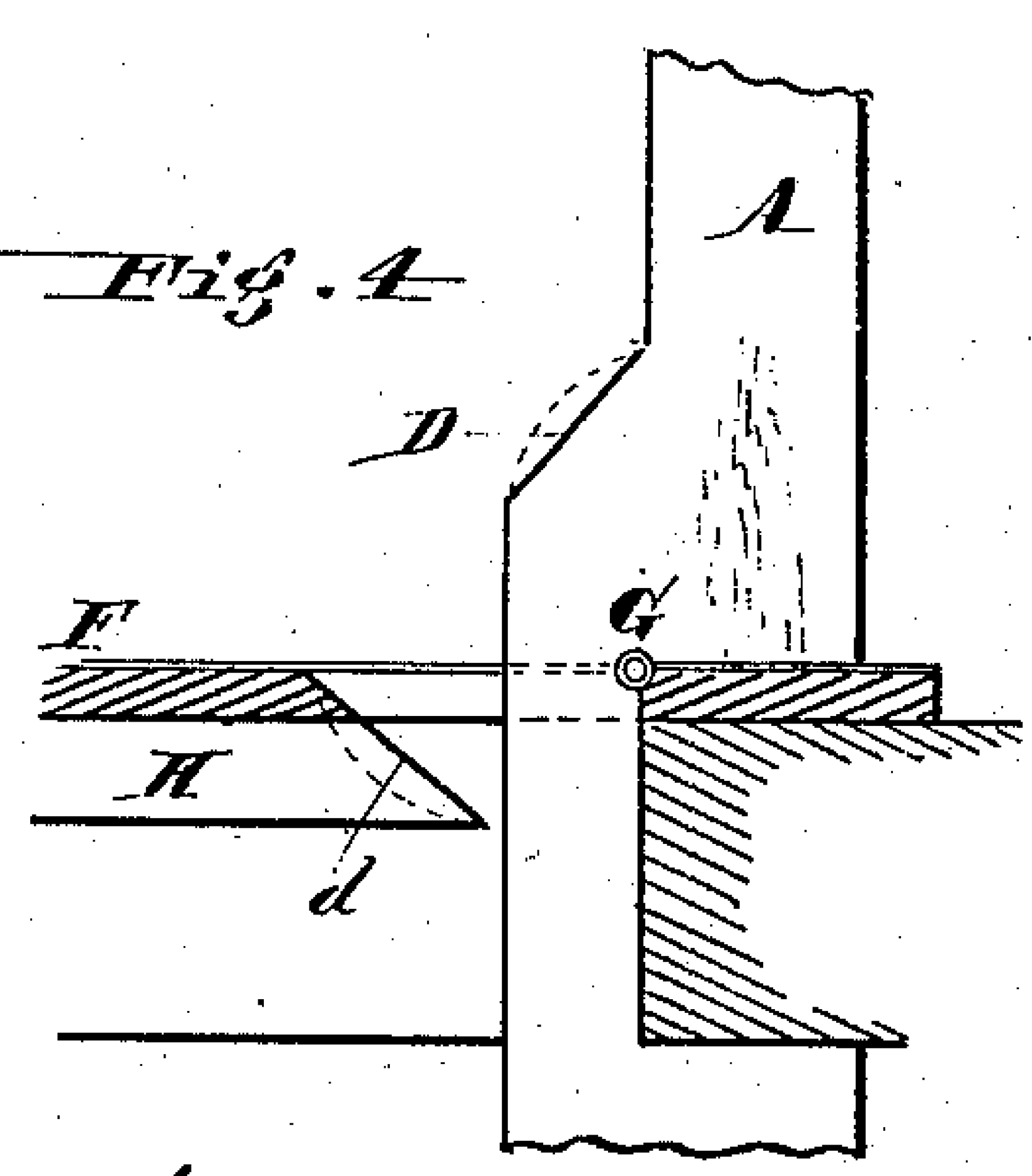


Fig. 4



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UNITED STATES PATENT OFFICE.

WILLIAM STEVENS, OF PHILADELPHIA, PENNSYLVANIA.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 261,880, dated August 1, 1882.

Application filed April 3, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM STEVENS, of the city and county of Philadelphia and State of Pennsylvania, have invented an Improvement in Elevators, of which the following is a specification.

My invention has reference to elevators, but more particularly to the hatchway-doors of same; and it consists in recessing the guide-posts on each side of the hatchway and immediately above the same and providing the said hatchway with hinged doors having upon their under side guide-strips, which, when the doors are turned up, fill the recesses in the posts and make the guide continuous all the way up, all of which is fully set out in the following specification, and shown in the accompanying drawings, which form part thereof.

Heretofore hatch-doors for elevators have been provided with guide-strips secured to their under sides, which strips fit into recesses in the posts when the doors are raised; but in all cases the strips on the doors were so constructed that they did not and could not fill up the entire recessed part on the posts or guides, and there was always a gap on each guide and at every hatch. These gaps always caused the elevator-cage to jar in passing and put all the parts under unnecessary strain, and injured the guides. By my improved construction the guides are continuous and smooth all the way and no gaps are left. Consequently the cage moves smoothly over or through each hatchway, making it more safe to carry heavy loads, preventing any undue strain being put upon the machine, and making the elevator more pleasant to ride upon.

In the drawings, Figure 1 is a sectional elevation of my improved hatchway open. Fig. 2 is a similar view closed. Fig. 3 is a perspective view of same partly open and partly closed; and Fig. 4 is a detailed view, showing a modification of the bottom of recess in the guide-posts.

A are the vertical guide-posts, and are provided with the usual racks, K. B are the floors. The hatchways are covered by doors F, hinged to the floors at G, and may be opened or closed automatically by the cage or by hand. The guide-posts A are recessed on each side of the hatchway, and beginning a short distance above the floor B, as shown at C, the lengths of said recesses being equal to the depth of the doors F. The tops of said recesses are horizontal; but the bottoms are either curved or oblique, as shown at D, and, if desired, these oblique bottoms may be cut square at top, as shown at E, and in which the door fits. The under parts of the doors F are provided with guide-pieces H, which, with the doors, fill the recesses C in the posts when side doors are raised to the vertical position to open the hatchway. The bottoms of these guide-strips H are made oblique or curved, as at *d*, to fit on the bottoms D of the recesses C in the posts A. The division-line I, made by the top and bottom of guide A and piece H, respectively, should be of such an angle that when the door swings upon its hinge the joint made by the piece H entering the recess C is simply a line, and the guiding-edge of the post A and piece H is continuous, as shown. This joint I may be curved, as shown in Fig. 4 in dotted lines, and will of necessity be some distance above the hinge G, for the reason that when the door is shut the piece H must not strike the post A. This is shown in Fig. 2. By making the bottom of the recess C oblique, no dust or dirt can collect and prevent the raising of the door. The pieces carry the racks K′, which, when the doors are open, are in line with racks K.

I am aware of the patent to Osgood, March 12, 1872, No. 124,614, and claim nothing therein shown or described, as in that patent the guide is not continuous when the door is raised, there being a large notch at the bottom of the doors.

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

1. In an elevator, vertical guiding-posts having recesses for the doors when opened, in combination with said doors having guiding-pieces upon their under sides, which, when the doors are raised, fit into the recesses in the posts and make the guide for the cage continuous.

2. In an elevator, a recessed guide-post, in

combination with a door provided with a guide-piece secured thereto, and which fits into said recess in the guide-post when the door is raised and makes the guiding-surface continuous throughout.

3. In an elevator, the vertical guide-posts A, provided with recesses C, having oblique or curved bottoms D, in combination with hinged doors F, provided with guide strips or pieces H, said pieces being adapted to fit into and close up the entire recesses in the posts vertically when the doors are opened.

In testimony of which invention I hereunto set my hand.

WILLIAM STEVENS.

Witnesses:
R. M. HUNTER,
R. S. CHILD, Jr.