

(No Model.)

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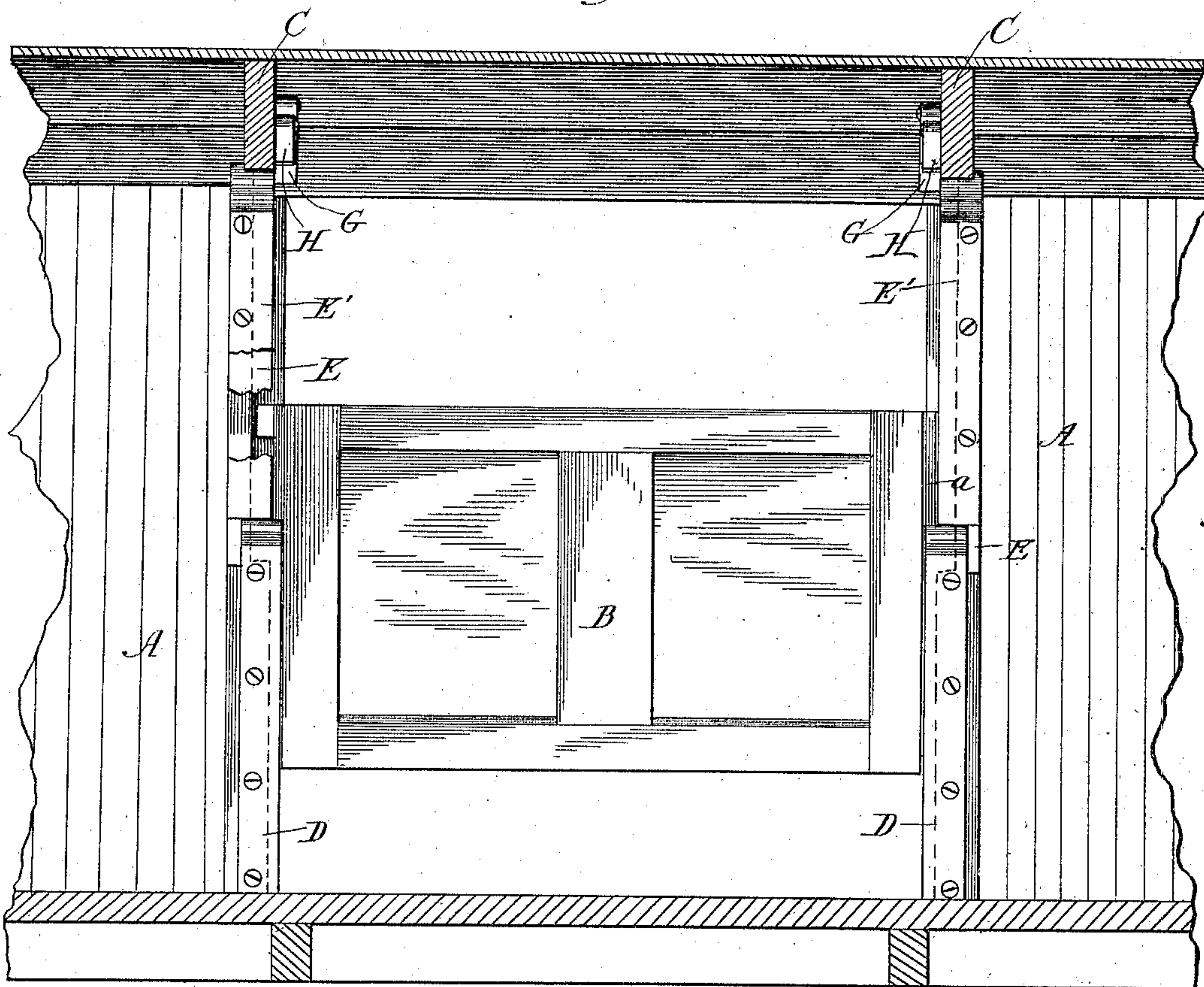
H. C. WILLIAMSON & F. PRIES.

CAR DOOR.

No. 335,169.

Patented Feb. 2, 1886.

*Fig. 1.*



*Witnesses:*

*Frank J. Blanchard*

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*Inventors:*

*Henry C. Williamson*

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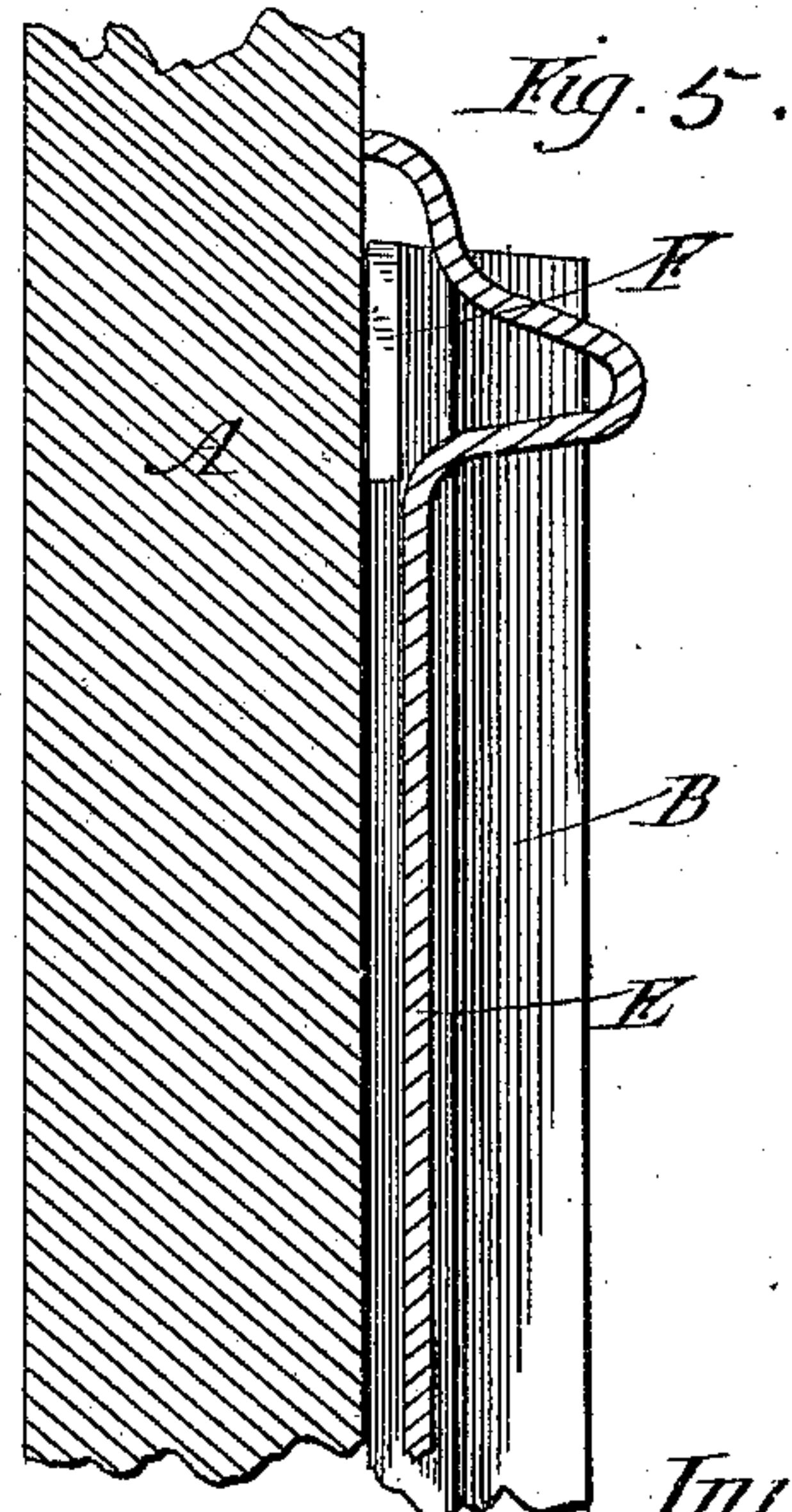
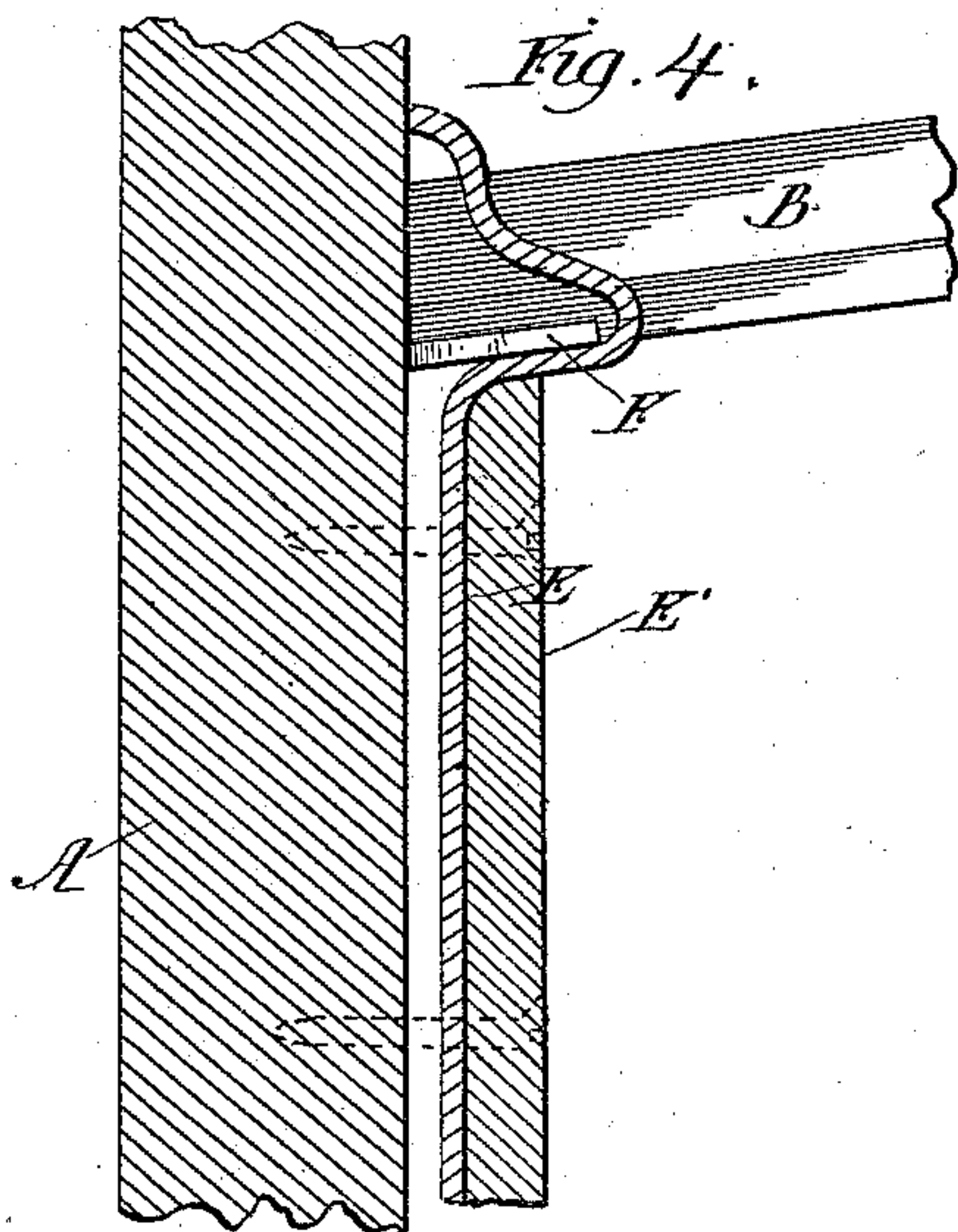
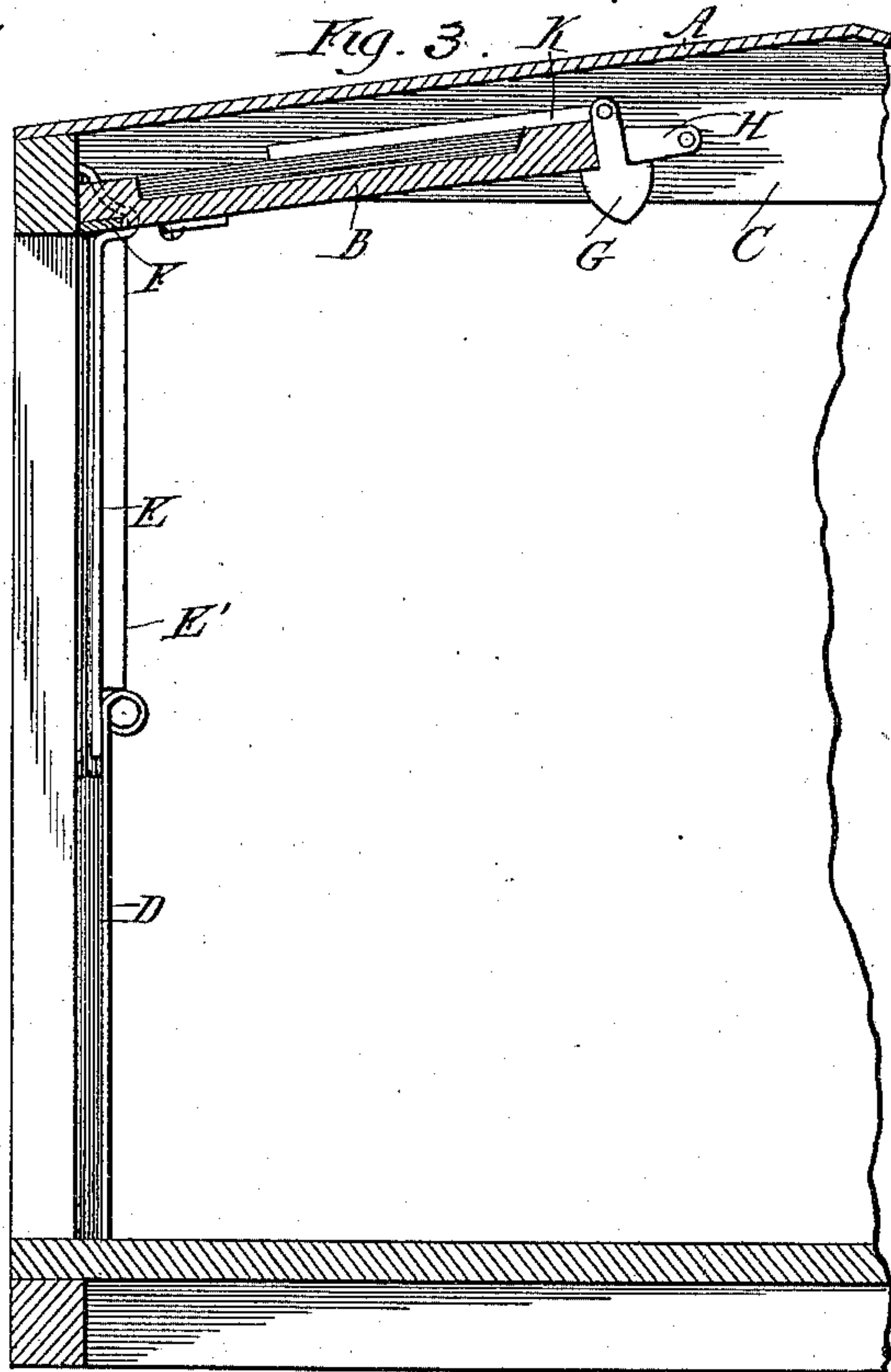
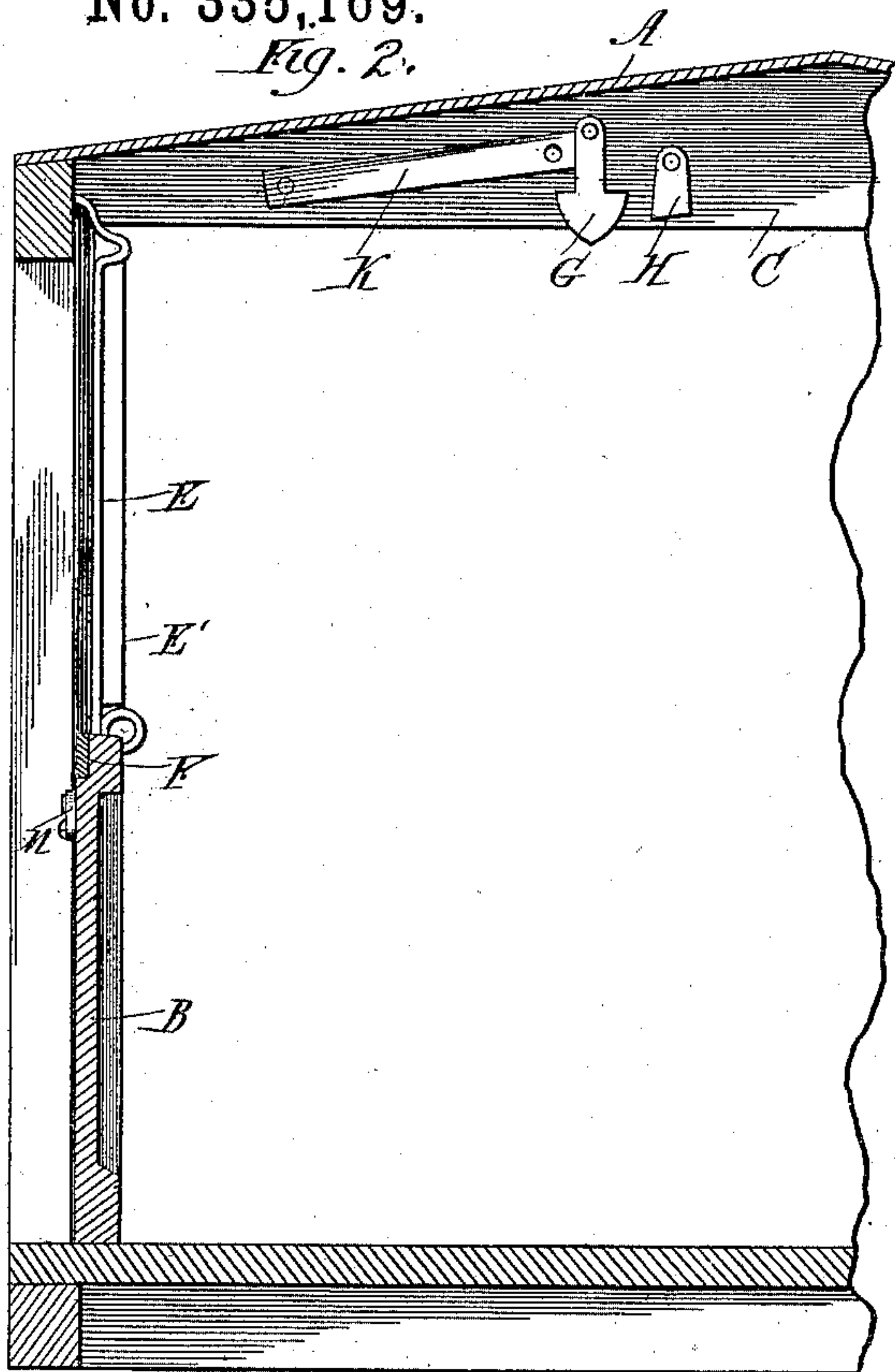
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2 Sheets—Sheet 2.

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Witnesses:  
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# UNITED STATES PATENT OFFICE.

HENRY C. WILLIAMSON AND FREDRICK PRIES, OF MICHIGAN CITY, IND.

## CAR-DOOR.

SPECIFICATION forming part of Letters Patent No. 335,169, dated February 2, 1886.

Application filed September 8, 1885. Serial No. 176,468. (No model.)

*To all whom it may concern:*

Be it known that we, HENRY C. WILLIAMSON and FREDRICK PRIES, citizens of the United States of America, residing at Michigan City, in the county of La Porte and State of Indiana, have invented certain new and useful Improvements in Car-Doors, of which the following is a specification, reference being had therein to the accompanying drawings.

Our invention relates to an improved door especially adapted to use upon freight-cars.

The object of the invention is to provide a door which may be conveniently handled, and which may be supported out of the way during loading and unloading, and to the accomplishment of the above it consists of the novel devices and combination of devices to be described.

Reference will be made to the accompanying drawings, in which Figure 1 is a sectional elevation; Figs. 2 and 3, cross-sections; Figs. 4 and 5, detail sections on an enlarged scale.

Like letters refer to like parts in each view.

A represents a car; B, a vertically-moving door, and C suitable cross-beams supporting the roof, the distance between such beams being equal to a little more than the width of door B.

The door is so constructed as to have formed upon each side edge a projection, *a*, which is adapted to enter and move in a guideway formed between the door-posts and suitable strips, D, secured thereto, said strips being about equal in height to the door, and being turned out and rounded at their upper ends. Strips D being of such a height and their lower ends resting upon the floor, the guideway formed by them will extend up to about midway the height of the car and serve as a guide to the door in its lower movements.

E represents strips, which are also secured to the door-posts to form guideways. These last-named strips and the guideways formed thereby extend from the points where strips D end to the top of the car, and are placed a little to one side of strips D, so that the ways formed by the two sets of strips are not in the same vertical line.

Secured to the outer face of the door, near its upper edge, is a cross-piece, F, protruding at each end a short distance beyond the side edges of the door and enters the guideways

formed by strips E. By the arrangement described it will be seen that during the entire vertical movement of door B there is a guideway formed for it in which it is certain to move, the entrance of projections *a* into the ways formed by the strips D being rendered certain by the outwardly-turned and rounded upper ends of such strips. At a point near their upper ends each strip E is bent outwardly and then inwardly with a curve, as shown in Figs. 5 and 6. The ends of cross-piece F, described as moving in guides formed by strips E, are flat, and when the door has been raised a sufficient height to bring them in line with the outward bend in the strips E, above referred to, they serve as pivots upon which the door turns from a vertical to a horizontal position, as shown in Figs. 4 and 5, the peculiar bend in the guide-strips E, and the fact that the protruding ends of cross-piece F are flat, serving to hold the pivot securely in place.

Pivoted upon each beam C is a catch, G, formed upon their lower ends, each with a double-inclined head, and also formed with two shoulders, as shown. As the door, after being elevated, is turned upon its pivots, its end will strike one incline of catches G, and force them away until the door passes the enlarged heads of such catches, when they will return to their original positions and act as supports for the door. H H represent pivoted lugs, which are arranged to rest upon the remaining shoulders of the catches to hold the parts in position, the two positions being clearly shown in Figs. 3 and 4.

K represents a strip, secured one to each beam C, and adapted to limit the upward movement of the door when it is turned. A wooden strip, *E'*, may also be employed, there being one of such for each strip E, the strips *E E'* being secured to the posts by the same screws. This additional strip serves to more effectually keep the door in the guides, and is useful in other respects.

We hereby disclaim the broad idea of an upwardly-sliding and folding door when combined with a pivoted pendent hook secured to the roof of a car, and a pivoted latch supported by a shoulder on said hook.

What we claim is—

1. The combination, with door B and cross-piece F, the latter having flat protruding ends,

of guide-strips E, bent outwardly and then inwardly with a curve near their upper ends, as and for the purpose set forth.

2. The combination, with door B and cross-piece F, of guide-strips D E, the former rounded on their upper ends, as set forth.

3. The combination, with door B, cross-piece F, and guides E, of catches G and locks H, as set forth.

10 4. The combination, with door B, cross-piece F, and guide-strips D E, strips D rounded at

their upper ends, and strips E bent outwardly and inwardly at their upper ends, of swinging catches G and locks H, as set forth.

In testimony whereof we affix our signatures 15 in presence of two witnesses.

HENRY C. WILLIAMSON.  
FREDRICK PRIES.

Witnesses:

JARED H. ORR,  
I. A. HONITON.