

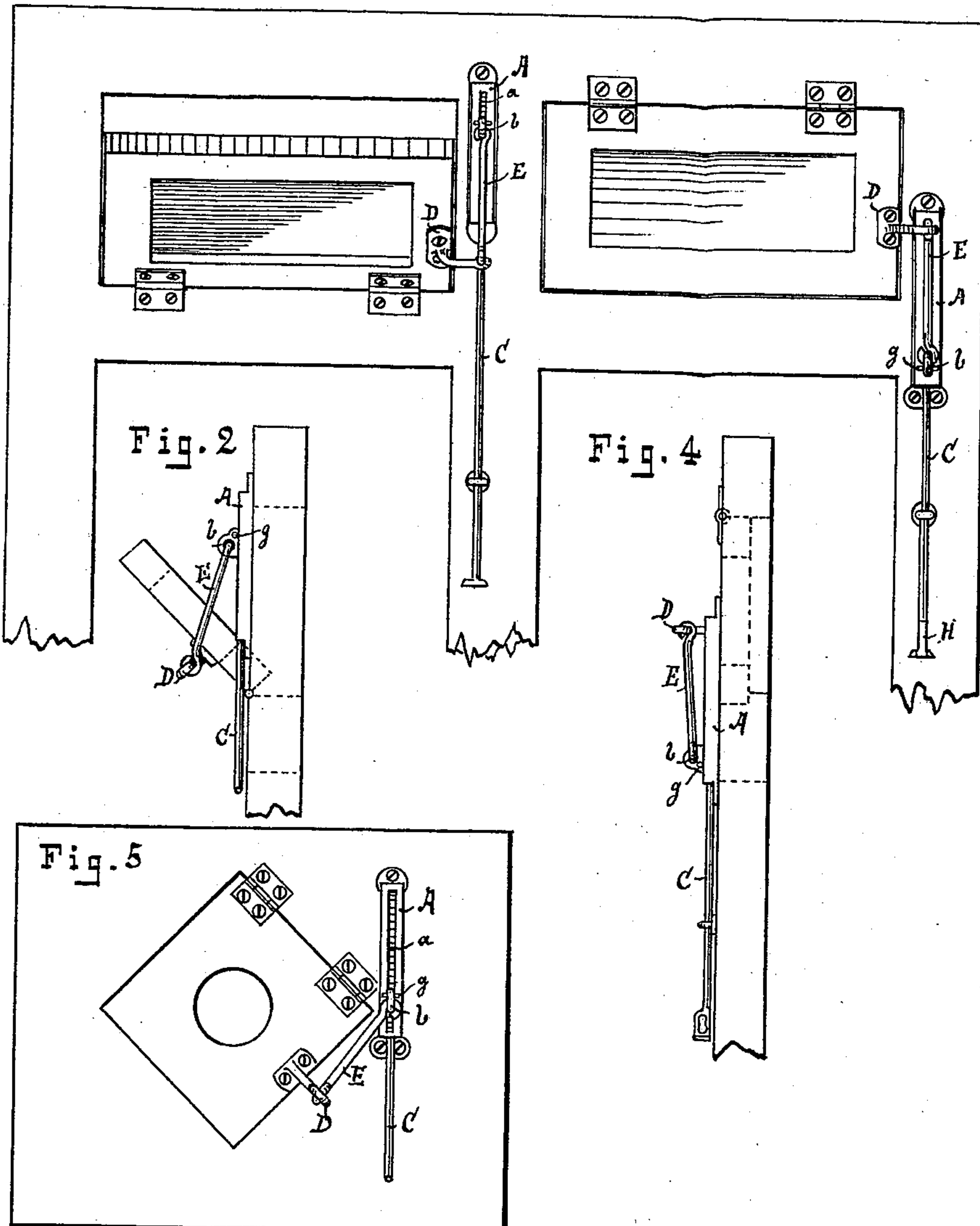
F. A. REIHER.
Transom-Lifter.

No. 226,353.

Patented April 6, 1880.

Fig. 1

Fig. 3



WITNESSES:
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Fig. 6

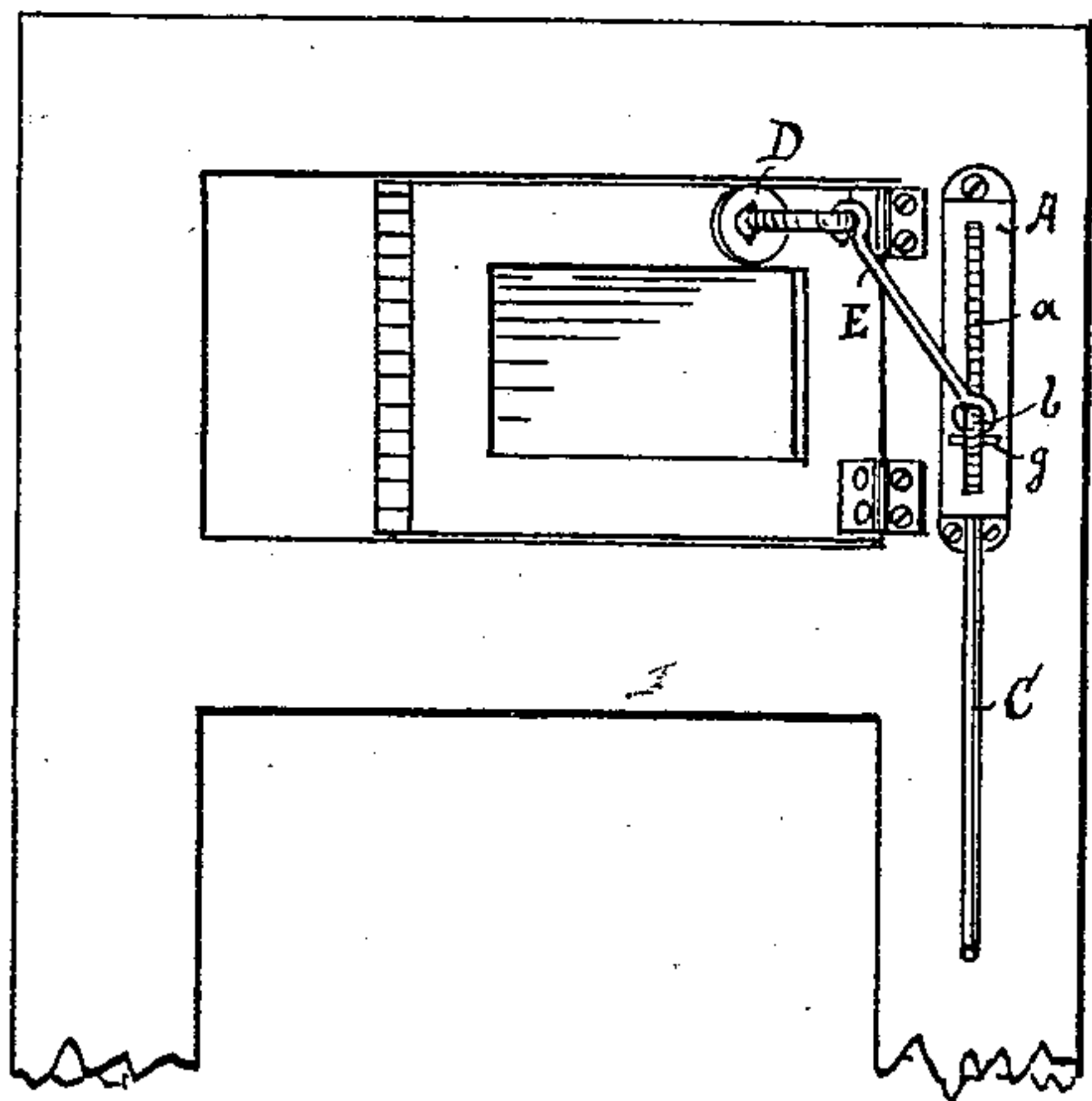


Fig. 7

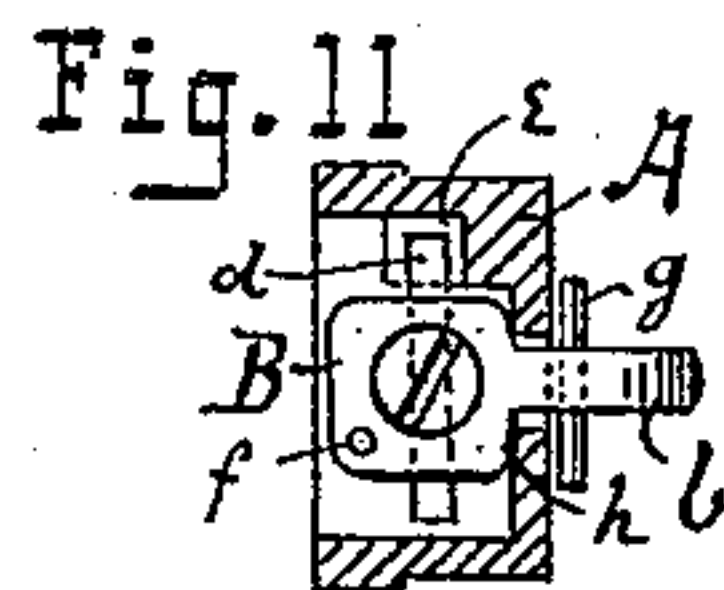
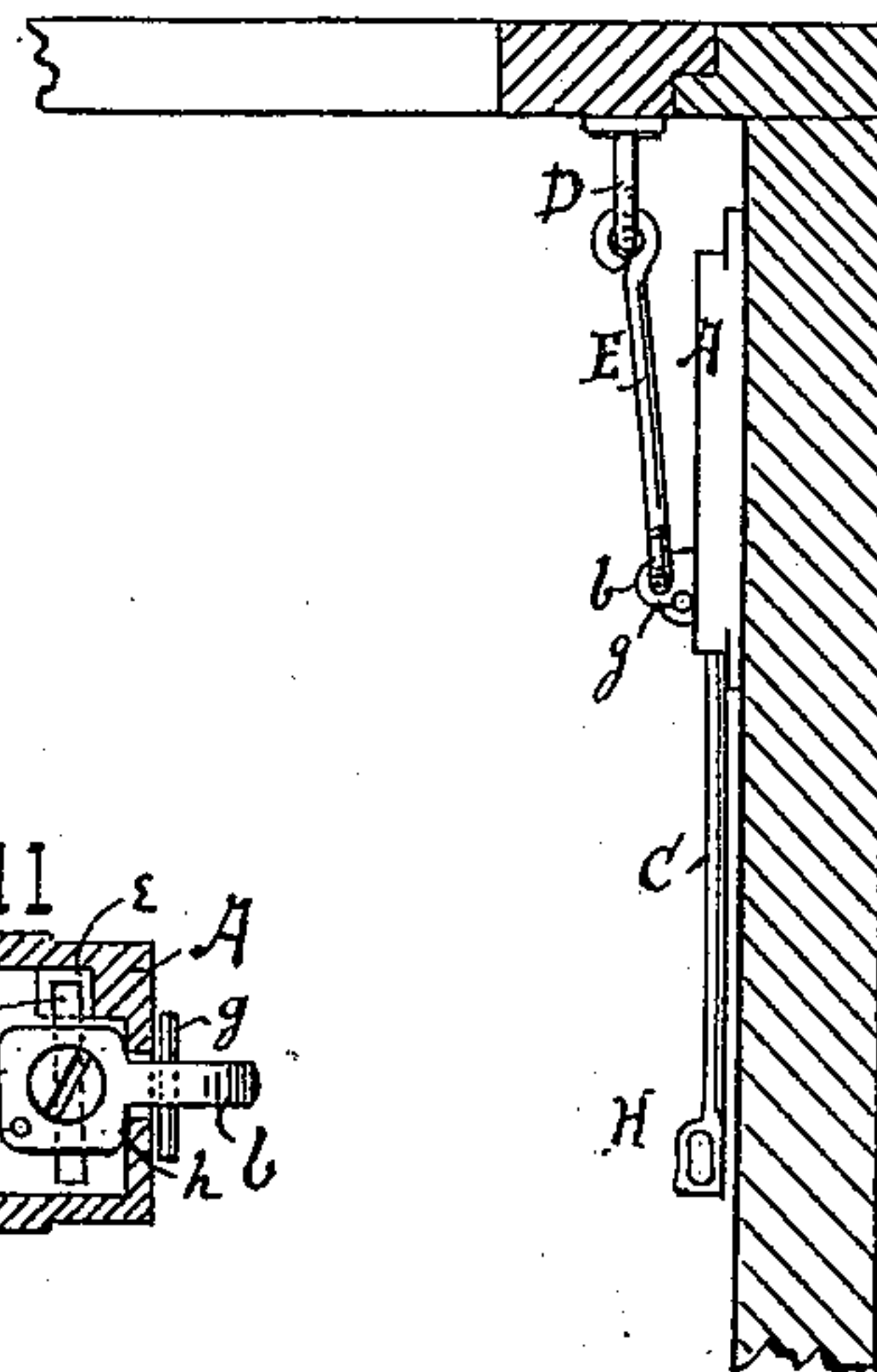


Fig. 8

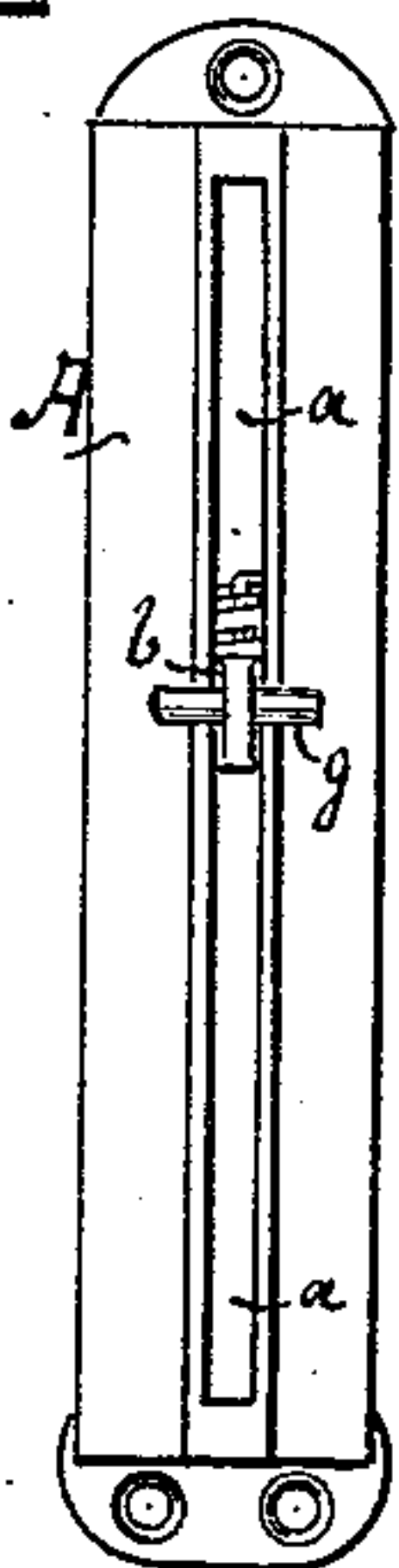


Fig. 9

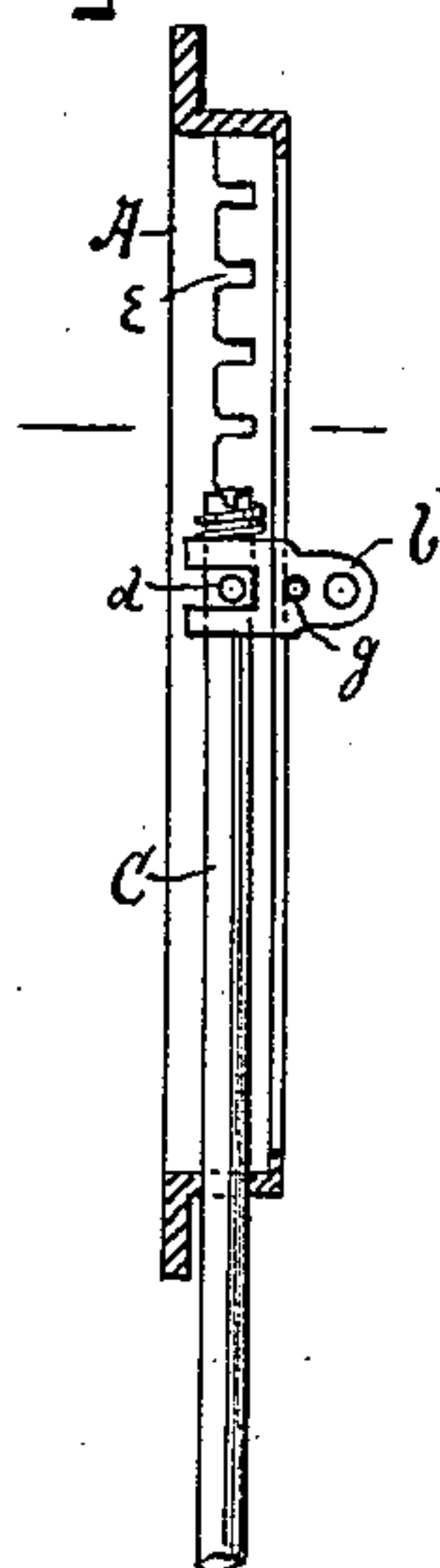


Fig. 10

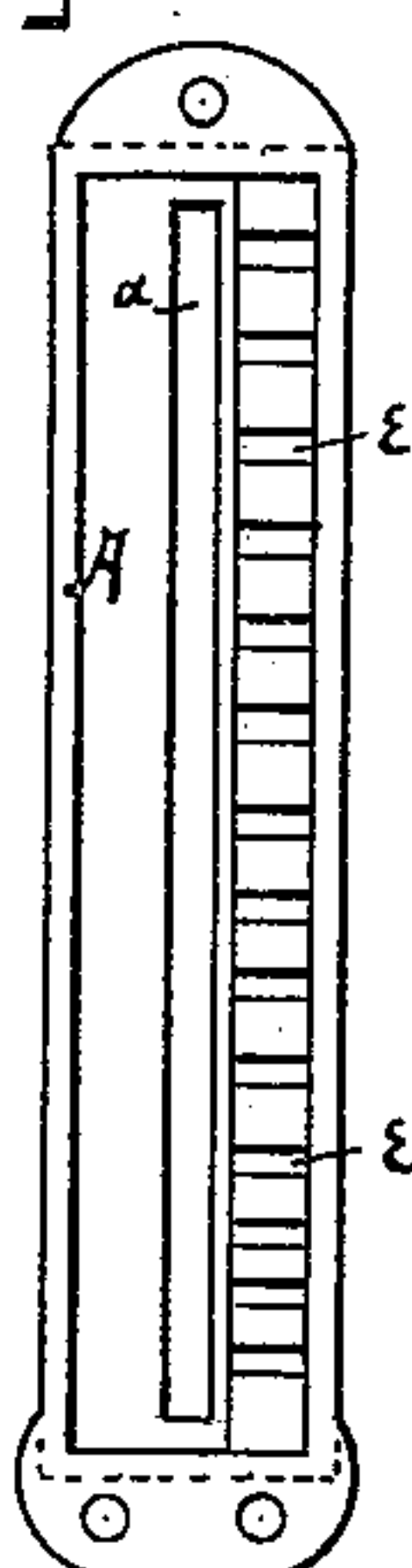


Fig. 12

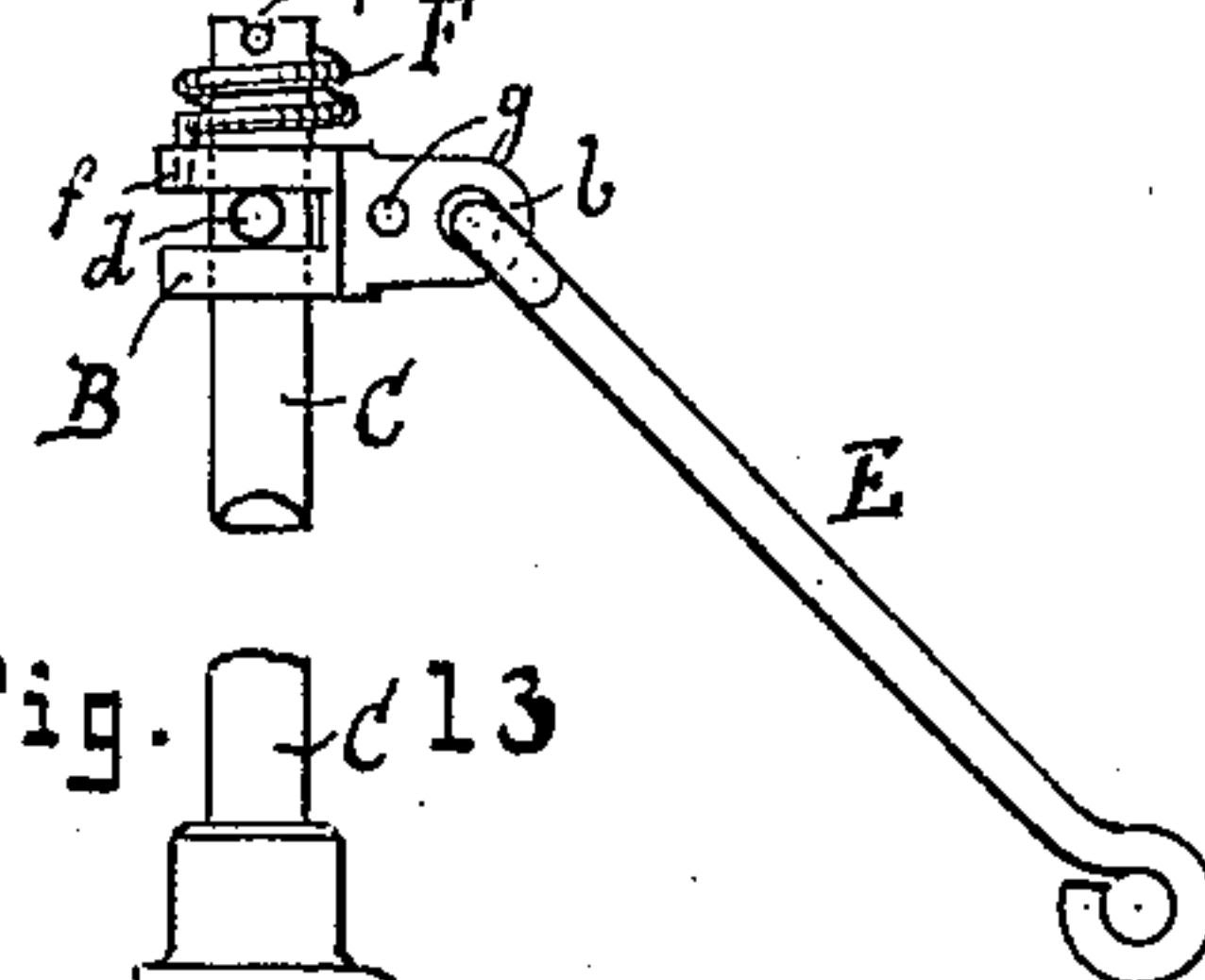
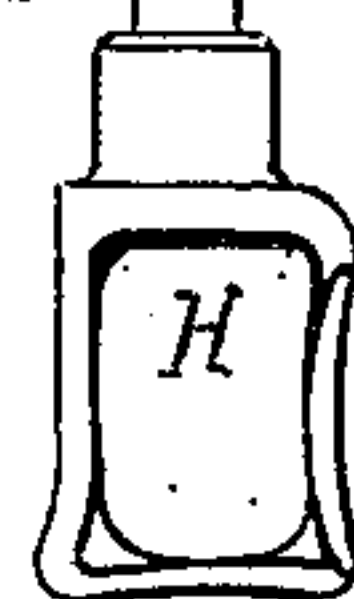


Fig. 13



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UNITED STATES PATENT OFFICE.

FRANK A. REIHER, OF CHICAGO, ILLINOIS.

TRANSOM-LIFTER.

SPECIFICATION forming part of Letters Patent No. 226,353, dated April 6, 1880.

Application filed January 29, 1880.

To all whom it may concern:

Be it known that I, FRANK A. REIHER, of Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Transom-Lifters, which are described in the following specification.

My object is to construct a lifter which will always be ready for use and answer equally well for all kinds of transoms, no matter how the same may be hinged, without exchanging or altering any of the parts, in a simple and durable manner.

In the drawings forming part of this specification, Figures 1 and 2 show a front view and side elevation of my lifter attached to a transom hinged below. Figs. 3 and 4 show the lifter for transoms hinged above. Fig. 5 shows a front view of the lifter attached to a ventilating-opening hanging obliquely. Fig. 6 shows the lifter attached to a transom hinged sidewise. Fig. 7 shows the lifter attached to a skylight. Fig. 8 shows a front view, Fig. 9 a vertical longitudinal section, and Fig. 10 an inverted plan, of the casing. Figs. 11 and 12 show the top of lifting-rod with adjusting-block. Fig. 13 shows the lower part of the lifting-rod with handle attachment.

Like letters of reference indicate like parts.

The casing A, which is screwed to the door-frame, is provided on the front plate with a long slot, *a*. Sliding loosely up and down in this casing A is the adjusting-block B, which protrudes by the ear *b*, forming part of this block, through slot *a*. Affixed to block B is the lifting-rod C, in such a manner as to allow the rod to turn in said block. For this purpose the block is provided with a wide slot, as shown in Figs. 9 and 12, into which fits loosely the pin *d*, which penetrates the rod C.

Attached to the transom in a position which is regulated by and depends upon the manner of hinging the same, at about midway between the outer swinging point and the center of hinge, is the bracket or loop D. Attached to this loop is the connecting link or arm E, which connects at its other end to the ear *b* of the adjusting-block.

A look at the drawings will show that the upward or downward movement of the adjusting-block, caused by the respective movement

of the lifting-rod, will be followed by a swinging movement of the transom on its hinges through the agency of the universal link or arm E.

The inner face of the casing A (shown in Fig. 9) is provided with a series of notches, *e*. The upper end of the rod C is provided with a spiral spring, F, which, resting at one end in the hole *f* of the adjusting-block B, is affixed at its other end in a groove, *f'*, at the top of rod C. This spring F has the tendency to hold the rod C, which turns loosely in the block B, in such a position as to cause the pin *d*, which projects on both sides of the block B, to fall into one of the notches *e* provided in the casing. Thus the rod, with block B and universal link E, is held in place by the action of spring F and pin *d*, and can be moved only by turning the rod C slightly in its axis, so as to disengage the pin *d* from the notch *e*.

It will be seen that whenever the hand of the operator should happen to loose its hold upon the rod the spring F will cause the pin *d* to fall into the next notch and arrest the further movement of the block B, and thereby the movement of the transom. The transom may thus be locked at any desired position.

The rod C is provided at its lower end with handle H, arranged with an opening for the finger, so that the rod may be with convenience turned and lifted or lowered at will.

For transoms hinged at the lower edge of the frame (shown in Figs. 1 and 2) the transom with loop D hangs in the universal link E. The casing A with adjusting-block is affixed above. When operating the same the block bears with its shoulders *h* upon the inner face of casing A.

For transoms hinged at the upper frame, as shown in Figs. 3 and 4, the casing is fastened below, so that the adjusting-block may be held by the lowest notch *e*. While the transom is closed the universal link hangs downward from the loop D. In this case, when operated, the bearing between block and casing is reversed, and is taken up by a pin, *g*, penetrating through the ear of the block and resting upon the outer face of the casing A.

For oblique transoms the lifter is affixed as shown in Fig. 5.

Fig. 6 shows a transom hinged at the side. The casing of lifter is affixed vertically at the hinged side, the adjusting-block being in the highest notch when the transom is closed.

5 For transoms hinged in the middle the lifter may be affixed either above or below the hinged center. For skylights the lifter is affixed as shown in Fig. 7.

10 It will be seen that the universal link E, with its two swiveling loop ends, will always be ready to form a connection between the transom-loop D and the ear *b* of the adjusting-block, no matter which way the transom may be hinged.

15 What I claim as my invention, and desire to secure by Letters Patent, is—

1. The casing A, with slot *a*, containing the adjusting-block B, with upright rod C, in combination with chain-link E and loop D, all arranged and constructed in the manner as 20 shown, and for the purpose specified.

2. The adjusting-block B, rod C, pin *d*, and spring F, in combination with casing A, provided with slot *a* and notches *e e*, for the purpose set forth.

FRANK A. REIHER.

Witnesses:

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