

No. 883,555.

PATENTED MAR. 31, 1908.

E. A. MARSH.
LOCK OR LATCH FOR WINDOWS.

APPLICATION FILED FEB. 20, 1907.

3 SHEETS—SHEET 1.

Fig. 1.

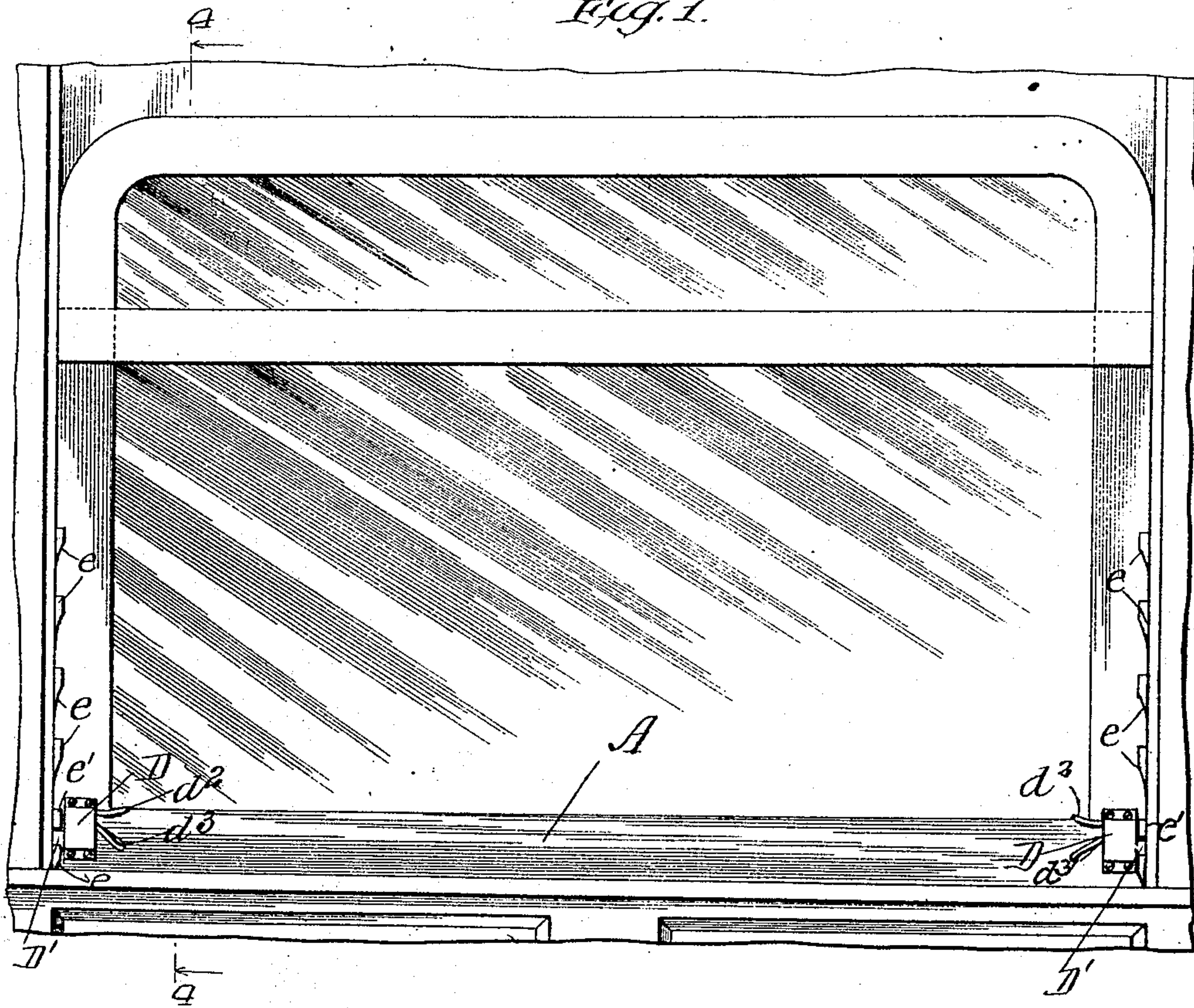


Fig. 2.

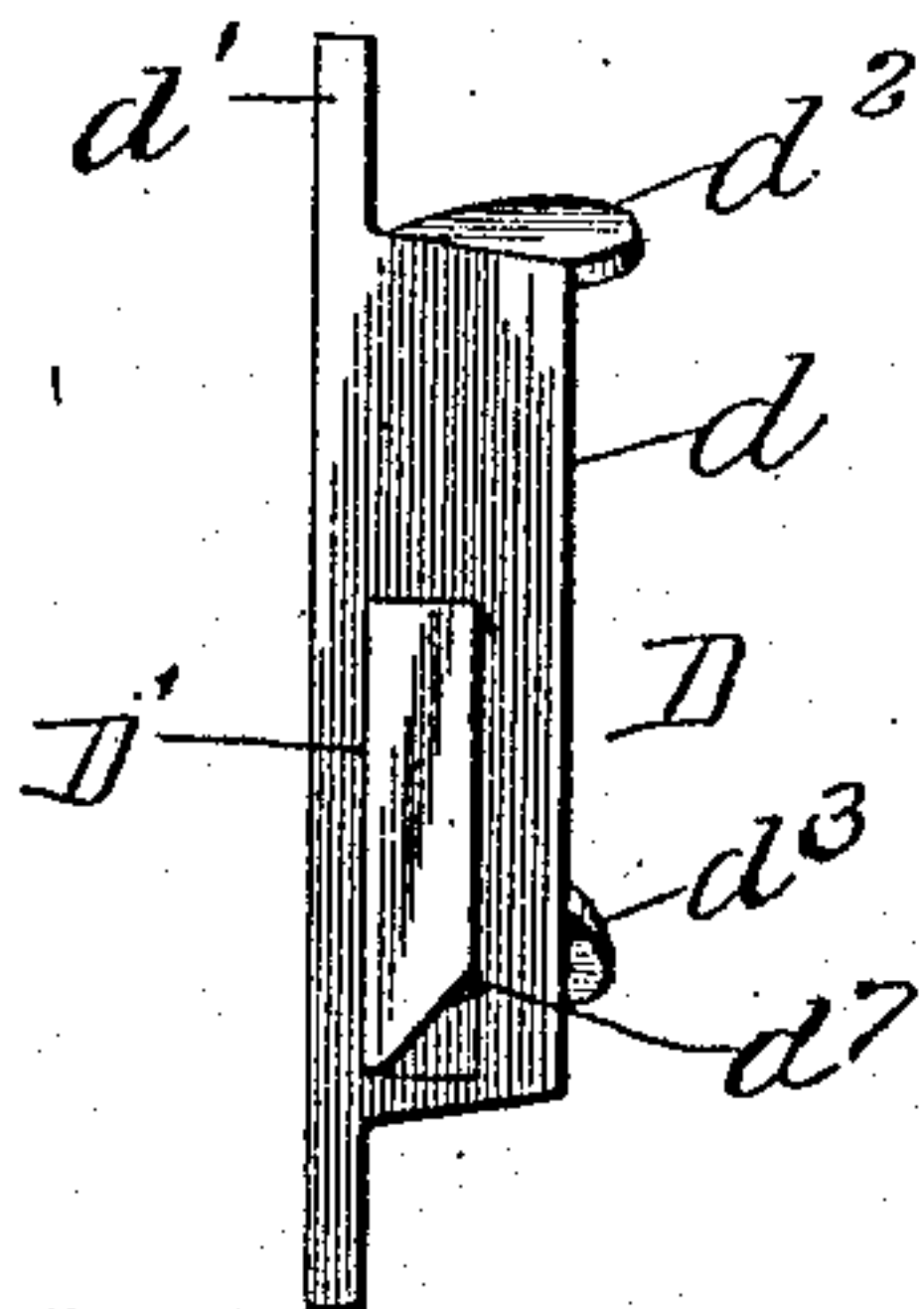
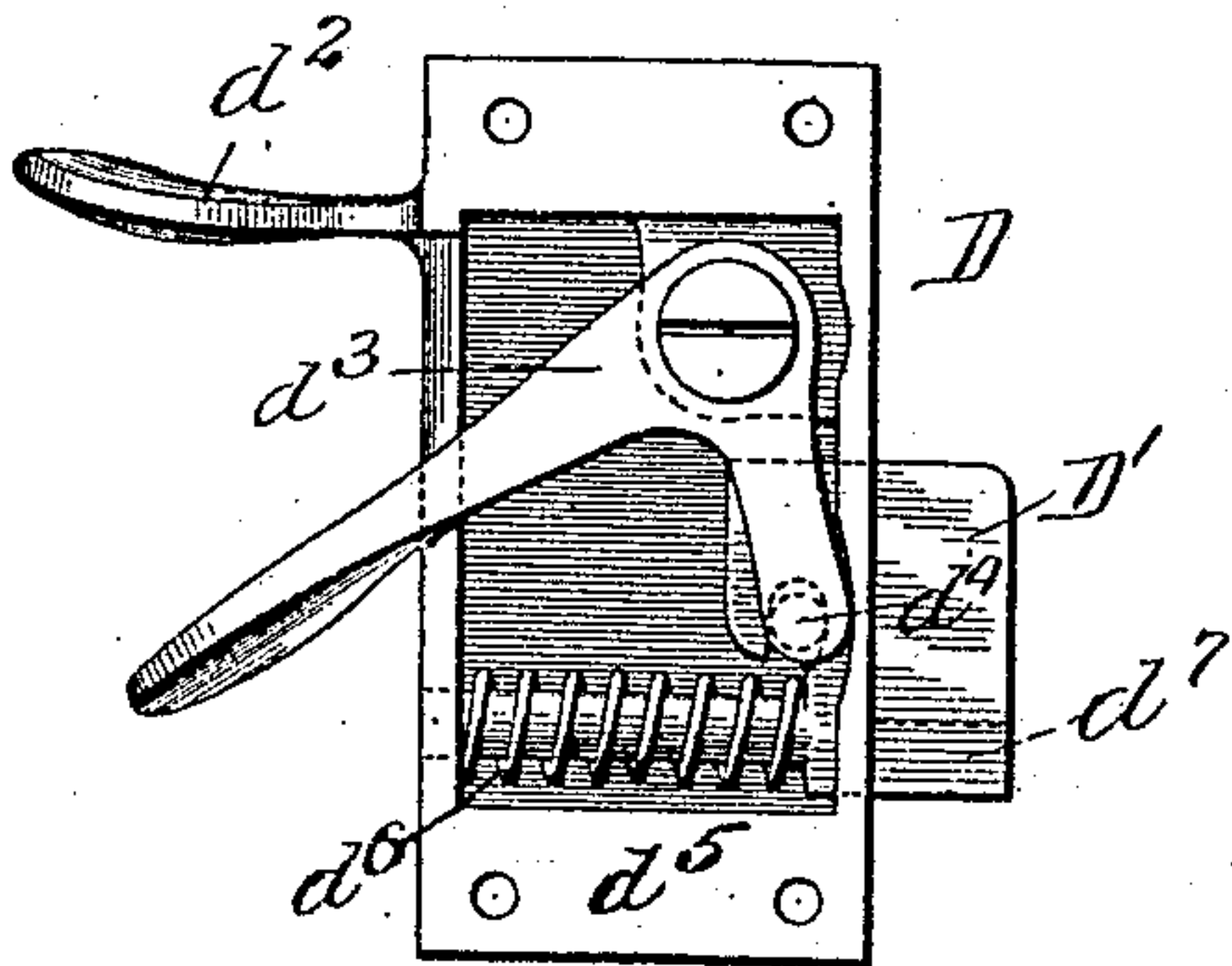


Fig. 3.



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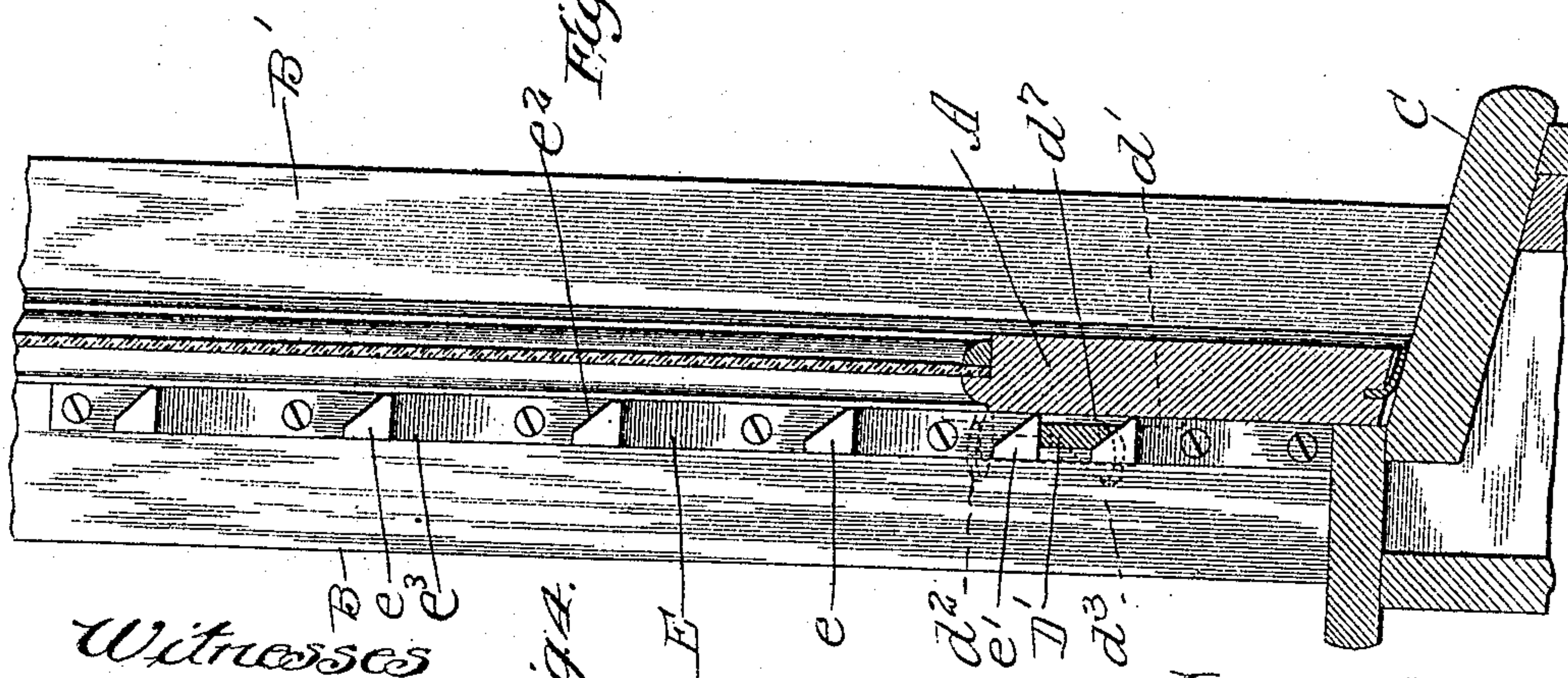
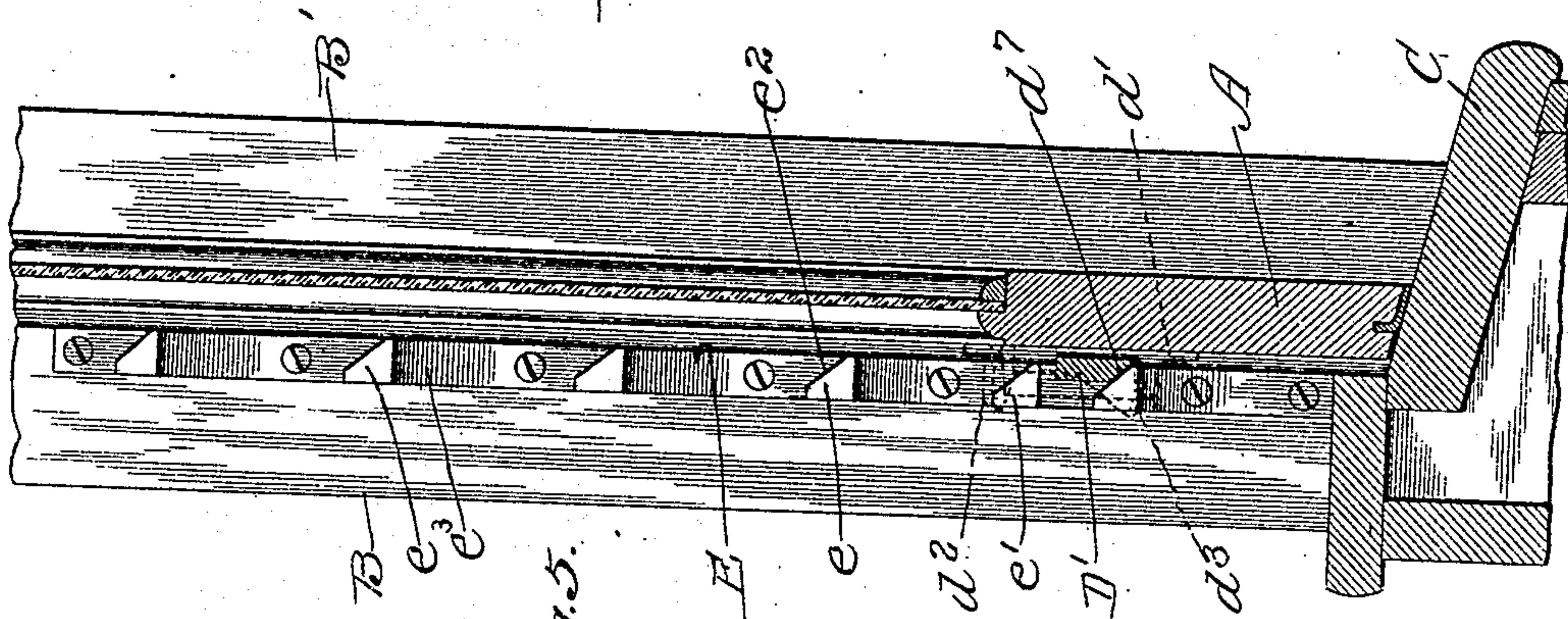
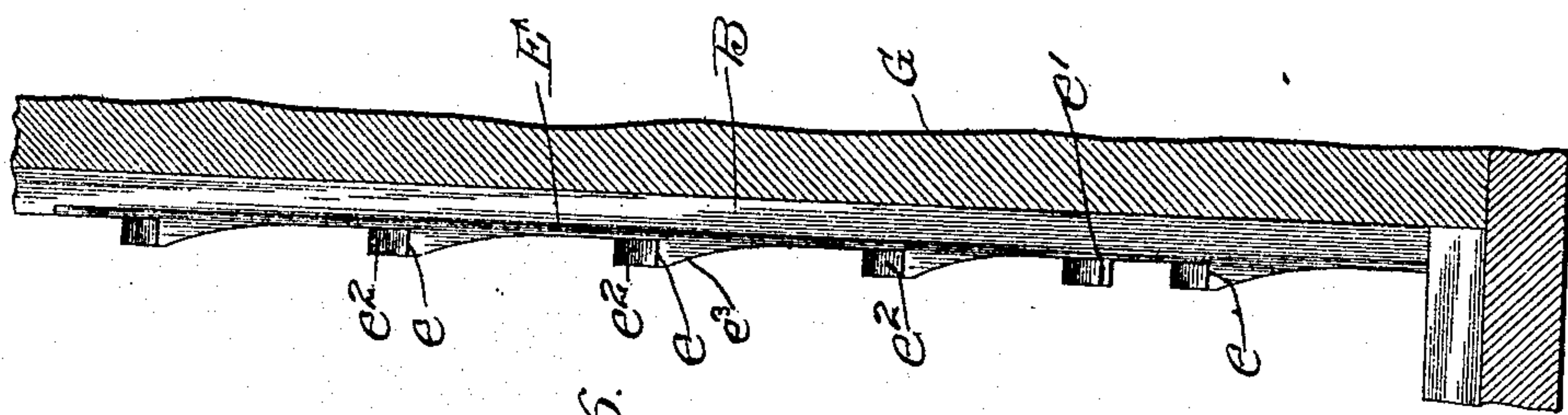
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3 SHEETS—SHEET 2.



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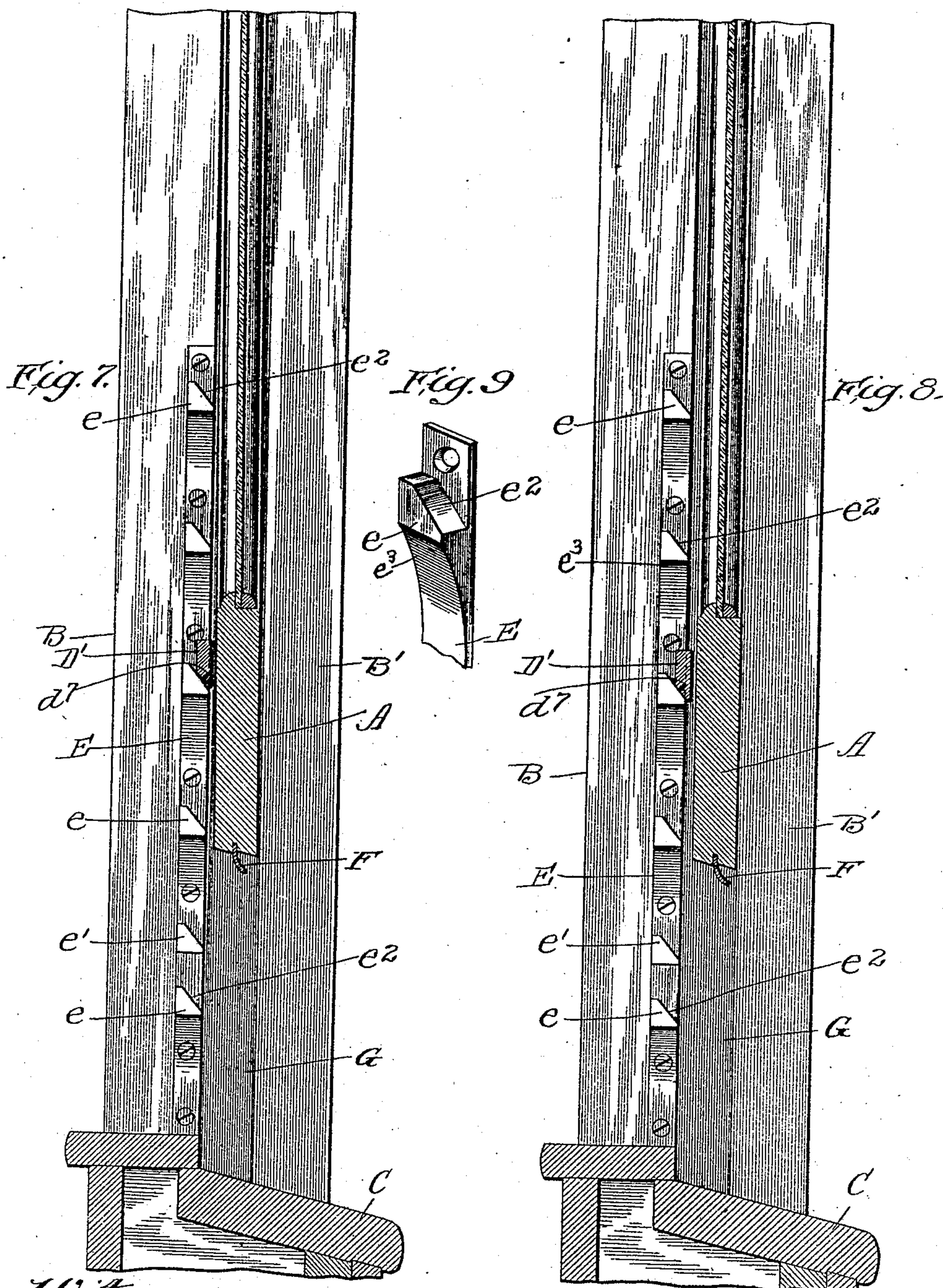
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

ERNEST A. MARSH, OF CHICAGO, ILLINOIS.

LOCK OR LATCH FOR WINDOWS.

No. 883,555.

Specification of Letters Patent.

Patented March 31, 1908.

Application filed February 20, 1907. Serial No. 358,354.

To all whom it may concern:

Be it known that I, ERNEST A. MARSH, a citizen of the United States, and residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Locks or Latches for Windows, of which the following is a complete specification.

This invention relates to improvements in locks or latches for windows and the like, and more particularly to a gravity acting latch adapted to utilize the weight of the window sash in forcing the sash against the stop to provide a tight joint.

Heretofore, especially in railway coaches, various devices have been resorted to for the purpose of insuring a tight joint between the window sash and the stop to prevent the admission of dust and drafts of air and also to prevent rattling. It has not however been possible heretofore to utilize the weight of the window sash to produce this effect and it has usually been necessary to make a comparatively tight fit of both the jamb and the stop to the sash, thereby greatly interfering with the freedom of movement of the sash in opening or closing the window.

The object of this invention is to provide a window lock or latch which acts under the gravity of the sash to force the sash into close and binding contact with the window stop, thereby providing a tight and noiseless joint.

It is also an object of the invention to provide a cheap and simple device adapted to be applied to car windows in particular and to press the sash firmly against the stop irrespective of whether the window be in opened or closed position.

The invention consists of the matters hereinafter described in the specification and more fully pointed out and defined in the appended claims.

In the drawings: Figure 1 is a fragmentary, inner elevation of a car window provided with a lock embodying my invention. Fig. 2 is an end elevation of the lock. Fig. 3 is a rear side elevation of the lock. Fig. 4 is an enlarged, fragmentary section taken on line 4—4 of Fig. 1 and showing the position which the sash assumes when being raised or lowered. Fig. 5 is a similar view, but showing the sash in fully closed position. Fig. 6 is a fragmentary, vertical section of the window frame and showing in elevation the side of the catch rack adjacent the sash.

Fig. 7 is a still further enlarged, fragmentary section similar to that shown in Fig. 4, but showing the position which the sash assumes with respect to the window jamb and stop when the latch bolt is seating on the catch. Fig. 8 is a similar section showing the bolt fully seated, and Fig. 9 is an enlarged, fragmentary, perspective view of the catch rack.

As shown in said drawings: A indicates the window sash, which may be partially counterbalanced if desired, and is adapted to slide vertically between the jamb and the window stop, indicated by B and B' respectively, and when in closed position to sit on the window stool C as shown in Fig. 5. All of said parts are of the ordinary or of any preferred construction and the jamb and stop B and B' are placed a sufficiently greater distance apart than the thickness of the sash to insure perfect freedom of movement.

Rigidly engaged at any desired position on the sash, but as shown, and preferably, on the inner side thereof and near each lower corner, are the window locks or latches indicated as a whole by D, and each of which comprises a casing d , having apertured flanges d' thereon affording means for attaching it to the sash, and a slidable bolt D' . Said casing, as shown, is provided on its rear side, near the top thereof with a handle d^2 , and pivoted within the casing is a bell crank lever d^3 , one end of which extends through a suitable opening in the rear wall of the casing beneath the handle d^2 , and the other end of which is provided with a laterally directed lug or pintle d^4 which engages in a suitable aperture or recess in the rear end of the bolt D' and acts to move the same. A guide shank d^5 extends from the rear side of said bolt and is slidably engaged in the rear wall of the casing and a coiled spring d^6 is carried thereon and one end engages said rear wall and the other engages against the bolt and acts to normally hold the bolt extended from the wall of the casing as shown in Fig. 3. Said bolt may be of any preferred shape in cross section, but as shown, it is approximately rectangular and the lower outer corner thereof, or that furthest from the sash, is beveled from a point near the inner face of the bolt, at an angle of approximately forty five degrees to the perpendicular, and which provides an inclined bearing face d^7 , the purpose of which will be more fully hereinafter explained.

Engaged at any suitable place but as

shown to the inner edge of the jamb, or that adjacent the sash, is the catch or stop rack E, which, as shown, is countersunk in the jamb and is provided at suitable distances through
 5 out its length with catches or stops e and e' , the latter of which affords a square shoulder on its under side beneath which the bolt engages when the window is in closed position and prevents the window from being opened
 10 until the bolt is withdrawn. Each of said catches or stops is provided with a downwardly and laterally inclined face e^2 which is complementary with the inclined face of the bolt and on which the bolt rests when sup-
 15 porting the sash and which acts by reason of the attraction of gravity on the sash to throw the sash away from the jamb and against the stop as shown in Figs. 5, 7 and 8. The catches or stops e are each provided on their
 20 outer faces, or that adjacent the window opening, with an incline e^3 against which the bolt engages when the window is being raised and which acts to retract the bolt.

The sash if preferred may be provided at
 25 its bottom and sides with a weather strip F of rubber or other flexible material which acts to seal the joints and at the bottom affords a cushion for the sash and thus avoids nicety of adjustment between the bolt and
 30 the lower catch.

The operation is as follows: Inasmuch as the space between the jamb and the stop in which the window travels is of somewhat greater width than the thickness of the sash
 35 it is obvious that the sash may have perfect freedom of movement. The force exerted on the sash in raising and lowering it tends to move it into contact with the jamb, as shown in Fig. 4, and as soon as the lever d^3 is re-
 40 leased and the bolt is permitted to be forced outwardly by its spring onto the inclined face e^2 of the catch, gravity causes the sash to fall and said inclined face causes the bottom thereof to slide into contact with the stop B'
 45 as shown in Fig. 7, and inasmuch as the sash

must seek its lowest level on the catch, the bolt moves still further down the incline of said face until the top of the sash is forced firmly against the stop as shown in Figs. 5 and 8.

Obviously the lock may be countersunk in the edge of the sash if desired and the catches may be set in the post G and may be made separately instead of in a continuous
 55 rack.

I claim as my invention:

1. In a device of the class described the combination with a sliding bolt, of a catch therefor having an inclined face adapted to retract the bolt and an inclined face at one
 60 side thereof upon which the bolt rests when seated.

2. In a device of the class described the combination with a sliding bolt adapted to be engaged to a window sash, of a catch
 65 therefor adapted to be supported adjacent the sash and having a bearing face for said bolt inclined from the top of the catch downwardly and laterally of the longitudinal axis of the bolt and adapted to force the sash
 70 laterally of the catch.

3. A window latch, comprising a casing adapted to be engaged to a window sash, a spring pressed bolt slidably engaged therein and having an inclined face on one side
 75 thereof extending from its bottom upwardly and lying in a plane parallel to the longitudinal axis of the bolt, and a catch adapted to be rigidly engaged to the window jamb and provided with a downwardly and later-
 80 ally inclined face down which the inclined face of the bolt is adapted to slide in seating.

In testimony whereof I have hereunto subscribed my name in the presence of two witnesses.

ERNEST A. MARSH.

Witnesses:

W. W. WITHEBURY,
 GEORGIA F. MOODY.