(No Model.) 4 Sheets—Sheet 1.

J. WOJTON.

WINDOW.

No. 559,557. Patented May 5, 1896.

Fig. 1.

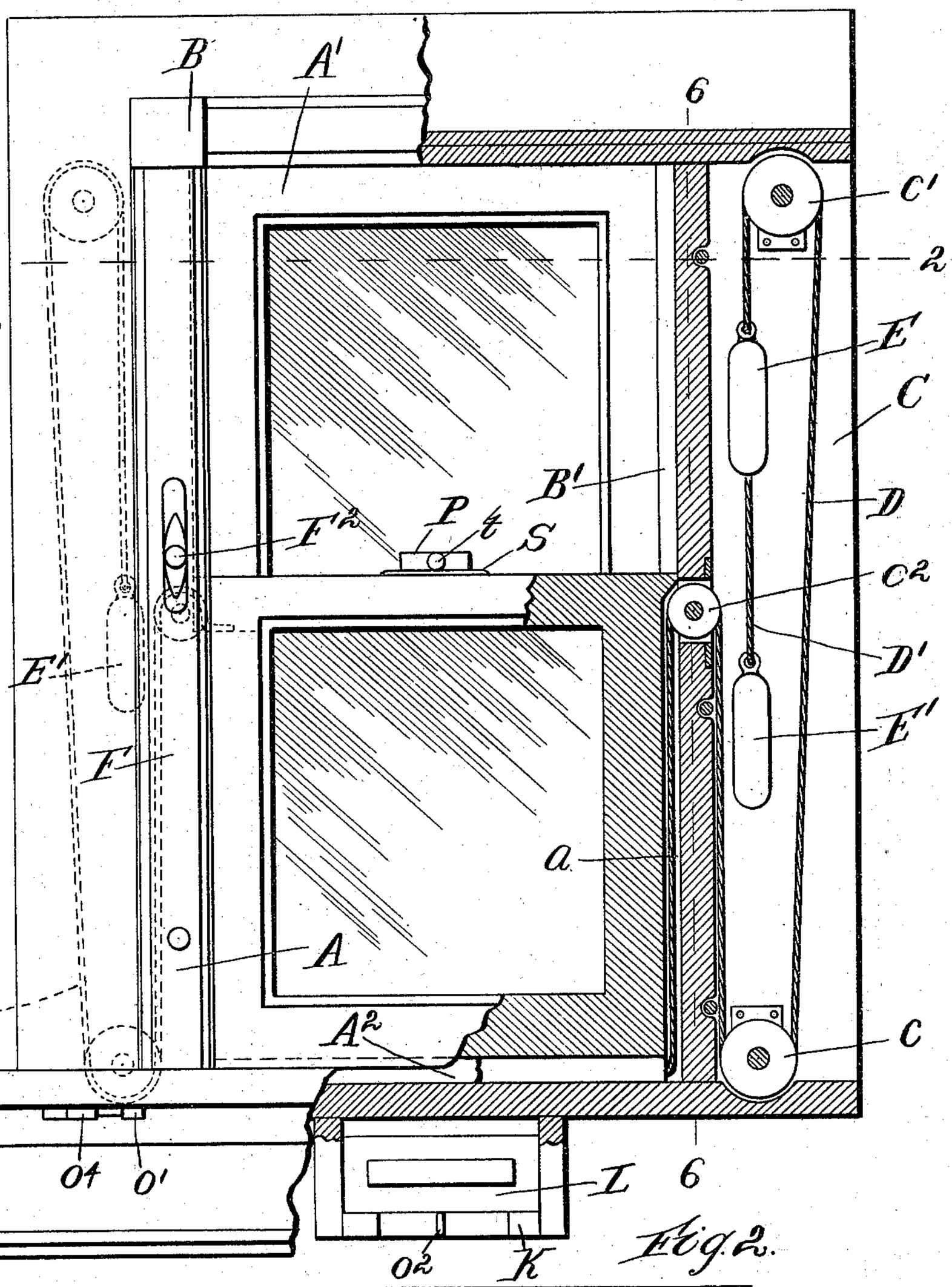
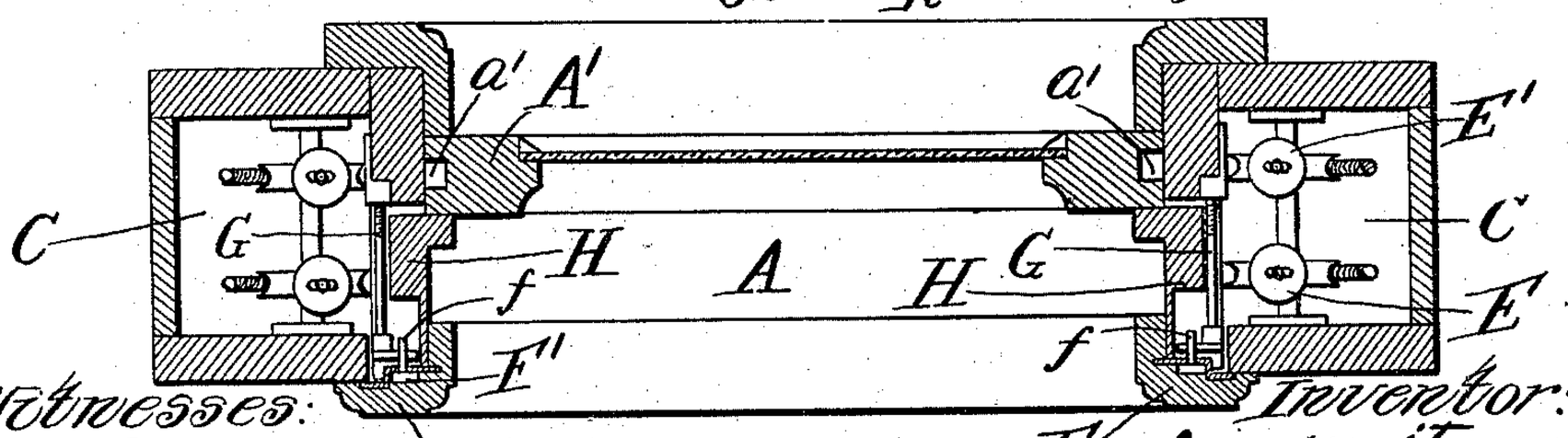


Fig. 1a.

Fig. 2.



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(No Model.)

4 Sheets—Sheet 2.

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WINDOW.

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Fig. 4.

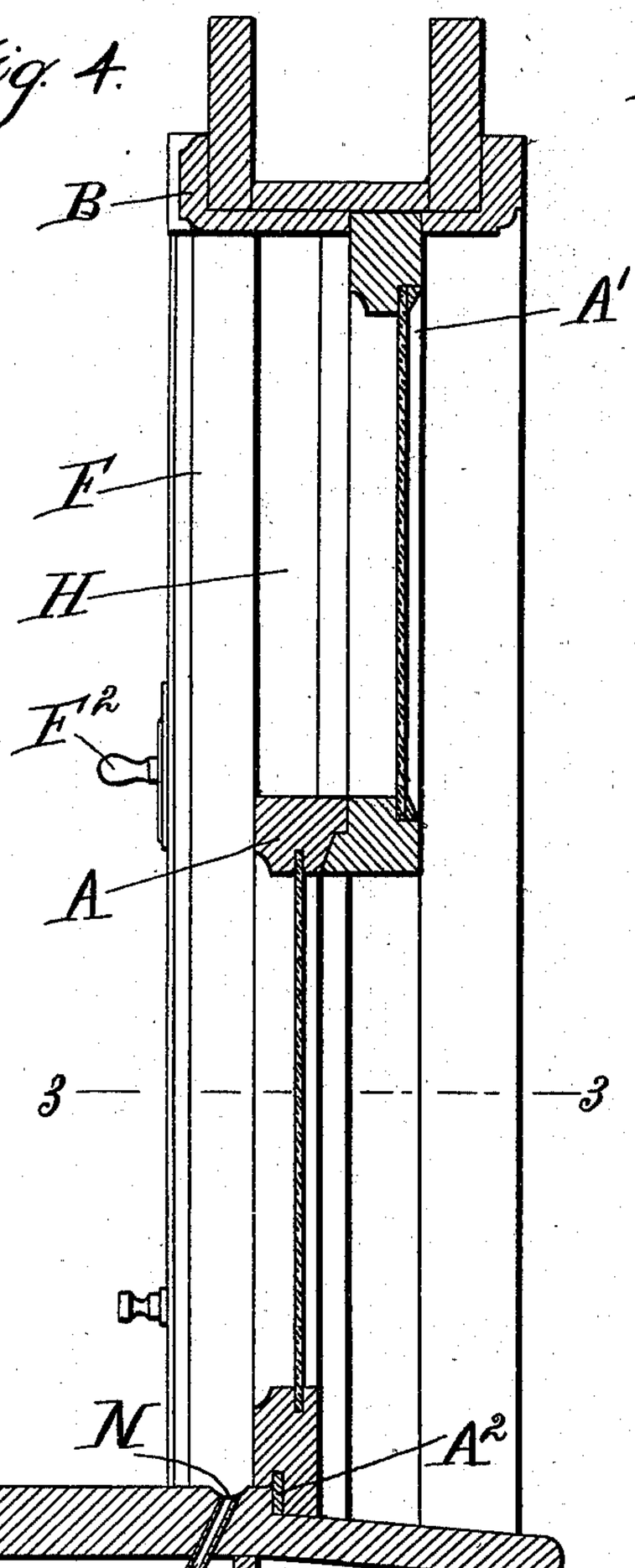


Fig. 6.

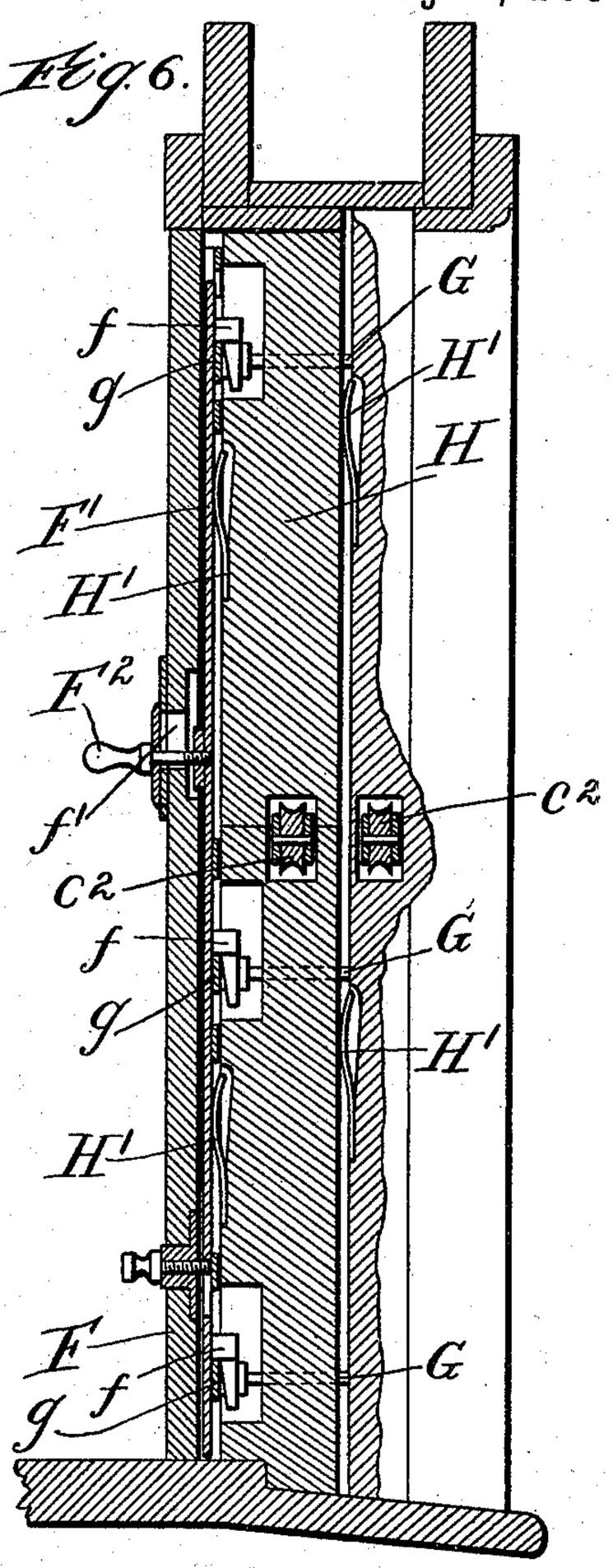
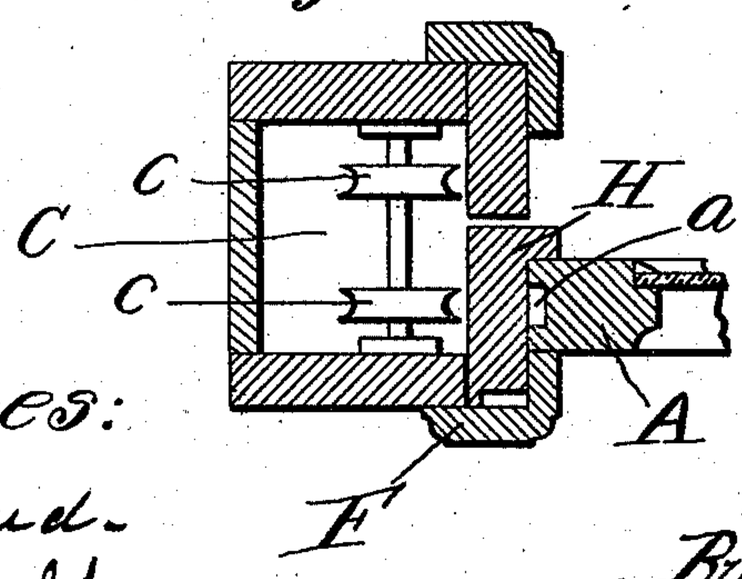


Fig. 3.



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WINDOW.

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Fig. 5.

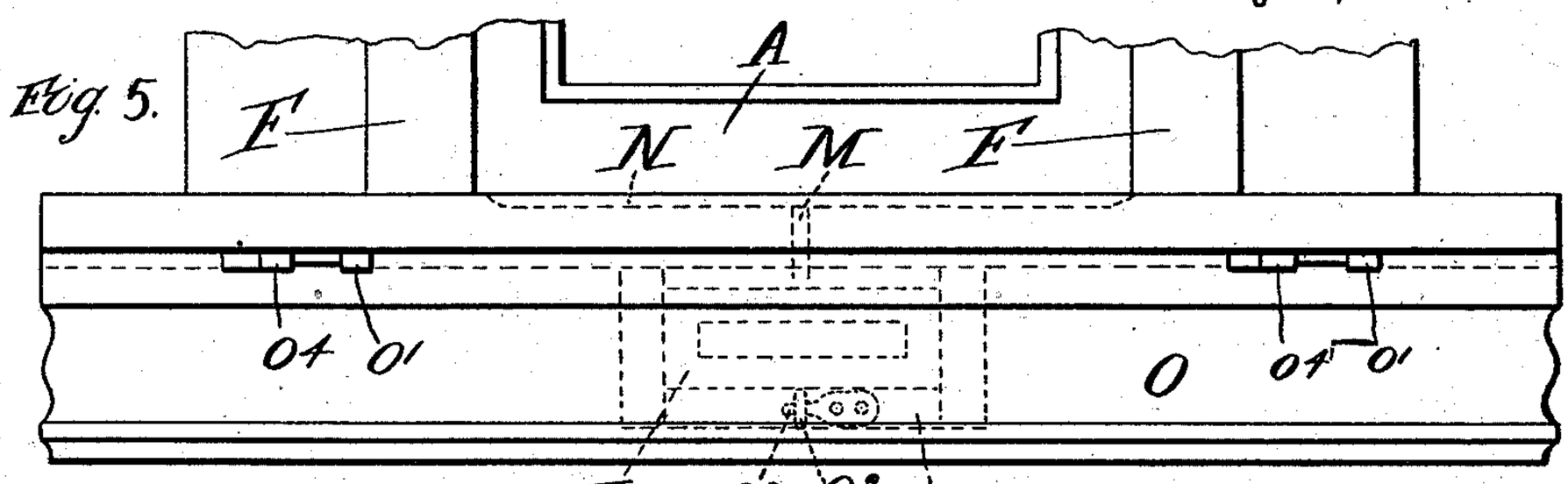


Fig. 7.

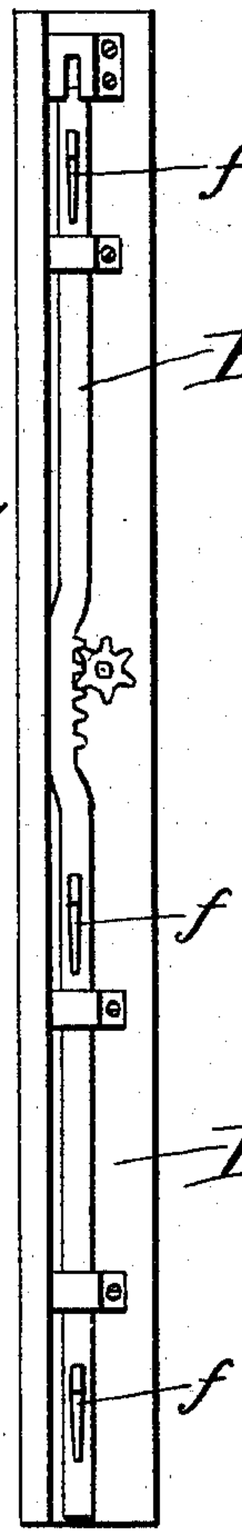


Fig. 8

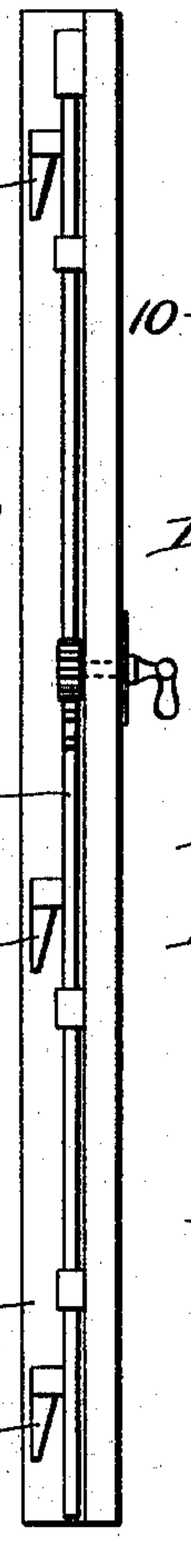


Fig. 9.

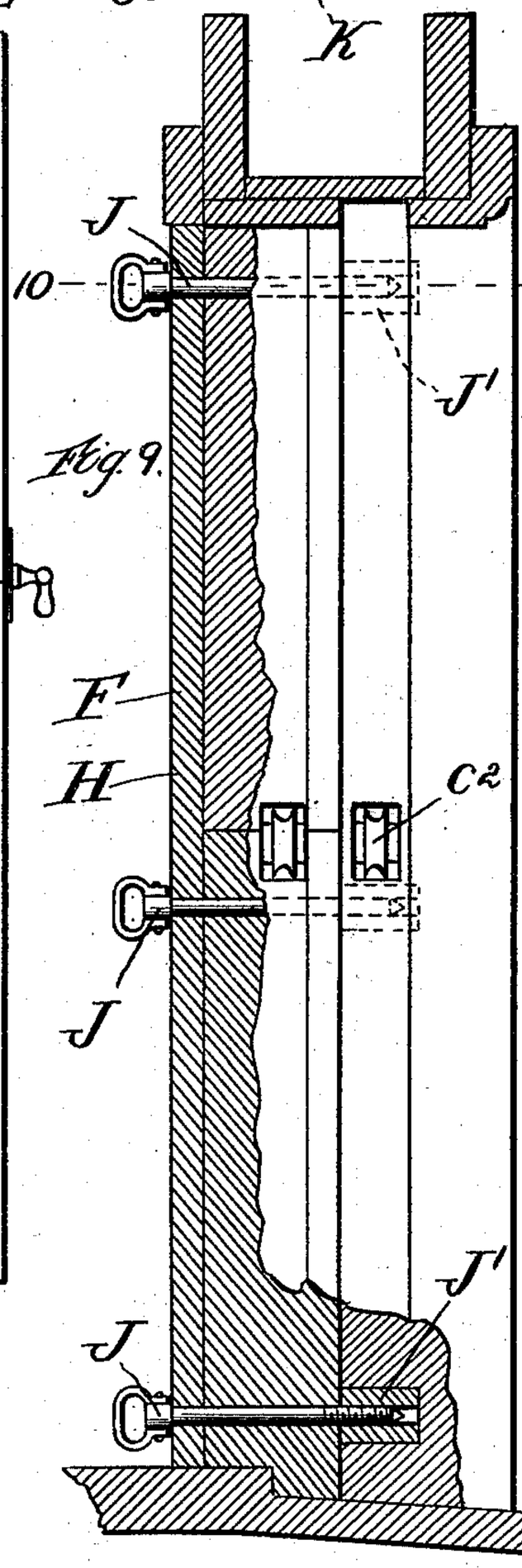
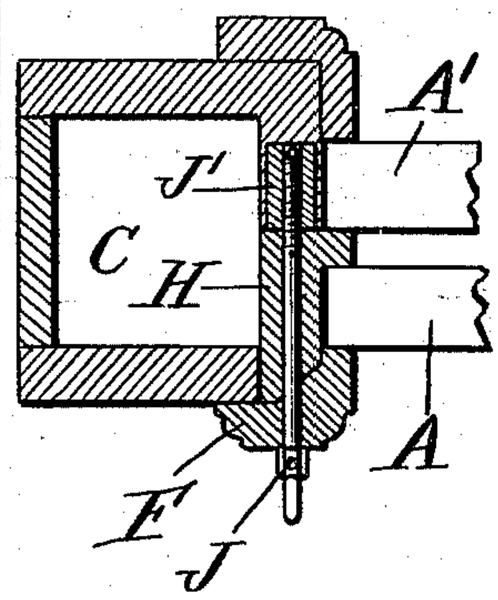


Fig. 10.



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WINDOW.

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Fig. 11.

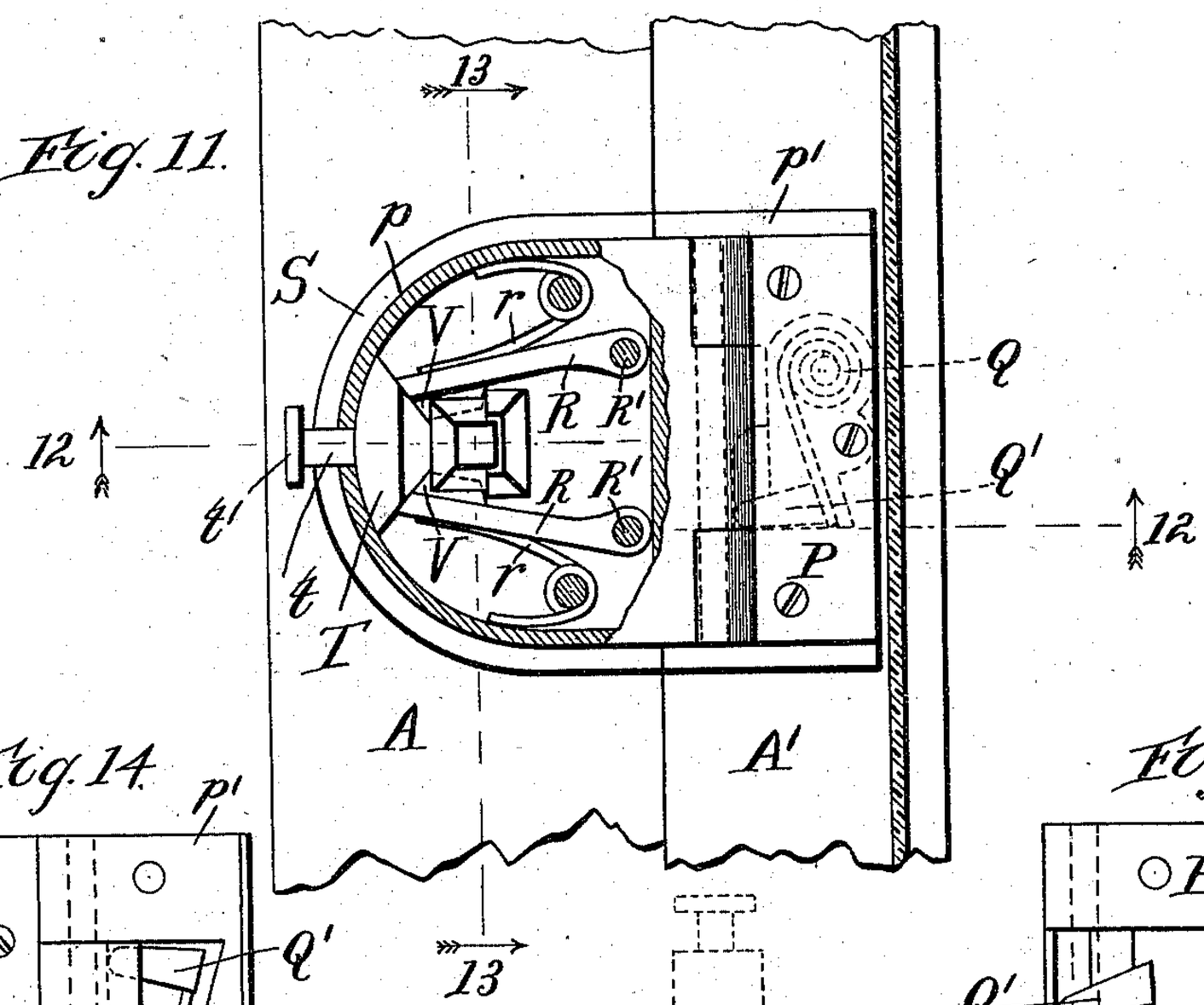


Fig. 14.

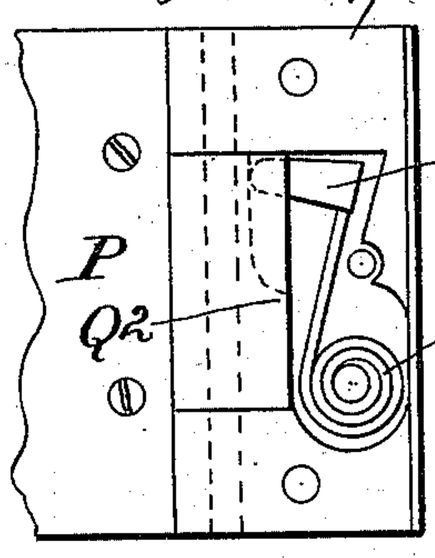


Fig. 15.

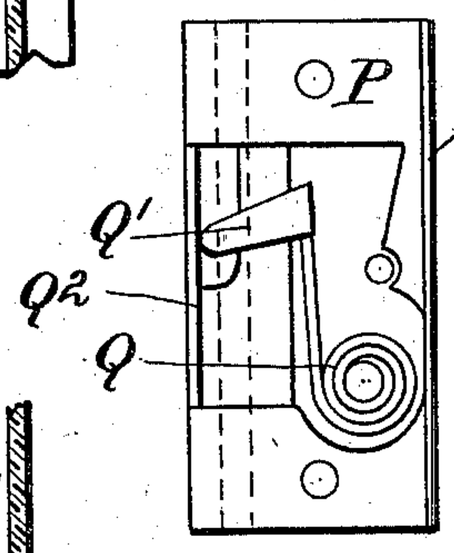


Fig. 12.

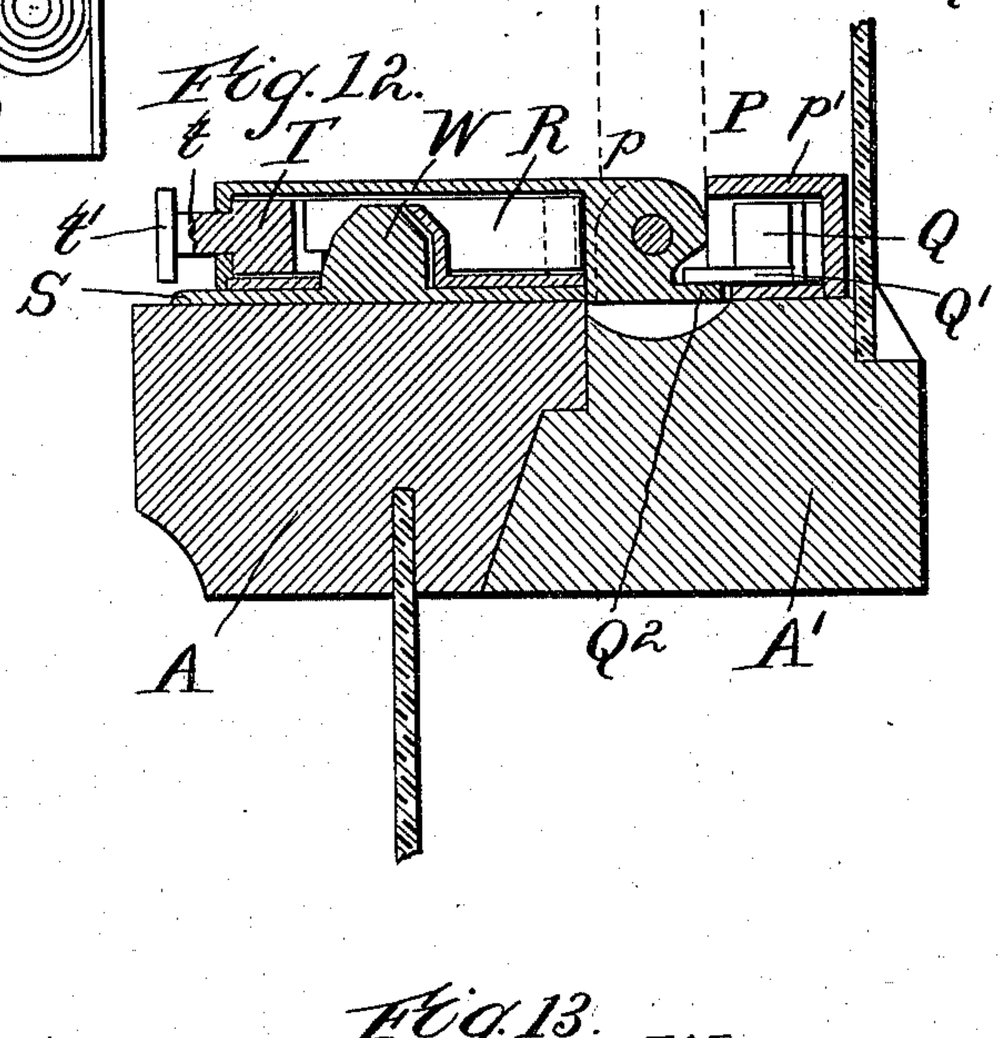
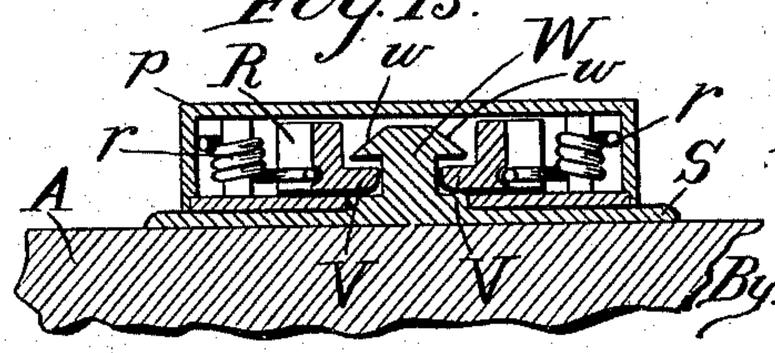


Fig. 13.



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UNITED STATES PATENT OFFICE.

JAN WOJTON, OF PULLMAN, ILLINOIS.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 559,557, dated May 5, 1896.

Application filed November 16, 1895. Serial No. 569,142. (No model.)

To all whom it may concern:

Be it known that I, JAN WOJTON, a subject of the Emperor of Austria-Hungary, residing at Pullman, county of Cook, and State of Illinois, have invented a certain new and useful Improvement in Windows, of which the following is a specification.

My invention relates to the arrangement and construction of windows and kindred parts; and its prominent objects are to produce a window which shall be both closely fitting and readily adjustable; whose operating parts—such as pulleys, weights, and ropes—shall be at all times concealed; which shall be impenetrable to snow, dust, and similar objects; which are arranged to permit the water formed by the melting of frost, which collects during winter on the inside of the window-pane, to be properly removed; which shall not rattle or creak during the prevalence of high winds, and which may be securely fastened by a lock or catch specially adapted for the purpose.

In carrying out my invention I counterbalance the weight of the window-sashes by weights fastened thereto by suitable flexible connectors and conceal the weights in convenient recesses near the window. The connecting ropes or cords are led around pulleys, so placed that the weights may rise and fall without interference and are attached to the sashes at their lower extremities. The pair of pulleys over which the ropes pass in leaving the recess are located substantially at the middle of vertical sides of the window-frame. A groove or channel is provided in the side of each sash in which the corresponding rope is concealed when any portion of its length is withdrawn from the recess. Evidently by thus placing the pulleys at or near the middle of the sides of the frame only a length of rope about equal to the height of the sash is withdrawn from the recess at any time, and this is entirely concealed in the groove or channel provided for the purpose.

An additional feature is that the frame is so constructed that certain pieces or strips at its sides, bearing against the sashes, may be set tight or clamped against the latter after they have been adjusted, and means are provided for holding these strips with any desired degree of pressure exerted by them against the sashes. As a further preventive of drafts, the bottom of the window-frame is tongued and the lower sash correspondingly grooved. Furthermore, a section of the molding below the window-sill is hinged, so that it may be swung vertically; and a receptacle, into which water may flow from the sill, is placed in a convenient pocket behind said molding-section. When occasion demands, the latter may be swung out of the way and the receptacle removed and emptied.

I prefer to use in connection with my improved window the catch or lock herein described, although it is obvious that any approved form may be used. This catch consists of two separable portions, a plate having a projection or knob secured to one sash, and a main or body portion arranged to clasp and be held in engagement with the knob on said plate secured to the other sash. The latter or body portion of the lock may be considered as composed of two parts hinged together, one of which overhangs the sash to which it is not secured when locked, but which is normally kept in an upright or vertical position, so as to permit the free movement of the sashes.

In the accompanying drawings, Figure 1 is an elevation of my improved window, portions of the lower sash, the frame, and surrounding wall being removed, so as to show the arrangement of the weights, ropes, and pulleys, and the receptacle, pan, or drawer below the sill. Fig. 2 is a horizontal section of the same at the line 2 2 of Fig. 1, illustrating the parts of the frame, which may be clamped against the sashes, and means for clamping them. Fig. 3 shows the location in the recesses of the pulleys carrying the ropes. Fig. 4 is a central section of the window, showing in detail the frame, sashes, movable molding, and receptacle. Fig. 5 shows the molding and manner in which it may be unfastened and swung upward, so as to permit the withdrawal of the receptacle, which is indicated by the dotted lines. Fig. 6 is a section at the line 6 6 of Fig. 1, in which the method of clamping the movable strips in the frame against the sashes is seen. Figs. 7, 8, 9, and 10 illustrate two modifications of the same. Fig. 11 is a plan of the lock or catch in its engaged position, having a portion of

the shell or casing broken away to conveniently illustrate the internal mechanism. Fig. 12 is a sectional illustration of the same, the views being taken as shown by the arrows 12 12 of Fig. 11. The normally-vertical position of the hinged portion of the lock is indicated by the dotted lines. Fig. 13 is a section of the same at the line 13 13 of Fig. 11. Figs. 14 and 15 are plans, looking upward, of the spring which tends to hold said hinged portion of the lock in an upright position when it is locked and unlocked. Fig. 1ª shows the preferred way of attaching the cord to the weight.

In my window the sashes A A′ may be of any approved construction, so as to fit snugly within the framework B, at each side of which is the customary recess C. Within this recess are arranged the pulleys *c c′*, around which the ropes D D′, terminating in the weights E E′, are passed and then led to the lower edges of the sashes A A′ over pulleys c^2 near the middle of the frame B′. I prefer a similar arrangement of pulleys on each side of the window; but this may be varied, if desired. The apparatus for the upper sash is indicated more clearly by the dotted lines in Fig. 1. Obviously upon raising the sash A the weight E will descend an equal distance and the length of rope, which is concealed in the groove *a*, will pass over the pulley c^2 into the recess. Similarly when the sash A′ is lowered the weight E′ will rise.

The removable frame-piece F is provided with a rod or bar F′, carrying the keys or cotters *f*. By the longitudinal movement of this bar the keys, having been engaged with the shoulders *g*, formed at the ends of the bolts G, held rigidly in the frame, will clamp the strip against the sash A′. This movement of the bar F may be given by means of the handle F^2, moving in the slot *f′*, Fig. 6, or by means of the rack and pinion, Figs. 7 and 8; or this result may be obtained by passing threaded bolts J through the strips F and H and engaging them with suitable nuts J′, fixed in the frame, Figs. 9 and 10.

The springs H′, Fig. 6, permit easy adjustment of the sashes by holding the strips F and H lightly apart when not clamped.

In any convenient part of the wall under the sill may be placed the shelf K, holding the receptacle, pan, or drawer L, to which water flows through the groove N and pipe M. In order to remove the pan to empty it, the molding O below the sill is hinged so that it may be swung upward out of the way. The molding is held in place by a catch O^2, arranged to engage with the pin O^3 carried by it, but may be disengaged by a longitudinal movement, which is permitted by the hinges O′, having long spindles, along which their central portions or hooks O^4 may slide.

The window is locked by holding the sashes securely together by the lock shown in Figs. 11 to 15, both inclusive. This lock is composed of two separable portions, the main or body portion P, preferably secured to the upper sash, and a plate S, preferably secured to the lower sash. The portion P consists of two parts *p p′*, hinged together. Within the part *p′*, which is held firmly to the sash A′, is the spring Q, which tends to keep the part *p* perpendicular to it by pressing the flap or shank Q′ against the casing Q^2. Within the part *p* is a pair of arms R, arranged to swing about the pins R′ and provided with flanges or shoulders V. The beveled ends of these arms are pressed by the springs *r* against similarly-inclined ends of the push-plate T, which is provided with a stem *t* and head or cap *t′*. When the part *p* is pushed down over the plate S, an opening or aperture in the casing of the former permits the projection or knob W to enter it and by its sloping shoulders *w* spread apart the arms R, which assume their normal position and lock the sashes as soon as their flanges V pass the shoulders *w*. An inward movement of the cap *t′* slightly separates the arms R, thereby disengaging them from the knob W, so that the part *p* is free to assume the upright position shown by the dotted lines in Fig. 12, where it is retained by the spring Q. The sashes may then pass each other without hindrance.

In Fig. 4 is shown a tongue A^2, preferably a metallic strip, arranged to fit into a corresponding groove in the lower window-sash. The weights may be secured to the ropes by passing the latter through a recess in the weights and providing an enlargement at the end of the ropes, as shown in Fig. 1ª.

What I claim as my invention is—

1. The combination of two sashes arranged to move in opposite directions and counterbalanced by weights whose attaching-connectors emerge from the frame sides at substantially the middle of their lengths; two pairs of movable strips, a pair on each side of the sashes and one in each pair in contact with each sash; and means for tightening either pair against the sashes independently of the other pair, and also independently of the movement of the sashes, substantially as described.

2. In a window-frame, a strip arranged to be clamped against the adjacent sash; a second strip arranged to be clamped against the other sash; an adjustable bar carried by said first strip, and provided with a series of keys and also with means for longitudinal adjustment; and a series of bolts, forming coincident shoulders for the engagement of said keys; substantially as described.

3. A window provided with a receptacle beneath its sill; a molding-section having hinges adapted to permit its slight longitudinal movement; and means for locking and unlocking said molding-section by said longitudinal movement, substantially as described.

4. In combination with the sashes of a window, a lock consisting of a plate having a

sloping shouldered knob; a main or body portion comprising two hinged parts, the one provided with a spring to normally maintain said parts perpendicular and the other provided with a pair of pivotally-secured flanged arms, arranged to be held by springs in engagement with the shoulders of said knob, and to be disengaged by the inward movement of a push-plate; substantially as described.

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