

(Model.)

2 Sheets—Sheet 1.

A. RIPPIEN.

FASTENER FOR MEETING RAILS OF SASHES.

No. 370,560.

Patented Sept. 27, 1887.

FIG. 2.

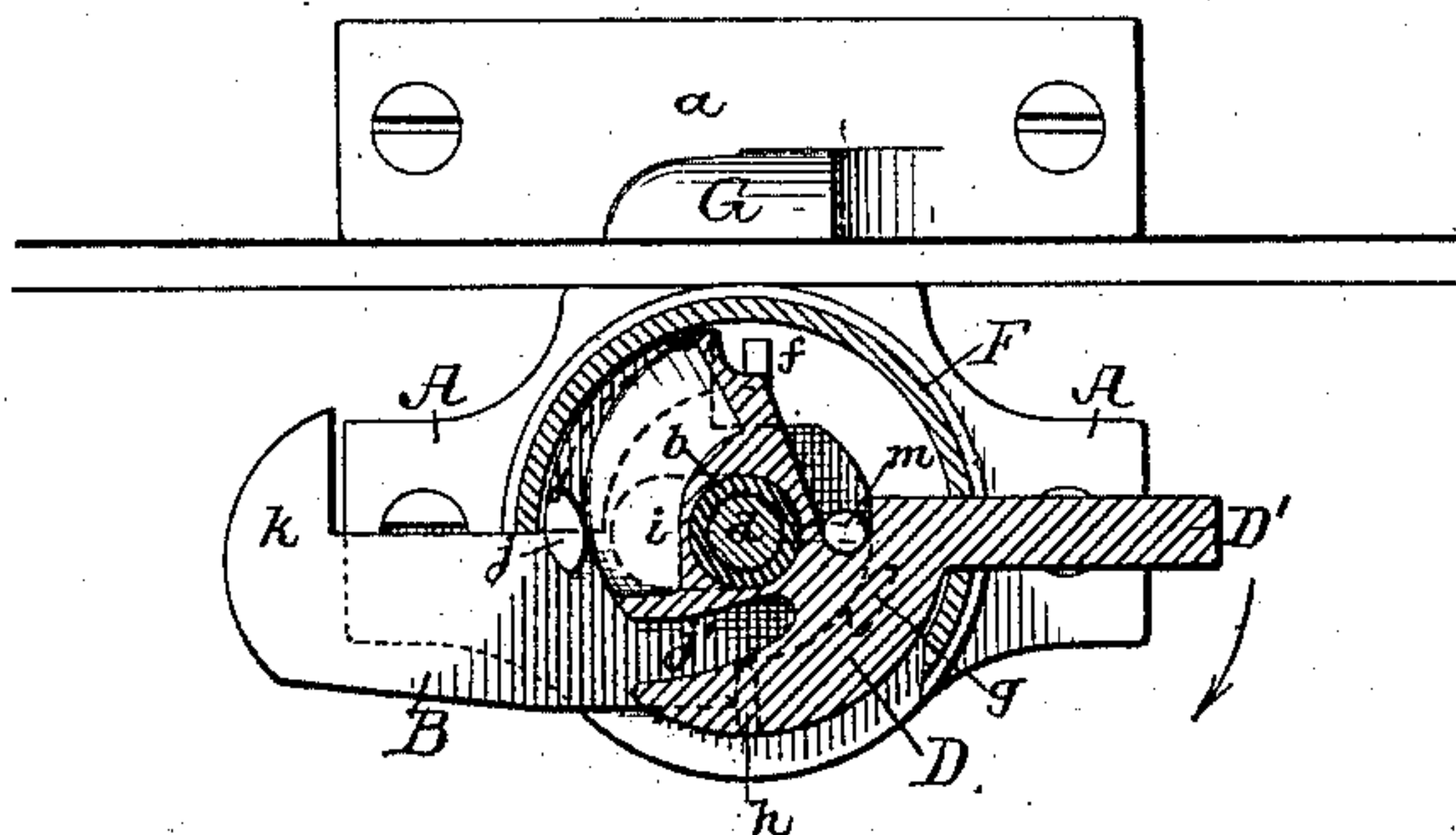


FIG. 3.

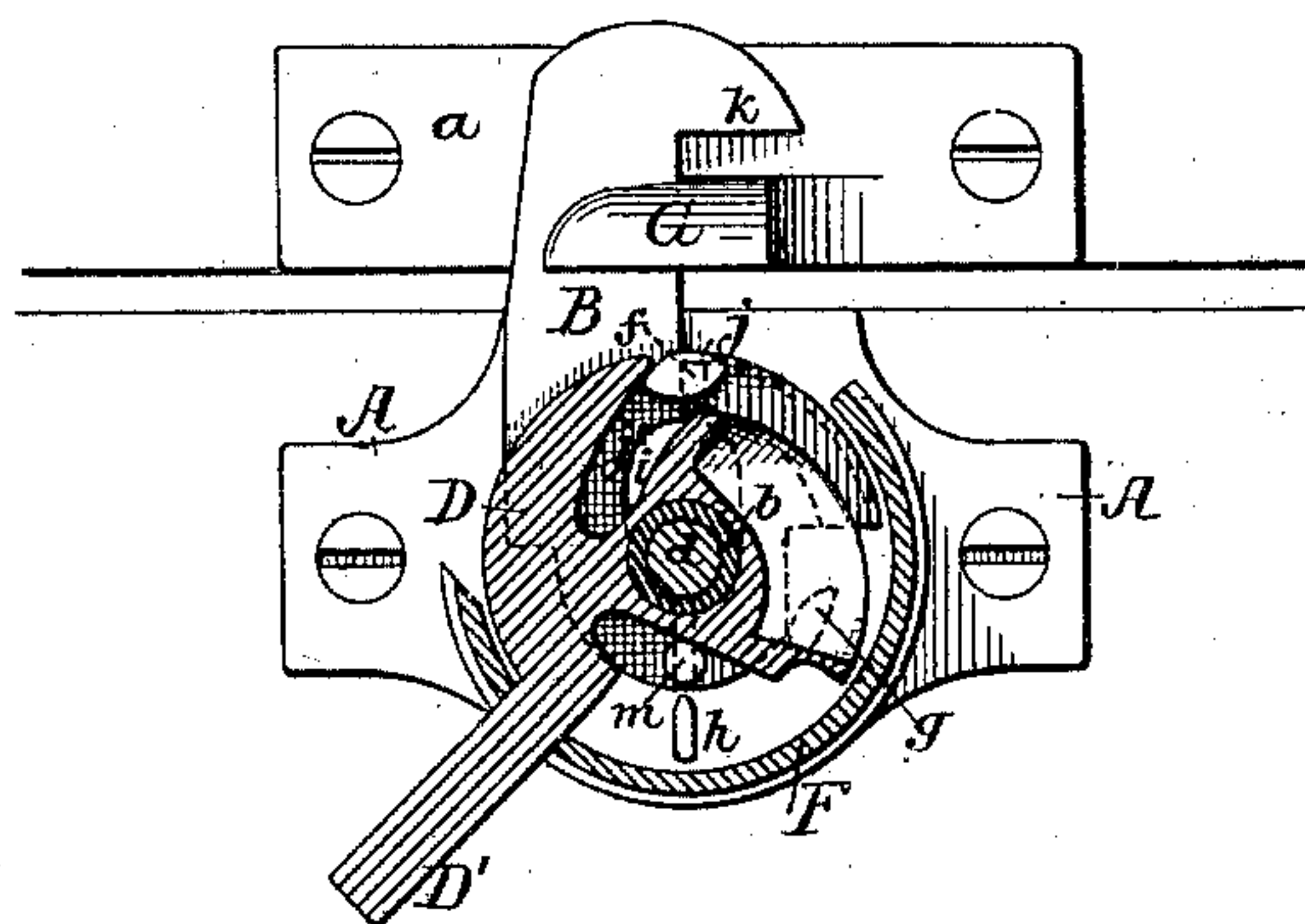


FIG. 4.

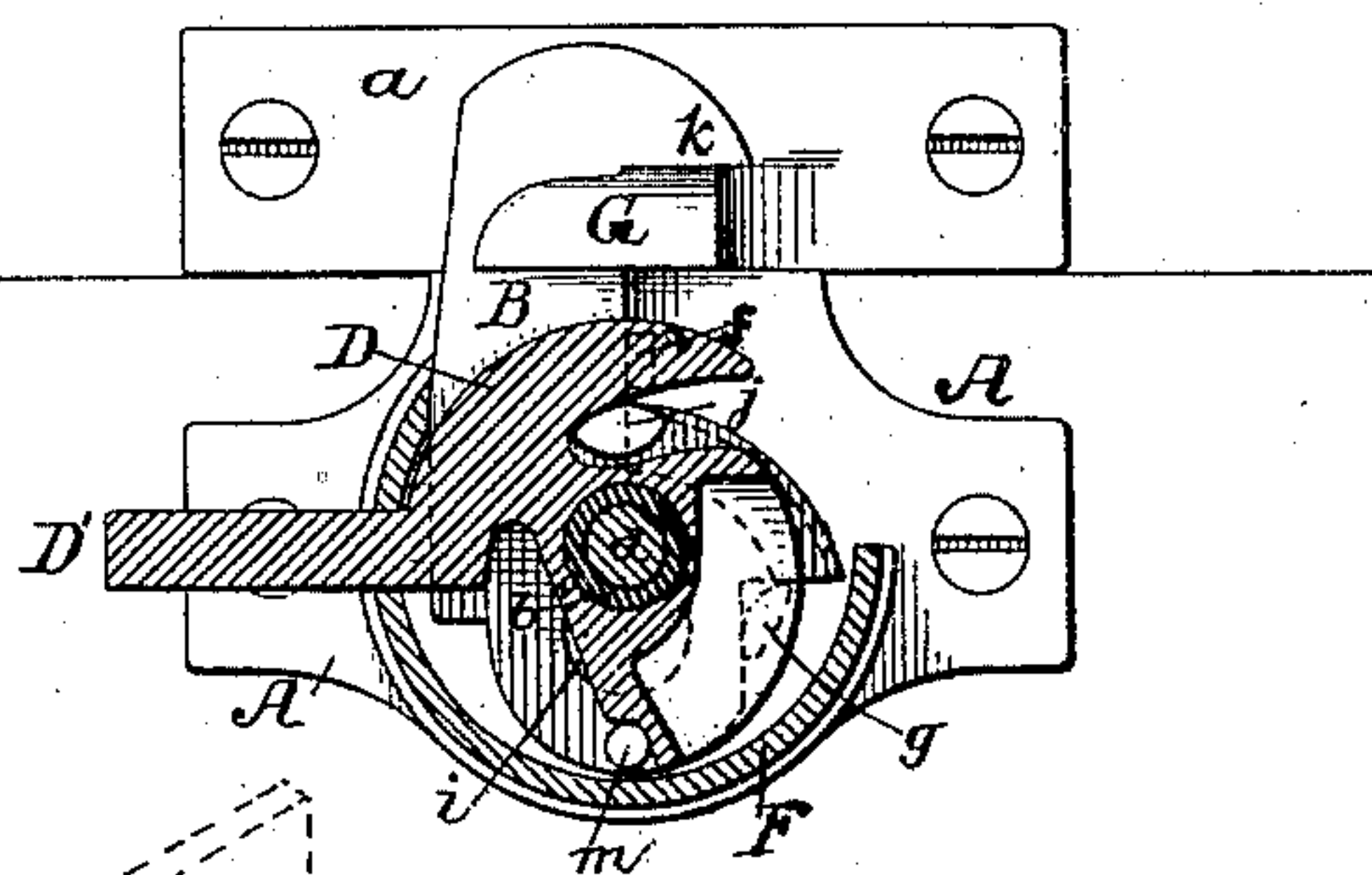
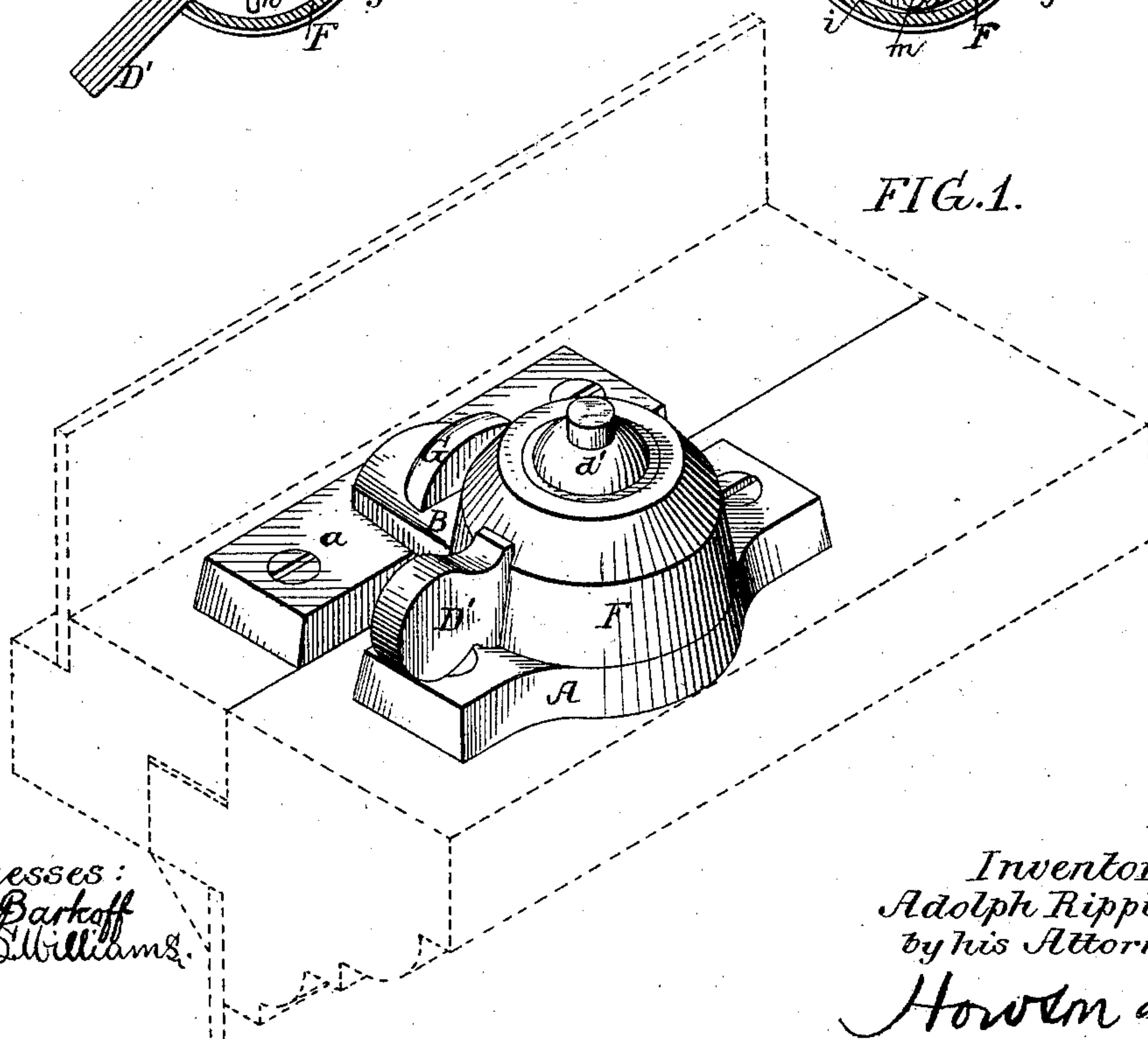


FIG. 1.



Witnesses:
Alex. Barkoff
David Williams.

Inventor:
Adolph Rippien
by his Attorneys
Howell and Low

(Model.)

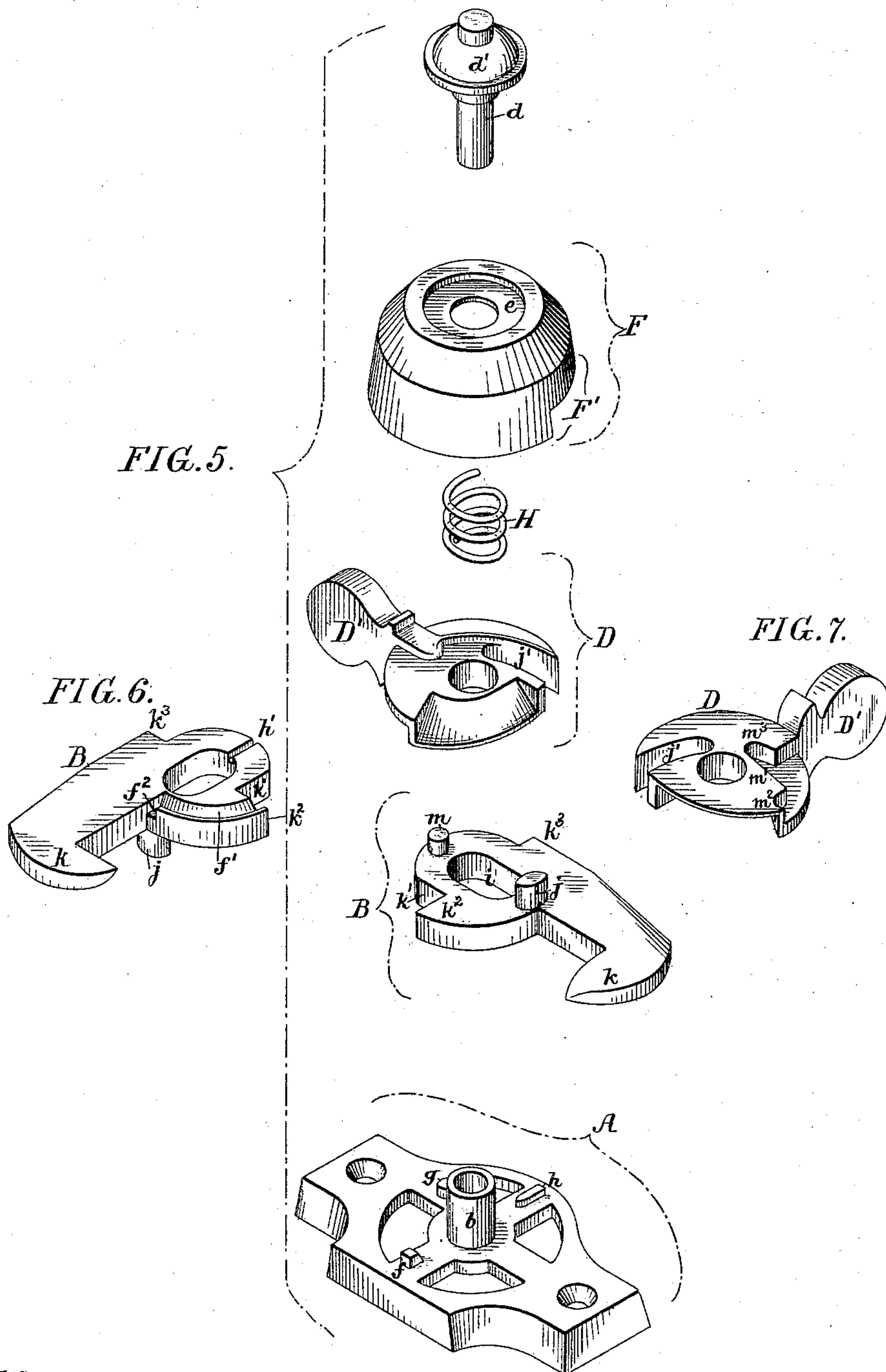
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UNITED STATES PATENT OFFICE.

ADOLPH RIPPIEN, OF READING, PENNSYLVANIA, ASSIGNOR TO THE READING HARDWARE COMPANY, OF SAME PLACE.

FASTENER FOR MEETING-RAILS OF SASHES.

SPECIFICATION forming part of Letters Patent No. 370,560, dated September 27, 1887.

Application filed February 21, 1887. Serial No. 228,333. (Model.)

To all whom it may concern:

Be it known that I, ADOLPH RIPPIEN, a citizen of the United States, residing in Reading, Berks county, Pennsylvania, have invented certain Improvements in Sash-Fasteners, of which the following is a specification.

My invention consists of certain improvements in that class of sash-fasteners in which a hooked latch-bolt on the lower sash is swung around into engagement with a hooked keeper on the upper sash, and the two are then drawn together, so as to bring the sashes into contact, said sashes being thus not only locked together, but also prevented from rattling.

My improvements comprise certain constructions and combinations of parts, fully set forth and claimed hereinafter, the results of the improvements being that the fastener presents a neat external appearance, is powerful in its action, yet easy of operation, and when in the locked position effectually prevents either the spreading apart of the sashes or the forcing back of the latch-bolt out of engagement with the keeper.

In the accompanying drawings, Figure 1 is a perspective view of my improved fastener, parts of the upper and lower sashes being shown by dotted lines. Figs. 2, 3, and 4 are sectional plan views of the fastener, showing the parts in different positions. Fig. 5 is a perspective view showing the parts of the fastener detached from each other. Fig. 6 is an inverted perspective view of the latch-bolt, and Fig. 7 is an inverted perspective view of the operating-disk.

The fastener comprises five main parts—namely, the base-plate A, latch-bolt B, cam-disk D, hood or cover F, and keeper G, the base-plate A being secured to the meeting-rail of the lower sash, and the keeper G being secured to or forming part of a plate, *a*, which is secured to the meeting-rail of the upper sash. (See Fig. 1.)

On the base-plate A is a central upwardly-projecting tubular stud, *b*, which serves as a pivot for the latch-bolt, cam-disk, and hood, a central pin or rivet, *d*, passing through this tubular stud and having a head, *d'*, which is contained in a recess, *e*, in the top of the hood,

the pin being secured to the base by riveting the lower end of the same, or by providing the same with a suitable nut or other retainer. On the base are also three studs, *f g h*, the purpose of which will be explained hereinafter.

The latch-bolt B has a projecting hook, *k*, at the outer end, shoulders *k² k³* upon opposite sides, a recess, *k'*, in one side, a central elongated slot, *i*, and lugs *j* and *m* projecting from its upper face, while in the under side of said latch-bolt is a radial groove, *h'*, and a segmental groove, *f'*, the outer wall of the latter having a notch, *f²*.

The cam-disk D has a projecting arm, *D'*, by which the manipulation of the disk is effected, and said disk has a cam-slot, *j'*, while on the under side of the disk is a beveled shoulder, *m'*, terminating at the ends in recesses *m²* and *m³*.

The hood F has in its side wall a recess for the reception of the arm *D'* of the cam-disk, and a slot, *F'*, for the projecting latch-bolt, this slot being of sufficient dimensions to permit the necessary movement of the latch-bolt. The hood, however, partakes of the rotating movement of the cam-disk. Hence this slot can be much less in dimensions than if the hood were stationary.

A spring, H, is interposed between the under side of the hood and the top of the cam-disk D, so as to press said cam-disk firmly upon the latch-bolt and the latter upon the base-plate, and thus prevent any loose fit of the parts, such as would cause them to rattle.

When the fastening is open, the parts are in the position shown in Fig. 2, and in order to close the fastening the cam-disk is turned in the direction of the arrow shown in said figure. The first effect of this movement is to cause the shoulder *m'* on the under side of the cam-disk to bear upon the lug *m* of the latch-bolt, and thereby cause the turning of said bolt with the disk, any longitudinal sliding movement of the bolt being prevented by contact of the segmental inner end of the bolt with the stud *g* on the base-plate, and also by engagement of the stud *f* on the base-plate with the segmental groove *f'* in the under side

of the latch-bolt. The rotating movement of the latch-bolt with the cam-disk continues until the projecting stem of the bolt strikes the keeper G, as shown in Fig. 3, whereupon a longitudinal-sliding movement is imparted to the bolt by reason of the action of the cam-slot j' upon the lug j , which projects from the upper side of the bolt. This longitudinal-sliding movement is permitted when the parts reach the position shown in Fig. 3, for the stud g of the base-plate is now in line with the recess k' of the bolt, the stud h is in line with the groove h' , and the stud f is in line with the notch f^2 at the end of the groove f' . When the parts reach the position shown in Fig. 4, the fastening of the sashes is completed, the longitudinal-sliding movement of the bolt after its engagement with the keeper having had the effect of drawing the meeting-rails of the sashes closely together.

Any attempt to pry the sashes apart without turning the cam-disk backward is resisted, first, by the engagement of the lug j of the bolt with the cam-slot j' of the disk, and, second, by reason of the fact that the lug m of the bolt occupies a position in the recess m^2 in the under side of the cam-disk, which recess is diametrically in line with the pivotal center of the disk, so that separation of the sashes is resisted by the full strength of the tubular pivot-stud and latch-bolt.

The turning of the latch-bolt backward, so as to free it from engagement with the keeper, is also effectually prevented by reason of the engagement of the stud h on the base-plate with the groove h' in the under side of the latch-bolt, and by the presence of the stud g in the recess k' of the bolt.

A positive stop limits the movement of the latch-bolt in either direction, and the movement of the cam-disk is likewise limited. Thus the forward-swinging movement of the latch-bolt is limited by contact of the projecting stem of the bolt with the lug f on the base, irrespective of the stop provided by the keeper G, as reliance cannot always be placed upon the latter being in proper line to serve of itself as a stop for the bolt.

The inward-sliding movement of the bolt is restricted by contact of the shoulder k^2 with the stud g on the base, and the outward-sliding movement is restricted by the contact of the stud f of the base with the inner wall of the segmental groove f' of the latch-bolt, while the backward-swinging movement of said bolt is restricted by contact of the shoulder k^3 of the same with the stud h on the base. The forward movement of the cam-disk D is restricted by the lugs j and m of the bolt, which respectively enter the slot j' and recess m^2 , the contact of the side wall of the hood F with the back of the latch-bolt stem also serving to restrict this movement, while backward movement of the cam-disk is arrested by the stud m entering the recess m^3 in the under side of the disk, and by the contact of the side wall

of the hood with the front of the latch-bolt stem.

The hood F constitutes an important feature of my improved fastener, as it covers, protects, and conceals the working parts of the fastener, and, as it is a separate piece, it is susceptible of being turned in a lathe and polished or otherwise ornamented, so as to impart a neat and attractive appearance to the fastener.

Strength, stability, durability, and ease of operation also characterize my improved fastener, owing to the precautions which I have taken for keeping the latch-bolt properly centered during its swinging movement, to the fact that each movement is effected by a special cam, and because positive stops are employed to limit the movement of both the latch-bolt and cam-disk and to prevent either the longitudinal or swinging movement of the bolt without the operation of said cam-disk.

I claim as my invention—

1. The combination, in a sash-fastener, of the base-plate, the latch-bolt, and the cam-disk, with a revolving hood which covers and protects the cam-disk and the hub of the bolt, said hood being separate from the cam-disk and bolt and being slotted for the reception of the projecting stem of the bolt and the projecting arm of the cam-disk, all substantially as specified.

2. The combination of the base-plate having studs f and g , with the latch-bolt having a segmental end for bearing against the stud g , a segmental groove for the reception of the stud f , and a notch through which said stud can enter or leave the groove, all substantially as specified.

3. The combination of the base-plate having a pivot-stud, the latch-bolt having an elongated slot for the reception of said stud and having two projecting lugs upon its upper face, and the cam-disk having a shoulder for acting upon one of said lugs to turn the bolt, and a cam-slot for acting upon the other lug to impart a longitudinal sliding movement to the bolt, all substantially as specified.

4. The combination of the base-plate having a pivot-stud, the latch-bolt having an elongated slot for the reception of said stud and having projecting lugs upon its upper face, and the cam-disk having a slot for acting upon one lug to move the bolt longitudinally, and a shoulder which acts upon the other lug to turn the bolt and terminates in a recess for the reception of said lug when the turning movement is completed, all substantially as specified.

5. The combination of the base-plate having a pivot-stud, the locking-bolt having an elongated slot for the reception of said stud and having projecting lugs upon its upper face, and the cam-disk having a slot for acting upon one lug to move the bolt longitudinally and a shoulder for acting upon the other lug to turn the bolt, said shoulder ter-

minating at its opposite ends in recesses, one of which receives the lug when the disk has reached the limit of its movement in one direction, the other receiving the lug when the
5 disk has reached the limit of its movement in the opposite direction, all substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ADOLPH RIPPIEN.

Witnesses:

F. PIERCE HUMMEL,
GARRETT B. STEVENS.