

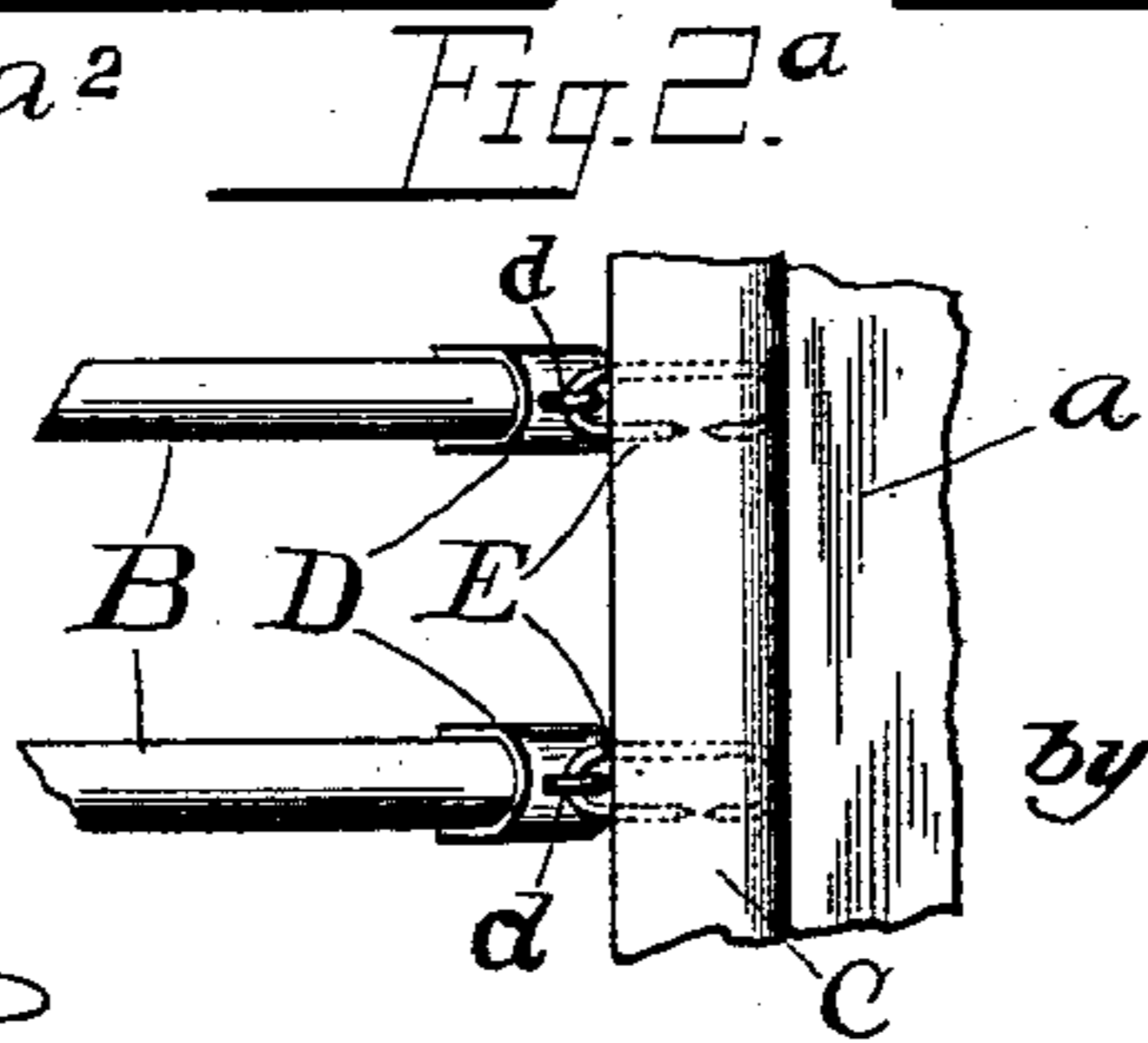
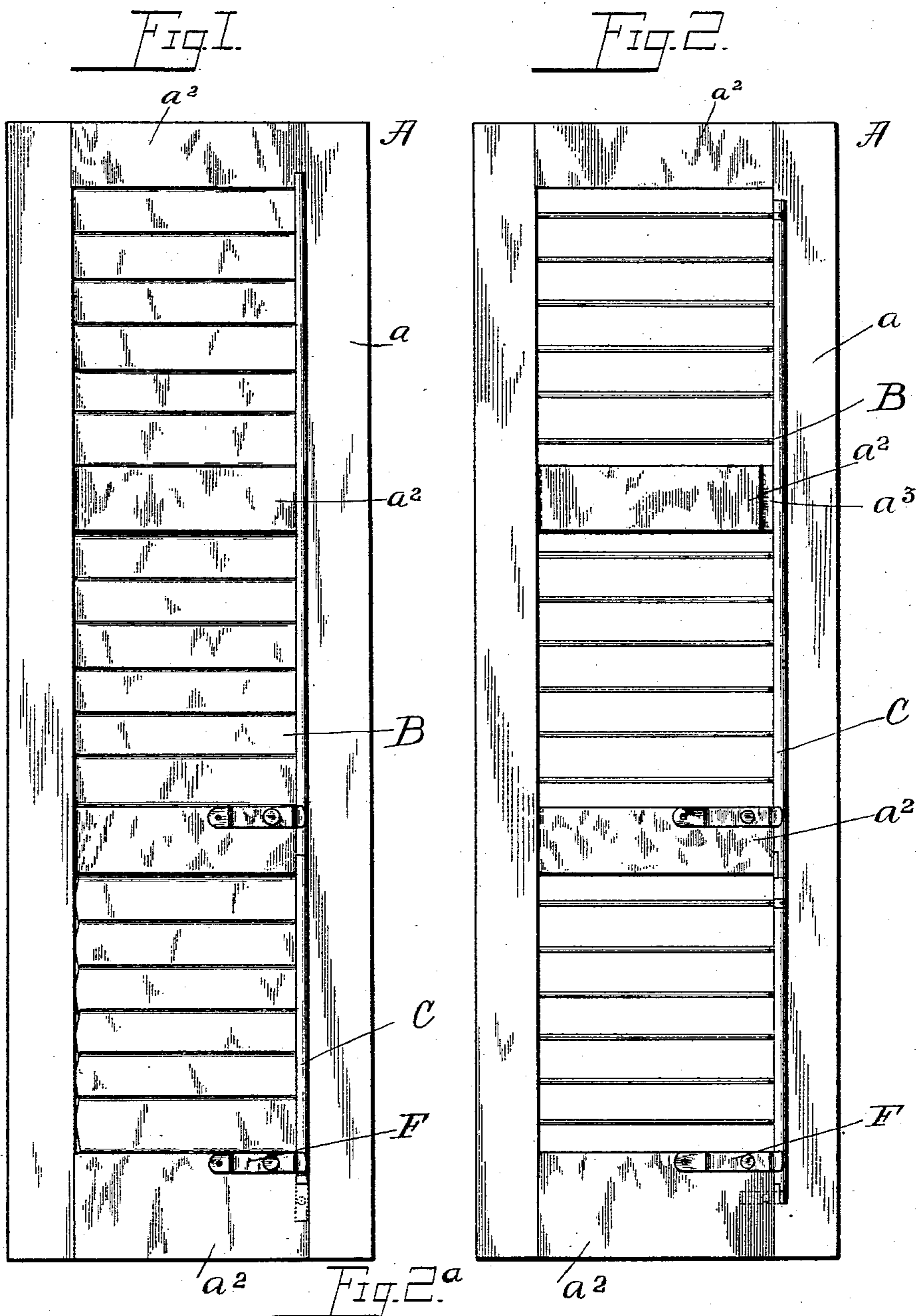
(No Model.)

2 Sheets—Sheet 1.

W. E. ANDREW.
BLIND FOR WINDOWS.

No. 572,045.

Patented Nov. 24, 1896.



Witnesses:

H. S. Galt.
R. H. Ewing.

Inventor:
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by
A. J. Dyrenforth,
his attorney.

(No Model.)

2 Sheets—Sheet 2.

W. E. ANDREW.
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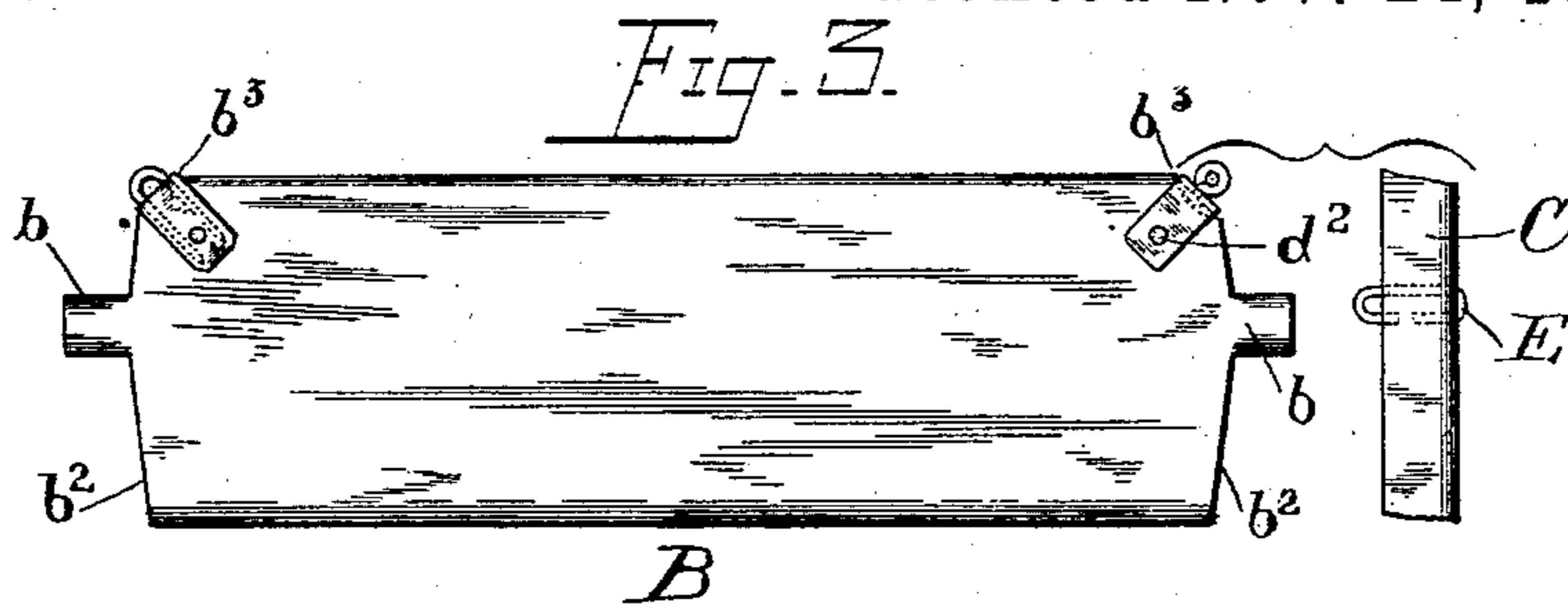


Fig. 4.

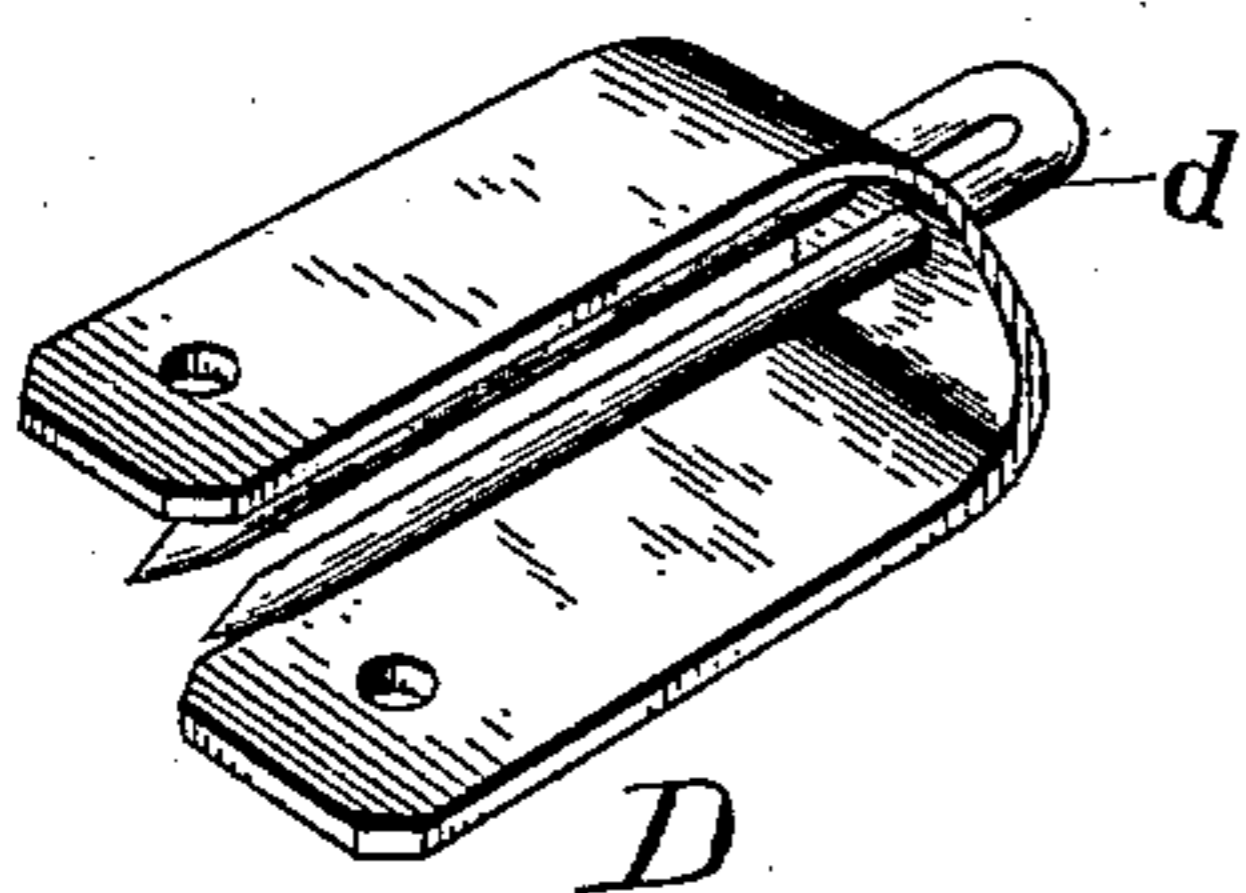


Fig. 5.

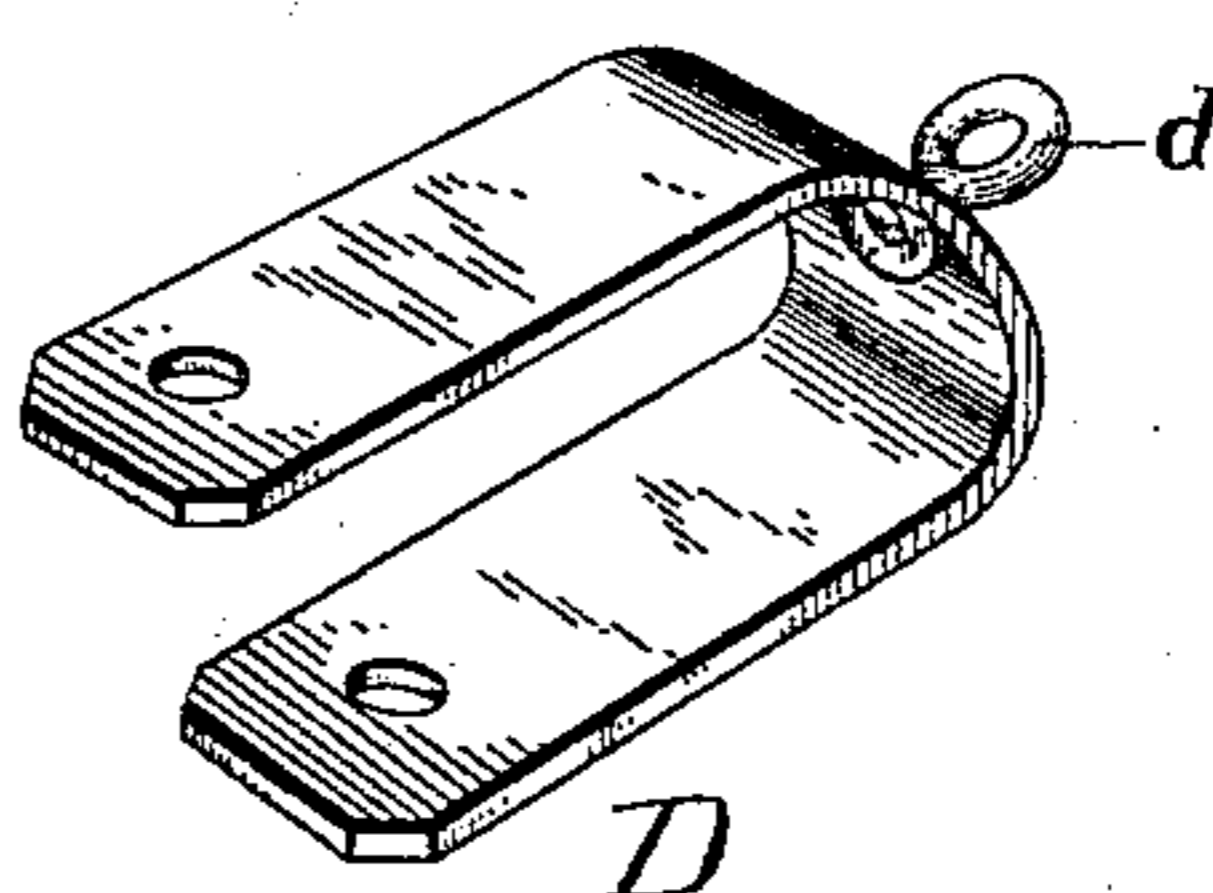


Fig. 6.

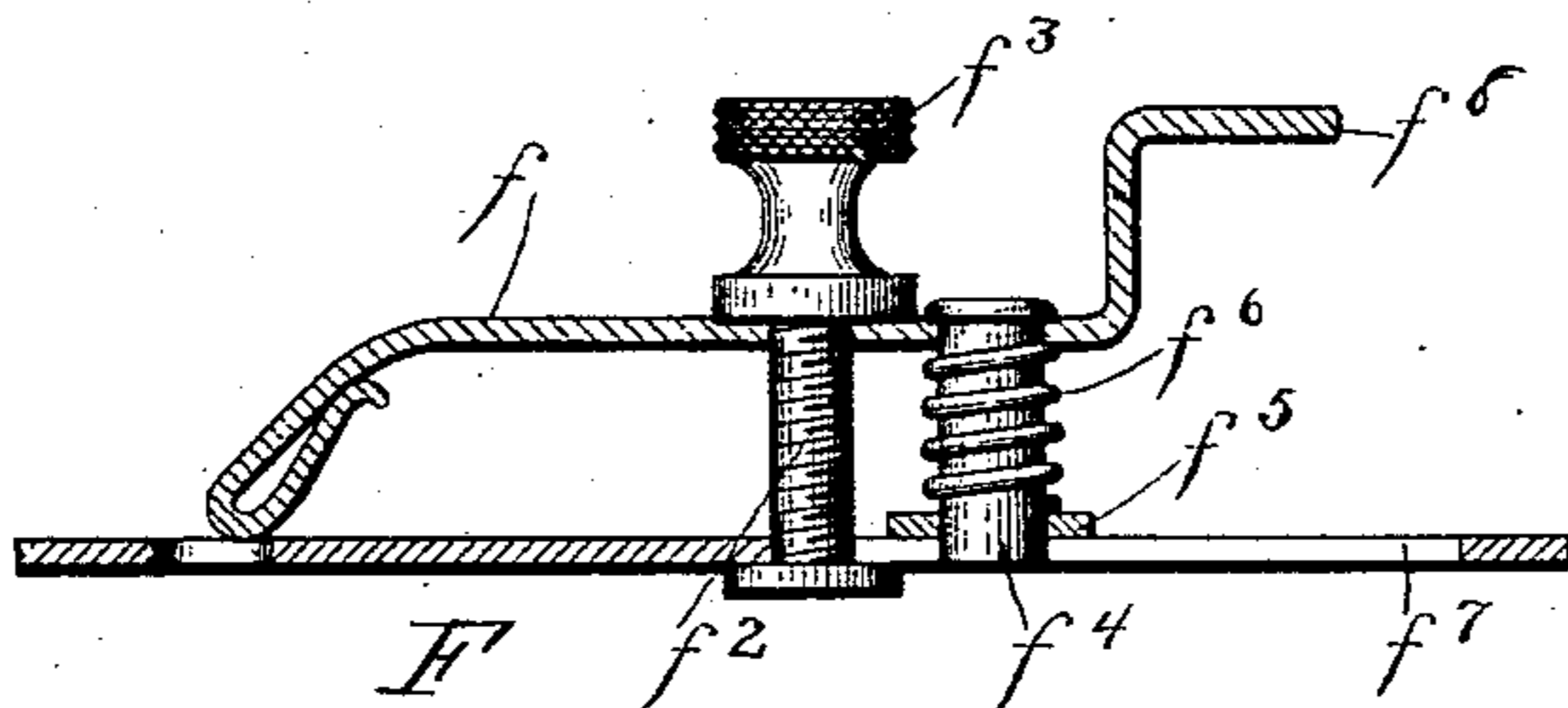


Fig. 7.

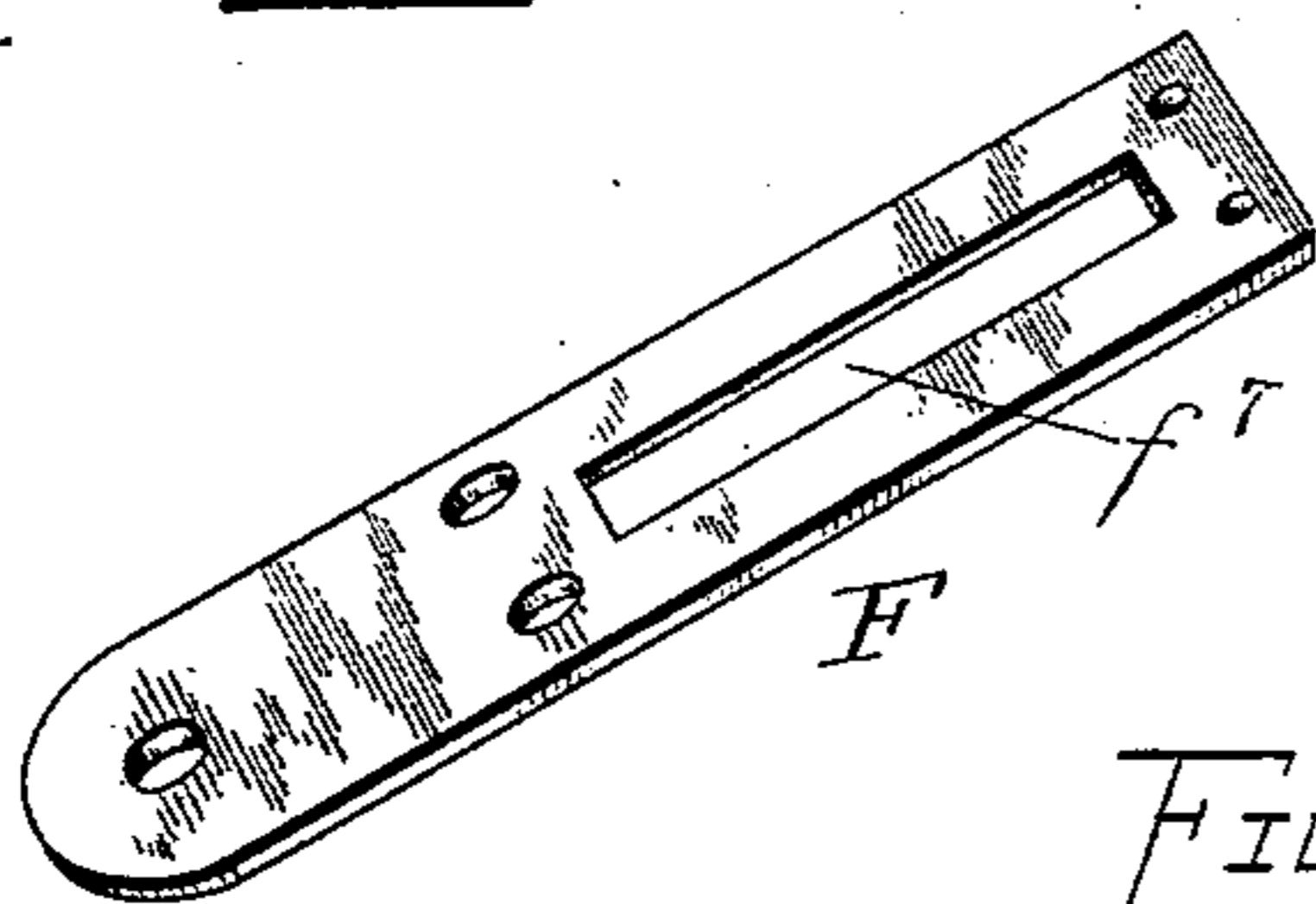


Fig. 8.

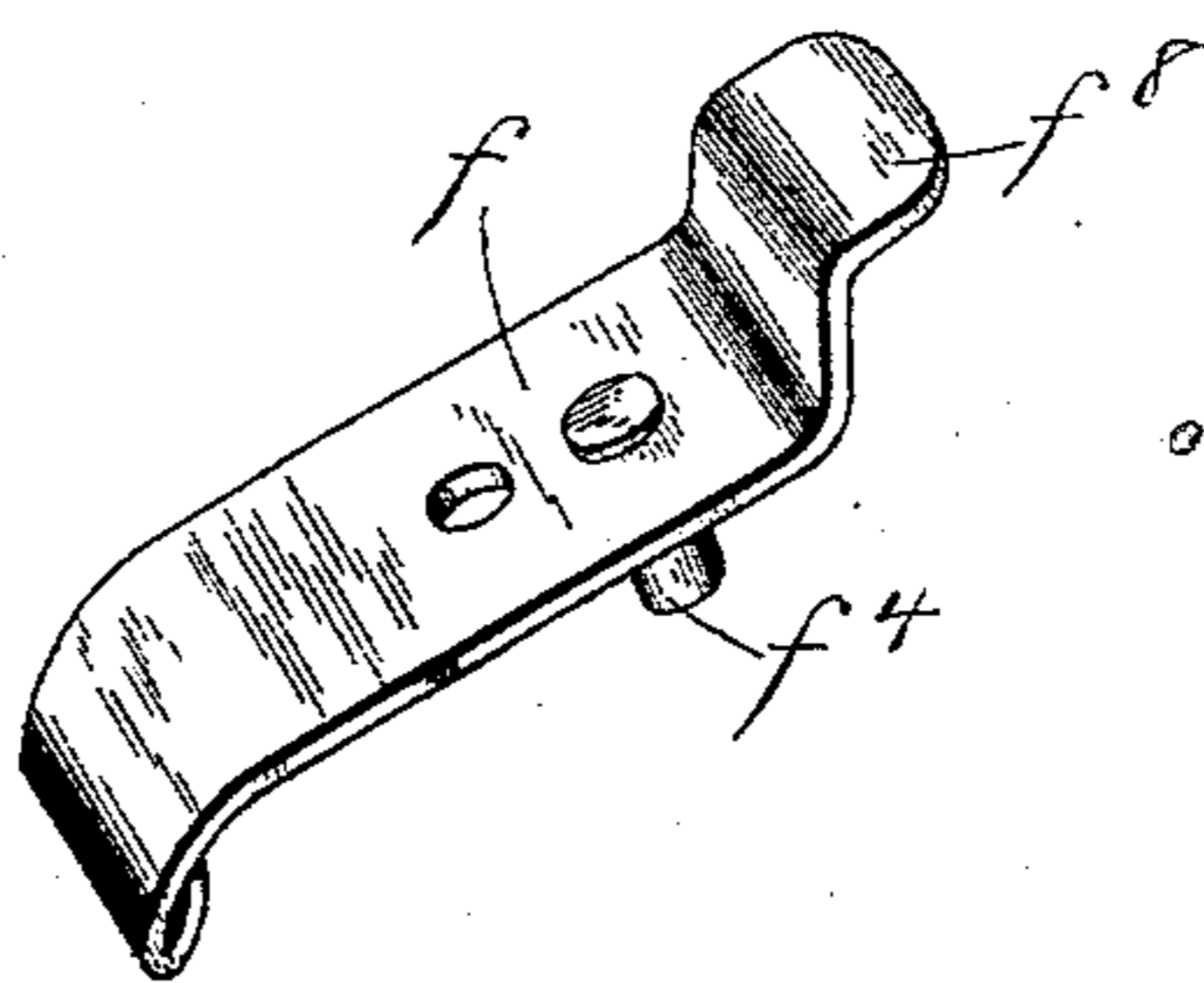


Fig. 9.

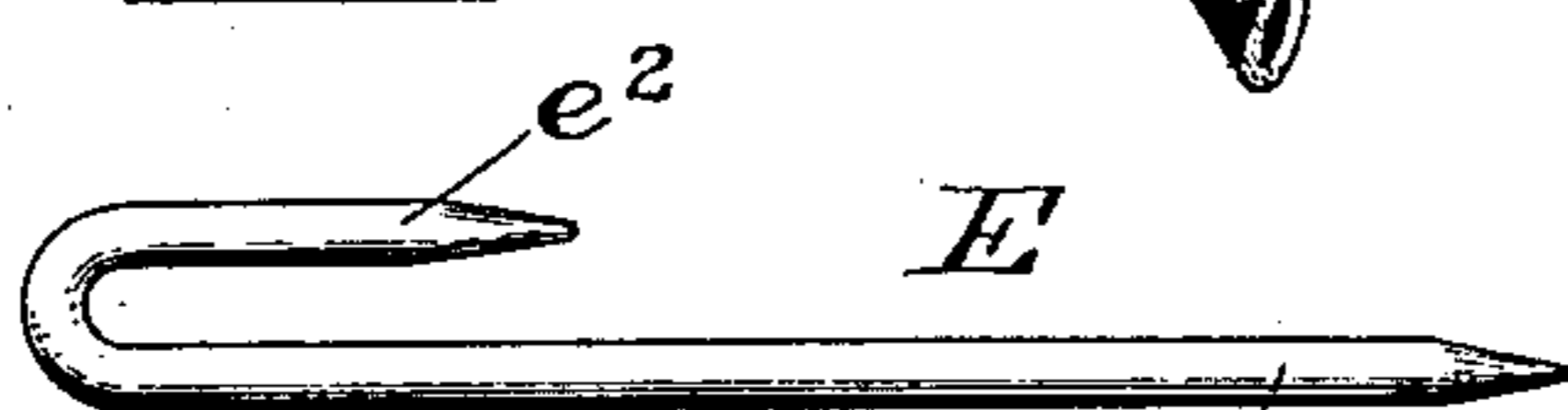
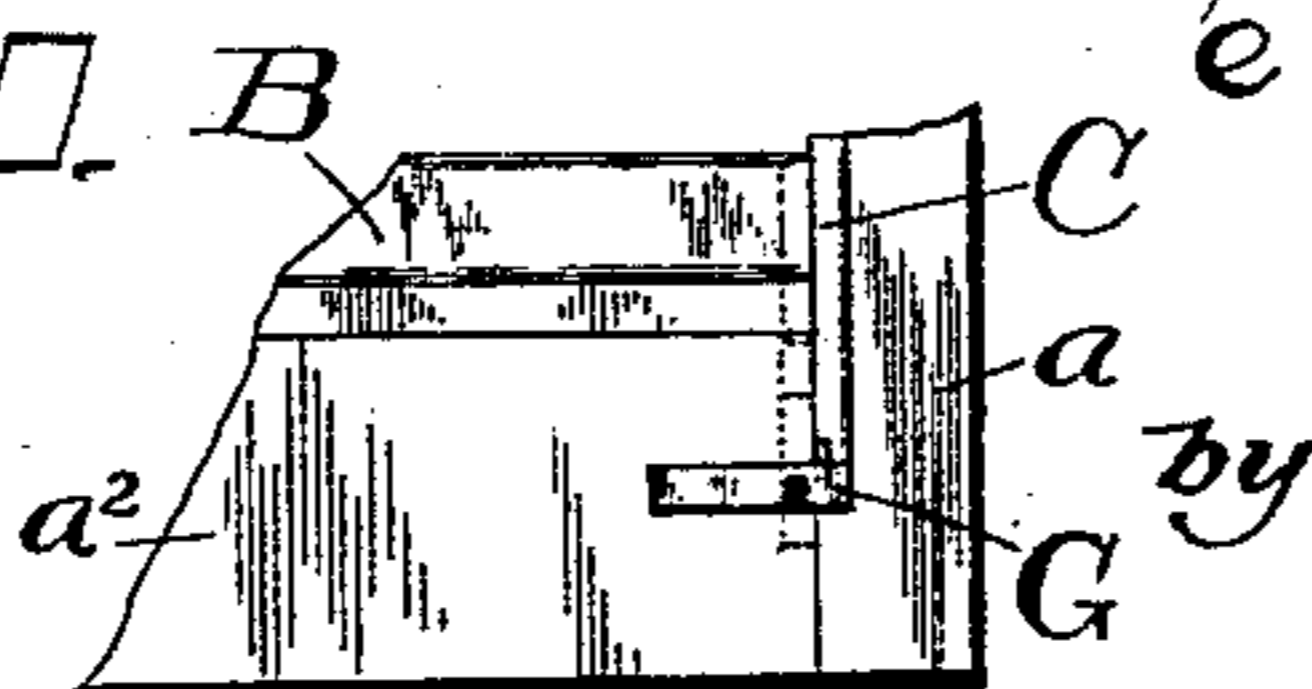


Fig. 10.



Witnesses:

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Inventor:

W. E. Andrew,

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his attorney.

UNITED STATES PATENT OFFICE.

WILLIAM E. ANDREW, OF ATLANTIC HIGHLANDS, NEW JERSEY.

BLIND FOR WINDOWS.

SPECIFICATION forming part of Letters Patent No. 572,045, dated November 24, 1896.

Application filed January 30, 1896. Serial No. 577,408. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. ANDREW, a citizen of the United States, residing at Atlantic Highlands, in the county of Monmouth and State of New Jersey, have invented certain new and useful Improvements in Shutters or Blinds for Windows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to blinds for windows.

The object is to combine the slats and the slat-connecting bar in such manner that upon closing the slats the line of draft upon the rod will be lateral and turn the same into position; furthermore, to produce a blind in which the slats may be adjusted to any desired angle and then be securely fixed against accidental movement, whereby the admission of light and air to a room may be regulated at will and any tendency to rattling of the slats will be effectually overcome; furthermore, to provide a novel form of fastening for connecting the slat-connecting rod and the slats, the fastening being of such a nature as to reinforce the slat against splitting and also to hold the staple securely in place, and, finally, to provide a novel form of latch for locking the slats at the desired adjustment.

With these objects in view the invention consists in the novel construction and combination of parts of a blind, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like letters of reference indicate corresponding parts, I have illustrated one form of embodiment of my invention, together with modified forms of certain parts thereof, although it is to be understood that other forms of embodiment thereof may be employed without departing from the spirit of the same, and in these drawings—

Figure 1 is a view in elevation of my improved blind, showing the slats closed and a latch in locked engagement with the slat-connecting rods or bars, the two upper sections of the slats being of the ordinary construction and connected by a single rod and the lower section of slats being of a peculiar con-

struction to prevent binding or sticking, as from paint, and operated by a separate connecting-rod, showing also in dotted lines an alternative form of fastening device. Fig. 2 is a similar view showing the slats opened and the slat-connecting bars turned over against one of the stiles of the frame, with the fastening devices also in locked engagement with the said bars. Fig. 2^a is an enlarged detail view of a portion of the frame, showing more clearly the connection between the slat-connecting rod and the slats. Fig. 3 is a detached detail view of one of the slats, displaying at the left-hand end a reinforcing-plate secured to the corner of the slat and an ordinary staple driven through the plate and into the slat, by which staple connection with the slat-connecting bar is effected, and at the right-hand end an alternative form of connection comprising a plate adapted to be secured to the corner of the slat and an eye swiveled to the plate to engage a staple on the connecting-bar. Fig. 4 is an enlarged detail view of the form of connection shown at the left-hand end of the slat shown in Fig. 3. Fig. 5 is an enlarged detail view of the form of connection shown at the right-hand end of the slat shown in Fig. 3. Fig. 6 is a longitudinal sectional view of one form of locking-latch. Figs. 7 and 8 are detail views of parts of this latch. Fig. 9 is a detail view of a preferred form of staple used for connecting the bar and the slats. Fig. 10 is a view in detail of the lower corner portion of the blind, showing one of many other forms of fastening device that may be employed in lieu of the latch shown in Figs. 6, 7, and 8, the opened position of the connecting-bar being shown in full lines and its closed position in dotted lines.

Referring to the drawings, A designates the frame of an ordinary blind comprising side stiles *a* and cross-pieces *a*², of which latter there are four shown in this instance, although it is to be understood that a greater or a less number may be employed, as the requirements of the case may demand.

Mounted between the stiles in the ordinary manner are the slats B, which may be of any preferred construction and of any suitable material; but preferably, in this instance, the structural arrangement of the slats is such as effectually to prevent any sticking or bind-

ing of the slats between the stiles, as from moisture or from an accumulation of paint around the supporting-pintles *b*. To accomplish this, the ends of the slats are inclined in opposite directions away from the pintles in order that when the slats are in position between the stiles the shoulders formed by these inclines adjacent to the pintles will contact with the inner walls of the stiles, and as the bearing-surfaces thus in contact are small and are close to the pintles it follows that if the slats should stick, as from an accumulation of paint, they may readily be loosened without danger of breaking or splitting the slats or of loosening the staples by which they are connected to the connecting-bar *C*. The common practice of having the pintles *b* to bear against the end walls of the openings in the stiles, in order to prevent an accumulation of paint at those points from causing the pintles to become paint-bound, has proven by experience to be ineffective and practically useless; but by my peculiar manner of constructing the ends of the slats any sticking or binding will be effectually overcome and their free and proper working will be assured at all times. It is to be understood, however, that in some instances, as, for example, where the slats are of hard wood that will not require painting, the ends of the slats may be made straight, as usual.

In Fig. 1 the slats are shown as arranged in three sections, the two upper sections of the slats having their ends straight and the lower section having its ends inclined in the manner just described. This is done to avoid unnecessary illustration, as it will be understood that the slats of all three sections may have their ends inclined or straight, as preferred.

The pintles *b*, by which the slats are held in working position between the stiles, are arranged to one side of a straight line drawn through the center of the slat, so that the slats are eccentrically hung in place. In mounting this form of slat between the stiles the shortest sides of the slats are located on the inside of the blind and the slat-connecting bar *C* is secured to these shorter sides, and by this arrangement the slats may be easily opened and closed with a shorter movement of the connecting-bar than if the slats were centrally hung; but it is to be understood, however, that if preferred the slats may be mounted in the ordinary manner—that is to say, with the pintles arranged at the center of the width of the slats. The connecting-bar *C* instead of being secured to the slats at their centers is secured to the upper corner of each of the slats, as shown in Figs. 1, 2, and 3.

The connection between the bar and the slats may be effected by means of the ordinary staple usually employed; but as a matter of specific improvement I have devised a special form of connection by which splitting

of the slat and the pulling out of the staple are effectually prevented. These results may be accomplished as shown in Figs. 4 and 5. In Fig. 4 the staple *d* is shown as passed through a plate or strap *D*, which is secured to the corner of the slat and is bent to embrace both sides thereof, a rivet *d*² or the like, passed through the plate and slat, serving to hold the latter securely in place. The plate is set at an angle to the length of the slat in order that any strain to which the staple and plate may be subjected will be distributed across the grain of the wood instead of with the grain, whereby any tendency to splitting will be overcome. In some instances, however, the plate may be arranged parallel with the length of the slat and be made to operate satisfactorily.

Instead of having the staple independent of the plate, as shown in Fig. 4, the staple may be swiveled thereto, as shown in Fig. 5, or, in some instances, the staple may be secured to the plate by having the ends of its limbs upset.

As shown in Figs. 2^a and 3, the corner of the slat to which the connecting-bar *C* is connected is cut away, as at *b*³, to permit of a close union between the slats and the bar in order that when the slats are closed the under surface of the bar will bear upon these cut-away portions and thereby prevent the contact between the edges of the slats, by which all danger of any sticking of the slats when newly painted will be obviated. If, however, it is desired that the slats should touch when closed, the staple connection between the bar and the slats will be lengthened.

The staple *E* for securing the slats and the bar *C* together may be of the usual form; but for the purpose of effecting a strong and efficient connection between these parts the staple is constructed with a long arm or limb *e* and a short arm *e*², the long arm being driven entirely through the connecting-bar, then turned upon itself and again driven into the bar, so that when seated it forms approximately a link with its two sides and one end embedded in the wood of the slat, as indicated by dotted lines in Fig. 2^a and to the right of Fig. 3.

It will be seen that this manner of securing the staple in place in the bar is an exceedingly simple and effective one, and that it will remain intact and seated and resist a greater amount of strain than would be possible if the ordinary U-shaped staple were employed. These peculiar forms of staples for connecting the slats and the bar permit of the bar being turned over and against one of the stiles when the slats are open, by which arrangement the slats may be held at any desired angle of adjustment, so as to permit of the easy regulation of the amount of air or light admitted to a room. In order that the bar may lie in or nearly in the same plane with that of the stile when the slats are closed,

one or more of the cross-pieces of the sections may have a recess, as at a^3 , in which the bar rests when the slats are closed.

As a means for preventing rattling, and also for locking the slats in either their closed or opened position, any suitable fastening device, such as a button or the like, may be employed, an embodiment of one form that may be used in this connection being shown in Figs. 6, 7, and 8. This latch comprises a base-plate F, adapted to be secured to a suitable part of the blind, a slidable clamping-plate f , a screw f^2 , carrying a binding-nut f^3 , a guide-post f^4 , a plate f^5 , and a spring f^6 on the post. The plate F is provided with a longitudinally-disposed slot f^7 , in which works the screw f^2 and guide-post f^4 , the spring f^6 operating to force the plate f against the base of the nut f^3 , and thereby cause the hook end f^8 of the clamping-plate to move away from the bar C as the nut f^3 is loosened. The end of the clamping-plate opposite the hook end f^8 is bent downward and bears upon the base-plate F, so that any tendency on the part of the clamping-plate to rock or shift will be overcome. Instead of employing the form of latch shown in Figs. 6, 7, and 8 an ordinary turn-button or cleat G may, in some instances, be employed, as shown in Fig. 10. When the slats are closed, one end of the button is turned under the end of the rod C, as indicated by dotted lines in Fig. 10, and when the slats are opened the button is turned at right angles to the position occupied when the slats are closed, and by bearing upon the top of the bar holds it securely locked in place.

It is to be understood that the peculiar manner of arranging the bar C, so as to permit of its being turned or rocked to one side to lock the slats in their opened position, is applicable to metallic shutters; also, that other forms of fastening devices may be employed in lieu of the forms shown, and be secured on the frame at other points than those indicated in the drawings.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A blind having a corner of each of its slats cut away, in combination with a connecting-bar secured to the slats at these corners and bearing thereon when the slats are

closed, whereby the slats will be held out of contact with each other, substantially as described.

2. In a blind, the combination with the slats, of a connecting-bar secured thereto at their corners and within the general rectangular outline of the slats and adapted to bear thereon when closed to prevent rattling, and, when opened, to bear against a stile of the blind-frame and to move thereon to effect the desired adjustment of the slats, substantially as described.

3. In a blind, the combination with the slats, of a connecting-bar secured thereto at their corners and within the general rectangular outline of the slats and adapted to bear thereon when closed to prevent rattling, and, when opened, to bear against a stile of the blind-frame and to move thereon to effect the desired adjustment of the slats, and means for holding the rod in its adjusted position, substantially as described.

4. A blind having a corner of each of its slats cut away, a reinforcing band or plate secured to the slat over this cut-away portion, and a staple passed through the band or plate, in combination with a connecting-bar having staples engaging the staples of the slats, substantially as described.

5. In a blind, the combination with the slats, of a reinforcing band or plate secured to one of the corners of each of the slats and extending diagonally of the width thereof, staples passed through the plates, and a connecting-rod having staples engaging those of the slats, substantially as described.

6. A blind-slat having one of its corners reinforced by a diagonally-disposed plate through which is passed a staple, substantially as described.

7. A blind-slat having one of its corners cut away, in combination with a diagonally-disposed plate secured over the cut-away portion, and a staple passed through the plate, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM E. ANDREW.

Witnesses:

R. G. DYRENFORTH,
E. H. PARRY.