

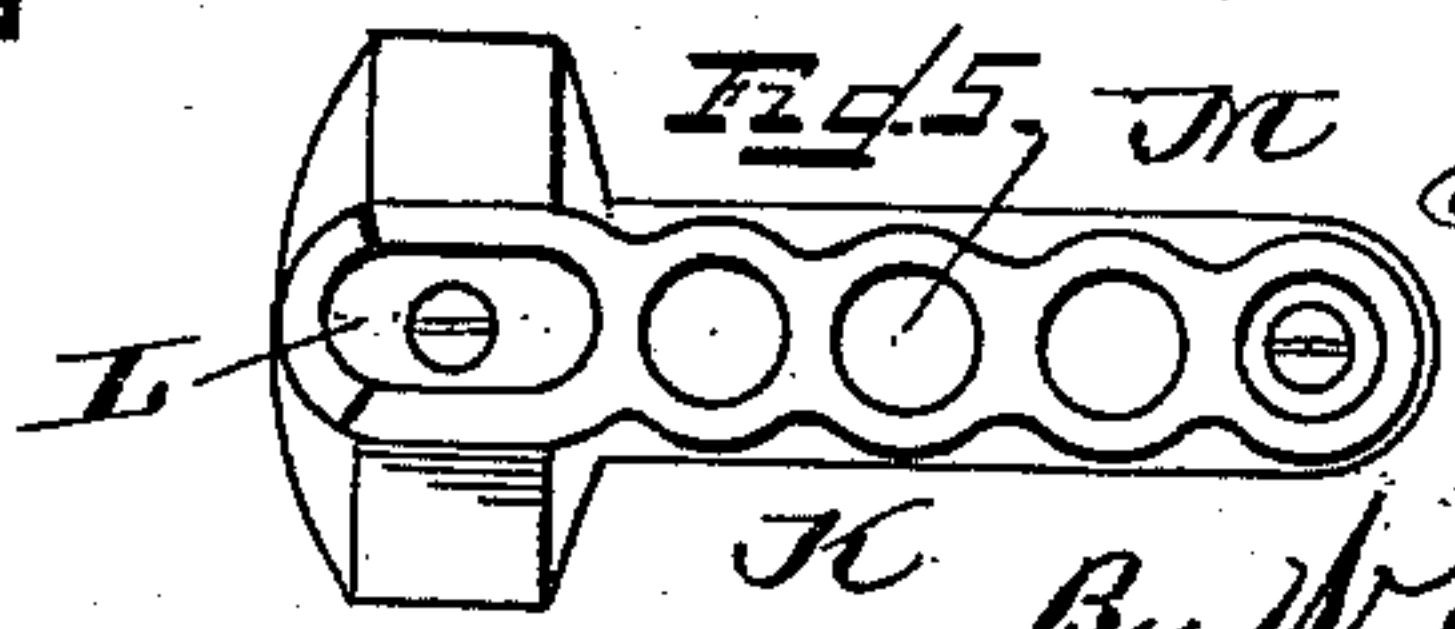
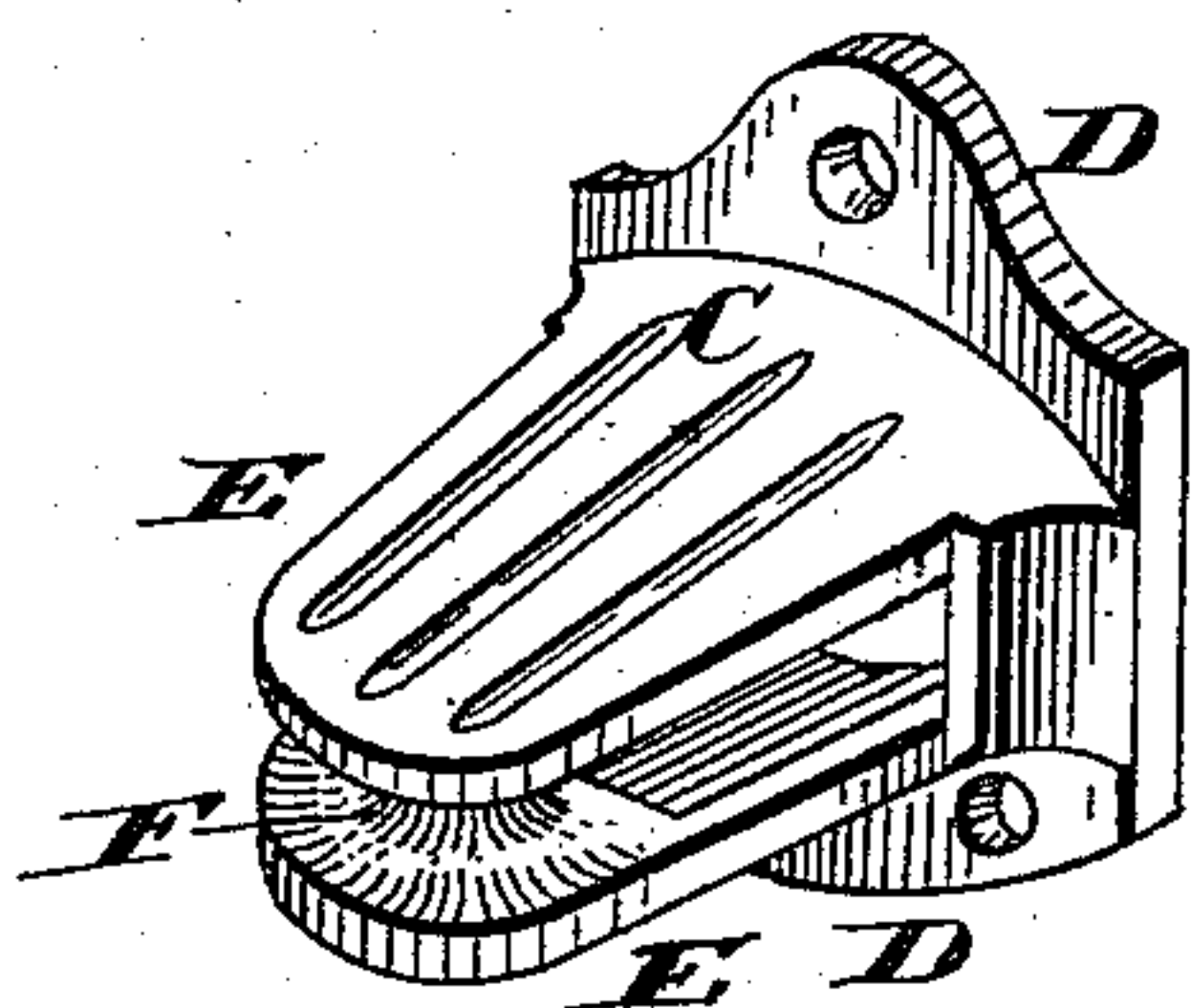
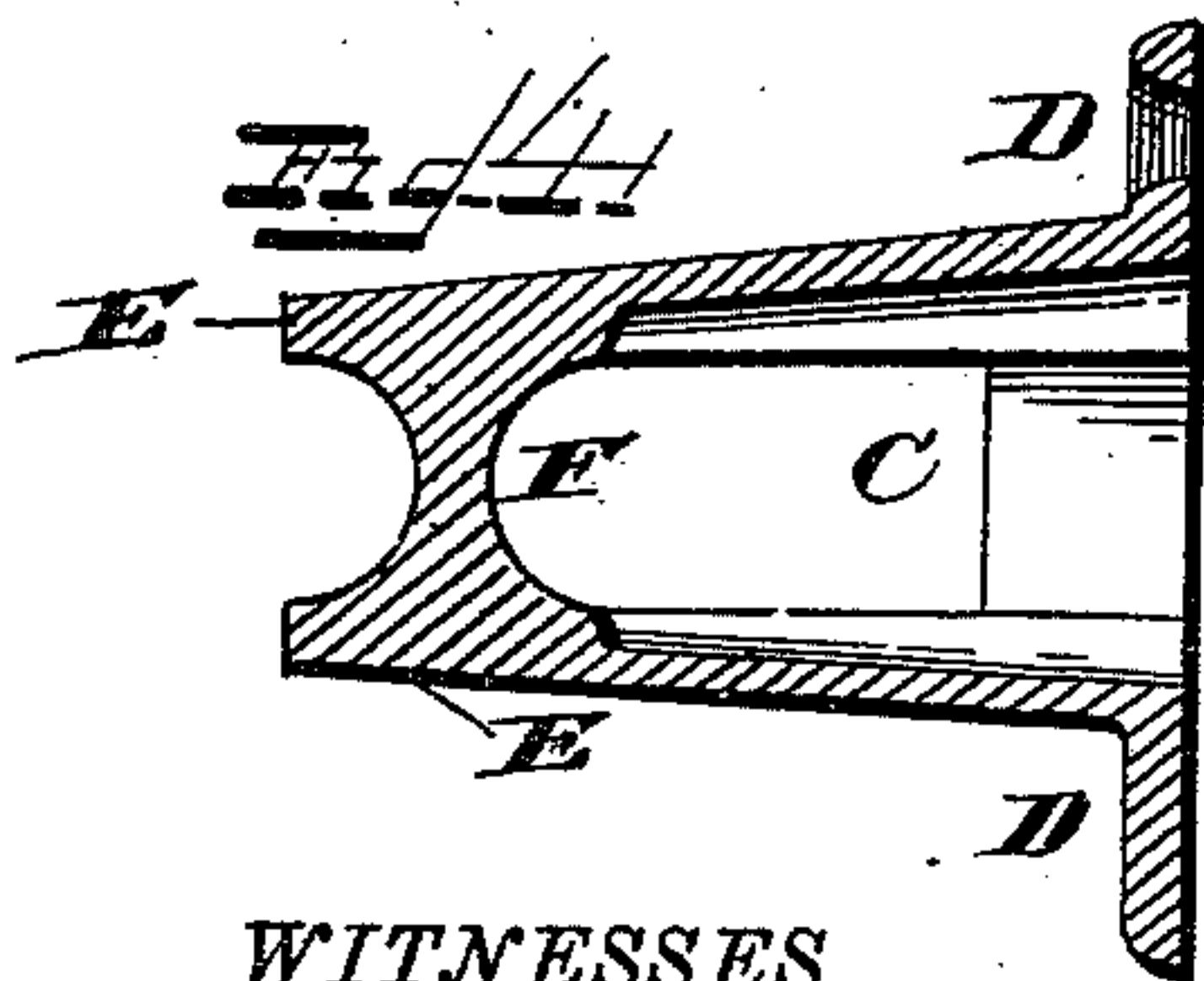
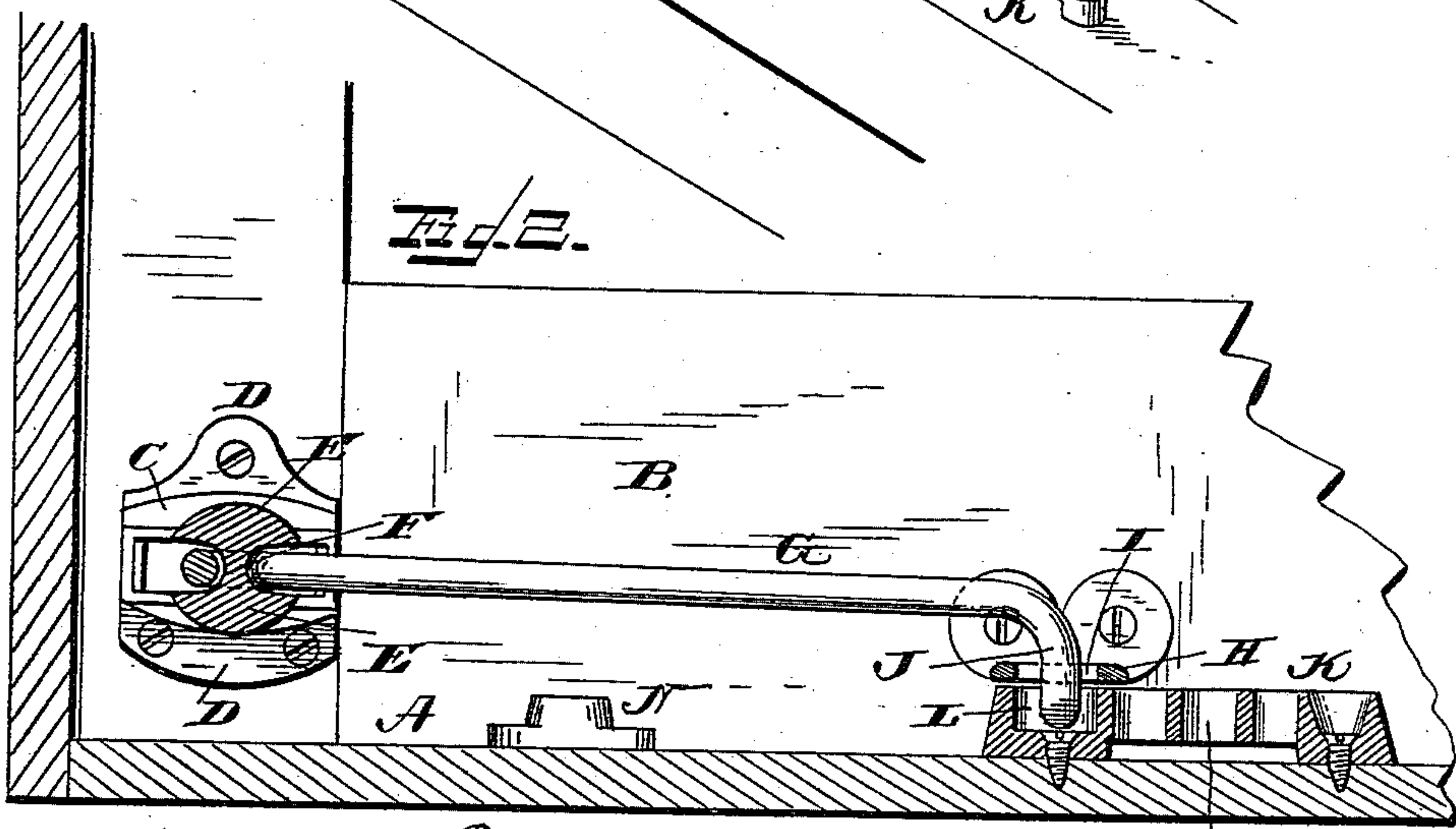
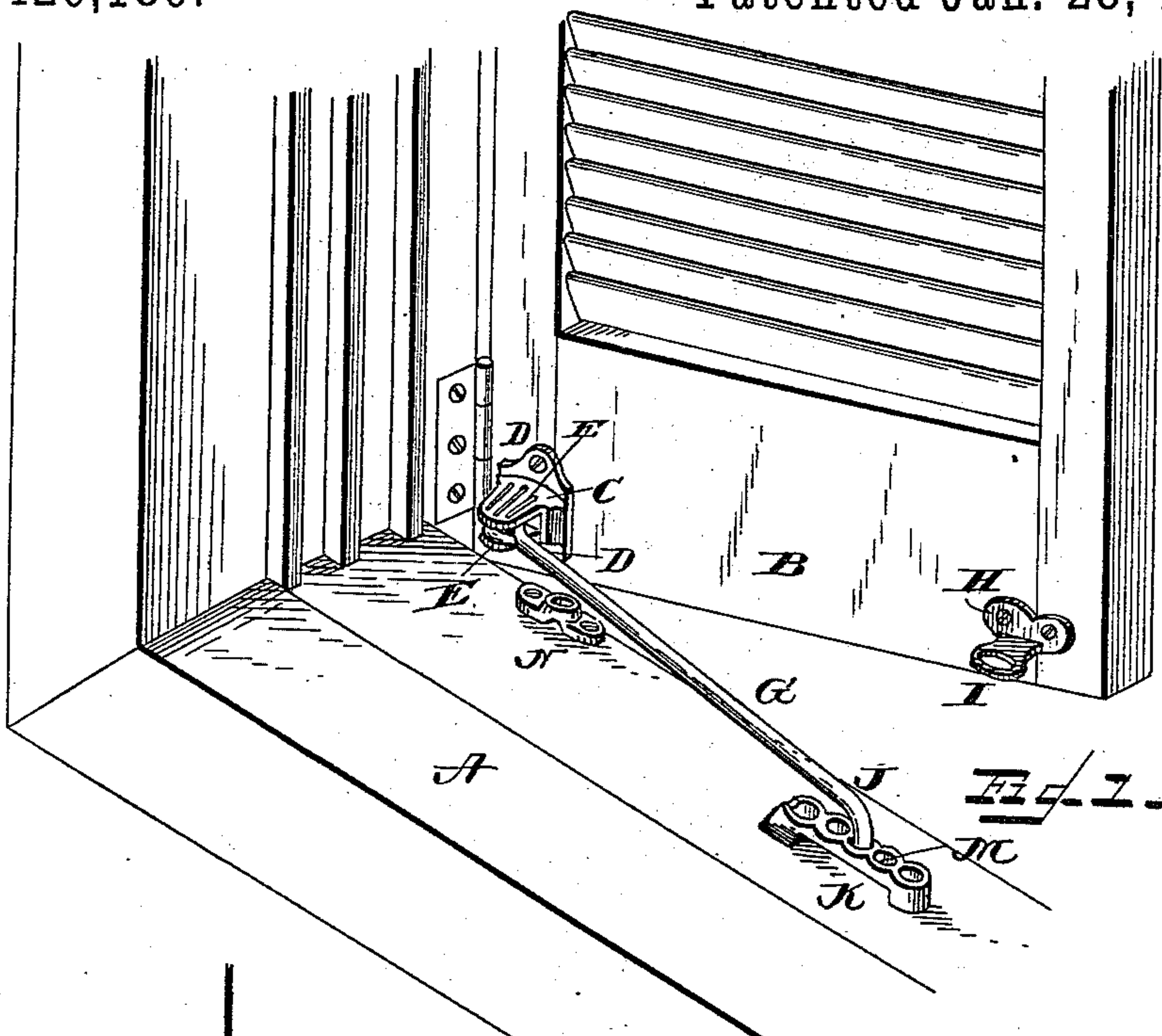
(No Model.)

G. F. S. & H. ZIMMERMAN.

SHUTTER BOWER.

No. 420,180.

Patented Jan. 28, 1890.



WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE F. S. ZIMMERMAN AND HARRY ZIMMERMAN, OF FREDERICK,
MARYLAND.

SHUTTER-BOWER.

SPECIFICATION forming part of Letters Patent No. 420,180, dated January 28, 1890.

Application filed January 11, 1888. Serial No. 260,425. (No model.)

To all whom it may concern:

Be it known that we, GEORGE F. S. ZIMMERMAN and HARRY ZIMMERMAN, citizens of the United States, residing at Frederick, in the county of Frederick and State of Maryland, have invented certain new and useful Improvements in Shutter Bowers and Fasteners; and we do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a perspective view of the lower portion of a window, showing our improved shutter bower and fastener secured in position upon a shutter partly open. Fig. 2 is a vertical sectional view taken through the fastener and bracket, the window being closed; and Figs. 3 and 4 are enlarged detail views. Fig. 5 is a plan view of the plate K.

In applying devices to window-shutters for operating and locking them in position difficulty is often experienced in so arranging them that the subsequent swelling and shrinking of the wood-work or the expansion and contraction of the metal parts of the device will not so change the relative positions of the parts to each other as to render it inoperative.

Our invention therefore relates to that class of window bowers and fasteners in which a rod is pivotally secured to the shutter at one end and engages with a locking-plate upon the sill at the other, as will be hereinafter more fully described, and pointed out in the claims.

Referring to the accompanying drawings, in which the same letters of reference indicate corresponding parts in all the figures, A indicates the frame of the window, to which the shutter B is secured in any ordinary manner. To the lower portion of the shutter and close to the edge which is hinged to the frame is secured a bell-shaped bracket C, which is preferably made hollow to decrease its weight as much as possible without decreasing its strength. The base of this bracket is provided with the flanges D D, through which

are passed the screws to secure it to the shutter. By this means a good firm securement is obtained, which will prevent its being torn from the shutter by the strain coming upon it from either direction, as is liable to be the case and especially when the shutter is standing partly open. The outer portion of the bracket is formed into two lips E E, which are connected together near their outer ends by means of the pin F, which is cast integral with them, thus making a stronger bracket than where they are separate. Another advantage arising from this construction is the fact that the middle portion of the pin can be made smaller than at its ends, thus giving great strength where it is most needed and permitting of a smaller eye being secured upon it in the end of the rod G. In casting this pin integral with the rest of the bracket it is necessary to give the lips at that point, especially, plenty of "draw," or, in other words, make the inner faces of the lips from the base of the pin to the edge of the lips inclined, which we find is just sufficient to permit of sufficient play of the rod G to enable it to engage with the locking mechanism at the other end without binding.

Upon the opposite edge of the shutter, about on a line with the bracket C, is secured a bent plate or bracket H, which we call the "locking-bracket." One portion of this plate projects from the shutter, and is provided with a slot I, the length of which is transverse of the plate, and in which the locking end of the rod G is secured, that end of the rod being bent at an angle, as shown at J, and projects down through the plate as far as desired.

Secured upon the sill near the middle, one for each shutter, is a plate K, one end of which registers with the plate H and the end of the rod G when the window is closed, and is provided with a small cross-head or T, the upper part of the ends of which are inclined and up which the end of the rod G slides as the shutter is being closed when resting in the slot I in the plate H. The cross-head affords a more secure support for the plate, preventing its being turned over and torn loose when the strain comes upon the rod, and by making it with the two ends it can be used for either

side without any change. At this end of this plate a slot L is formed of the same size as the slot I in the plate H, so that in putting the parts upon the shutter the same care need
5 not be taken in securing them in their exact position as would be required if holes were used instead of the slots, and also if the shutter or frame should become swelled, or if the rod should expand or contract, and thus the
10 position of the end of the rod be changed in relation to the plate upon the sill, it would not be prevented from entering and locking the shutter, as would be the case with a hole. The remaining portion of this plate is provided with a series of holes M, in which the
15 end of the rod G will engage when the shutter is being held in a partly-opened position. The bottoms of the slot at one end of the plate and of the hole at the other end are each
20 adapted to receive the screws for securing the plate to the sill, thus putting the screws out of sight and avoiding the necessity of providing the plate with lugs or ears at its sides for these screws, making a far neater piece of
25 work than could be otherwise obtained. To prevent dirt, &c., from collecting in the holes, except the end ones, the lower portion of the plate is cut away and the holes extended entirely through the plate, which thus gives it
30 a means of escape. A small perforated plate N is also secured upon the sill, into which the end of the rod G is hooked for securing the shutter in its opened position.

In operation the shutter can be secured
35 entirely open by placing the end of the rod G in the small plate N, which is so secured upon the sill that when the end of the rod G is placed in the hole in the plate the shutter will be held back against the wall of the
40 building or as near to it as the hinges will permit it to go. To partly close the shutter, as where it is desired to keep out the sunlight, but still admit the air as freely as possible, the end of the rod is taken out of the
45 small plate and the shutter brought into the position desired and secured there by dropping the end of the rod into one of the holes in the longer plate near the middle of the sill. As there are several of these holes, and
50 as the end of the bracket C to which the end of the rod G is secured is upon the inside of the shutter and at a little distance from it, and as the shutter is hinged to the frame upon the outside the distance between these
55 holes is sufficient to cause about the desired change in the position in the shutter in changing the end of the rod from one hole to the other. When it is desired to close and lock

the shutter, the end of the rod is placed in the plate upon the shutter and the shutter
60 drawn shut, the end of the rod sliding up the inclined end of the plate upon the sill until it reaches the top, when it will drop into the slot at that end and lock the shutter in its
65 closed position. If the end of the rod should happen to not be placed in the slot in the plate upon the shutter, it will not fall down far enough to be caught between the lower edge of the shutter and the sill, owing to the
70 fact that its opposite end is secured between the two lips of the bell-shaped bracket and around a pin, the middle of which is reduced to more nearly conform to the shape of the round rod.

Having thus described our invention, we
75 claim—

1. In a shutter bower and fastener, the combination of a hollow bell-shaped bracket, the base of which is provided with outwardly-projecting flanges at right angles thereto, and
80 the wall of said bracket being cut away on opposite sides substantially to the base, thereby forming two arms projecting from the base outward and joined together near their
85 outer ends by means of a pin cast integral therewith, the middle portion of which is reduced or smaller than where it is united to the arms, and a round rod secured to said
90 pin at one end and engaging with a plate on the sill at the other end, substantially as described.

2. In a shutter bower and fastener, the combination of a plate to be secured to the sill, having a longitudinal slot and a cross-head
95 at one end with beveled edges, and a series of holes in the remaining portion, the bottom of the slot and one of the holes being provided each with an opening for the retaining-screws, a plate to be secured upon the shutter
100 above the plate upon the sill, having a transverse slot in its projecting portion registering with the slot in the plate on the sill when the shutter is closed, and a rod to be secured
105 to the shutter at one end and having its opposite end bent at an angle and riding up the beveled edges and fitting within the slots of the two plates for securing the shutter in its closed position, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

GEORGE F. S. ZIMMERMAN.
HARRY ZIMMERMAN.

Witnesses:

MARSHALL FOUT,
EDWIN C. MARKELL.