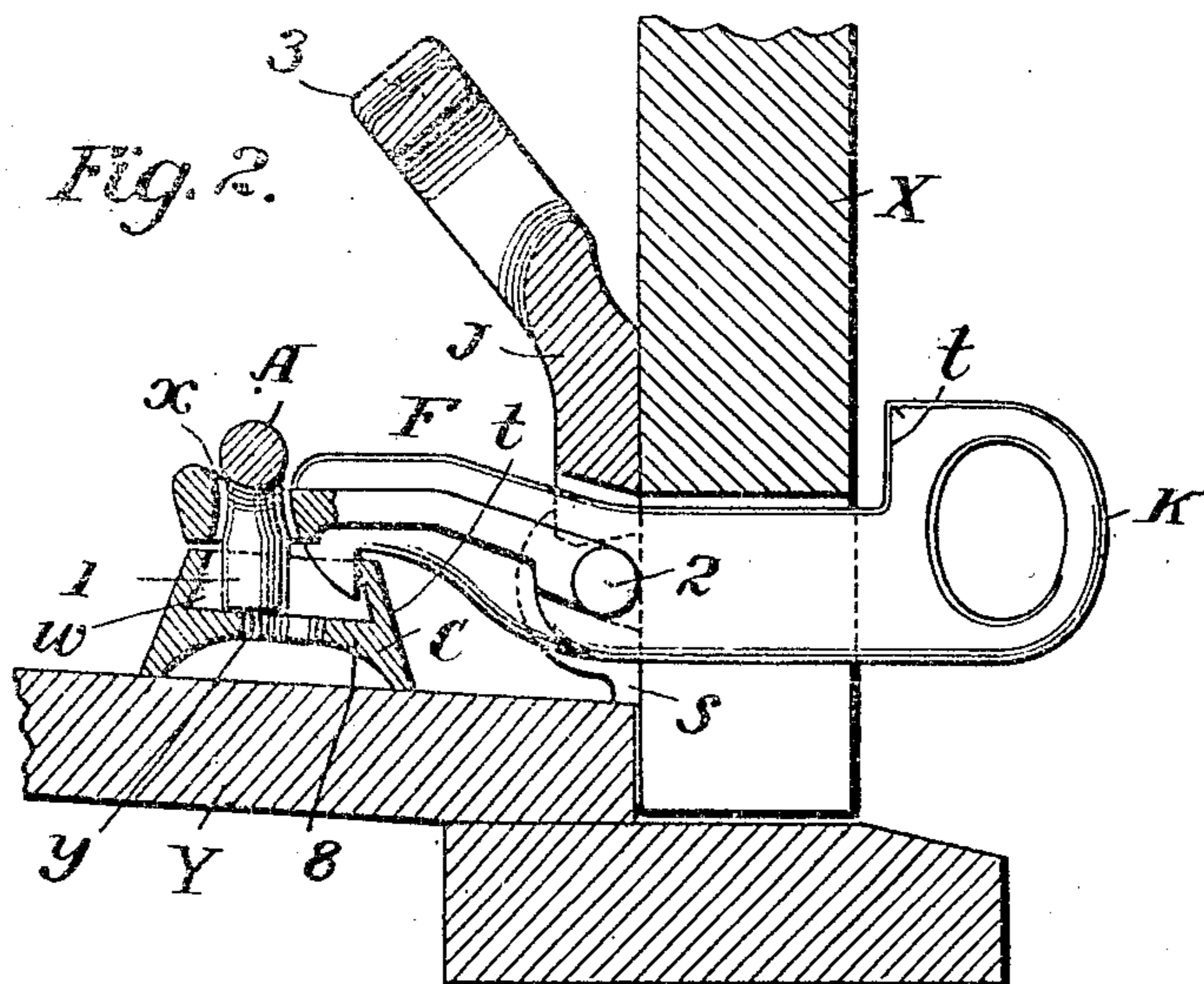
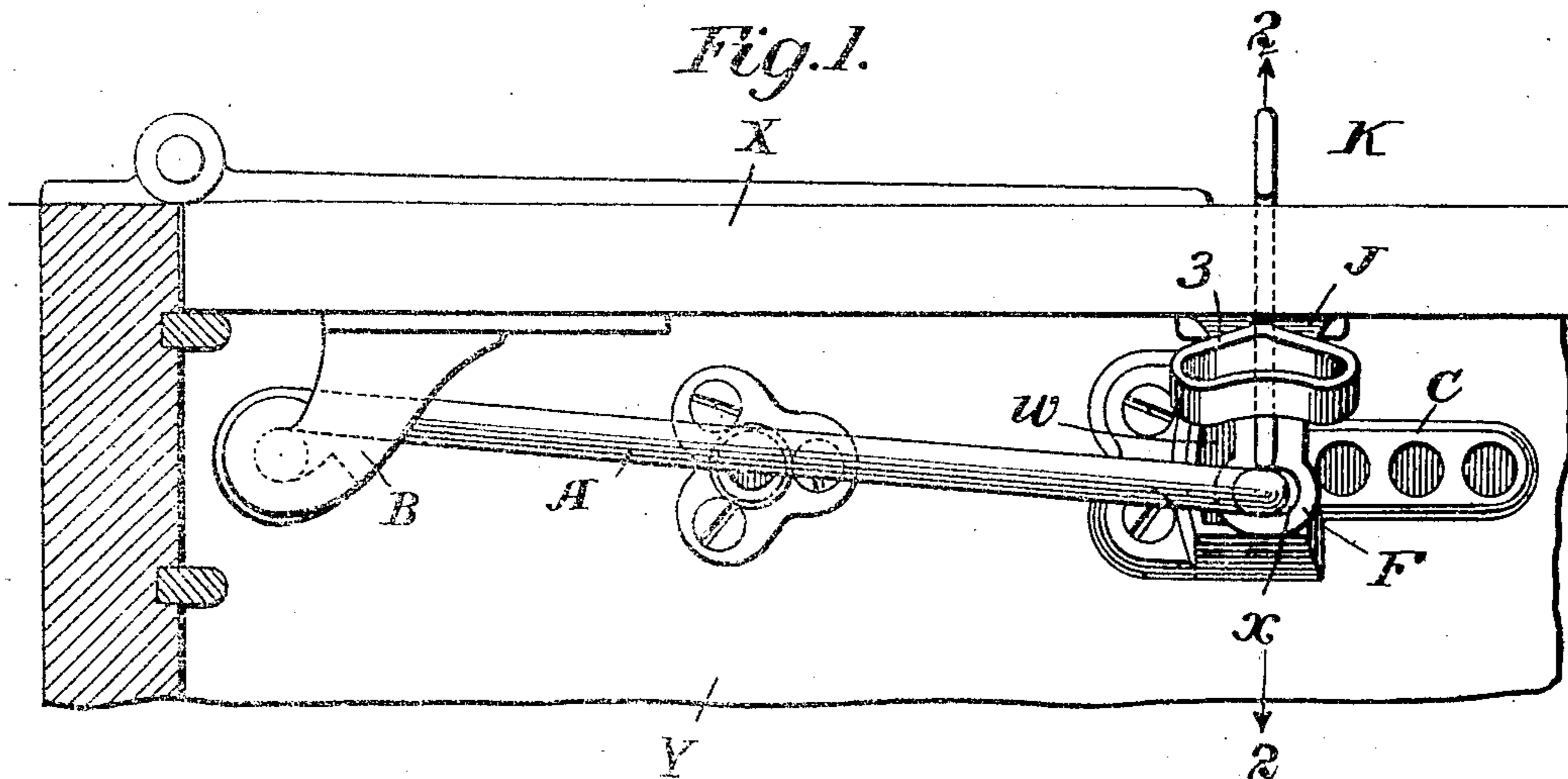


No. 892,490.

PATENTED JULY 7, 1908.

H. ZIMMERMAN.  
SHUTTER FASTENER.  
APPLICATION FILED JULY 18, 1906.

2 SHEETS—SHEET 1.



Witnesses  
J. G. Stinkell  
J. J. McConkey

Inventor  
by Harry Zimmerman  
Atty, Herman Watson

Attorneys

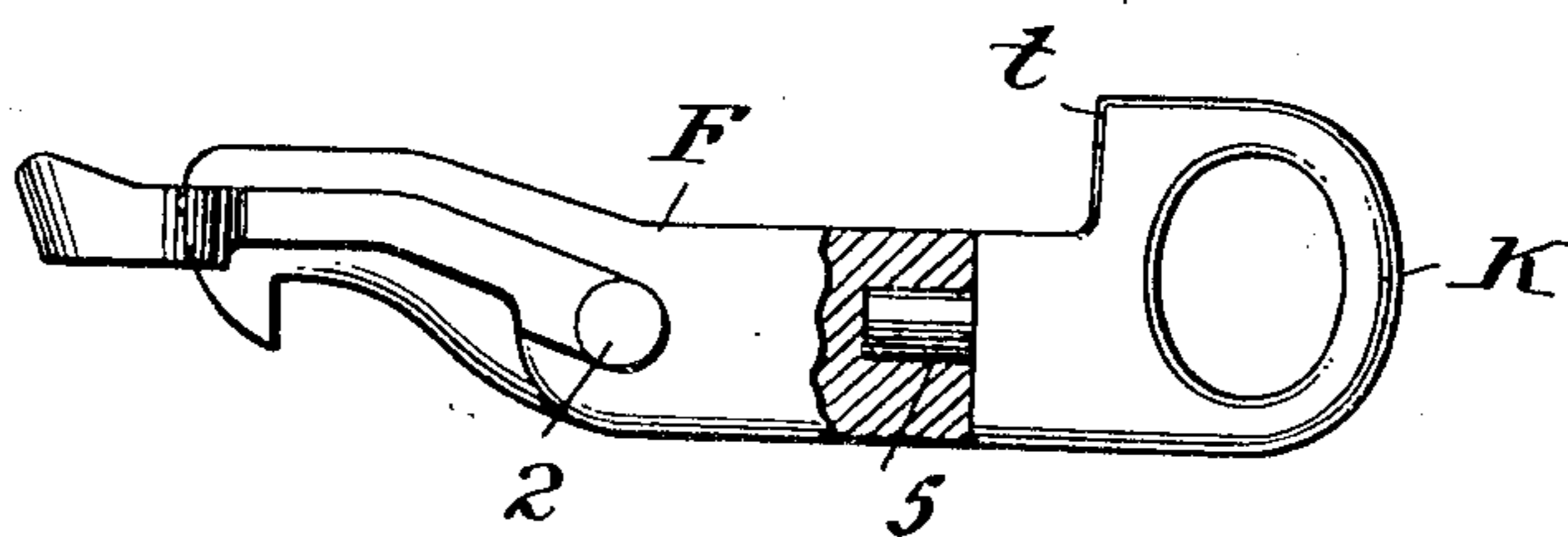
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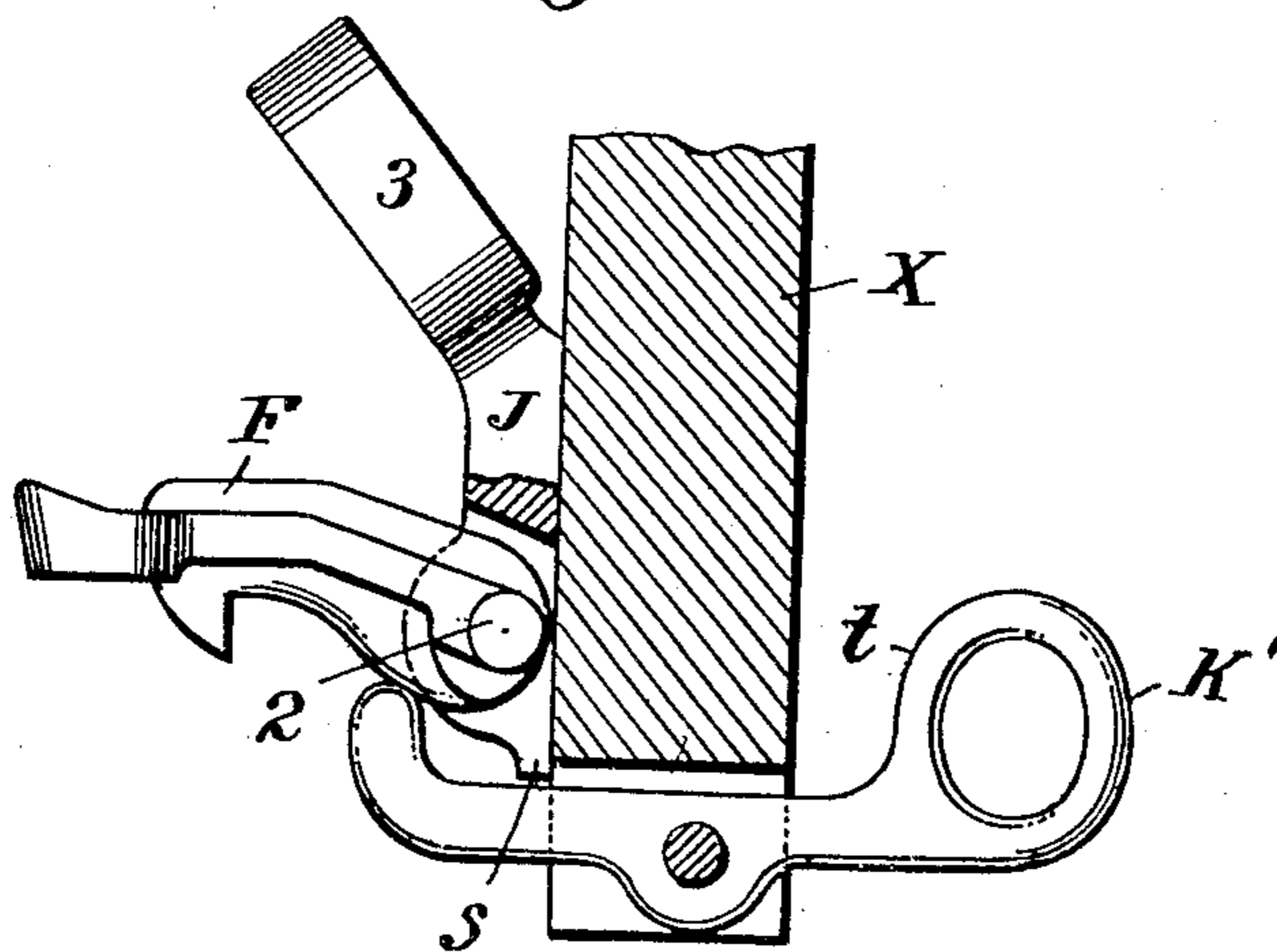
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2 SHEETS—SHEET 2.

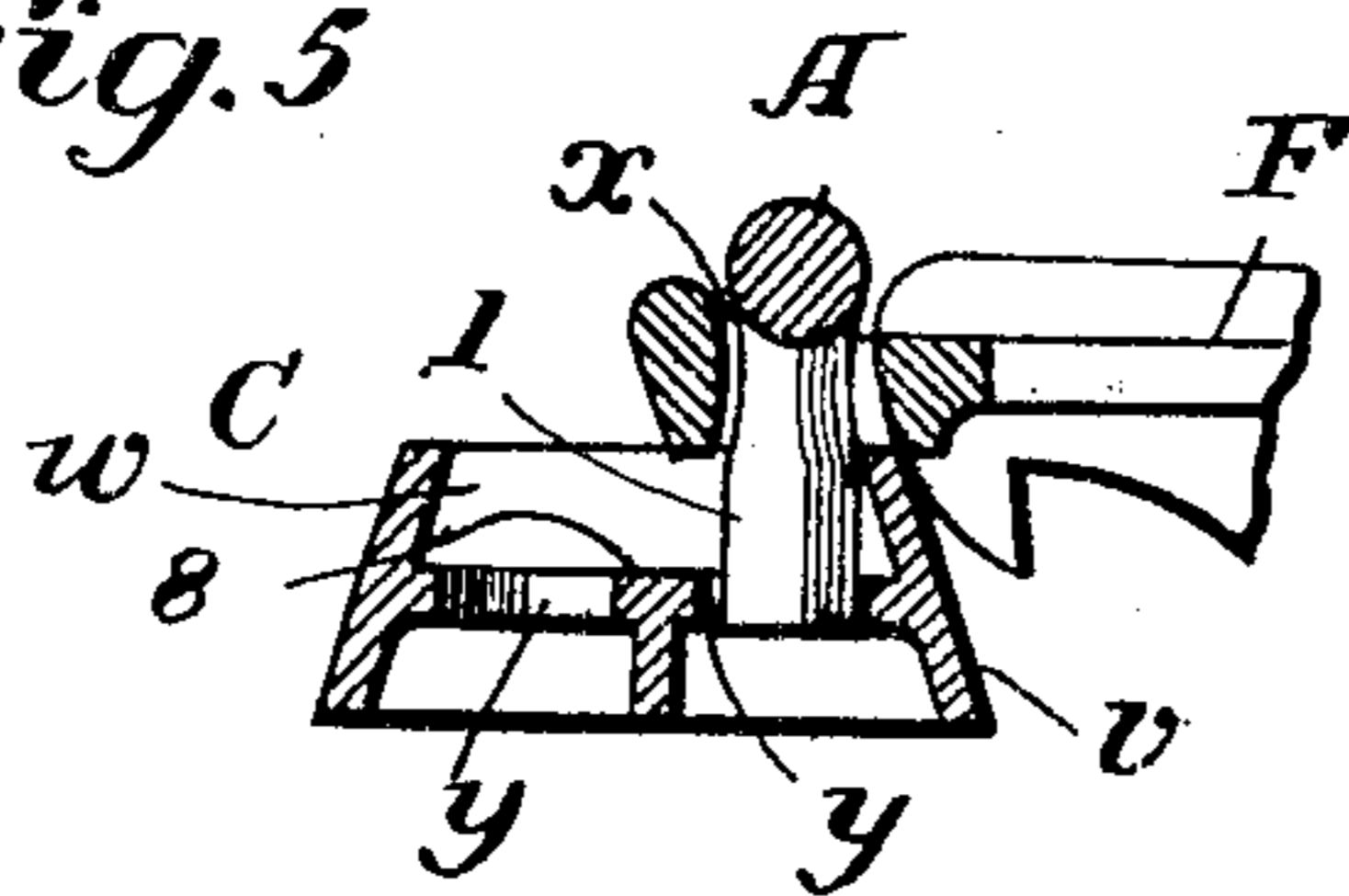
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



Witnesses  
*J. J. Stink*  
*J. J. McCarthy*

Inventor  
*Harry Zimmerman*  
by *John, Deeman & Watson*

Attorneys

# UNITED STATES PATENT OFFICE.

HARRY ZIMMERMAN, OF FREMONT, OHIO.

## SHUTTER-FASTENER.

No. 892,490.

Specification of Letters Patent.

Patented July 7, 1908.

Application filed July 18, 1906. Serial No. 326,746.

*To all whom it may concern:*

Be it known that I, HARRY ZIMMERMAN, a citizen of the United States, residing at Fremont, in the county of Sandusky and State of Ohio, have invented certain new and useful Improvements in Shutter-Fasteners, of which the following is a specification.

My invention relates to devices for securing shutters in different positions, and more especially to that class of shutter fasteners in which a brace rod pivoted to the shutter coacts with a socketed sill plate and a pivoted catch, and my invention consists in the construction of parts so as to facilitate manipulation, secure an increased capacity for adjustment, and permit the opening of the catch and the manipulation of the brace rod from outside the shutter, as fully set forth hereinafter and as illustrated in the accompanying drawing, in which,—

Figure 1 is a plan illustrating my improved fastener as applied to a shutter and sill plate; Fig. 2 is an enlarged section on the line 2—2, Fig. 1; Figs. 3 and 4, sectional views illustrating modifications; and Fig. 5, a cross section of the sill plate having two sockets for the brace rod.

The shutter fastener like many of those now in use is provided with a brace rod A pivoted to a bracket B, secured to the shutter X, and engaging sockets in a sill plate C secured to the sill Y of the window, the sill plate also constructed so as to be engaged by the hook of a catch F pivoted to the shutter X, the said catch having an opening or loop  $\alpha$  through which may extend the hook or end 1 of the brace rod A into one or other of the sockets of the sill plate. In the apparatus of this kind heretofore constructed the parts are so formed that in order to open the window the brace rod A must be first raised and then the catch F must be lifted in order to disengage it from the sill plate.

One of the features of my invention consists in means whereby the lifting of the brace rod is also made the means of lifting the catch and also of applying power to open the shutter. I secure this result by providing the catch F with trunnions 2 adapted to sockets in the bracket J secured to the shutter, said trunnions arranged below the lower face of the catch when the latter is horizontal, and by pressing against the side of the rod A to lift it and force it outward towards the shutter it will be brought against the

edge of the loop of the catch which will therefore, owing to the low position of the trunnions, be lifted to disengage its hook from the socket, while at the same time the pressure in this direction tends to open the window shutter. By this means I can raise the hook of the brace rod out of its socket, disengage the catch and open the shutter by a single movement of the hand.

Window sills are ordinarily inclined downward and outward and with the sill plates of ordinary construction secured to the inclined faces of the sill plates, and with the hooked end of the rod extending through the loop of the catch, pressure tending to swing out the shutter, has a tendency to cause the catch to pull the end of the rod out of the socket of the sill plate, and this frequently occurs. By setting the trunnions of the catch below the lower face of the catch, as before described, the pull of the catch on the hooked end of the rod when the shutter is forced outward is a downward pull and tends to hold the end of the rod in the socket instead of to lift it therefrom, an effect which is increased if the hooked part of the rod is reduced above its lower end, as shown.

Where the device is heavy, as for instance, when it is intended to be applied to the shutter of ware houses, whether of iron or wood plated with metal, the power to raise and push out the brace rod may be applied by applying the thumb to the brace rod while the hand is properly supported by the bracket J, and to secure this support I prefer to provide the latter with a hand grasp or hold 3 adapted to be grasped by the fingers while the thumb is applied to elevate and carry out the brace rod.

It is required by law in many cases, and is desirable in all cases where ware houses and other establishments are provided with metallic shutters or metal coated shutters which cannot be chopped open or readily broken, to provide means whereby the catches may be lifted from the outside, and in connection with the class of shutter fasteners which I have described I provide means whereby not only the catch may be lifted, but also the brace rod. As shown in Figs. 1 and 2, this may be effected by providing the catch F with a handle K which may be manipulated from outside the shutter, and the loop at the inner end of the catch through which the hook end 1 of the brace rod ex-

tends also supports the shaft of the said rod so that by depressing the outer end of the handle K not only the hook can be lifted, but also the brace rod, thus permitting the shutter to be unlatched, and by providing the handle K with an opening or otherwise so construct it that it can be seized by the hand or a hook, the requisite power may be applied to pull open the shutter.

The handle K need not necessarily form part of the catch. As shown in Fig. 3, it has a tongue 5 adapted to a socket in the catch so that the latter cannot be operated except by the application of a handle of proper character.

In the construction shown in Fig. 4, the handle K<sup>1</sup> is pivoted independently to the shutter and the inner end thereof bears against the inner end of the catch F to lift the same. In order that the catch may be raised by the use of an ax or other tool used by firemen I provide it with a bearing edge *t* against which the tool may bear when introduced between the same and the shutter.

The above devices may be used in connection with a sill plate of ordinary construction having the usual terminal sockets for receiving the end 1 of the brace rod, but in sill plates as ordinarily constructed the socket which receives the end 1, as for instance the inner terminal socket is enlarged to permit the entrance both of the hook of the catch and the hooked end of the brace rod when the shutter is closed and locked. But this enlargement of the terminal socket interferes with the use of this socket for bowing the shutter, as the hooked end of the brace rod can play in the enlarged socket permitting the shutter to swing and causing the device to rattle. To avoid this defect I provide the sill plate with the usual terminal enlarged socket *w*, but the latter, instead of being the depth of the sill plate, has an elevated bottom 8 in which I provide one or more supplemental sockets *y* adapted to receive the end of the brace rod when the shutter is opened so as to bow the same without play or rattling, while the end of the rod rests on the elevated bottom in the enlarged portion of the socket when the shutter is locked, as in Fig. 2.

When the terminal sockets are separated by a partition extending to the upper part of the sill plate, the hooked end of the brace rod cannot be pressed against the edge of the loop, but is pressed against the partition between the sockets so that it can exert no tendency to lift and push out the catch. But by providing the sill plate with a terminal socket enlarged at the top but with the bottom elevated above the bottom of the sill plate and socketed to receive the end of the hook for bowing, I am enabled to facilitate the above described operation of unlocking the catch by pressing outward on the

hooked arm, as the end of the hooked rod, when elevated above this bottom, can be brought against the edge of the loop to elevate the latter as before described.

Ordinarily in fitting the bracket of the catch to the shutter it has been necessary to draw a line on the inside of the shutter level with the face of the sill, and measure from this line to the point where the lower edge of the catch bracket should be placed, and carelessness on the part of the workman frequently leads to improper placing of the catch bracket and the loss of time requisite to readjust it. To avoid this I provide the bracket with an extension *s* at the lower part, of such length that when the lower edge of this extension is level with the top of the sill the catch plate will be in its proper vertical position and no measurements are therefore required, it being sufficient to close the shutter, set the catch plate with the lower end of the extension *s* level with the face of the sill, and then screw the plate in place.

When the sill plate has two terminal sockets advantage accrues from so arranging the shoulder of the catch that it will bear against the inclined outer face *v* of the sill plate, when the hook of the brace rod is in the socket nearest the shutter, while at the same time the horizontal portion of the rod rests upon the catch. When the parts are in this position with the shutter partly open, the brace rod may be lifted out of the first socket by the action of the catch in drawing to the window, the hook then falling in the second socket as the shoulder of the catch engages the inclined sides of the sill plate.

I do not here claim the combination of the sill plate with sockets and inclined sides, brace rod and catch having a loop and hook, as shown, the same being the subject matter of a separate application for Letters Patent, Serial No. 331,391, filed by me August 20, 1906.

Without limiting myself to the construction and arrangement of parts shown, I claim as my invention:

1. The combination in a shutter bower, of a brace rod having a hooked end, a pivoted catch having trunnions arranged below the lower face thereof, and a sill plate having supplemental sockets adapted to receive the hooked end of the brace rod, said sockets below the upper face of the sill plate, for the purpose described.

2. The combination with the socketed sill plate and hooked brace rod, of a catch having a loop to receive the end of the rod, and with trunnions arranged below the lower face of the catch.

3. The combination with the catch device and sill plate, of a pivoted catch, a bracket to which the catch is pivoted, and a downward projection of the bracket arranged to

meet the face of the sill when the catch is in position to engage the sill plate, for the purpose set forth.

5 4. A sill plate provided with a terminal enlarged socket having a socketed bottom above the bottom of the sill plate.

10 5. The combination in a shutter fastener, of a hooked brace rod, a socketed sill plate, a catch adapted to be pivoted to the shutter and with a terminal loop for receiving the hooked end of the brace rod, and a handle whereby the catch may be lifted by power applied to the handle outside the shutter.

15 6. The combination with the bracket for attachment to a shutter, of a catch having a terminal loop and side trunnions, a hooked brace rod also adapted for attachment to the shutter, and a sill-plate having a single ter-

minal socket extended to receive both the end of the brace rod and the catch when the brace rod is within the loop. 20

7. The combination with a shutter of the brace rod, the catch, and the handle whereby the catch and brace rod may be operated from the outside of the shutter. 25

8. In a shutter bower the combination of a shutter, a brace rod, and means for operating the brace rod from the outside of the shutter.

In testimony whereof I affix my signature 30 in presence of two witnesses.

HARRY ZIMMERMAN.

Witnesses:

CHARLES E. FOSTER,  
EDWIN S. CLARKSON.