

(No Model.)

H. SOMMERFELD.
SHUTTER WORKER.

No. 549,081.

Patented Oct. 29, 1895.

Fig. 1.

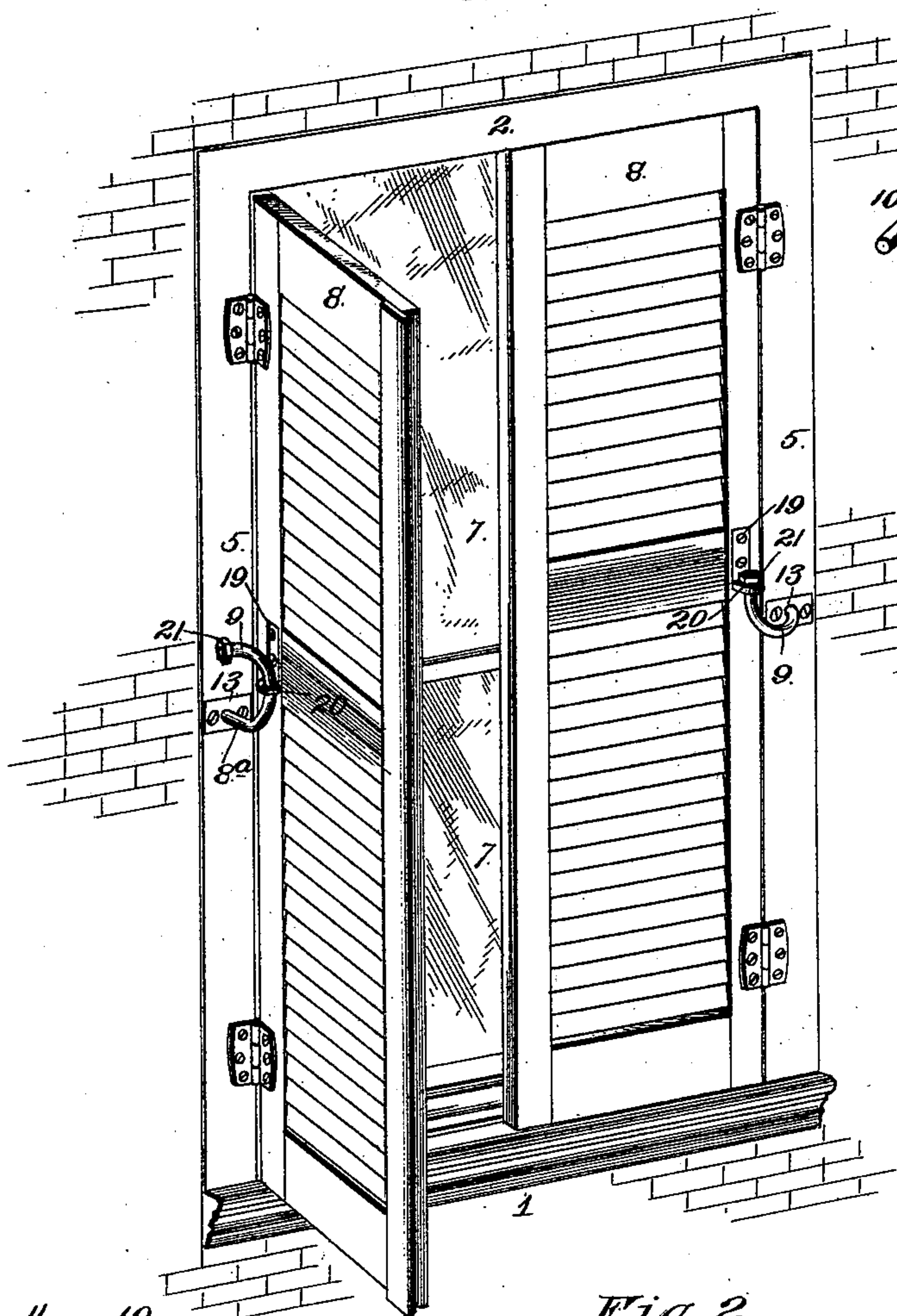


Fig. 3.

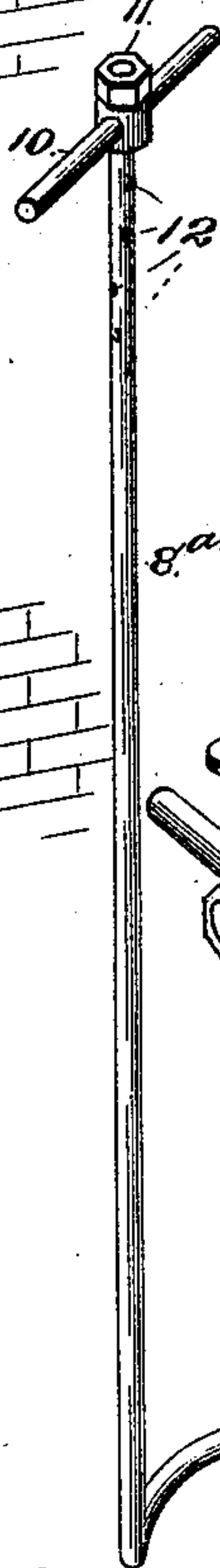


Fig. 4.

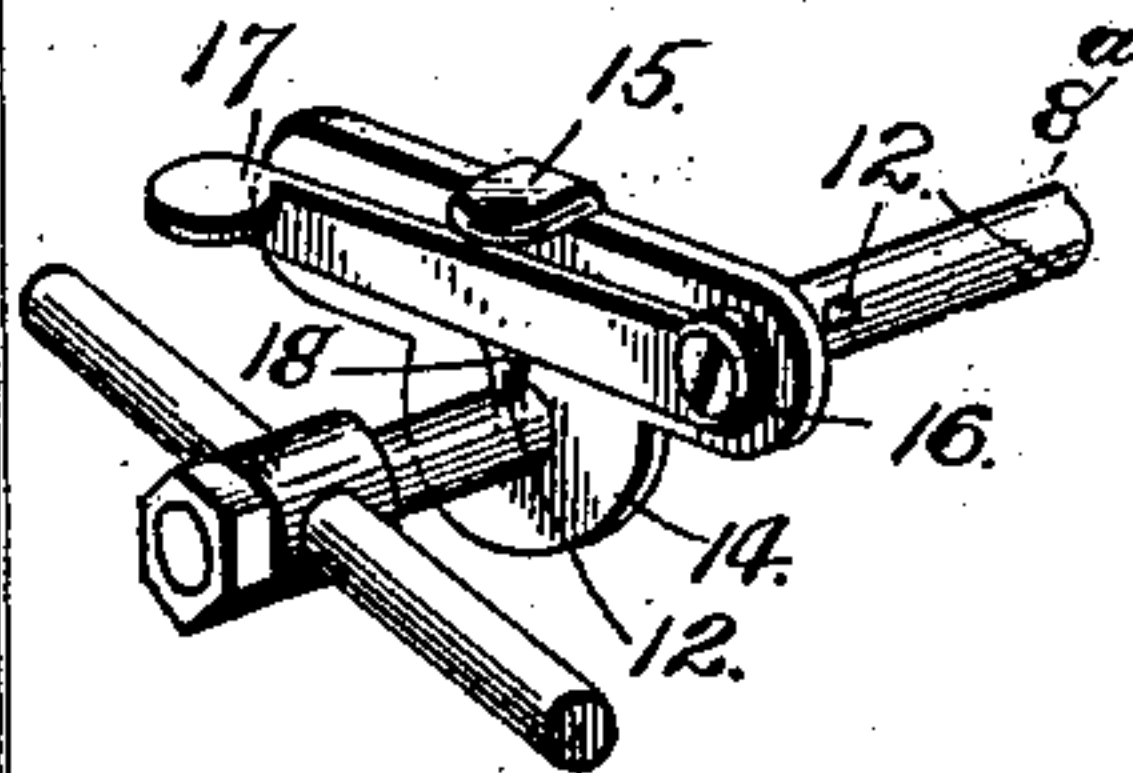
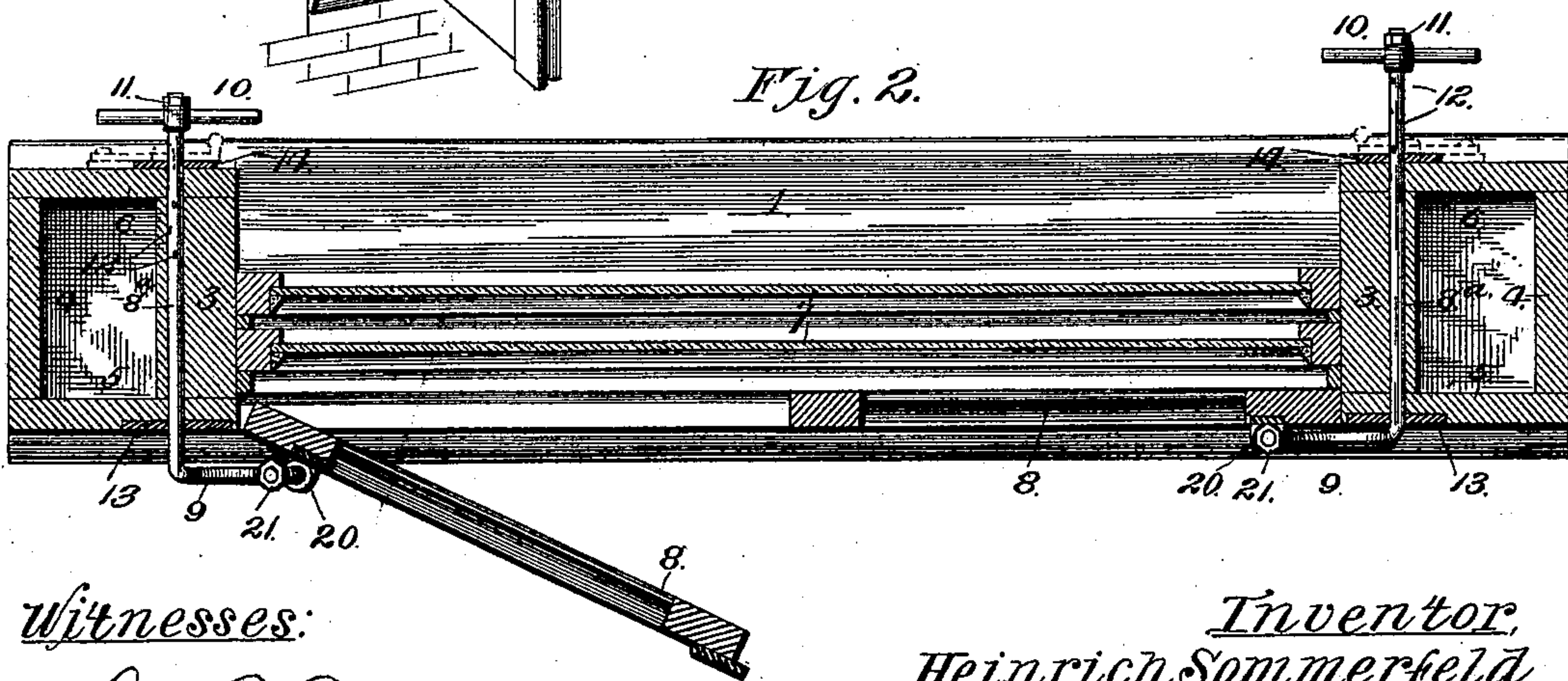


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

HEINRICH SOMMERFELD, OF CANTON, ASSIGNOR OF ONE-HALF TO ABRAHAM QUIRING, OF NEWTON, KANSAS.

SHUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 549,081, dated October 29, 1895.

Application filed June 22, 1896. Serial No. 553,740. (No model.)

To all whom it may concern:

Be it known that I, HEINRICH SOMMERFELD, of Canton, McPherson county, Kansas, have invented certain new and useful Improvements in Devices for Opening and Closing Window-Shutters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to shutter opening and closing devices, and my object is to provide a device of this character whereby the shutters, independently of each other, may be opened or closed from the inside of the building without necessitating the raising of the sash, and whereby said shutters may be securely held at any desired point in their adjustment.

A further object of the invention is to provide a device of the character before specified which is simple, strong, durable, and inexpensive of construction, and which may be conveniently applied to any hinged shutter or blind.

With these objects in view the invention consists in certain novel and peculiar features of construction and combinations of parts, as will be hereinafter described and claimed.

In order that the invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 represents a perspective view of a window-casing and its shutters or blinds provided with a device constructed in accordance with my invention. Fig. 2 represents a horizontal section of the same on an enlarged scale. Fig. 3 represents, on a still greater scale, a perspective view of the push-and-pull rod; and Fig. 4 represents a perspective view of a portion of the same and of the gravity-catch for engaging it at various points.

In the said drawings, 1 designates the sill of a window-casing; 2, the lintel; 3, the inner jambs, and 4 the outer jambs. Said jambs, in connection with the outer casings 5 and the inner casings 6, form the grooves for the sliding weights (not shown) which counter-balance the window-sashes 7 in the customary manner, and 8 designates shutters or

blinds, which are hinged to the casing in the ordinary manner and may be of the form shown or of any other suitable or preferred form.

A hinged shutter-operating device consists of a cylindrical body portion 8^a, which terminates at its front or outer end in the curved arm 9, extending at right angles to said body portion 8^a. At its inner end a handle 10 is mounted and is secured in position, preferably, by a nut 11. Said rod, inward of said handle for a suitable distance, is provided with a spirally-arranged series of holes or apertures 12. One of these devices is journaled in the window-casing at each side of the opening thereof, the portion 8^a being rotatably mounted and extending horizontally through the inner jamb and the inner and outer casings, as shown clearly in Fig. 2. The curved arms 9 are at the outer side of the casing, and are normally disposed inwardly or toward each other, as also shown in said figure, and the handles 10 are at the inner side of said casing within convenient reach of a person in the apartment where said window is located. To take the wear off said jambs 3 and the casings 5 and 6, I preferably lay in the reveal of the casing 5 the bearing-plate 13 and secure to the inner side of the casing 6 the bearing-plate 14. The bearing-plates 14 are provided at their upper margins with the shoulders or lugs 15, and pivotally mounted upon said bearings at 16 are the gravity-catches 17. Said gravity-catches are provided with the depending pins or teeth 18, which are adapted to engage, in practice, when the catch is not restrained, the first hole or recess 12 of the push-and-pull rod 8^a, which registers with it, and thereby lock said push-and-pull rod from further movement in any direction. Secured at a convenient point to the window sashes or blinds 8 are brackets, consisting of the vertical arms 19 and the horizontal outwardly-projecting arms 20, which arms 20 are engaged slidingly or loosely by the curved arms 9 of the push-and-pull rods. To prevent any possible accidental disengagement of said arms 9 with said brackets I secure upon the free ends of said arms 9 the retaining-nuts or collars 21.

When the shutters or blinds are closed, the push-and-pull rods 8^a occupy the position shown most clearly at the right-hand side of Fig. 2, and the gravity-catch 17 engages the registering aperture 12, so that it is impossible for a person at the outside of the window to open the same without tampering with the fastening or mutilating the shutter-blind. Supposing now a person on the inside of the building should desire to open said shutter, it could be done easily and quickly without raising the sash by simply raising the gravity-catch from engagement with the hole or recess 12 and pushing the rod 8^a outwardly, giving it preferably a slight twist or turn to obviate friction as much as possible, though it is apparent that by simply pushing the rod outwardly it will cause the shutter to turn on its hinges and thereby cause a slight spiral operation of the rod 8^a without other assistance. When the shutter or blind has been opened the required distance—for instance, as shown at the left-hand side of Fig. 2, or opened to a greater extent, as shown at Fig. 1, to its widest extent, or to any intermediate point in its adjustment required—it may be securely fixed in such position by simply permitting the engagement of the gravity-catch with the registering hole or recess 12 of the rod, of which holes or recesses there may be as many as desired, provided they be arranged on a spiral line. This is necessary because the rods always move spirally when pushed outward or when pulled inward to close the shutter, rotating, of course, in one direction when pushed outward and in the opposite direction when pulled inward. By means of the overhanging shoulder or lug 15 the gravity-catch is always held in close relation to the rod 8^a, so that the automatic re-engagement of said parts, when the gravity-catch is free and the hole or recess registers with it, takes place immediately, positively, and reliably.

While I have shown the brackets, consisting of arms 19 and 20, secured to the outer side of the shutter or blind, for convenience of illustration, it will be understood, of course, that in practice they may be placed or secured on the inner side of the shutters with the arms

20 projecting outwardly, so as to be proof against detachment from the outside by unauthorized persons. As illustrated, the shutter can be easily opened by removing said brackets; but when they are secured to the inner side of the shutter they are inaccessible, and it will be necessary for burglars or other unauthorized persons on the outside to go to considerable trouble in the way of cutting or breaking said devices or mutilating the shutter before they can effect an entrance into the building. The advantages of the invention, however, lie particularly in the convenience with which the shutters may be opened or closed from the inside without raising the sash, particularly in cold or inclement weather.

It is to be understood, of course, that slight changes in the form, proportion, and arrangement of parts, and also in the substitution of equivalents, will not be a departure from the spirit and scope or sacrifice any of the advantages of my invention.

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

In a shutter-operating device, the combination of a rod 8^a, provided with a series of spirally-arranged openings and mounted rotatably and slidingly in the window-casing, and terminating at its outer end in a curved arm 9, and at its inner end in a handle 10,—an apertured angle-bracket secured to the shutter, through which said curved arm loosely extends, a bearing-plate 14, through which the rod extends, provided with a shoulder 15, overhanging the shaft, and a catch 16, pivoted at one end to the bearing-plate provided at its free end with a handle, and provided at its middle with a depending pin to engage one or the other of the spirally-arranged openings of the rod, substantially as shown and described.

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

HEINRICH SOMMERFELD.

Witnesses:

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