

No. 818,346.

PATENTED APR. 17, 1906.

A. M. BURNHAM.
SHUTTER WORKER.
APPLICATION FILED APR. 21, 1905.

2 SHEETS—SHEET 2.

Fig. 2.

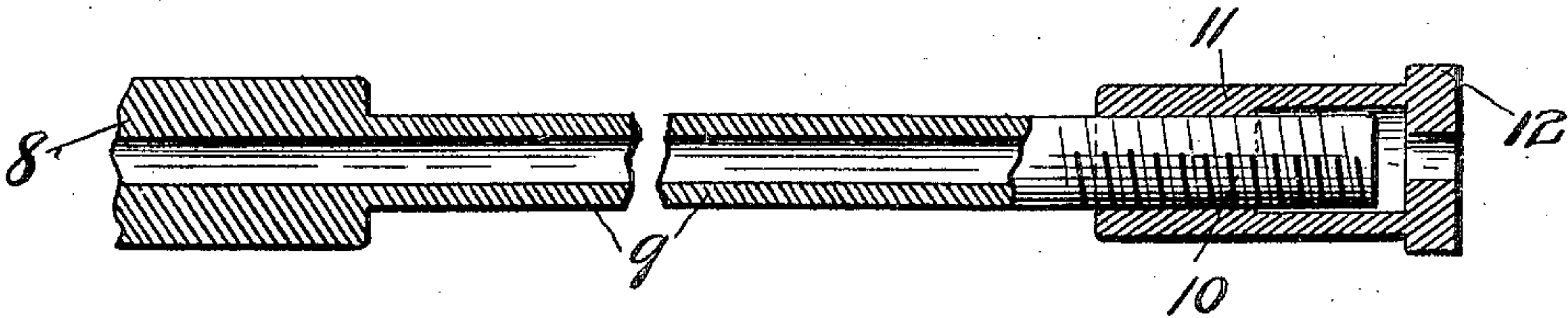


Fig. 3.

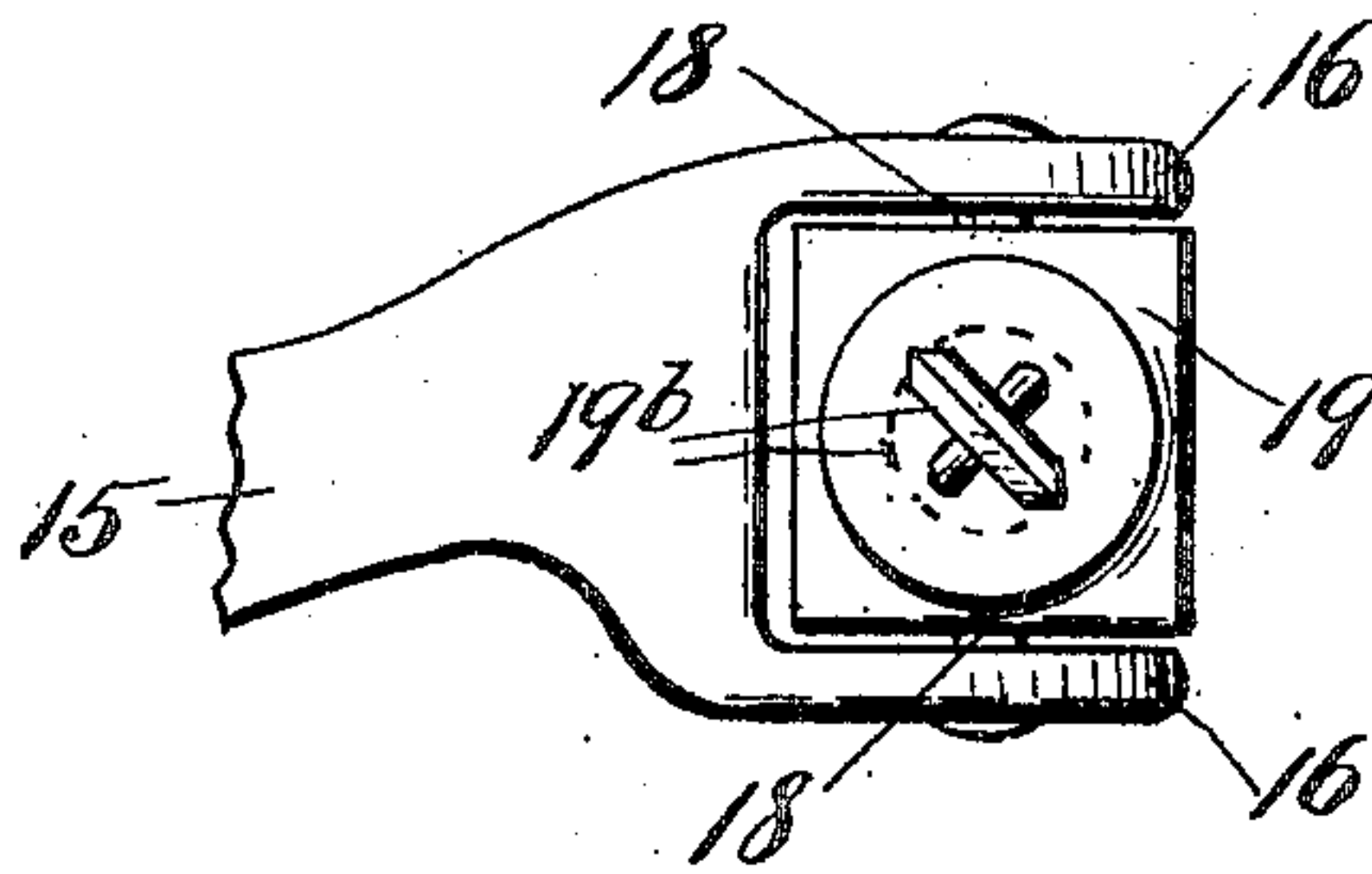


Fig. 4.

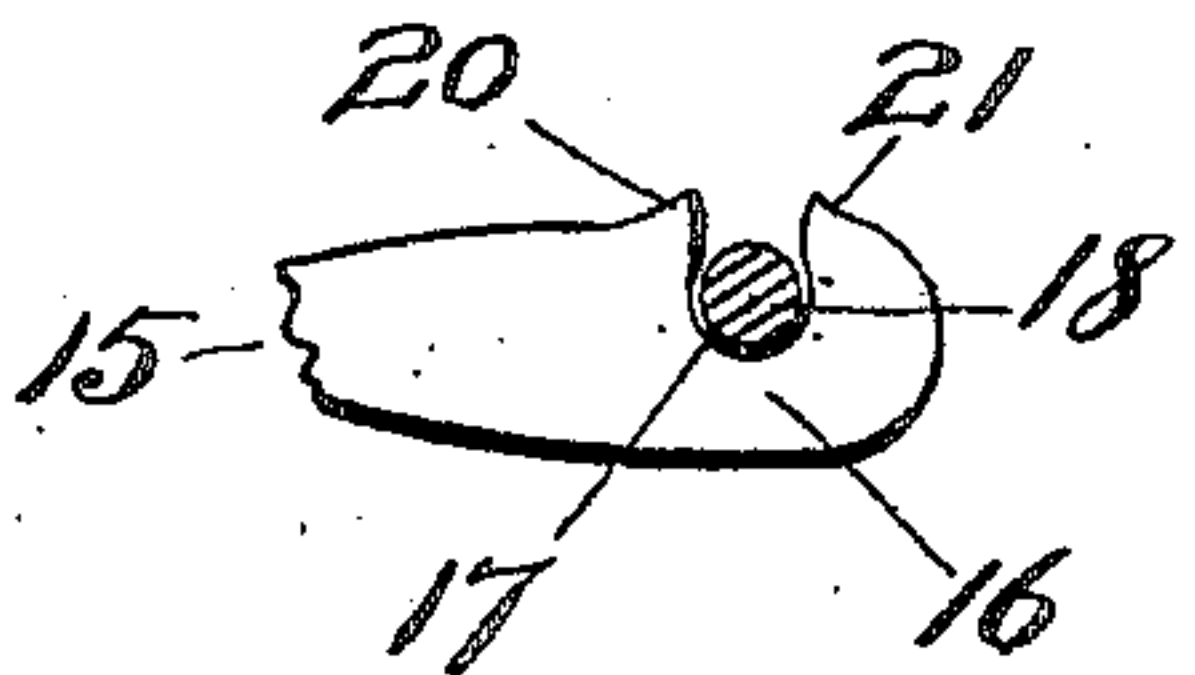
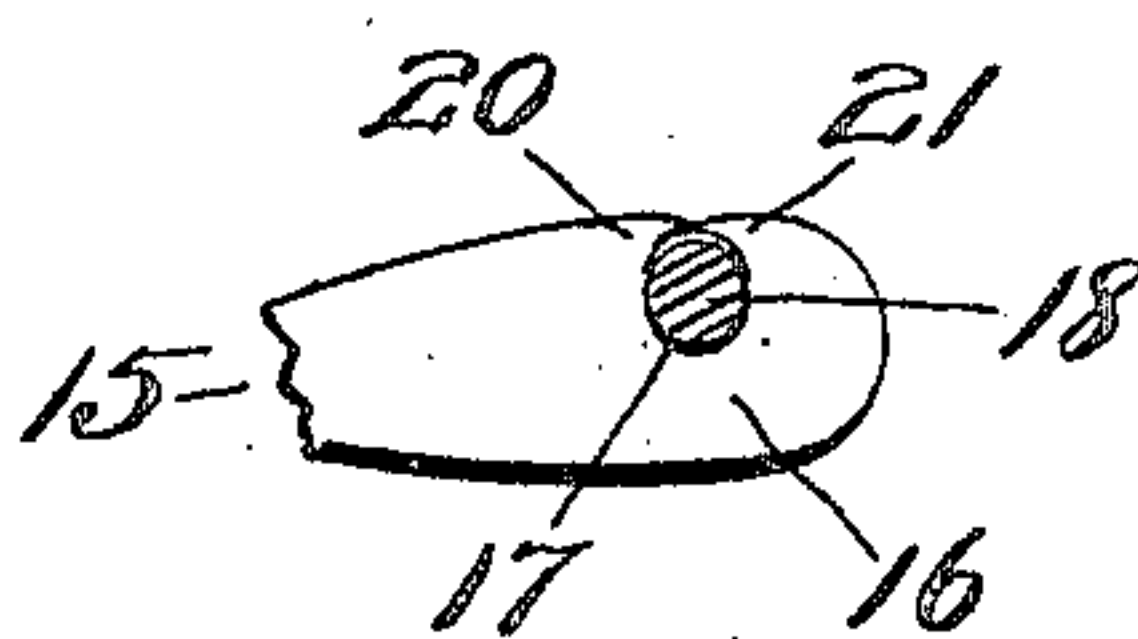


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

ARTHUR M. BURNHAM, OF GARDINER, MAINE, ASSIGNOR OF ONE-HALF TO WM. GORDON CRAWFORD, OF WASHINGTON, DISTRICT OF COLUMBIA.

SHUTTER-WORKER.

No. 818,346.

Specification of Letters Patent.

Patented April 17, 1906.

Application filed April 21, 1905. Serial No. 256,732.

To all whom it may concern:

Be it known that I, ARTHUR M. BURNHAM, a citizen of the United States, and a resident of Gardiner, in the county of Kennebec and State of Maine, have invented certain new and useful Improvements in Shutter-Workers, of which the following is a specification.

My invention relates to improvements in shutter-workers, and has for its object to provide a device which can be adjusted to window-casings of different thicknesses, which is simple, inexpensive, and easy to operate and which is adapted to be firmly seated in the window-casings, the portion extending there-
15 through being cast in one piece.

It further has for its object improved means for attaching the arm to the bracket.

The invention consists in the construction, combination, and arrangement of the several
20 parts, as hereinafter more fully described and claimed.

Referring to the drawings, Figure 1 is a view in elevation of my invention; Fig. 2, an enlarged detail view of the adjusting-sleeve;
25 Figs. 3, 4, and 5, enlarged detail views of the inner end of the operating-arm, and Fig. 6 a sectional view of the casing and the mechanism for connecting the shaft 14 with the operating-arm.

30 In the drawings, in which like numerals of reference indicate like parts throughout the several views, 1 represents the outside window-cap; 2, the inside cap, and 3 the window-casing, in which the ordinary sashes are
35 mounted in any well-known manner. To the window-casing hinges 4 are secured, supporting an ordinary shutter 5.

6 represents the shutter-worker provided with a casing 7, having an extension 8, an
40 elongated tube 9, made in one piece with said extension 8 for the purpose of providing a rigid connection. The inner end of the elongated tube 9 is screw-threaded, as at 10, and is provided with an interiorly-screw-threaded
45 sleeve 11 thereon for the purpose of extending the length of said tube to enable it to accommodate window-casings of varying thicknesses. One end of the sleeve 11 has formed integrally thereon a nut 12 for the purpose of
50 affording means whereby a wrench may be applied when it is desired to adjust said sleeve and also forms a journal and bearing for the operating-shaft of operating-gears.

13 is a double-grooved drum mounted on a

shaft 14, which in turn is mounted in the elongated tube 9, said drum being provided with a suitable cord for operating it.

15 is the operating-arm for the shutter 5, one end being attached to said shutter and the opposite end being forked, and the arms
60 16 of said forks each provided with an opening 17, designed to receive the pins 18 of the block 19, which is mounted on a shaft 19^b, depending from the casing 7. Connection
65 between the shaft 14 and the operating-arm 15 is made by means of a worm 19^a, supported on shaft 19^d and meshing with a worm-wheel 19^c, said worm being provided at one
70 end with a journal 19^b, revolvably supported in a bearing in the casing 7, and is made with an angular bore to receive the angular outer
75 end of the shaft 14, said shaft being designed when rotated to transmit motion to the worm-wheel 19^c, shaft 19^b, and from said
80 shaft 19^b to the operating-arm 15. After the pins 18 are inserted in the openings 17 in the
85 arms 16 (see Fig. 4) the lugs 20 21 on opposite sides of the said openings are hammered or welded together, (see Fig. 5,) which securely retains said pins in place in said openings. It will be seen that by pivoting the
90 arm 15 to the block 19 by means of the pins 18 the perfect operation of the arm is insured regardless of the different arc the shutter
95 may move owing to its becoming sagged or if from any other cause it does not move concentric with the short shaft of the casing.

Having thus described my invention, what I claim is—

1. A shutter-worker comprising a shaft
90 operatively connected to an arm designed to be connected to a shutter, a casing, having a hollow member integral therewith carrying the said shaft and provided with screw-threads, and a screw-threaded sleeve mounted
95 on and covering the end of said hollow member designed to clamp said hollow member to a window-casing, substantially as shown and described.

2. A shutter-worker comprising a shaft, a
100 casing having a shaft therein operatively connected to the first-mentioned shaft and provided with a block rigidly fixed thereon, and an arm having forked ends pivoted to said block, substantially as shown and described.
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3. A shutter-worker comprising a shaft, a casing having a shaft therein operatively

connected to the first-mentioned shaft and provided with a square block rigidly fixed thereon and an arm having forked ends connected to said block, substantially as shown 5 and described.

4. A shutter-worker comprising a casing, having a hollow extension, with a tube at one end thereon, said tube provided with exterior screw-threads, an interiorly-screw-threaded sleeve mounted on the screw-threads of the tube and having a hole at one end, a shaft passing through said extension,

tube, and hole in the sleeve, an operating-arm designed to be pivoted to a shutter, means for operatively connecting said shaft 15 and arm and means for operating said shaft, substantially as shown and described

In witness whereof I have hereunto set my hand in presence of the subscribing witness.

ARTHUR M. BURNHAM.

Witness:

IRWIN B. LINTON,
JAMES K. POLK.