H. C. SHAABER & W. M. ACKER.

LOCKING BOLT.

APPLICATION FILED APR. 8, 1911.

998,860. Patented July 25, 1911.

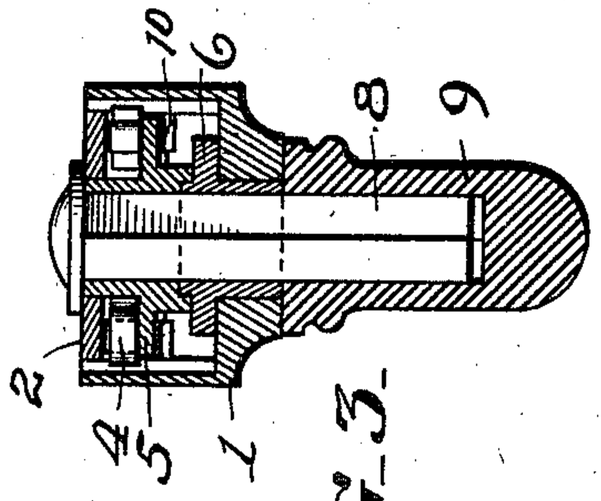

FIG. 3.

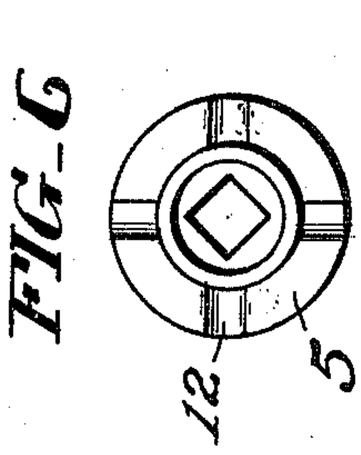

FIG. 6.

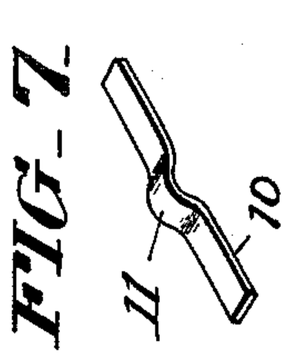

FIG. 7.

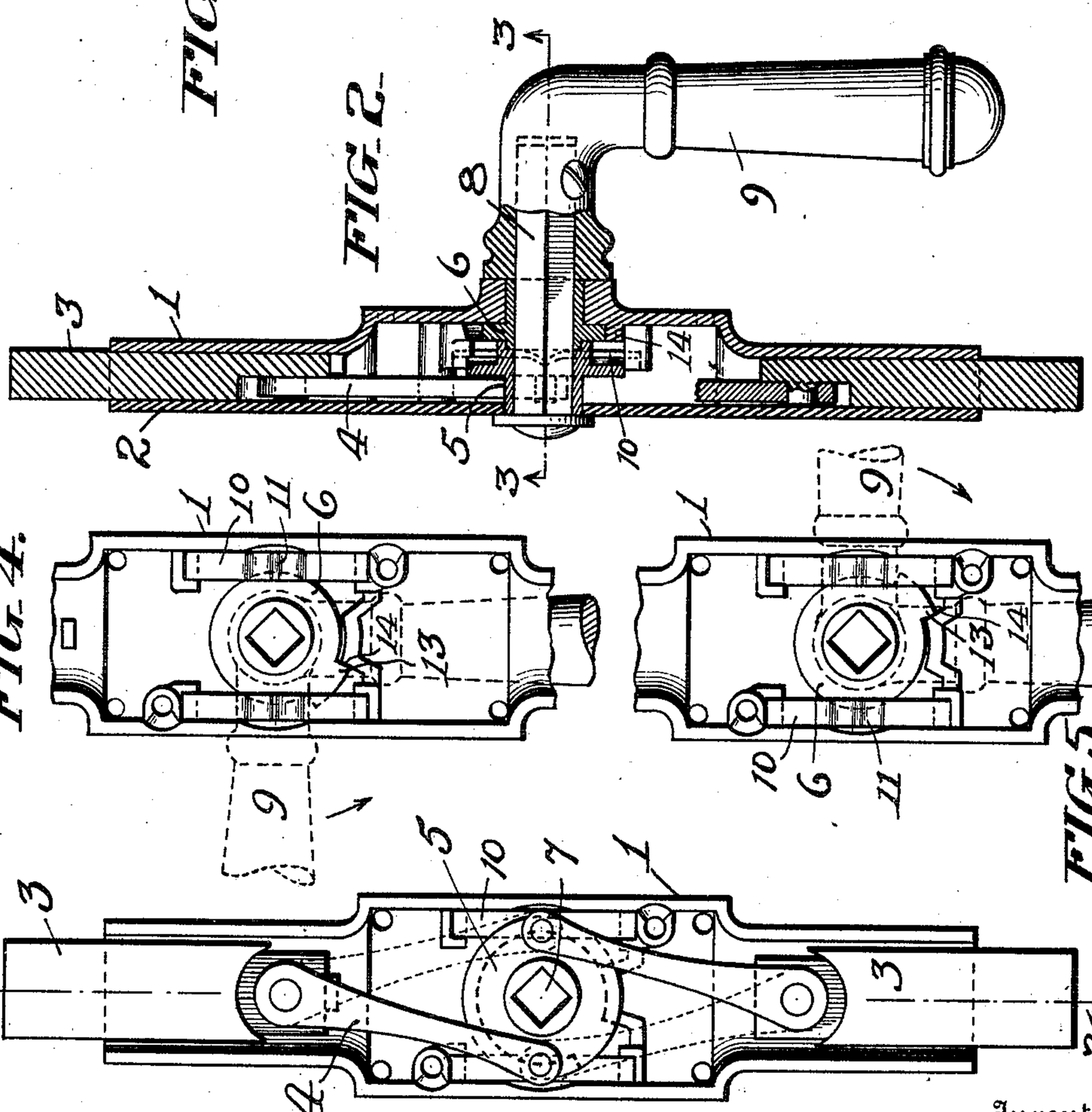

FIG. 2.

FIG. 4.

FIG. 5.

FIG. 1.

Witnesses

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UNITED STATES PATENT OFFICE.

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LOCKING-BOLT.

998,860. Specification of Letters Patent. Patented July 25, 1911.

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To all whom it may concern:

Be it known that we, HARRY C. SHAABER and WILLIAM M. ACKER, citizens of the United States, residing, respectively, at Reading, Berks county, Pennsylvania, and at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Locking-Bolts, of which the following is a specification.

This invention relates to improvements in locking bolts intended more particularly for use on doors, windows or other objects in which it is desirous of locking both ends or sides simultaneously.

The invention consists of a casing provided with two oppositely movable bolts, operated in unison by means of a suitable handle and the object in the present instance is to provide a device which may be operated by either a right or left hand movement of the handle,—that is, a device in which a change from right hand to left hand operation may be easily and rapidly accomplished, or vice versa.

The invention consists of a hub of two piece construction, to one portion of which the bolts are connected by links, while the other portion is capable of being set for movement by a right or left hand action, and both hub portions are adapted to turn as a single piece when engaged by the handle spindle.

The invention is more fully described in the following specification and clearly illustrated in the accompanying drawing, in which:—

Figure 1 is a plan view of the under side of our device with the back plate removed and showing the bolts in retracted position; Fig. 2 is a central sectional view on line 2—2 of Fig. 1; Fig. 3 is a sectional view on line 3—3 of Fig. 2; Fig. 4 is a partial plan view of the under side of the device, with the bolts, links and one portion of the hub removed, showing the parts set for right hand operation and in the position occupied when the bolts are protracted, and Fig. 5 is a similar view, set for left hand operation; Fig. 6 is a detail view of the link carrying portion of the hub and Fig. 7 is a detail view of one of the friction springs for the hub.

The numeral 1 designates the casing and 2 the back plate.

3 designates the bolts, adapted to move in the casing in unison, toward and away from each other, that is, toward and away from the center or operating hub.

The numeral 4 designates the links, each of which is pivoted loosely to the inner end of one of the bolts while its opposite end is loosely pivoted to one of the hub portions 5.

The hub is composed of two pieces, 5 and 6 each being formed with a central opening 7 through which the handle spindle 8 passes, and 9 designates a removable and reversible operating handle of ordinary design.

The portion 6 of the two-part hub rests in and is free to turn in a central opening in the casing and the portion 5 is seated directly against the portion 6. A pair of friction springs 10 are located in the casing, one on each side of the spindle and these springs are formed each with a central upset portion or projection 11. The under side of the hub portion 5 is formed with four equidistant depressions 12 in its under face, adapted to register with the projections 11 on the springs, which tend to keep the hub in position when the operating handle has been moved to full open or closed position.

The portion 6 of the hub is formed with a tongue 13 and the casing is provided with an internal stop 14 for the tongue, adapted thereby to limit the rotary movement of the hub.

When the parts are assembled as shown, the fastening of the backing plate 2 and the securing of the handle to the spindle will keep the hub members snugly together, and the spindle in turning, will revolve the two portions as a single piece.

When the handle is in the position indicated by dotted lines in Fig. 4, the bolts are contracted and the movement of the handle 9 in the direction of the arrow will project the two bolts through the medium of the connecting links, and when the tongue 13 contacts with the stop 14, as shown in full lines, the bolts will be at their full locked position and the hub will be held against further movement by the stop 14. The reversal of the handle movement will, of course, retract both bolts. The handle movement consists of a quarter turn, or,

ninety degrees from the unlocked to the locked position, and when in the contracted position, as shown in Fig. 1, the links 4 will stop the movement of the hub at the quarter turn.

When it is desired to change the operation to a left hand movement, the handle is removed from the spindle and the spindle is withdrawn and either the spindle or some other suitable instrument is inserted in the opposite side of the casing, that is, in the handle side, until it engages only the portion 6 of the hub; the spindle is turned until the portion 6 assumes the position shown in Fig. 5; with the tongue 13 contacting at the opposite side of the stop 14; the spindle is withdrawn and replaced in proper position and the handle is secured thereto in reversed position. This will permit the device to be operated by a left hand movement, as indicated by the arrow.

It is evident that our device may be applied with equal facility to doors or windows opening in either direction, and that the device may be converted from one with a right hand to one with a left hand operation, with ease. When the parts are assembled and the casing closed, it need not be opened, as the change from one to the other movement is made without interfering with the operating parts of the lock, and is so simple that any person can make the change without necessarily being familiar with lock construction.

Having thus fully described our invention, what we claim and desire to secure by Letters Patent is:—

1. In a locking bolt, the combination of a casing, a pair of oppositely movable bolts, a two-part hub constructed so as to be capable of being set for right or left hand operation without opening the casing, links connecting the hub and the bolts, tension springs for the hub and means for limiting the movement of the hub in either direction.

2. In a locking bolt the combination of a casing, a pair of oppositely movable bolts, a two part hub, links connecting the bolts to one of the hub members, friction springs in the casing adapted to hold said hub member against accidental movement; the other hub member having a tongue, a stop in the casing adapted to limit the movement of the hub by contacting with the tongue, an operating spindle passing through both hub members, and a removable and reversible handle for the spindle.

3. In a locking bolt the combination of a casing, a backing plate, a pair of oppositely movable bolts in the casing, a two-part hub adapted to rotate as a single body when engaged by an operating spindle but constructed so as to be capable of independent movement when not so engaged, tension springs adapted to engage and hold the hub in full open or closed position, a tongue on the hub, a stop in the casing adapted to limit the movement of the hub, a spindle passing through both hub members, and a removable and reversible handle for the spindle.

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

HARRY C. SHAABER.
WM. M. ACKER.

Witnesses:
PAUL H. PRICE,
ED. A. KELLY.