

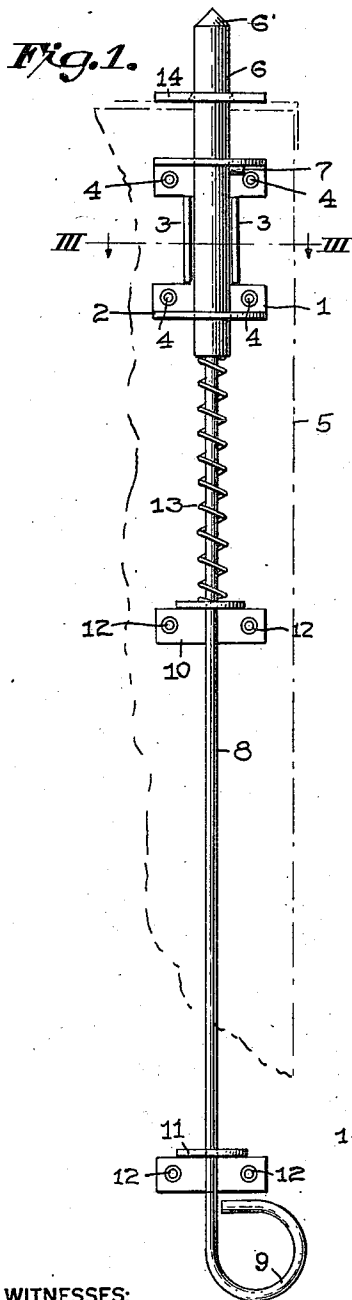
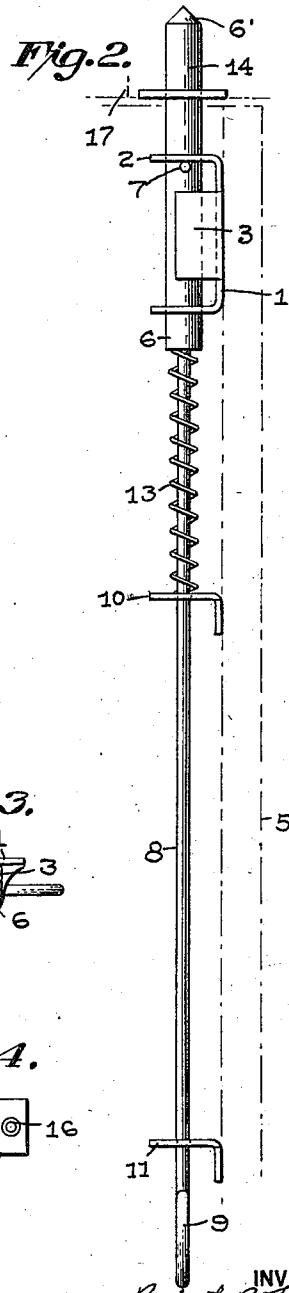
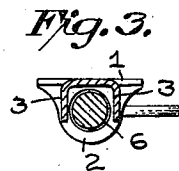
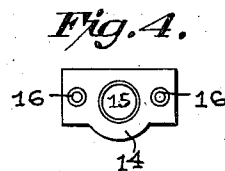
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DOOR LOCKING DEVICE

Filed July 25, 1923



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DOOR-LOCKING DEVICE.

Application filed July 25, 1923. Serial No. 653,630.

My invention relates to door bolts, such as is employed either at the top, bottom, or at both extremes of large doors such as those of garages, barns, or other buildings.

The object of my invention is to provide a device of the above class embodying such characteristics as practicability, simplicity of structure, strength and durability and that can be manufactured and sold to the consumer at a reasonable price.

With the above object in view, my invention consists in certain features of construction, arrangement of parts, their combination and co-operation as will be hereinafter more fully described and particularly pointed out in the appended claim.

In the accompanying drawings, forming a part of this specification—

Figure 1 is a vertical front elevation of my improved bolt.

Fig. 2 is a vertical side elevation of the same.

Fig. 3 is a transverse section through the device on the line III—III of Fig. 1, and

Fig. 4 is a plan view of the striker plate or keeper.

The device comprises a bolt holder or attaching means of sheet metal including the body portion, 1, having outstanding end lugs, 2, and the intermediate and outstanding parallel flanges, 3, spaced at their ends from and disposed at right angles to said lugs, 2. The body portion is provided with holes, 4, for the reception of screws to fasten the same to a door, 5. The bolt, 6, formed of a substantial bar of metal, circular in cross-section, is loosely fitted through openings in the lugs, 2, and is provided with a conical or tapered point, 6', of about forty-five degrees, and with a locking pin, 7. To the bolt, 6, is rigidly secured an operating extension in the form of a rod, 8, of considerable less area in cross-section, the free end of which is formed into a loop, 9. This extension, 8, is loosely fitted through openings in the spaced brackets, 10 and 11, respectively, each of which is provided with holes, 12, through which screws pass in securing the brackets to the door. Disposed about the extension rod, 8, between the connecting end of the bolt and bracket, 10, is a spiral spring, 13, which maintains tension on the bolt at all times. A striker plate or keeper, 14, provided with a bolt opening, preferably of taper form, and with

screw openings, 16, is attached by screws to the door frame, 17, in line with the bolt.

The device, as shown in Figs. 1 and 2, is in locked position. To unlock the bolt, simply grasp the loop portion, 9, of the rod extension, turning to the right to cause the locking pin, 7, to pass from the space between the lug, 2, and upper end of flange 3. Then by pulling downward the spring, 13, is overcome and the bolt, 6, caused to pass out of the striker plate 14. The pull is continued until the locking pin engages the lug 2, at which time the rod is turned toward the left, or right, causing the locking pin to engage beneath the lower end of the flange 3, locking the bolt in open position. To lock the bolt it is only necessary to turn the rod to release the locking pin 7 and allow the action of the spring 13 to force the bolt in locked position.

By forming the bolt with a conical point, preferably of about forty-five degrees, it becomes self centering with the striker plate, 14, and it may be readily forced into the striker plate opening even though the door should sag sufficient to cause unalignment between the bolt and the striker plate. Again, by providing the bolt with a rigid extension the operation is positive, besides the extension being of much less area in cross-section it is much lighter and reduces the cost than if it were all of uniform diameter and permits the bolt, 6, proper to be of such diameter as will give great strength.

While the device is shown as applied to the upper part of a door, it is evident that it may be applied to the lower part, or on each end, as desired.

Various modifications in structure and details may be made without departing from the spirit of my invention and be within the scope of the appended claim.

I claim as my invention and desire to secure by Letters Patent:—

A door locking device having a bolt holder comprising a flat plate adapted to be attached to a door, upturned parallel flanges on each end of said plate and apertured in alignment with the longitudinal center thereof, upturned parallel flanges at each side of said plate and disposed longitudinally thereof with the ends of said flanges terminating in spaced relation from said end flanges, a slidable bolt member disposed through the apertures of said end flanges

and guided between said side flanges for longitudinal movement relative to said plate, a stem extending from said bolt member, spaced brackets supporting said stem at intervals throughout its length, said brackets being adapted for attachment to a door on which said plate is mounted, an operating handle on said stem for manual movement of said bolt member, a coil expansion spring surrounding said stem between one of said brackets and the bolt member for normal projection of said bolt member, and a retaining pin carried by said bolt member for engagement behind said side flanges for locking said bolt member in position.

In testimony whereof, I have hereunto signed my name.

ROBERT B. HUTCHISON.