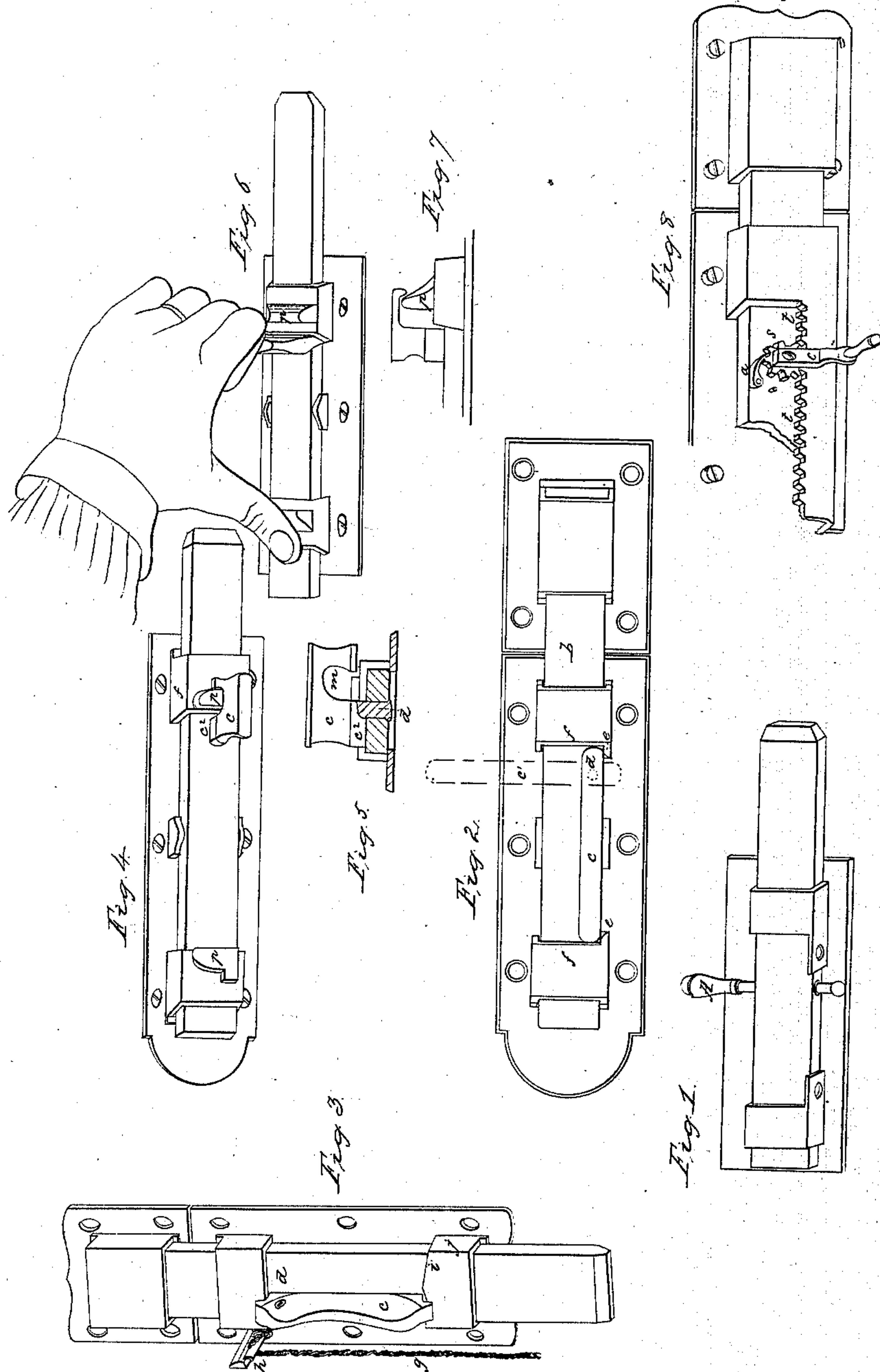


# C. G. Page Door Bolt.

N<sup>o</sup> 26,518.

Patented Dec. 20, 1859.



Witnesses:  
Chas. C. Tucker  
Wm. H. Harrison

Inventor:  
Chas. G. Page



# UNITED STATES PATENT OFFICE.

CHARLES GRAFTON PAGE, OF WASHINGTON, DISTRICT OF COLUMBIA.

## DOOR-BOLT.

Specification of Letters Patent No. 26,518, dated December 20, 1859.

*To all whom it may concern:*

Be it known that I, CHARLES GRAFTON PAGE, of Washington, in the county of Washington and District of Columbia, have invented a Mode of Locking Bolts, and that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known and of the usual manner of making, modifying, and using the same, reference being had to the accompanying drawings, of which—

Figure 1 represents a flat bolt locked by a loose handle having a rectilinear movement, and Figs. 2, 3, 4, 5, 6, 7, and 8 represent several modifications of bolts locked by loose handles having rotary movements.

My invention consists in certain improvements in bolt fastenings described and represented as follows. Letters Patent were granted to me on the fourteenth day of July 1857, for locking bolts by means of a loose handle which had a rectilinear movement while in the act of fastening and unfastening. In the present case the loose handle requires a rotary movement to effect the fastening. The loose handle (A, Fig. 1) with a rectilinear movement may be applied according to principles set forth in the above named patent, to bolts of a square or flat form as clearly shown in the drawing A Fig. 1, but in order to apply the principle, of locking bolts by means of a loose handle, to the sliding bolts with as little change as possible in the construction and operation of such bolts, I have invented the several modifications exemplified in the several Figs. 2, 3, 4, 5, 6, 7 and 8 of the accompanying drawings.

In Fig. 2, *b* is the bolt and *c* the loose handle, turning on the pivot *d*. The bolt is shown as locked and the loose handle *c* resting on the ledges *e* or projections of the guards, prevents the bolt from being slipped or pushed back. The handle is shown by dotted lines *c'* in that position in which the bolt is to be moved back and forth. This handle acts to some extent as a lever in moving the bolt, the guards *f, f*, serving as fulcra.

Fig. 3 shows the use of this bolt for an upright bolt and when used at the top of a high door, it is worked by means of a chain *g* running over a pulley or pin *h*. The chain being attached to the handle just below the pivot *d*, draws the loose handle *c* in place, as it draws the bolt up. The chain being

pressed against the lower end of the loose handle throws it upon the inclined part *i* of the guard *j* and the bolt then descends by its own weight, or if the bolt binds from displacement, or other cause, another chain may be attached to the same part of the loose handle as chain *g* and hang down therefrom, instead of passing over pulley *h* and this chain may be used for pulling the bolt down.

Fig. 4, shows another modification by which the loose handle is applied to square or flat bolts.

Fig. 5 is a cross section through the handle. The handle *c* turns on its pivot *d* and is used like the ordinary knob or handle in pushing the bolt back and forth. A portion of the ordinary handle being cut out at *m* is the only substantial change in the construction of this handle to adapt it to the purpose of locking the bolt. When the bolt is to be pushed in either direction the loose handle *c* is turned so as to stand across the bolt or in a direction at right angles to its axis, as it is shown in Fig. 6; and the loose handle is used in the same manner as the fixed handle of ordinary bolts. When the bolt is to be locked the loose handle being turned so as to stand in the direction of the length of the bolt, the projection *n* passes beyond the catch or check piece *p* and thus prevents the bolt from being pushed back. When the loose handle is turned to unlock the bolt, if it be turned half around or to the reverse of the position shown in Fig. 4 it acts favorably as a lever in starting the bolt, in case it binds from any cause; its shorter arm *c'* operating against the guard *f* of the bolt. The gain of leverage in this case is not great but the power of the thumb and finger is applied to a greater advantage than it would be in an attempt to move the bolt by a direct movement of the handle. This class of bolts is generally used for blinds or shutters and in positions where the bolt is to be pushed to one side or the other by the hand when extended in front of the body, which is an unfavorable position for the exertion of muscular force, in such directions. The most favorable exercise of the muscular power when the hand is extended in front of the body, is by rotation of the hand as in the act of turning a key or a button. Proceeding upon this principle I have made the catch piece *p* of the form shown in Figs. 6 and 7 so that it makes a



"*point d'appui*" or fulcrum for the thumb or finger of the hand in moving the bolt back and forth, the muscles being brought into play here to produce the act of squeezing or compression between the thumb and fore finger, which is more favorable than the direct movement of the whole hand. Lastly to effect the purposes of locking and leverage by the loose handle especially in the case of very large and heavy bolts I use the modification shown in Fig. 8, where the handle *c* is in the form of a crank upon the axle of which is fixed a pinion *s* which meshes into the rack *t*, this rack being on a part of the guard of the bolt. This bolt is moved back and forth by turning the crank *c* and is locked by the engagement of the pawl *x* in the teeth of the pinion *s*. When the bolt is to be pushed back or unbolted the pawl is to be raised from the pinion.

It will be seen that a common principle

of action obtains in all the above modifications, viz., the locking and leverage are effected by loose handles turning on their axes and moving with the bolts. It is obvious also that giving to the bolts other angular forms than square or flat or making them cylindrical or semicylindrical or giving to the bolt a curvilinear motion would not change the character or principle of my invention.

Therefore what I claim and desire to secure by Letters Patent as my invention is—

The locking of bolts when bolted or shut by means of rotary handles moving with the bolts and operating substantially upon the principles herein set forth.

CHAS. G. PAGE.

Witnesses:

WM. H. HARRISSON,  
H. S. STEVENS.