W. H. APPLEBY.

BOLT FASTENER.

APPLICATION FILED MAR. 5, 1921.

1,427,253. Patented Aug. 29, 1922.

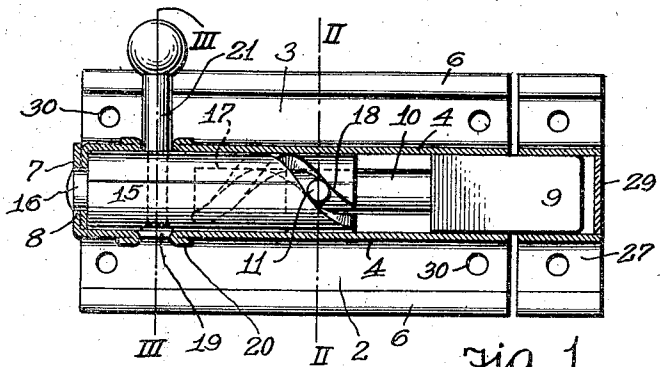
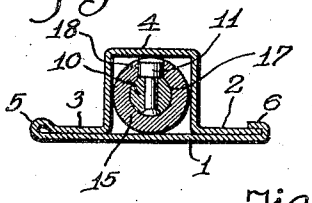


Fig. 1.

Fig. 2.



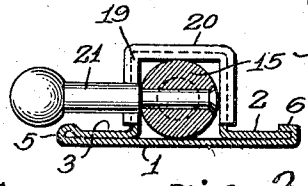


Fig. 3.

Fig. 9.

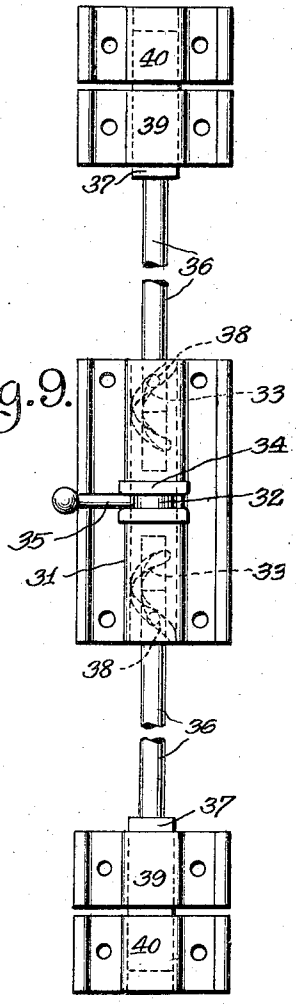


Fig. 4.

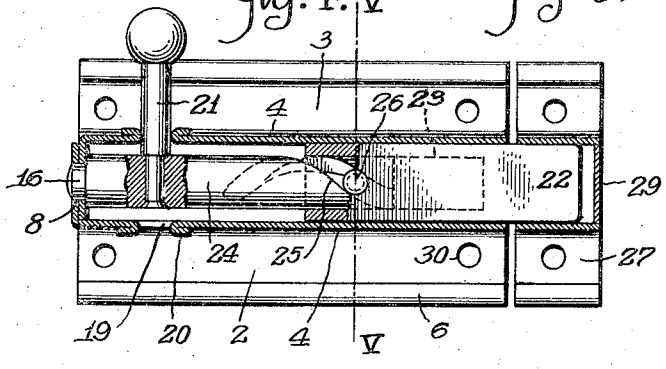


Fig. 6.

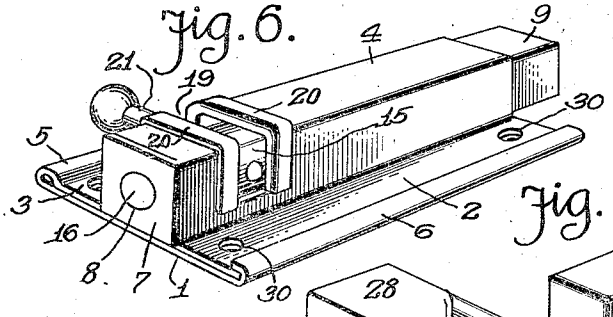


Fig. 7.

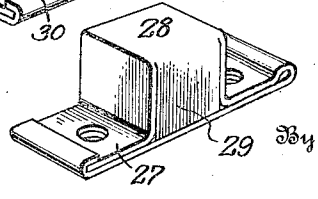
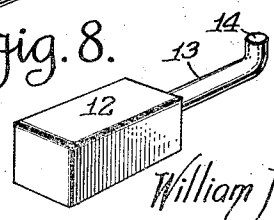


Fig. 8.



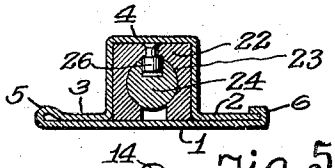


Fig. 5

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WILLIAM H. APPLEBY, OF TORONTO, ONTARIO, CANADA.

BOLT FASTENER.

1,427,253. Specification of Letters Patent. Patented Aug. 29, 1922.

Application filed March 5, 1921. Serial No. 450,071.

To all whom it may concern:

Be it known that I, WILLIAM H. APPLEBY, a subject of the King of England, residing at Toronto, in the county of York, Province of Ontario, Canada, have invented certain new and useful Improvements in Bolt Fasteners, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to bolt fasteners that may be advantageously used in connection with doors, lids, gates, casement windows or any member that is movable relative to a stationary member.

The primary object of my invention is to provide a bolt fastener embodying a reciprocable bolt which may be shifted by an oscillatory barrel, and the bolt and barrel are mounted in a novel housing.

Another object of this invention is to provide a bolt housing that may be made of a single piece of material cut and stamped to provide a blank which may be bent to afford a housing or keeper having lateral rigid flanges by which the housing or keeper may be conveniently attached to a door, door jamb or other support.

A further object of my invention is to provide a fastener embodying a reciprocable bolt that may be mounted in a vertical position for fastening the upper and lower edges or opposite ends of a movable member relative to a stationary member. In this instance, the bolt is made in two sections fitting in a single oscillatory barrel by which the bolts may be simultaneously shifted.

The above and other objects are attained by a fastener construction that may be easily and quickly manipulated, in the dark as well as in the light, and the bolt is held so that it cannot accidentally shift or be forced when holding a door relative to a door jamb.

The construction entering into the bolt fastener will be hereinafter described, and reference will now be had to the drawing, wherein

Figure 1 is a plan of a bolt fastener, partly in horizontal section;

Fig. 2 is a cross sectional view taken on the line II—II of Fig. 1;

Fig. 3 is a similar view taken on the line III—III of Fig. 1;

Fig. 4 is a plan, partly broken away and partly in horizontal section, of a modified form of bolt fastener;

Fig. 5 is a cross sectional view taken on the line V—V of Fig. 4;

Fig. 6 is a perspective view of the preferred form of bolt fastener;

Fig. 7 is a similar view of a bolt keeper;

Fig. 8 is a perspective view of a modified form of bolt, and

Fig. 9 is a front elevation of a double bolt fastener.

The bolt fastener consists of a keeper, a bolt, a barrel, and a housing or casing for the bolt and barrel.

The housing or casing is made of a single piece of metal in the form of a blank which is bent upon itself to provide a back plate 1, lateral flanges 2 and 3, and a housing 4 disposed longitudinally and centrally of the back plate 1. The lateral flanges 2 and 3 bear on the back plate 1 and at the juncture of the flange 3 with said back plate there is a longitudinal bead 5, said bead adding rigidity to the outer edge of the flange. The same is accomplished by the flange 2 by bending the edge of the blank to overlie the flange 2, as at 6, and this inturned edge of the blank maintains the housing 4 at all times on the back plate 1.

At the inner end of the housing 4 the side walls of said housing have inturned overlapped flanges 7 providing an end wall for the inner end of the housing and said flanges are apertured, as at 8 for a purpose that will presently appear.

The housing 4 is substantially rectangular in cross section and slidable in the outer end of said housing is a bolt 9 having a cylindrical shank 10 at its inner end provided with a radially disposed stud 11. This stud is adjacent the end of the shank 10 and is made separate therefrom, but as shown in Fig. 8 a bolt 12 may have a shank 13 provided with an angular end 14 that will serve as a stud.

Rotatable in the inner end of the housing 4 is a barrel 15 having its inner end provided with a pintle 16 extending into the apertures 8 of the housing end wall. The outer end of the barrel 15 has a bore 17 to receive the bolt shank 10, and the walls of the bore 17 have a spiral slot 18 to receive the stud 11 of the bolt shank. It is now apparent that if the barrel 15 is oscillated within the housing 4 that the bolt 9 will be shifted longitudinally of said housing. This is due to the walls of the spiral slot 18 riding against the stud 11, and since the

bolt 9 is held against rotation by the housing 4, it is obvious that the bolt 9 must shift longitudinally of the housing when the barrel is oscillated.

The inner end of the housing 4 has a transverse slot 19 and the marginal edges of the slot are rounded or stiffened by bending the material of the housing on itself, as at 20, and these bent edges of the housing will afford a substantial bearing for a crank or handle 21 having its outer end provided with a suitable knob and its inner end fixed to the barrel 15. This may be conveniently accomplished by reducing the inner end of the crank to extend through the barrel and be riveted or otherwise fixed therein, as clearly shown in Fig. 4. By swinging the crank or handle 21 from one side of the housing to the other the barrel 15 may be oscillated and the bolt 9 retracted or extended relative to its housing.

As shown in Figs. 4 and 5 the driving relation between the barrel and bolt may be reversed. The bolt 22 may have a bore 23 to receive the barrel 24, and said barrel may have a spiral groove or slot 25 to receive an inwardly projecting stud 26 carried by the bolt 22. Oscillation of the barrel 24 will cause the bolt 22 to slide on the barrel 24.

The keeper is designated 27 and is made from a blank shorter than the housing blank but in a manner similar thereto. The bolt housing portion 28 of the keeper has a flange which is bent downwardly to provide an end wall 29, which will serve as a stop for the bolt when entering the keeper. The flanges of the keeper and bolt housing have suitable apertures 30 so that the bolt lock may be connected to movable and stationary members by screws, nails or other fastening means.

In Fig. 9, I show an elongated housing 31 in which is an oscillatory barrel 32 having its ends provided with spiral slots 33. The housing 31 has a transverse slot 34 intermediate its ends to provide clearance for a crank or handle 35 by which the long or double barrel 32 may be oscillated. Extending into the ends of the barrel 32 are the long shanks 36 of bolts 37, said shanks having the inner ends thereof provided with studs 38 extending into the slots 33. The bolts 37 are slidable through guide housings 39 into keepers 40, said guide housings and keepers being made similar to the keeper 27, with the exception that the guide housings 39 are devoid of end walls. This type of double fastening bolt may be advantageously used when the upper and lower edges of a door are to be held by the top and bottom of the door jamb, and many are the uses of such a double fastening device.

From the foregoing it will be observed that I have devised an extremely simple, durable and inexpensive fastening device consisting of comparatively few pieces of hardware that may be easily and quickly assembled and finished to present a neat and attractive appearance. While in the drawing there are illustrated the preferred embodiments of my invention it is to be understood that the structural elements are susceptible to such changes, in size, shape and manner of assemblage, as fall within the scope of the appended claims.

What I claim is:—

1. A bolt fastener comprising a housing having a transverse slot, a bolt having a shank in said housing, with said bolt of such configuration as to prevent its rotation in said housing, a barrel in said housing receiving said bolt shank and adapted to reciprocate said bolt shank when said barrel is turned, and means extending through the slot of said housing to facilitate turning said barrel.

2. A bolt housing made of a blank bent on itself to form a back plate, lateral flanges and a housing, one of the lateral flanges being beaded and the other flange held by an inturned edge of the blank, and both of the flanges apertured.

3. A bolt housing as in claim 2, characterized by the housing side walls having inturned overlapped end portions providing an end wall for the housing.

4. A bolt housing as in claim 2, wherein the housing has a transverse slot with the blank flanged at the edges of the slot.

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

WILLIAM H. APPLEBY.

Witnesses:
KARL H. BUTLER,
ANNA M. DORR.