(No Model.)

A. SCHWEINFURT.

BOLT FOR DOOR LOCKS.

No. 329,494. Patented Nov. 3, 1885.

FIG. 1

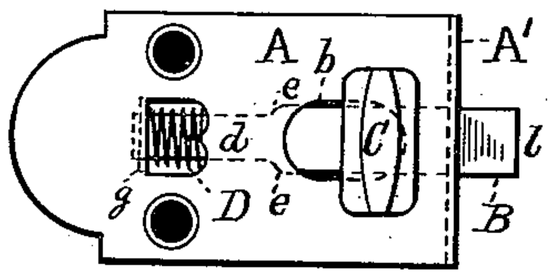


FIG. 2

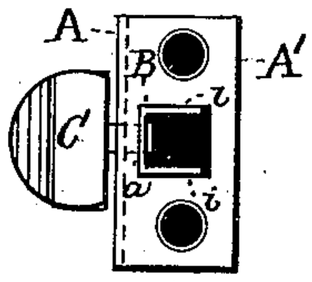


FIG. 3

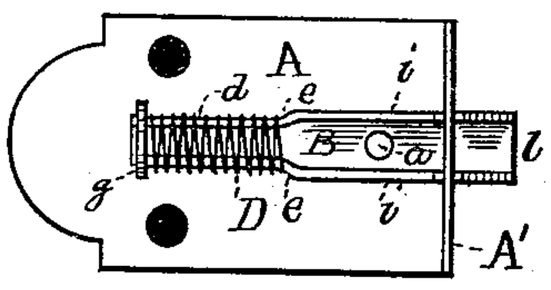


FIG. 8

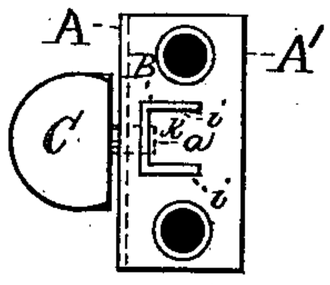


FIG 4

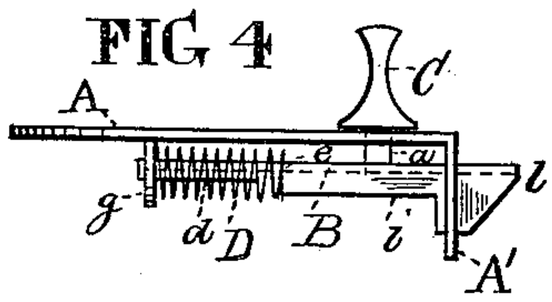


FIG. 5

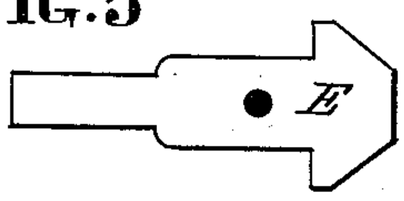


FIG. 6

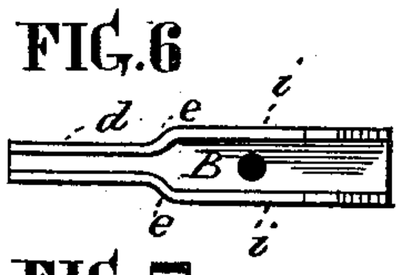
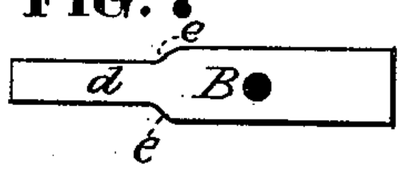


FIG. 7



Witnesses.

W. E. W. Bewley.

Clarence P. Levy.

Inventor

Augustus Schweinfurt.

per Thomas J. Bewley, Att'y.

UNITED STATES PATENT OFFICE.

AUGUSTUS SCHWEINFURT, OF PHILADELPHIA, PENNSYLVANIA.

BOLT FOR DOOR-LOCKS.

SPECIFICATION forming part of Letters Patent No. 329,494, dated November 3, 1885.

Application filed April 2, 1885. Serial No. 161,066. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS SCHWEINFURT, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Bolts for Door-Locks, of which the following is a specification.

My invention consists of an improvement in bolts of locks, constructed of sheet metal, cut and flanged by means of dies of the required conformation in punching-presses in such a manner as to give the requisite shape and strength to the bolt, hereinafter more fully described. Bolts for door-locks have generally been made of cast metal, preferably of malleable iron, through which a hole has been drilled in the main portion to rivet thereto a stem or shank of the knob that projected outside of the plate of the lock. A helical spring, whose ends are confined between shoulders of the bolt and a stud on the inner face of the plate, causes the outward beveled end of said bolt to be always projected outside of the rim of the lock, to act as a catch, in connection with a mortised keeper on the jamb of the casing, to retain the door in its closed position. This method of constructing bolts of cast metal has been found to be objectionable, the chief reason of which was that in drilling a hole through the body for the insertion of the shank of the knob, which extended through the plate, the bolt was so weakened as to be unable to withstand the strain. As a consequence many were broken during the process of fitting up the locks, involving much loss of time and material.

To overcome the objections and difficulties in the manufacture and use of cast-iron bolts is the object of my invention. Rolled metal of suitable thickness is used, preferably of brass, on account of its ductility, and the sheet passed between dies of desired conformation, which cut the blanks therefrom. A second pair of dies is then used, between which the blanks previously cut are inserted, which turn up at one side the parallel flanges upon the edges of the plate, forming the bolt ready for its connection with the plate of the lock. The hole for the connection of the shank of the knob may be punched by the dies that cut the blank, or by those that flange, at option, or it may be drilled, as best suits convenience.

In the accompanying drawings, which make a part of this specification, Figure 1 is a face view of a spring lock or closet-catch, showing my improved bolt connected therewith. Fig. 2 is an end view of the same. Fig. 3 is an inner face view. Fig. 4 is an edge view. Fig. 5 is a face view of the blank E before undergoing the flanging process to form the bolt B. Figs. 6 and 7 are opposite face views of the bolt B. Fig. 8 shows an end view of the bolt and lock-plate with the stud K left standing in the rim.

Like letters of reference in all the figures indicate the same parts.

A is the lock-plate, and A′ the rim of the same, projected at right angles thereto, the plate and rim being provided with the customary screw-holes for attachment to the face of a door.

B in the drawings represents a sliding bolt attached to the plate A, which is actuated in its lateral movements by means of the knob C, that is riveted thereto by the shank *a*, passing through said bolt, the slot *b* in the plate permitting of the free lateral movements of the bolt.

D is a helical spring surrounding the shank *d* of the bolt, one end of which rests between the shoulders *e e* and the opposite end against the face of the stud *g*, by which means the resilient action of the spring always keeps the end *l* of the bolt extended outside of the rim of the plate, to insure its acting as a catch.

A further description of the operation of the lock is not necessary, being well known.

My improvement consists only in the bolt, which I construct of sheet metal, preferably of brass, on account of its being easily bent without danger of cracking at the corners.

In the preliminary operation a sheet of metal of proper thickness is fed into and between the male and female dies of a punching-press, which cut the sheet into the flat blanks E, a face view of one being shown in Fig. 5. The blanks are again fed separately and successively between another pair of dies of proper formation, which turns up the edges of the blank at right angles to the main portion, forming the flanges *i i* parallel to each other upon one surface of the bolt.

My improvement is applicable to all kinds of locks for use upon doors, whether spring-catch, similar to the illustration, or to dead-latch, rim, and mortise lock, or to door-bolts.

I save metal by my method of construction,

and the liability of the breakage of a bolt is entirely obviated in drilling a hole for the insertion of the shank of the knob, as the hole may be punched either from the blank or from the bolt when flanged.

I claim as my invention—

The bolt B for door-locks, constructed of sheet metal, and provided with the flanges *i i*, bent over upon one of the faces of the blank at right angles to the main portion, substantially as shown and described, for the purpose set forth.

AUGUSTUS SCHWEINFURT.

Witnesses:

THOMAS J. BEWLEY,

SAML. B. S. BARTH.