

J. J. MULKERN.
WALL BOLT HOLDER.
APPLICATION FILED AUG. 2, 1919.

1,349,977.

Patented Aug. 17, 1920.

Fig. 1.

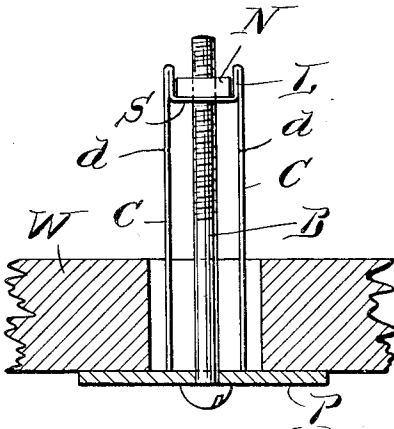


Fig. 2.

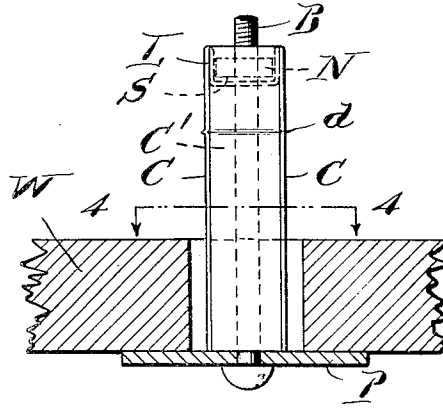


Fig. 4.

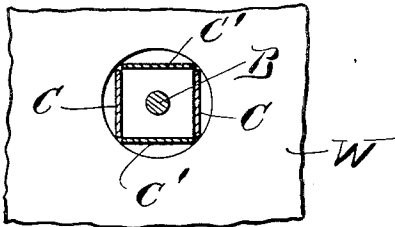


Fig. 3.

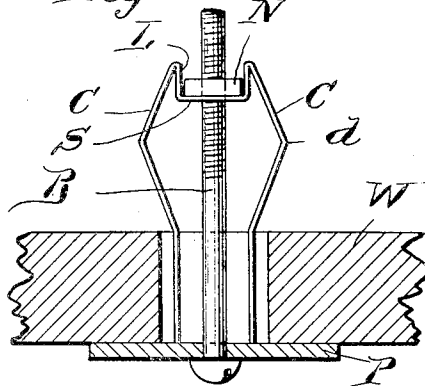


Fig. 5.

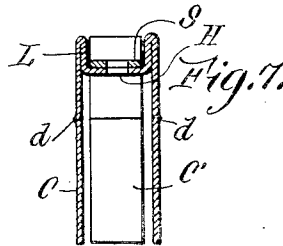
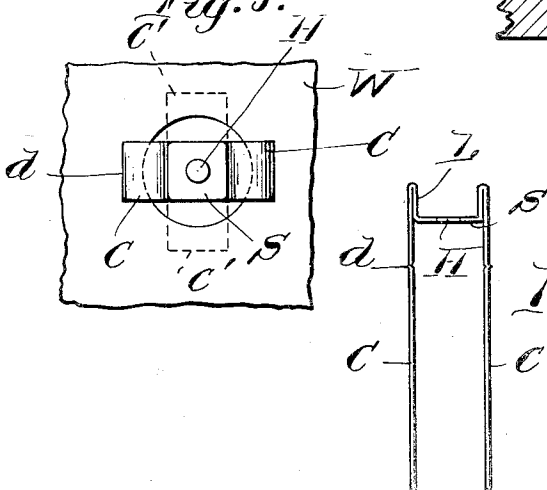


Fig. 6.

Inventor:
John J. Mulken.

UNITED STATES PATENT OFFICE.

JOHN J. MULKERN, OF CAMBRIDGE, MASSACHUSETTS.

WALL BOLT-HOLDER.

1,349,977.

Specification of Letters Patent.

Patented Aug. 17, 1920.

Application filed August 2, 1919. Serial No. 314,923.

To all whom it may concern:

Be it known that JOHN J. MULKERN, a citizen of the United States of America, residing at Cambridge, in the county of Middlesex and State of Massachusetts, has invented an Improvement in Wall Bolt-Holders, of which the following is a specification.

Heretofore many devices of complicated and expensive construction have been made for the purpose of wall anchors or devices in the nature of expansion bolts; but my improvement in wall-bolt holders is a simplification in the construction of such devices and at great reduction in the cost; and it consists in a relatively thin strip of flexible metal the ends of which near its middle portion, are bent at right angles to its length, thus forming a flat section which serves as a seat for the bolt-nut and is provided with a hole for the bolt; each end of this strip, a little beyond this flat section, is bent back upon itself, which produces a projecting ledge to engage the sides of the bolt-nut and prevent it being turned when the screw-bolt is turned.

These bent ends extend back parallel to the shank of the bolt, and upon the side next to the bolt are scored or creased across their surface to determine the place of maximum expansion of the strip and where it will first bend outward when pressure is brought upon the seat by turning the screw-bolt and drawing the nut inward, with the ends of the strip resting against the plate or surface of the device which is to be secured against the wall.

A single strip thus bent into the form described may be used when the plate or other thing to be secured to the wall is not heavy nor to be subjected to great strain, but I prefer to use a pair of these devices interlocked with the flat sections superposed and the long ends of each extending back parallel to the shank of the bolt and with the flat surface of the ends of the respective strips arranged at right angles to those of the other, so that when the strips are compressed these long ends will bend outward and engage the wall in four different directions.

In the drawings forming a part of this specification, Figure 1, is an elevation of a single strip of metal bent into the desired shape and a section of wall with a bolt extending through the plate and the wall to which it is to be secured, and a nut engaged

by the bolt in the seat of the holder; Fig. 2, is an elevation of a pair of such strips interlocked with one another; Fig. 3, is an elevation of a single strip holder such as shown in Fig. 1, with the nut drawn down by the screw-bolt so as to cause the sides of the holder to bend outward and engage the wall; Fig. 4, is a plan view of a cross section on line 4-4, in Fig. 2; Fig. 5, is a plan view looking down upon Fig. 3, and Fig. 6, is an elevation of a single strip of the holder in the position shown in Fig. 1, before being compressed as in Fig. 3; Fig. 7, is a view of a single strip, in elevation, as in Fig. 6, with a similar interlocking strip placed at right angles thereto and in section through the seat S, that is, cutting off one of the legs C'. When the holder is compressed only the edges of the strips will bear against the wall within the hole, as seen in Fig. 4.

Referring to the drawings by reference characters, W, is a section of wall to which the plate P, is to be secured; C, C, are the sides of the flexible strip first bent at right angles to its length to form a seat S, for the nut N, and then bent back upon itself to form the nut engaging ledges L and the legs or sides C, C, of the holder. The sides C, C, extend parallel with the screw-bolt B, which passes through the plate P, between the sides C, C, and C', C', through the hole H, in the seat S, and engages the nut N, resting in the seat S, within the ledges L.

The sides or legs C, C', of the holder are scored or creased upon their inner surfaces as at d, to determine the place where the strips will first bend outward when compressed by the nut N, through the action of the screw-bolt B, and also the location of the maximum expansion of the strips when thus caused to collapse.

When the sides C, C', of the holder are expanded as shown in Fig. 3, they engage the wall at the sides of the hole through which the holder passes and secure the plate P, against the other side of the wall, as shown in Figs. 1 to 3.

The bolt-holder will be found very inexpensive to manufacture and in the material used, easily applied, and perfectly secure in its operation.

I claim:

1. A wall bolt-holder, consisting of a flexible metal strip a section of which is bent at right angles to its length and beyond that section bent backward upon itself to

form a seat for the bolt-nut and engagement for its sides, and provided with a hole in such seat section for the passage of the bolt; the turning of which will draw the nut inward and cause the flexible sides of the holder to expand.

2. A wall bolt-holder, consisting of a pair of flexible metal strips the two ends of each being bent at right angles to their length, thus forming a flat seat for the bolt-nut and provided with a hole in such flat portion for the bolt, the ends of the strips beyond such seats being bent backward upon themselves to form ridges to engage the sides of the nut; these bent strips being adapted to interlock, with the right angled seat portions superposed and their ends parallel with and surrounding the bolt.

3. A wall-bolt holder, consisting of a pair of flexible metal strips each of which is bent near its middle portion at right angles to its length, to form a seat for the bolt-nut, with a hole through the seat for the bolt, and beyond such seat a portion of each end of each strip being bent backward upon itself thus forming projections which engage the sides of the nut, and having the inner surface of the strips creased between the seat and the ends of the bent back portions, to determine the location of their maximum expansion when caused to collapse and engage the encompassing wall, by the force of the nut upon the seat when drawn inward by the action of the screw bolt.

JOHN J. MULKERN.