

TOGGLE BOLT.

Patented Dec. 27, 1910.

Fig. 5.

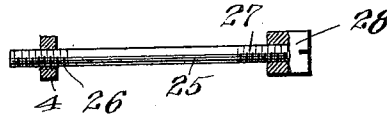


Fig. 1

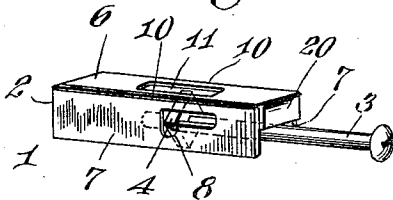


Fig. 2

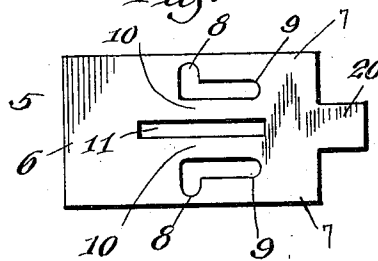


Fig. 3.

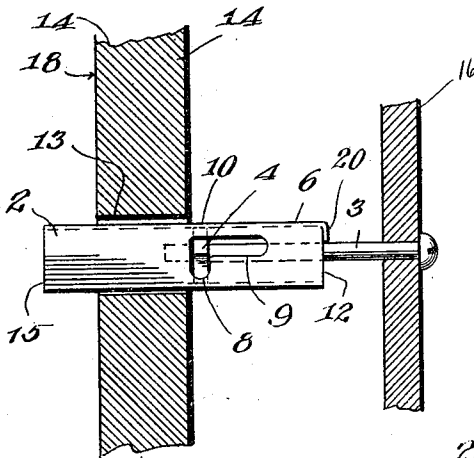
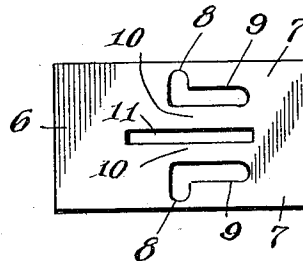
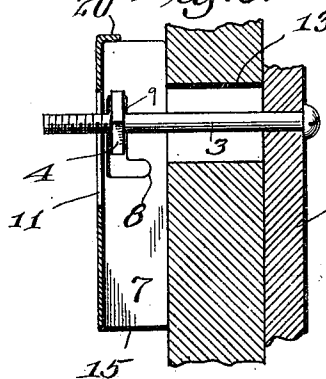


Fig. 4.



20 Fig. 6.



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TOGGLE-BOLT.

979,841.

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To all whom it may concern:

Be it known that I, JAMES EDWARD GOEWEY, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Toggle-Bolts, of which the following is a specification, taken in connection with the accompanying drawings, which form a part of the same.

This invention relates to toggle bolts and more particularly to one which can be cheaply and economically manufactured.

It further relates to the head of such toggle bolt as a separate article of manufacture.

In the accompanying drawing I have shown an illustrative embodiment of my invention in which the same reference numerals refer to similar parts in the several figures.

Figure 1 is a perspective view of my toggle bolt; Fig. 2 is a plan view of the preferred form of blank from which the head is made; Fig. 3 is a side elevation of the toggle bolt, the support and the article to be supported being shown in section; Fig. 4 is a plan view of a blank; Fig. 5 is a side elevation of a modified form of stem or bolt, a portion of the head being shown in section; and Fig. 6 is a vertical section through the toggle bolt, support and article supported, a portion of the toggle bolt being in side elevation.

In the illustrative embodiment of this invention shown in the drawing 1 is a toggle bolt including a head 2 and a stem 3 and a stem engaging member 4. The head 2 may be formed from a stamped metal blank 5, cut in the proper manner to form the desired sized head, it, of course, being understood that the size of the head would vary for the work required and the apertures or openings through which the toggle bolts are inserted. With the larger size head, larger stems and stem engaging members would generally be used. The head 2 comprises a body member 6 with side strengthening flanges 7, 7 the flanges being preferably bent around at an angle to the body member 6 and preferably formed at a right angle with said member, though this may be varied without departing from my invention. By stamping out portions of the blank 5 I form in the flanges 7, 7 pivoting shoulders 8, 8

and locking shoulders 9, 9 for a purpose to be hereinafter described. At the same time that these shoulders are formed in the blank I also preferably form two guards 10, 10 forming a slot 11 between them, both ends of the guards being connected to the body member 6. Furthermore they preferably connect the front and rear portions of the body member 6 together and lie in substantially the same plane as said body member, permitting the head 2 to be inserted in an aperture 13 of the minimum size for the particular sized head used. With this head 2, which is sold separately as an article of manufacture, I may or may not sell the stem and stem engaging member. These latter members may have any suitable configuration and be formed of any suitable material to cooperate with the head. I preferably use for these members a bolt and a nut of any approved form of construction. Such bolts and screws are themselves separate articles of manufacture, one such type of bolt which I have found to be extremely efficient in practice, but to which my invention of course is not to be limited, is what is known as a stove bolt and nut. The nut 4 is inserted beneath the guards 10, 10 and allowed to rest upon the pivoting shoulders 8, 8. The stem 3 is then inserted beneath the body member 6 and between the side flanges 7, 7 until it engages with the threads in the nut. In this position of the parts (Fig. 3) the head and stem are secured together, there being a pivoting connection between the nut 4 with its bolt 3 and the head 2.

In using my device the parts are brought substantially into the position shown in Fig. 3 when the head and a portion of the stem are forced through the aperture 13 in the support 14, which support may be of terra cotta, brick, metal work, cornice work, wire lath, masonry, or any other suitable support. As soon as the end 12 has passed the inner surface 18 of the support 14, the entire head 2 will, by gravity, swing down into substantially right angles to the stem 3 (Fig. 6) in which position the stem engaging member or nut 4 will move from the pivoting shoulders 8, 8 to the locking shoulders 9, 9. It is obvious that by screwing upon the stem or bolt 3, the article 16 to be supported will be securely clamped or held to the support 14 by means of the stem 3 screwing through the nut 4.

To permit the parts to readily position themselves when the head 15 has passed just beyond the inner surface 18 of the support 14, I preferably, though not necessarily, arrange the pivoting and locking shoulders on the head so that the end 15 will somewhat overbalance the end 12. In this position of the bolt 3 and nut 4, shown in Fig. 3, as soon as the end 12 passes the surface 18, the head 2 will swing down into the position shown in Fig. 6.

In some instances I may provide the blank with a lug 20, Fig. 2, or I may omit the lug, Fig. 4. I also use when desirable a stem or bolt with a detachable head secured, as by screw threads on the bolt. Such a bolt is shown in Fig. 5 wherein the bolt 25 has oppositely pitched screw threads 26 and 27 at its respective ends, the former to engage with the threads in the nut 4 and the latter with threads in the detachable head 28. This style of bolt is used interchangeably with the other form of bolt.

Having thus described this invention in connection with an illustrative embodiment thereof, to the details of which I do not de-

sire to be limited, what is claimed as new and what it is desired to secure by Letters Patent is set forth in the appended claims:

1. A head for a toggle bolt, including a body member, one or more guards connected at both ends with the body member, and side strengthening flanges provided with pivoting and locking surfaces. 30

2. A head for a toggle bolt, including a body member, one or more guards connected at both ends with the body member, side strengthening flanges provided with pivoting and locking surfaces, and a lug partly closing one end of the head. 35 40

3. In a toggle bolt the combination of a head including a body member, one or more guards connected at both ends with the body member, side strengthening flanges provided with pivoting and locking surfaces, a removable nut to coöperate with pivoting and locking surfaces, and a removable bolt to coöperate with the nut. 45

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Witnesses:

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