

J. J. TALTY.

BOLT.

APPLICATION FILED AUG. 11, 1920.

1,374,615.

Patented Apr. 12, 1921.

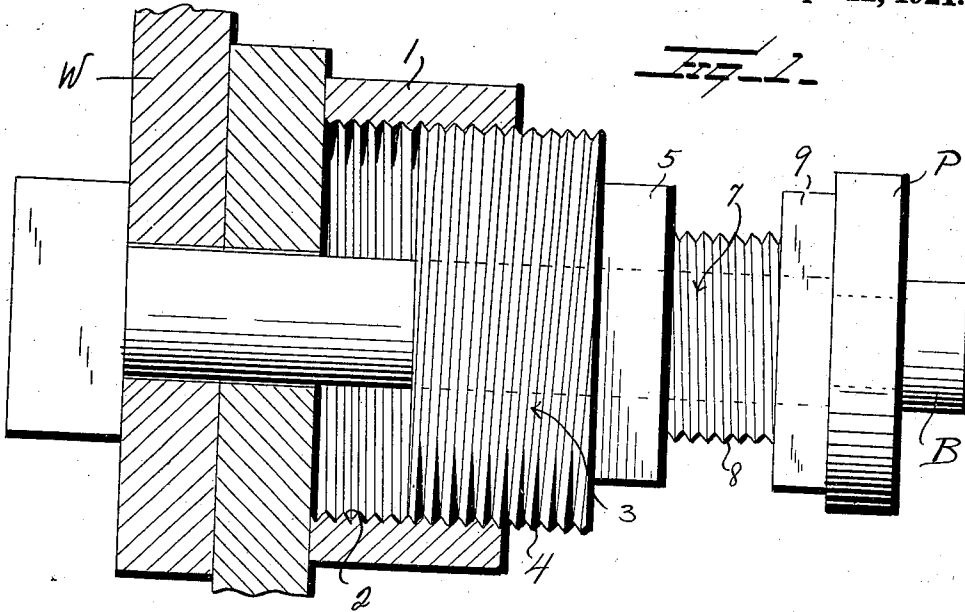


Fig. 1.

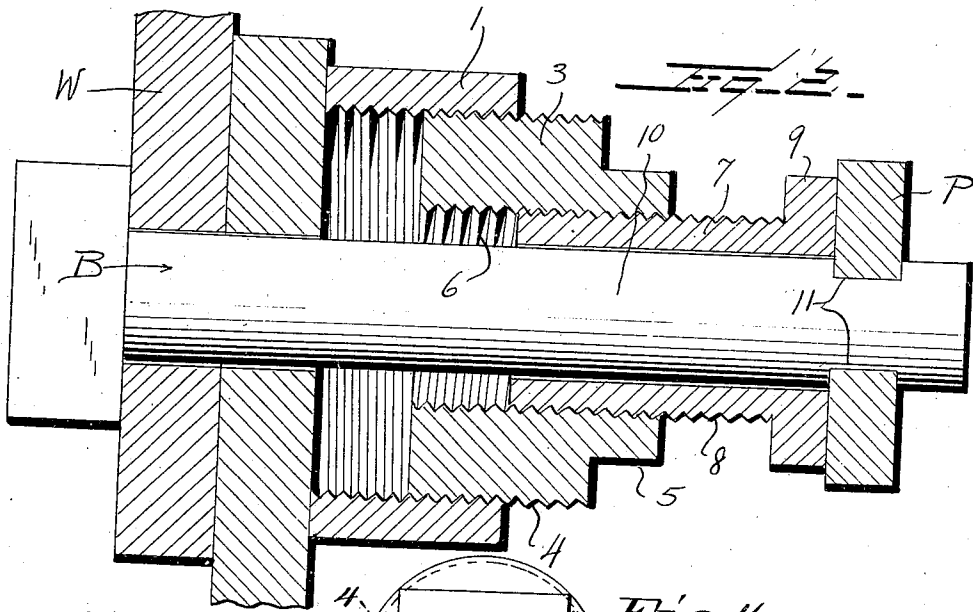


Fig. 2.

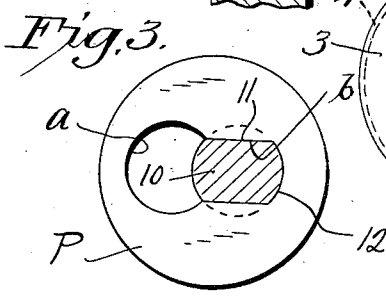


Fig. 3.

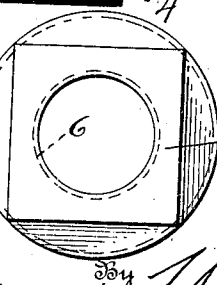


Fig. 4.

Inventor

J. J. Talty

Watson E. Coleman
Attorney

UNITED STATES PATENT OFFICE.

JAMES J. TALTY, OF HARRIMAN, PENNSYLVANIA.

BOLT.

1,374,615.

Specification of Letters Patent.

Patented Apr. 12, 1921.

Application filed August 11, 1920. Serial No. 402,757.

To all whom it may concern:

Be it known that I, JAMES J. TALTY, a citizen of the United States, residing at Harriman, in the county of Bucks and State of Pennsylvania, have invented certain new and useful Improvements in Bolts, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain improvements in bolts and has relation more particularly to a device of this general character especially designed and adapted for use in fitting-up work and more particularly such structural work as is comprised in the building of ships, and it is an object of the invention to provide a novel and improved device of this general character which can be readily applied and removed with convenience and facility and which, when in working position, serves to effect a close or tight fitting or contact of the elements with which it coöperates.

Another object of the invention is to provide a novel and improved device of this general character comprising a plurality of separable members connected for relative axial movement whereby said members, upon rotation of one of the members, may be caused to move in reverse directions to facilitate the application or removal of the bolt.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved bolt whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:

Figure 1 is an enlarged fragmentary view partly in section and partly in elevation illustrating a bolt constructed in accordance with an embodiment of my invention;

Fig. 2 is a sectional view taken entirely through my improved bolt and coacting work, with the holding bolt shown in elevation;

Fig. 3 is a view partly in end elevation and partly in section illustrating in detail the coaction between the plate P and the holding bolt; and Fig. 4 is a view in front elevation of the intermediate or central tubular member as herein disclosed.

My improved bolt, as herein disclosed, is particularly adapted for use for temporarily holding structural steel plates, shapes, or the like in position preparatory to riveting and is especially adapted for use in connection with the joints in assembling a ship structure and more particularly when applying the plates thereto.

As herein disclosed, my improved bolt embodies a tubular member 1 of requisite dimensions and which is internally threaded, the threads 2 being preferably left hand. In threaded engagement with the member 1 is a tubular member 3, the walls of which are relatively thick. One end portion of the member 3 is peripherally threaded, as at 4, for coöperation with the internal threads 2 of the tubular member 1.

The outer or opposite end portion of the member 3 is angular in cross section, as at 5, to provide means whereby a wrench or other implement may be readily and effectively engaged with the member 3 for imparting the desired rotary movement thereto necessary to effect or facilitate the application or removal of the bolt.

The bore of the tubular member 3 is internally threaded, the threads 6 thereof being right hand or reverse to the internal threads 2 of the member 1.

7 denotes a tubular member provided with peripheral threads 8 adapted to engage the internal threads 6 of the tubular member 5 and the outer end portion of the member 7 is defined by an outstanding flange 9 whereby the outer end of said tubular member is of increased area.

B denotes a headed bolt of a conventional type except that the shank 10 thereof in its free end portion is provided with the substantially diametrically opposed flattened faces 11 and wherein the shank 10 is of a length to extend through the work W and the assembled members 1, 3 and 7. The work W, as herein disclosed, comprises a lap joint, although it is to be understood that I do not wish to limit myself to the use of my invention with a joint of this particular character.

After the bolt B has been inserted through the registering openings in the work W and through the assembled tubular members comprised in my improved fitting-up bolt, the outer or extended end portion of the bolt B is disposed through the larger end portion *a* of a keyhole slot 12 provided in a locking or holding plate P. The plate P is then moved by imposing a suitable impact thereon to cause the extended end portion of the shank 10 of the bolt B to engage within the restricted portion *b* of the slot 12, whereby the bolt B is effectively maintained in applied position and the plate P operates as an abutment for the following operation. It is to be understood that the transverse diameter of the restricted portion *b* of the slot 12 is substantially equal to the thickness of the bolt B between the flattened faces 11.

A wrench or other implement is then engaged with the angular portion 5 of the tubular member 3 and upon requisite rotation thereof, the tubular member 1 moves inwardly toward the work W while the tubular member 7 moves outwardly against the holding plate P. This causes the plates or the like comprised in the work to closely contact and be held in such position to facilitate the riveting operation. When it is desired to remove the bolt B, it is only necessary to force the plate P, by impact with a suitable implement, to bring the portion *a* of the slot 12 about the outer or free end portion of the shank 10. When in this position, the bolt B can be readily knocked out and consequently my improved holding-on bolt released.

From the foregoing description it is thought to be obvious that a bolt constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:

1. A holding-on bolt of the character described comprising a tubular member, a second tubular member threaded therein, a third tubular member threaded in the second tubular member, the threaded connection between the second tubular member and the first tubular member and with the third tubular member being reversed, a shank insertible through the assembled tubular members, and a holding plate adapted to engage an extended end portion of the shank.

2. A holding-on bolt of the character described comprising a tubular member, a second tubular member threaded therein, a third tubular member threaded in the second tubular member, the threaded connection between the second tubular member and the first tubular member and with the third tubular member being reversed, a shank insertible through the assembled tubular members, and a holding plate adapted to engage an extended end portion of the shank, one of said tubular members being provided with means whereby the same may be readily rotated.

3. A holding-on bolt of the character described comprising a tubular member, a second tubular member threaded therein, a third tubular member threaded in the second tubular member, the threaded connection between the second tubular member and the first tubular member and with the third tubular member being reversed, a shank insertible through the assembled tubular members and a holding plate adapted to engage an extended end portion of the shank, the second tubular member being provided with means whereby the same may be readily rotated.

4. A holding-on bolt of the character described comprising a tubular member, a second tubular member threaded therein, a third tubular member threaded in the second tubular member, the threaded connection between the second tubular member and the first tubular member and with the third tubular member being reversed, a shank insertible through the assembled tubular members, and a holding plate adapted to engage an extended end portion of the shank, the portion of the second tubular member exterior of the first tubular member being angular in cross section to facilitate the engagement therewith of an operating implement.

5. A holding-on bolt of the character described comprising a tubular member, a second tubular member threaded therein, a third tubular member threaded in the second tubular member, the threaded connection between the second tubular member and the first tubular member and with the third tubular member being reversed, a shank insertible through the assembled tubular members, and a holding plate adapted to engage an extended end portion of the shank, said holding plate being provided with a keyhole slot, the shank insertible through the assembled tubular members being provided with flattened faces whereby said shank may be engaged within the restricted portion of the slot.

In testimony whereof I hereunto affix my signature.

JAMES J. TALTY.