

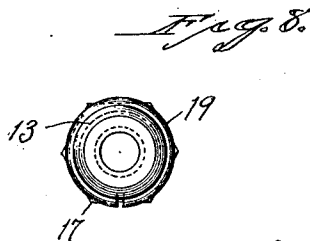
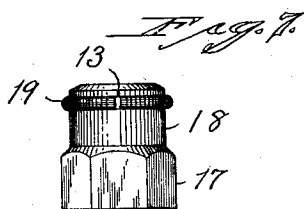
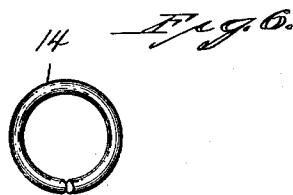
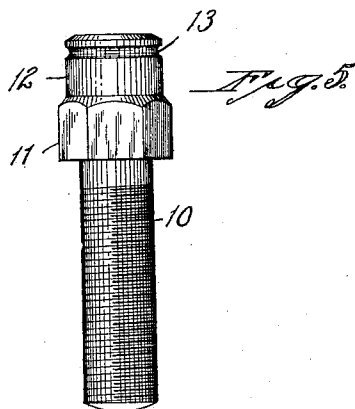
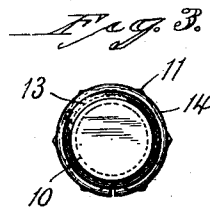
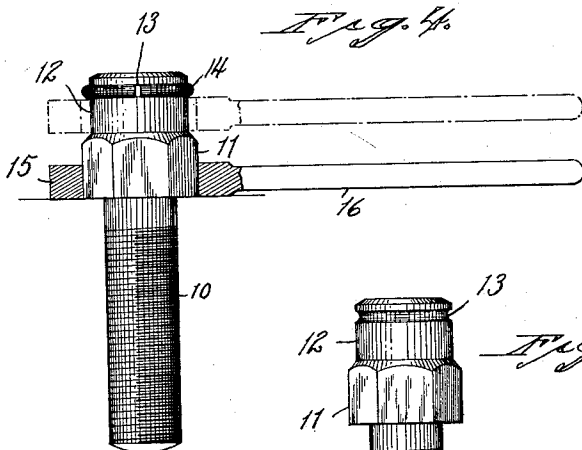
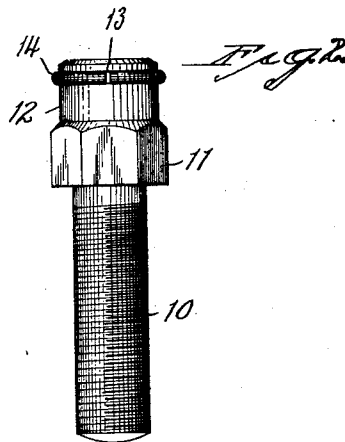
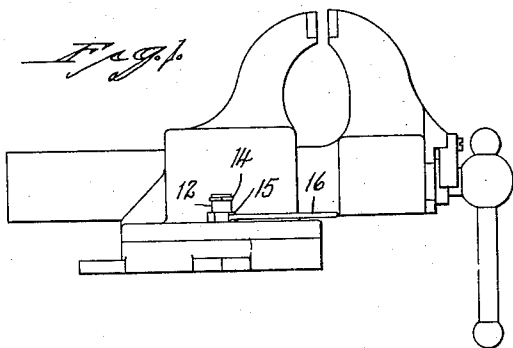
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P. H. D. WALKER

1,778,576

CLAMPING ELEMENT FOR VISES AND SIMILAR ARTICLES

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Inventor.
Percy H. D. Walker
By Seymour Earle & Nichols
attys

UNITED STATES PATENT OFFICE

PERCY H. D. WALKER, OF MERIDEN, CONNECTICUT, ASSIGNOR TO THE CHARLES PARKER COMPANY, OF MERIDEN, CONNECTICUT, A CORPORATION

CLAMPING ELEMENT FOR VISES AND SIMILAR ARTICLES

Application filed December 13, 1929. Serial No. 413,744.

This invention relates to improvement in clamping devices for various purposes where nuts and bolts are used, with particular reference to providing clamping elements which are to be operated by wrenches and which are particularly designed for use in connection with rotatable vises. In some cases, and as in vises, it is desirable that the wrench shall always be in position for operation, and means should be provided to prevent its entire removal from the element with which it is used. Various devices have been made for this purpose and the object of this invention is to provide a clamping element, simple in construction and from which a wrench may be removed, if desired, although not likely to be accidentally removed, and the invention consists in the construction as hereinafter described and particularly recited in the claim.

In the accompanying drawings:

Fig. 1 is a side view of a vise showing one of my improved clamping elements in connection therewith;

Fig. 2 is a side view of a clamping element of bolt form;

Fig. 3 is a top view of the same;

Fig. 4 is a side view of the element with a wrench attached;

Fig. 5 is a side view of the element with its spring-ring removed;

Fig. 6 is a perspective view of the ring detached;

Fig. 7 is a side view of a clamping element of nut form; and

Fig. 8 is a plan view of the same.

In carrying out one form of my invention, I employ a bolt having a threaded shank 10 and a polygonal head 11, above which rises a round neck 12 and near the outer end of the neck is an annular groove 13 to receive a spring-ring 14 providing an annular flange slightly greater in diameter than the diameter of the polygonal head, and the length of the neck between the angular portion and the ring is somewhat greater than the thickness of the head 15 of a wrench 16 which is placed onto the element before it is in its clamping position.

It is obvious, as shown in Figs. 7 and 8 of the drawings, that the invention may be

applied to clamping elements of nut type, the nut being threaded and having a polygonal wrench-receiving portion 17 and a neck 18 formed with an annular groove to receive a clamping-ring 19 which operates in the same way as the clamping device of the bolt type first described.

In either case, an annular flange is provided at the upper end of the round neck, extending beyond the angular portion of the element, so that a wrench is always in position to turn the element, but can be readily lifted above the polygonal part and turned preparatory to taking a new grip without danger of its slipping off from the element, with the further advantage that if necessary or desirable, the spring-ring may be removed from the neck so that the wrench may be applied or removed from the clamping element without entirely detaching the clamping element from its complementary part.

I claim:

A clamping element comprising a threaded part, a polygonal or faceted wrench-engaging portion, a neck made integral with, extending beyond, and smaller in diameter than the same to permit the wrench to turn freely upon it, and formed close to its outer end with an annular groove; and an open ring formed of hard spring wire located in the said groove than which it is normally smaller in internal diameter, and projecting out of the said groove to form a substantially-continuous, overhanging, annular guard larger in external diameter than the diameter of the said polygonal wrench-engaging portion.

In testimony whereof, I have signed this specification.

PERCY H. D. WALKER.