

Oct. 23, 1923.

1,471,531

E. SCHORRATH

PLIERS

Filed July 28, 1922

Fig. 1

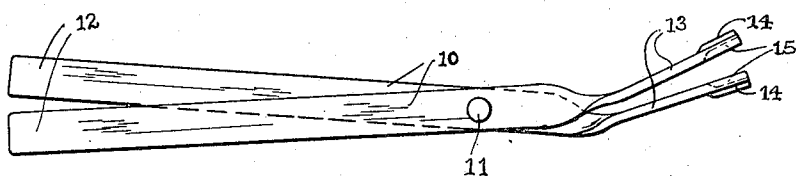


Fig. 2

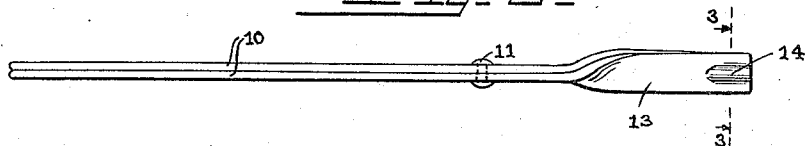


Fig. 4

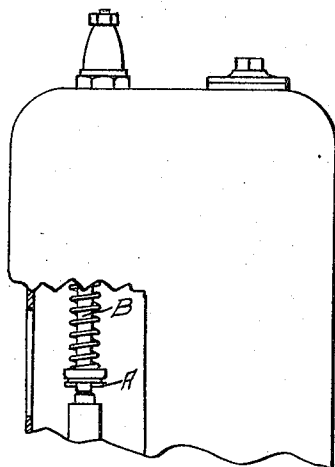
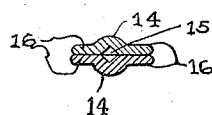


Fig. 3



INVENTOR.

Edward Schorrath

BY

Morsell & Keeney

ATTORNEYS.

Patented Oct. 23, 1923.

1,471,531

UNITED STATES PATENT OFFICE.

EDWARD SCHORRATH, OF MILWAUKEE, WISCONSIN.

PLIERS.

Application filed July 28, 1922. Serial No. 578,228.

To all whom it may concern:

Be it known that I, EDWARD SCHORRATH, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Pliers, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention relates to pliers and more particularly to pliers especially adapted for handling valve pins and keepers for L-type engines and also adapted to be used as general take-up pliers.

Difficulty has been experienced with pliers now generally in use in handling valve pins or washers, and indeed in every instance where it became necessary to use pliers to grip small articles, particularly where the available space was restricted.

Therefore, it is the object of this invention to provide a pair of pliers especially adapted for gripping small articles, the pliers being so constructed furthermore that they may be inserted in restricted openings and the desired result efficiently accomplished.

The utility of the invention will be made more apparent in the accompanying specification and drawings.

In the drawings;

Figure 1 is a side view of a pair of pliers constructed in accordance with this invention;

Fig. 2 is an edge view of the same;

Fig. 3 is a detail sectional view, taken on the plane indicated by line 3—3 in Fig. 2; and,

Fig. 4 is a fragmentary detail view of an L-type engine showing valve pins and keepers more particularly adapted to be removed by this type of pliers.

Referring now more particularly to the drawings wherein like reference characters indicate like parts, it will be seen that the pliers consist of two flat pieces of commercial steel 10, riveted together as at 11. The ends 12 of the members 10 form the handle portions of the pliers, while the other ends of the members 10 are twisted a quarter turn to form a pair of jaws 13.

The extremities of the jaws 13 are pressed or bulged outwardly as at 14 at points diametrically opposite to one another to thereby form a rectangular recess 15. This re-

cess 15 is designed for receiving the ends of pins or the like. Obviously the flat portions 16 of the jaws 13, which, lie on both sides of the depressions 14, are particularly adapted for engaging washers or other flat articles.

It should be noted that with the jaws 13 turned at an angle with reference to the handle portions, the jaws may be opened sufficiently to grasp small articles such as pins, washers, and the like, in places of restricted area. Furthermore attention is directed to the construction of the pliers, which, as mentioned hereinbefore, are made of flat pieces of commercial steel or other suitable metal, thus providing pliers which are relatively thin and which also facilitates the insertion of the pliers through small openings where it is impossible to use the types of pliers now universally employed.

As mentioned, these pliers are particularly adapted for handling valve pins and keepers such as shown at A in Fig. 4 and in this connection it should be noted that the rectangular recess formed by the depressions 14 of the jaws 13 will engage the cotterpins A, used as valve pins, and prevent the same from turning so that they may be conveniently removed and replaced for instance the valve stems B of an engine see Fig. 4. Furthermore the flat portions of the jaws will facilitate the handling of washers and the like.

From the foregoing it will be seen that there is provided pliers embodying certain characteristics whereby they are particularly adapted for the purpose for which they are designed.

Having thus described the invention what is claimed is:

1. A tool of the class described particularly adapted for handling valve pins and keepers comprising a pair of members pivotally connected together intermediate their length, each member comprising a relatively flat strip of metal, a corresponding end of each member being twisted a quarter turn to form a pair of jaws, the extremity of each jaw being formed with a central depression, which depressions register when the jaws are closed to form a rectangular recess, the portions of each jaw on both sides of said depressions being in the same plane and parallel to the corresponding portions of the other jaw when the jaws are closed.

2. As an article of manufacture, a pair of pliers particularly adapted for handling valve pins, keepers, and the like, comprising two flat elongated pieces of commercial steel, means pivotally connecting said pieces of steel intermediate their length and forming handle portions and jaw portions; said jaws being angularly disposed relatively to said handle portions, the extremities of said jaw portions being formed with oppositely extending central depressions which form a rectangular recess when said jaws are closed, the portions of each jaw on both sides of said depression being in the same plane and parallel to the corresponding portions of the other jaw when the jaws are closed.

In testimony whereof, I affix my signature.

EDWARD SCHORRATH.