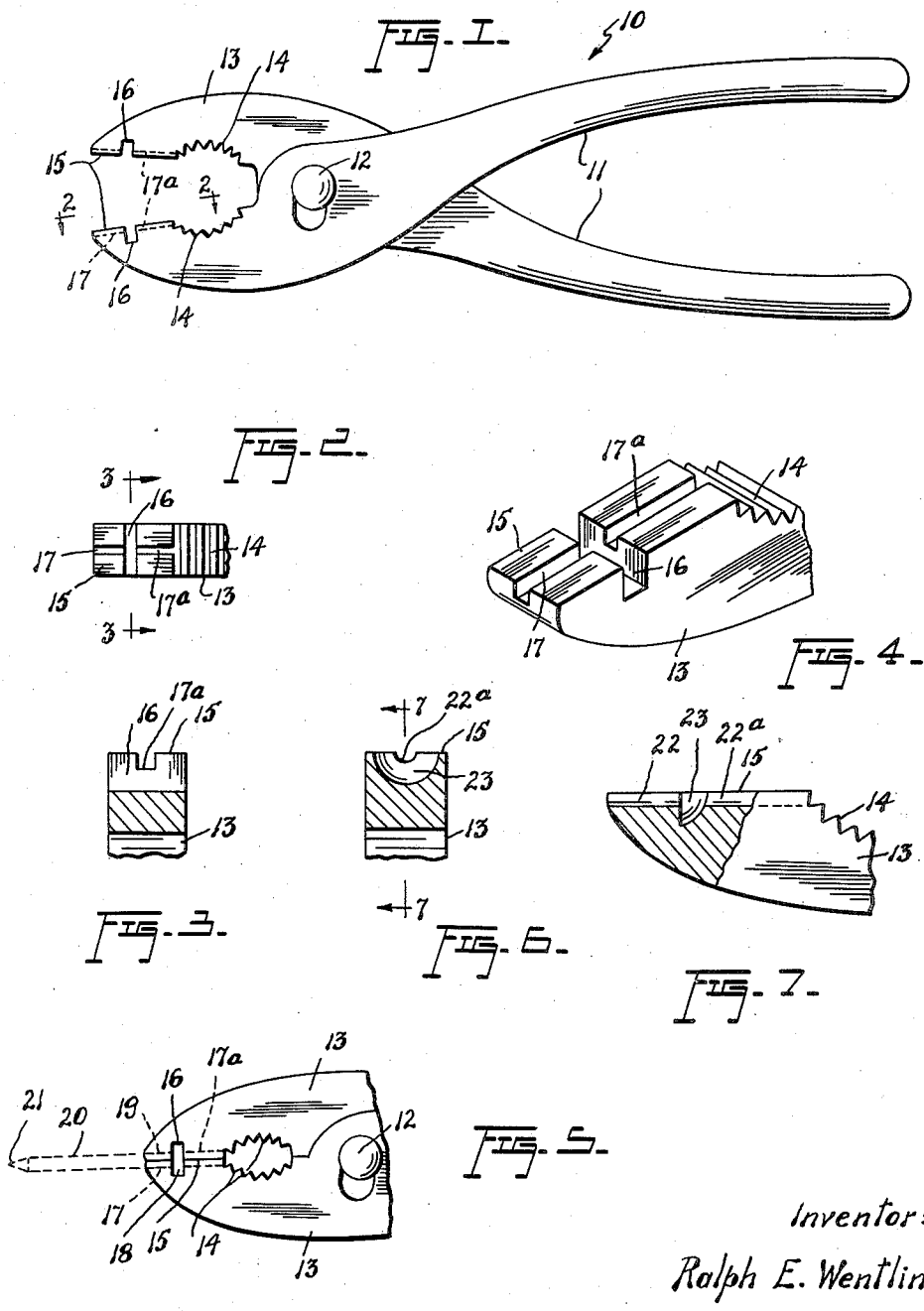


July 15, 1958

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FASTENER HOLDING PLIERS

2,842,997

Filed Aug. 28, 1956



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2,842,997

FASTENER HOLDING PLIERS

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Application August 28, 1956, Serial No. 606,654

1 Claim. (Cl. 81-418)

This invention relates to new and useful improvements and structural refinements in pliers or plier-type tools, and the principal object of the invention is to adapt such tools for efficient holding and manipulation of nails, screws or other similar fastening elements.

More specifically, the invention contemplates the provision of certain recesses and grooves in the opposing faces of coating plier jaws, such recesses and grooves forming, when the jaws are brought together, a transverse chamber and a longitudinal passageway in communication with the chamber to receive, respectively, the head and an adjacent shank portion of a fastening element. As such, the fastening element may be firmly held in the jaws with its longitudinal axis coplanar with the opening and closing movement of the jaws and with its usual pointed end exposed. Thus, the pliers may be conveniently manipulated, for example, to press the point of a nail into a piece of work in poorly accessible locations where sufficient space does not exist to permit initial tapping of the nail with a hammer. Similarly, the pliers may be used for pressing the point of a screw into a piece of work and turning the same to start the required grip by its screw-thread, where space does not permit such a procedure being effected by a screwdriver.

In addition, the invention is also useful in removing nails or screws from work in poorly accessible locations, and for holding and manipulating the same wherever space does not permit them to be held and manipulated by the user's fingers.

An important feature of the invention resides in arranging the aforementioned recesses and grooves in the jaws in such manner that they do not interfere with conventional usage of the pliers.

Some of the advantages of the invention lie in its simplicity of construction and in its adaptability to economical manufacture.

With the above more important objects and features in view and such other objects and features as may become apparent as this specification proceeds, the invention resides in the arrangement of parts and details of construction substantially as shown in the accompanying drawing, wherein like characters of reference are used to designate like parts and wherein:

Figure 1 is a plan view of a pair of pliers embodying the invention;

Figure 2 is a fragmentary detail, taken substantially in the plane of the line 2-2 in Figure 1;

Figure 3 is a cross-sectional view, on an enlarged scale, taken substantially in the plane of the line 3-3 in Figure 2;

Figure 4 is a fragmentary perspective view of one of the jaws;

Figure 5 is a fragmentary plan view, similar to that shown in Figure 1 but illustrating the jaws in a closed position;

Figure 6 is a cross-sectional view, similar to that shown in Figure 3 but showing a modified form of the invention; and

Figure 7 is a longitudinal sectional view, taken substantially in the plane of the line 7-7 in Figure 6.

Referring now to the accompanying drawing in detail, particularly Figures 1-5 thereof, the pliers are designated generally by the reference numeral 10 and comprise the usual handles 11 pivoted together at 12 and equipped with coating jaws 13. As is customary, the jaws 13 are

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provided with the usual serrations 14 for gripping purposes, while the opposing jaw faces are indicated at 15.

The invention involves the provision of a transversely extending, open-ended recess 16 in each of the jaw faces 15 at a point between the outer end of the jaw and the serrations 14. Moreover, the face 15 of each jaw is provided with a longitudinally extending groove 17 which extends from the outer end of the jaw at least to the recess 16 so that it communicates with the latter. The groove 17 is disposed centrally in the jaw face and, if desired, may be extended beyond the recess 16 to the serrations 14, as indicated at 17a. As shown in Figures 1-5, the recesses 16 and the grooves 17, 17a are of a rectangular cross-section.

As is best illustrated in Figure 5, when the jaws 13 are brought together, the recesses 16 and the grooves 17, 17a coact to form, respectively, a transverse chamber and a longitudinal passageway in communication with the chamber to receive, respectively, the head 18 and an adjacent shank portion 19 of a fastening element 20 such as a nail or screw. With the element 20 being so held in the jaws of the pliers, the axis of the element is coplanar with the opening and closing movement of the jaws, while the usual pointed end 21 of the element is exposed. The pliers may then be easily manipulated to press the pointed end of the element into a piece of work and to turn the same, if so desired, such as for example, in starting a screw.

In the event that the nail or screw is of substantial length, the shank portion thereof adjacent its head may be received in the coating grooves 17a as well as in the grooves 17, while the head of the element is gripped by the serrations 14. In this manner the serrations function in receiving and gripping the head of the element in substitution for the recesses 16.

The accompanying Figures 6 and 7 illustrate a slightly modified form of the invention wherein the grooves 22, 22a are semi-circular rather than rectangular in cross-section, so as to better fit the usual cylindrical shank of the element 20. Moreover, the recess 23 is of a substantially semi-spherical configuration, complementary to the usual shape of a screw head.

While in the foregoing there have been disclosed the preferred embodiments of the invention, various modifications may become apparent to those skilled in the art to which the invention relates. Accordingly, it is not desired to limit the invention to this disclosure and various modifications may be resorted to, such as may fall within the spirit and scope of the appended claim.

What is claimed as new is:

As an article of manufacture, a pair of conventional pliers having a pair of coating jaws and opposing jaw faces provided with serrated concavities at a point spaced longitudinally inwardly from the outer ends of the jaws, said jaws also being provided in the opposing faces thereof with transversely extending recesses disposed at a point between the outer ends of the jaws and said serrated concavities, said jaws also being provided in their opposing faces with open-ended grooves extending centrally longitudinally from the outer ends of the jaws through said recesses to said serrated concavities, said recesses being deeper than said grooves and coating therewith when said jaws are brought together to provide a transverse chamber and a longitudinal passageway extending from said serrated concavities through said chamber to the outer ends of the jaws, whereby to receive respectively the head and adjacent shank portions of a fastening element.

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