Aug. 17, 1937. F. T. LIND 2,090,259

TOOL

Filed June 22, 1936

Fig. 1.

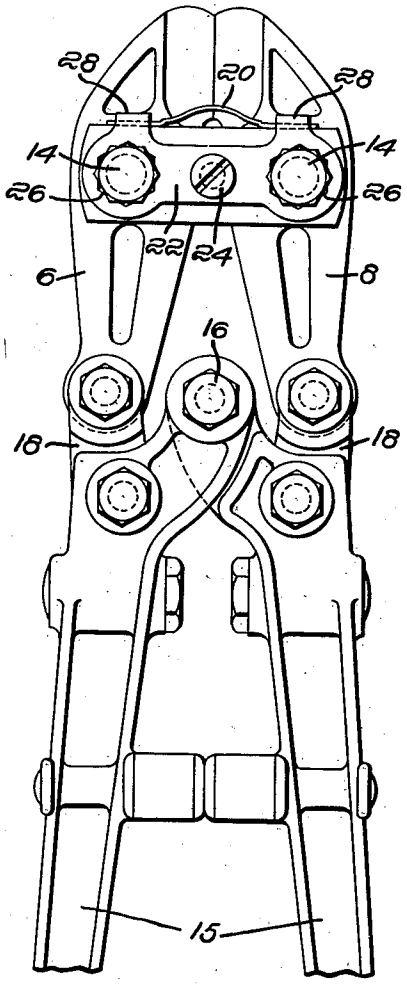


Fig. 2.

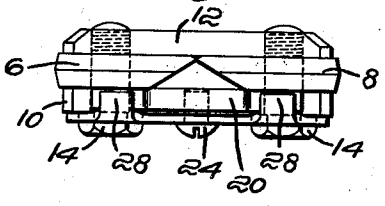


Fig. 3.

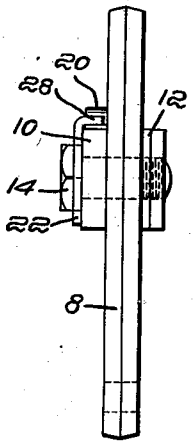


Fig. 4.

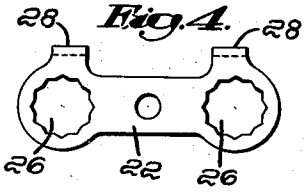
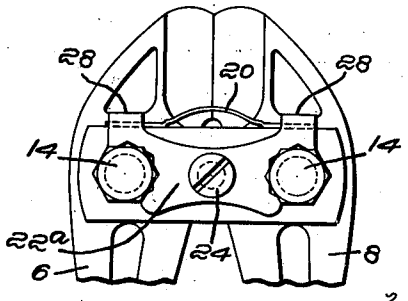


Fig. 5.



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UNITED STATES PATENT OFFICE

2,090,259

TOOL

Francis T. Lind, Everett, Mass., assignor to H. K. Porter, Inc., Everett, Mass., a corporation of Massachusetts

Application June 22, 1936, Serial No. 86,495

1 Claim. (Cl. 30—193)

This invention relates to pivoted jaw tools and the object is to provide a construction of such a tool wherein a single element provides both for positioning an abutment to prevent work passing too far into the throat of the tool and also for locking the pivot against undesired movement.

My invention will be well understood by reference to the following description of illustrative embodiments thereof shown by way of example in the accompanying drawing, wherein:—

Fig. 1 is a side elevation of a compound-lever cutting tool illustrative of my invention;

Fig. 2 is an end view thereof;

Fig. 3 is an edge view of the jaw levers;

Fig. 4 is a side view of the locking plate separately; and

Fig. 5 is a fragmentary side elevation showing a modification.

As an example of my invention I have here shown its embodiment in a bolt clipper of the type shown in the patent to Porter No. 484,670, Oct. 8, 1892, and embodying a pair of jaw levers 6 and 8 received between two straps or side plates 10 and 12 and pivoted on pivot bolts 14, here shown as extending through the nearer strap 10 and tapping into the further strap 12. The jaw levers are operated by handle levers 15 pivoted together at 16 and here shown as connected to the tails of the jaw levers by means of "adjusting sections" 18 of the kind shown in the patent to Porter No. 1,822,745, Sept. 8, 1931, which construction, however, is no part of the present invention.

To prevent the work from passing too far between the working faces of the jaws, for instance, beneath the cutting edges thereof, a flat spring 20 is provided bridging the throat and constituting a yielding abutment for the work. The present invention particularly relates to the provision of a single device which in the construction shown serves to position the spring 20 and also to lock the pivot bolts 14. Said device herein takes the form of a plate 22, shown separately in Fig. 4, which may be secured to the strap 10 between the bolt heads, as by means of the screw 24, and has portions fitting the flats of the heads to lock the same against rotation. Herein these take the form of openings 26 which pass over the heads and fit the same in the manner of a "box head" wrench, as shown in Fig. 2. The openings, as most clearly seen in Fig. 4, are herein what are known as twelve-point openings having twelve equally spaced notches adapted to fit the corners of the hexagon heads of the bolts 14, thus enabling the latter to be locked at each 30° increment of rotative adjustment. In Fig. 5 a plate 22a has end portions more nearly similar to "end" wrenches presenting five notches adapted to fit two corners of the head and surfaces adjacent the same to engage the adjacent flats. The same range of adjustment is provided as in the case of the form of Fig. 4.

Arms extending from plate 22 are bent over to form flanges 28, best seen in Figs. 2 and 3, opposing the upper edge of the strap 10. Between these flanges and the edge of the strap the ends of the spring are received to slide on the latter as the central portion of the spring is compressed.

The plates, as shown in Fig. 4, are simple and readily made. No modification of any other parts of the tool are required. They are easily removed to provide for the removal or replacement of the spring when effecting the assembly of the tool as a whole or its adjustment.

I have stated that the plate cooperates with the heads of the bolts 14 to lock the same against rotation. It will be understood that I include the case where such a head is removable to wit, a nut.

I am aware that the invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and I therefore desire the present embodiment to be considered in all respects as illustrative and not restrictive; reference being had to the appended claim rather than to the foregoing description to indicate the scope of the invention.

I claim:

In a tool of the class described a pair of straps between which extend pivot bolts on which are pivoted a pair of jaw levers, a plate secured to the strap having portions abutting the heads of the bolts to prevent turning thereof and flanges opposing an edge of the strap, and a spring extending across the line of contact of the jaws and having its ends received between said flanges and said edge of the straps.

FRANCIS T. LIND.