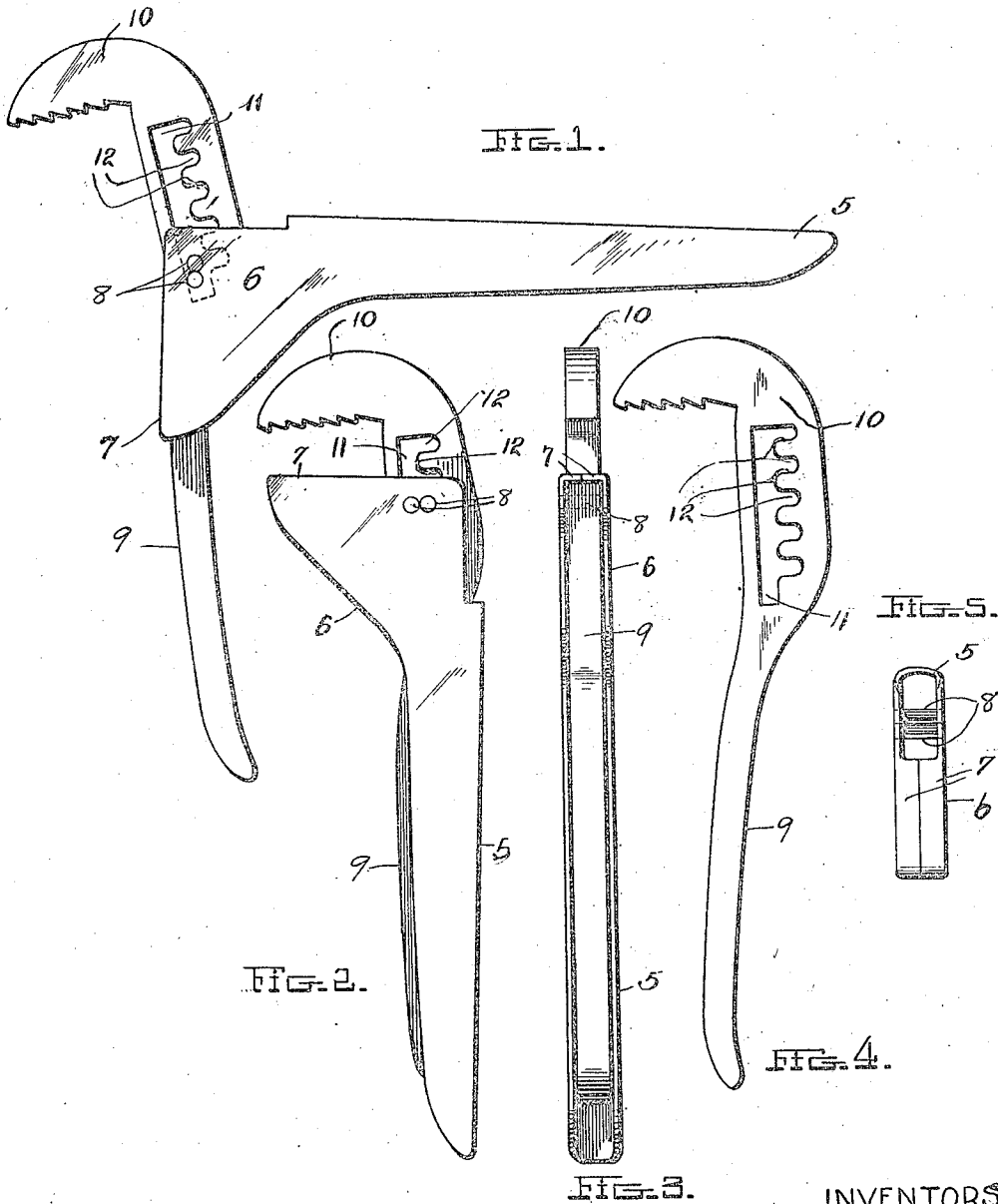


A. L. LANDIS AND J. C. SNODGRASS.
COMBINATION WRENCH AND PLIERS.
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1,405,232.

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UNITED STATES PATENT OFFICE.

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COMBINATION WRENCH AND PLIERS.

1,405,232.

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To all whom it may concern:

Be it known that we, ABB L. LANDIS and JOSEPH C. SNODGRASS, residents of Nashville, in the county of Davidson and State of Tennessee, have invented a new and useful Combination Wrench and Pliers, of which the following is a specification.

Our invention relates to wrenches, and its principal object resides in the provision of a device that may be used either as a wrench or pliers.

Further the invention embodies a combined wrench and pliers that may be quickly adjusted and positively locked in adjusted position, the adjusting means being such as to permit one jaw to be swung on a pivot for cooperation with the fixed jaw in grasping an object therebetween.

It is also within the provisions of the invention to provide a wrench which is constructed from lengths of relatively thin but stout metal, thereby rendering the wrench light and compact.

The invention also embodies a quick-acting adjustable wrench and which at the same time is positive in operation.

Another object of the invention resides in the provision of a combined pliers and wrench which is of comparatively simple construction and can therefore be produced and sold at a nominal cost.

With the preceding and other objects and advantages in mind as may become apparent from the following disclosure, the invention includes the general combination of elements, construction and formation of parts and operations to be hereinafter outlined and claimed, and illustrated in the accompanying drawing, wherein:

Figure 1 is an elevation of our improved wrench in position for adjustment;

Fig. 2 is a similar view of the wrench in adjusted position;

Fig. 3 is an edge elevation of the same;

Fig. 4 is an elevation of the adjustable jaw of the wrench; and

Fig. 5 is an elevation looking at the outer end of the channel-shaped member embodied in the invention.

Referring in detail to the drawing wherein similar characters of reference designate like parts throughout the several views, the numeral 5 designates a channel-shaped handle formed from a length of relatively thin but stout metal. The channel-shaped handle 5 is provided with a pair of parallel

lateral extensions 6 at its outer end which are bent at right angles to afford a bearing surface or jaw 7.

A pair of parallel pins 8 extend transversely through the channel-shaped handle 5 at a point rearwardly of the extensions 6 and have their ends riveted thereto.

Normally disposed within the channel-shaped handle 5 and adapted for longitudinal adjustment therein is a shank 9, the outer end of which terminates in a laterally disposed jaw 10 normally arranged in opposed relation to the jaw 7. The shank 9 is provided with a longitudinal slot 11 having spaced lateral branches or notches 12 communicating therewith at one side. The pins 8 extend through the slot 11 and are adapted for engagement in any one of the aligned notches 12 to lock the shank in different relative positions with respect to the handle 5.

In order to adjust the wrench, the handle 5 is swung at right angles to the shank 9 thereby disengaging the pins 8 from the notch in which they had been engaged, as illustrated in Fig. 1 of the drawing. The handle may then be moved to any position with respect to the shank 9 and the handle then swung to the position illustrated in Fig. 2 engaging the pins in the desired notch to hold the parts in locked position with the pins 8 engaged in any one of the notches or lateral branches 12 and the handle disposed at an angle with respect to the shank 9, the latter may be swung toward the shank to swing the jaw 10 toward the jaw 7, the two jaws operating in the manner of a pair of pliers.

It is to be understood that the form of our invention herein shown and described is to be taken as a preferred example of the same; and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claim.

Having thus described our invention, what we claim as new and desire to secure and protect by Letters Patent of the United States, is:

A wrench including a channel-shaped handle formed with lateral extensions at one end thereof, the extensions being provided with oppositely extending right-angular disposed parts, which constitute a rigid jaw, pins extending transversely through the

channel-shaped handle, a shank slidably mounted in the channel-shaped handle and terminating at one end in a jaw for cooperation with the fixed jaw, the shank being provided with a longitudinal slot through which the pins pass and further provided with lateral branches in any one of which the pins are engaged when the shank is parallel to the handle, the pins being moved in the slot to a position to clear the notches 10 upon arranging the handle at right angles to the shank to permit the handle to be moved with respect to the shank.

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