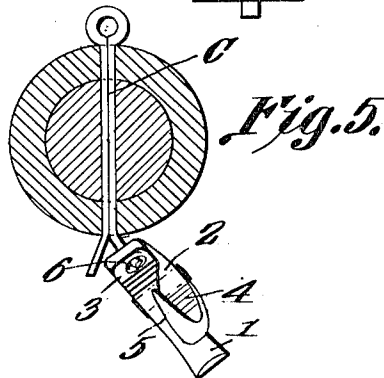
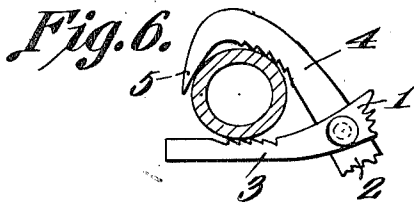
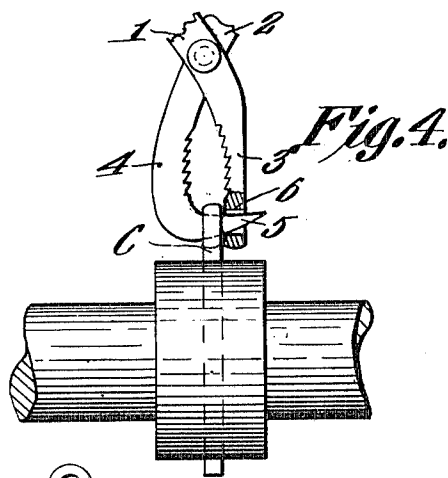
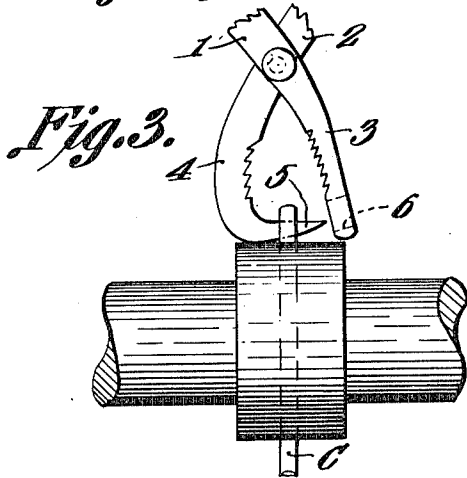
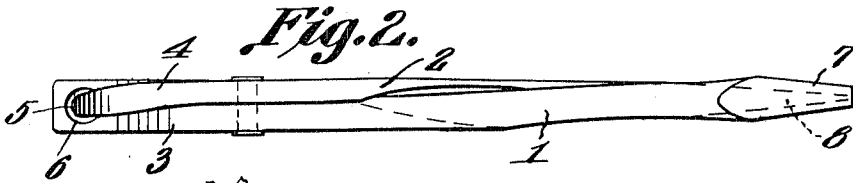
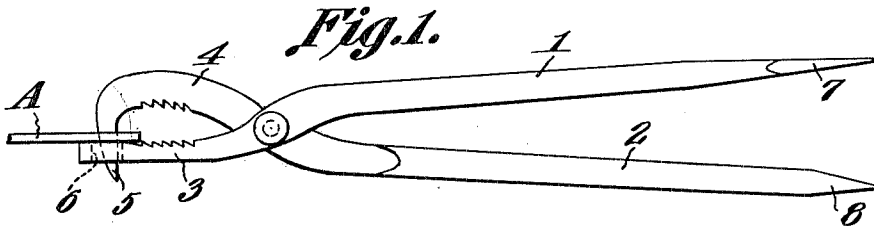


J. L. ENO.
COMBINATION TOOL.
APPLICATION FILED OCT. 13, 1913.

1,117,558.

Patented Nov. 17, 1914.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN L. ENO, OF LUANA, IOWA.

COMBINATION-TOOL.

1,117,558.

Specification of Letters Patent.

Patented Nov. 17, 1914.

Application filed October 13, 1913. Serial No. 794,959.

To all whom it may concern:

Be it known that I, JOHN L. ENO, a citizen of the United States, residing at Luana, in the county of Clayton and State of Iowa, have invented a new and useful Combination-Tool, of which the following is a specification.

The present invention appertains to combination tools, and particularly those of the pliers type.

It is the object of the present invention to provide a unique pliers of the nature indicated, which may be employed in divers capacities, such as a cotter pin extractor, a punch, a pipe and nut wrench or pliers, and for other kindred purposes.

The present invention contemplates the provision of a simple, compact, light, substantial, durable, and inexpensive device of the nature indicated, which shall be convenient and efficient in its use, and which will meet a large number of requirements, the present device being particularly adapted to be carried in the tool kit of an automobile for repair purposes, although the tool or implement may be employed for various purposes.

With the foregoing general objects outlined, and with other objects in view, which will be apparent as the nature of the invention is better understood, the present invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

The invention has been illustrated in its preferred embodiment in the accompanying drawings, wherein:—

Figure 1 is a side elevation of the improved pliers, illustrating the same as employed as a punch. Fig. 2 is another elevation of the device, taken at right angles to the line of view of Fig. 1. Fig. 3 is a fragmental view of the device illustrating the same as employed for loosening or extracting a cotter pin. Fig. 4 is a view similar to Fig. 3 illustrating the device in position for finally withdrawing the cotter pin. Fig. 5 is an end view of the device illustrating the same as employed for clenching or bending the prongs or ends of a cotter pin. Fig. 6 is a fragmental view of the de-

vice illustrating the same as employed as a pipe wrench.

The present implement embodies a pair of crossed and pivoted levers 1 and 2, which are preferably forged from suitable stock, and which form the relatively straight and curved jaws 3 and 4, respectively, at one end, beyond the pivotal point. The jaws 3 and 4 are toothed, in order that they may grip a pipe, nut, or the like. The jaw 4 is only curved slightly.

The free end of the jaw 4 is formed into an angular curved bill or beak 5, projecting toward the free end of the jaw 3, and being curved about the pivotal point of the levers as a center. The free end or tip of the bill or beak is pointed or sharpened, and the bill increases in diameter toward its butt end or base, the butt end or base of the bill merging abruptly to the free end of the jaw 4, and there is an abrupt bend between the curved jaw and bill.

The free end of the jaw 3 projects slightly beyond the free end of the jaw 4, and the jaw 3 is provided with a relatively large aperture or opening 6 adjoining its free end, and through which the bill 5 is adapted to be swung loosely, when the levers are closed together.

The inner end of the lever 1 is formed into a screw driver blade 7, while the inner end of the lever 2 is formed into a reamer 8.

The present implement has a wide range of use. It may be employed as a cotter pin extractor, the bill 5 being readily inserted or driven through the eye or loop of a cotter pin C as illustrated in Fig. 3, in order that the butt end of the bill or beak may serve as a fulcrum, in order that a leverage or purchase may be gained upon the cotter pin to loosen the same. After the cotter pin has been loosened, the levers may be closed together, as illustrated in Fig. 4 in order to swing the free end of the jaw 3 over the tip of the bill, 5, in which event, the levers may be grasped in the hand to draw the cotter pin outwardly, it being observed that there will be no liability of the implement to slipping out of engagement with the cotter pin which might prove injurious or detrimental. It will thus be evident that the present implement will provide a high class cotter pin extractor, it being possible to engage the eyelet or loop of the cotter pin notwithstanding the fact that the same is sometimes partially concealed or inaccessi-

ble. The implement may also be employed for extracting other articles, similar to cotter pins, with equal success and propriety. The implement may also be employed as a punch, the material A to be punched being placed upon the jaw 3, as illustrated in Fig. 1, in order that when the levers are closed or swung together, the bill or beak 5 will be forced through the material A to punch or force a hole through the material or article A. The beak or bill 5 being pointed will permit a hole to be forced in the article or material without punching a portion of the same away, the bill 5 merely spreading or opening the fibers. As a punch, the implement will be found useful for punching the brake lining fabric of motor vehicles but may be found useful for many other kindred purposes. The present implement will also serve as an efficient pipe or nut wrench, the pipe, nut or other article being readily gripped between the jaws 3 and 4, as illustrated in Fig. 6. When the pipe, or other article is gripped between the jaws, the bill or beak 5 will serve as a retaining member to prevent the pipe, from slipping out of engagement with the jaws. In this manner, the jaws are enabled to grip larger objects than could be accomplished without the assistance of the bill 5, as will be clearly apparent by reference to Fig. 6.

It will be evident from the drawing, that the levers are adapted to swing apart sufficiently to move the bill and straight jaw apart considerably, whereby the bill and straight jaw may be readily slipped over the pipe, or other object. Attention is directed to the fact that due to the peculiar formation of the jaws, when a pipe is grasped between the jaws, as seen in Fig. 6, the jaws will have three points of contact with the pipe, or, in other words, the two jaws and the bill of the curved jaw, will each have a point of contact with the pipe or other

object. The implement may also be employed for clenching or bending the prongs or ends of a cotter pin, as seen in Fig. 5, inasmuch as the aperture or eyelet 6 may be readily engaged over the prongs or ends of the cotter pin C to bend or deflect the same, especially after the prongs or ends of the cotter pin have been separated by means of the screw driver blade 7.

The use of the screw driver blade 7 will be clearly apparent without further comment, and it will be apparent that the reamer 8 may be employed for enlarging holes formed by the bill or beak 5.

The other advantages and capabilities of the present implement will be apparent to the artisan or user, especially in connection with the foregoing and the drawing.

Having thus described the invention, what is claimed as new is:—

A combination tool embodying a pair of crossed and pivoted levers, having jaws at one end, one jaw being relatively straight and having a relatively large aperture at its free end, and the other jaw being curved slightly and having an integral angular bill at its free end curved about the pivotal point of the levers as a center and arranged to pass loosely through the said aperture, the levers being adapted to swing apart sufficiently to enable the bill and straight jaw to be moved over a pipe or similar object and there being an abrupt bend between the curved jaw and bill whereby the curved jaw and bill will have a two point contact with an object received between the jaws.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN L. ENO.

Witnesses:

HARRY C. FOX,
J. E. ROBERTSON.