Aug. 2, 1938. E. TETLY 2,125,406

PLIERS

Filed June 30, 1937

Fig. 1.

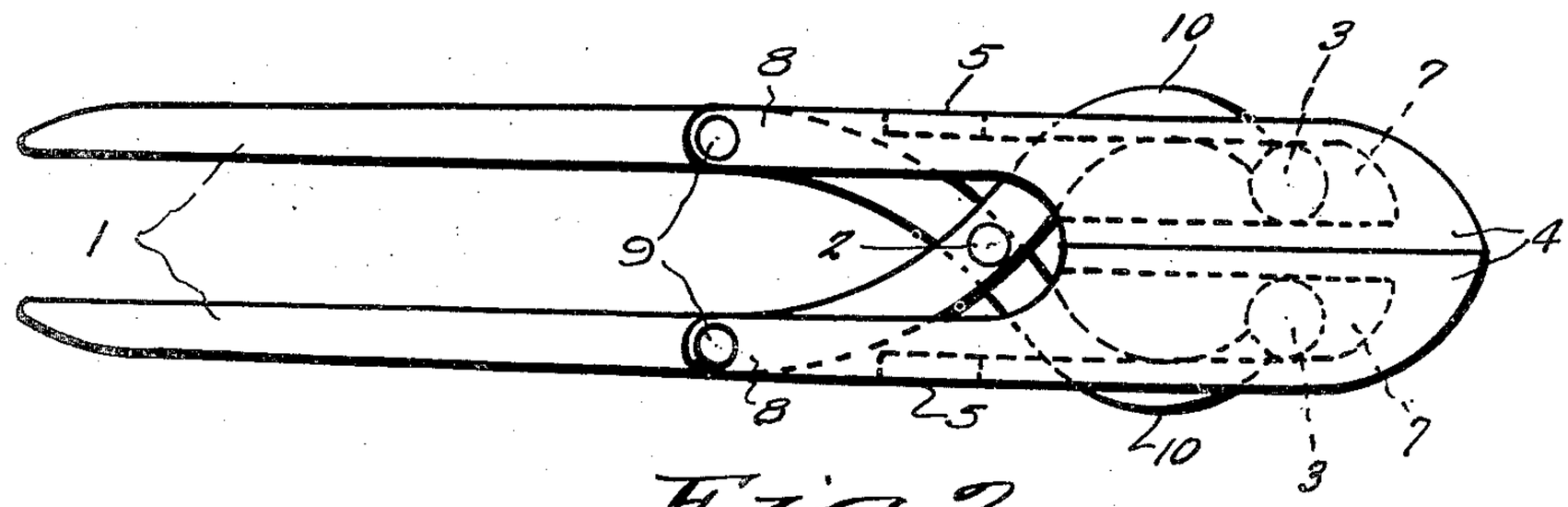


Fig. 2.

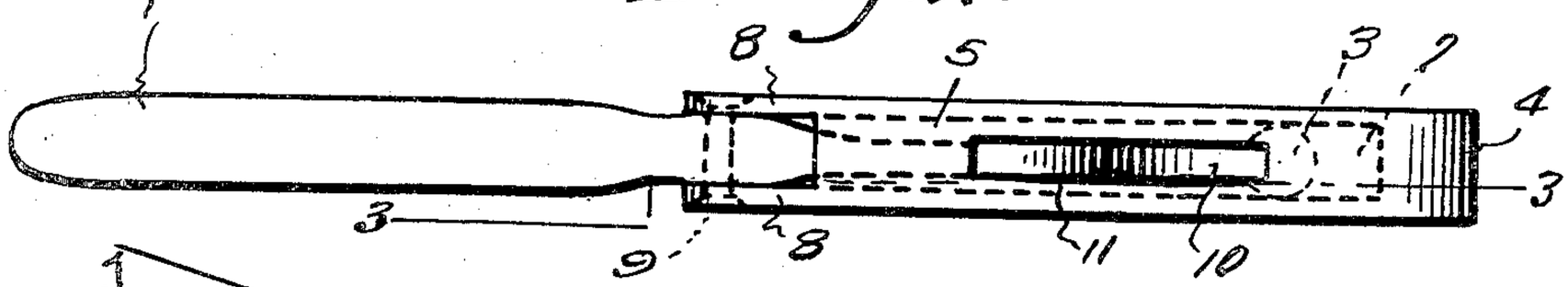
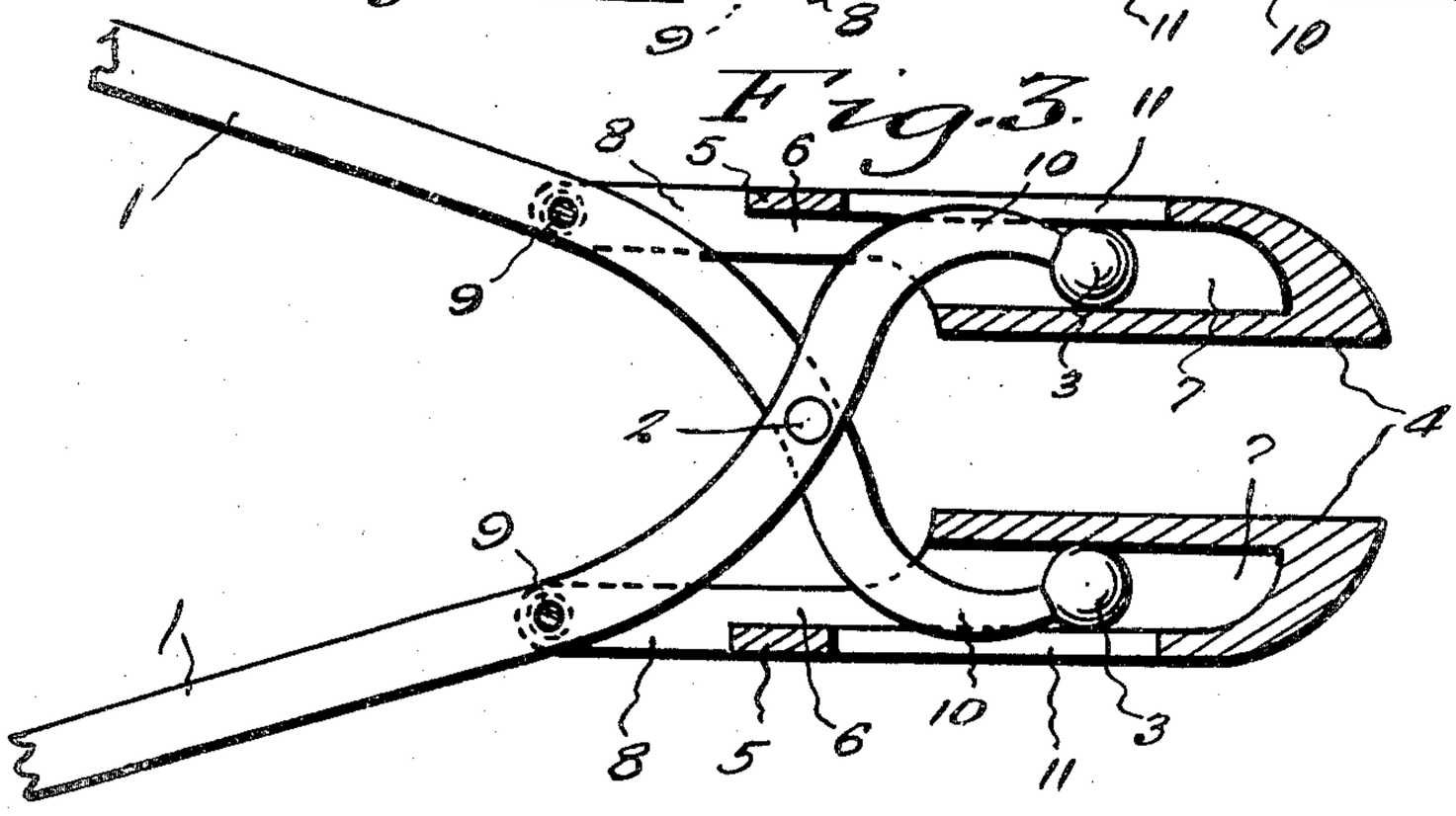


Fig. 3.



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2,125,406

PLIERS

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Application June 30, 1937, Serial No. 151,211

2 Claims. (Cl. 81—51.4)

The present invention relates to new and useful improvements in pliers, and has for its primary object to provide, in a manner as hereinafter set forth, a tool of this character embodying a novel construction and arrangement through the medium of which the jaws will be kept parallel to each other at all times.

Another very important object of the invention is to provide a tool of the character described embodying novel means for mounting the parallel jaws on the handles of the pliers.

Other objects of the invention are to provide a tool of the character set forth which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact, light in weight and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawing wherein like characters of reference designate corresponding parts, throughout the several views, and wherein:

Figure 1 is a view in side elevation of a tool constructed in accordance with the present invention.

Figure 2 is a plan view thereof.

Figure 3 is a fragmentary view in vertical longitudinal section, taken substantially on the line 3—3 of Fig. 2.

Referring now to the drawing in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a pair of crossed handles or levers 1 which are pivotally connected, as at 2. The crossed levers 1 include oppositely curved end portions 10 which terminate in balls 3.

The reference numeral 4 designates a pair of parallel, opposed jaws which are mounted on the levers 1. As illustrated to advantage in Figure 3 of the drawing, the jaws 4 include integral rearward extensions 5 which are formed to provide channels 6, said channels 6 being aligned with and communicating with sockets 7 which extend longitudinally into the jaws 4 from the rear ends thereof. The extensions 5 terminate, at their rear ends, in bifurcations 8 which straddle the levers 1 rearwardly of the pivotal connection 2. The bifurcations 8 are pivotally connected to the levers 1, as at 9. It will be noted that the balls 3 are engaged in the sockets 7. Longitudinal slots 11 in the backs of the jaws 4 accommodate the curved portions 10 of the levers 1.

It is thought that the operation of the tool will be readily apparent from a consideration of the foregoing. As the levers 1 are opened and closed the jaws 4 will be moved away from or toward each other in parallelism, the balls 3 traveling in the sockets 7, as shown in Figure 3 of the drawing. In addition to materially reducing friction, the balls 3 function somewhat as universal joints connecting the jaws 4 to the outer ends of the levers 1.

It is believed that the many advantages of a tool constructed in accordance with the present invention will be readily understood, and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

1. A tool of the class described comprising a pair of crossed, pivotally connected levers, a pair of opposed, parallel jaws mounted on said levers, said jaws including bifurcated rearward extensions straddling the levers and pivotally connected thereto rearwardly of the pivotal connection of said levers, said jaws having sockets extending longitudinally thereinto from the rear ends thereof for the reception of one end portion of the levers, and balls fixed on said one end portion of the levers and operable in the sockets.

2. A tool of the class described comprising a pair of crossed, pivotally connected levers, a pair of opposed, parallel jaws mounted on said levers, said jaws including integral rearward extensions having longitudinal channels therein for the reception of the levers, said extensions terminating, at their rear ends, in bifurcations straddling the levers and pivotally connected thereto rearwardly of the pivotal connection of said levers, said jaws having sockets extending longitudinally thereinto from the rear ends thereof for the reception of one end of the levers, said sockets being aligned with and communicating with the channels, and balls fixed on said one end of the levers and operable in the sockets.

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