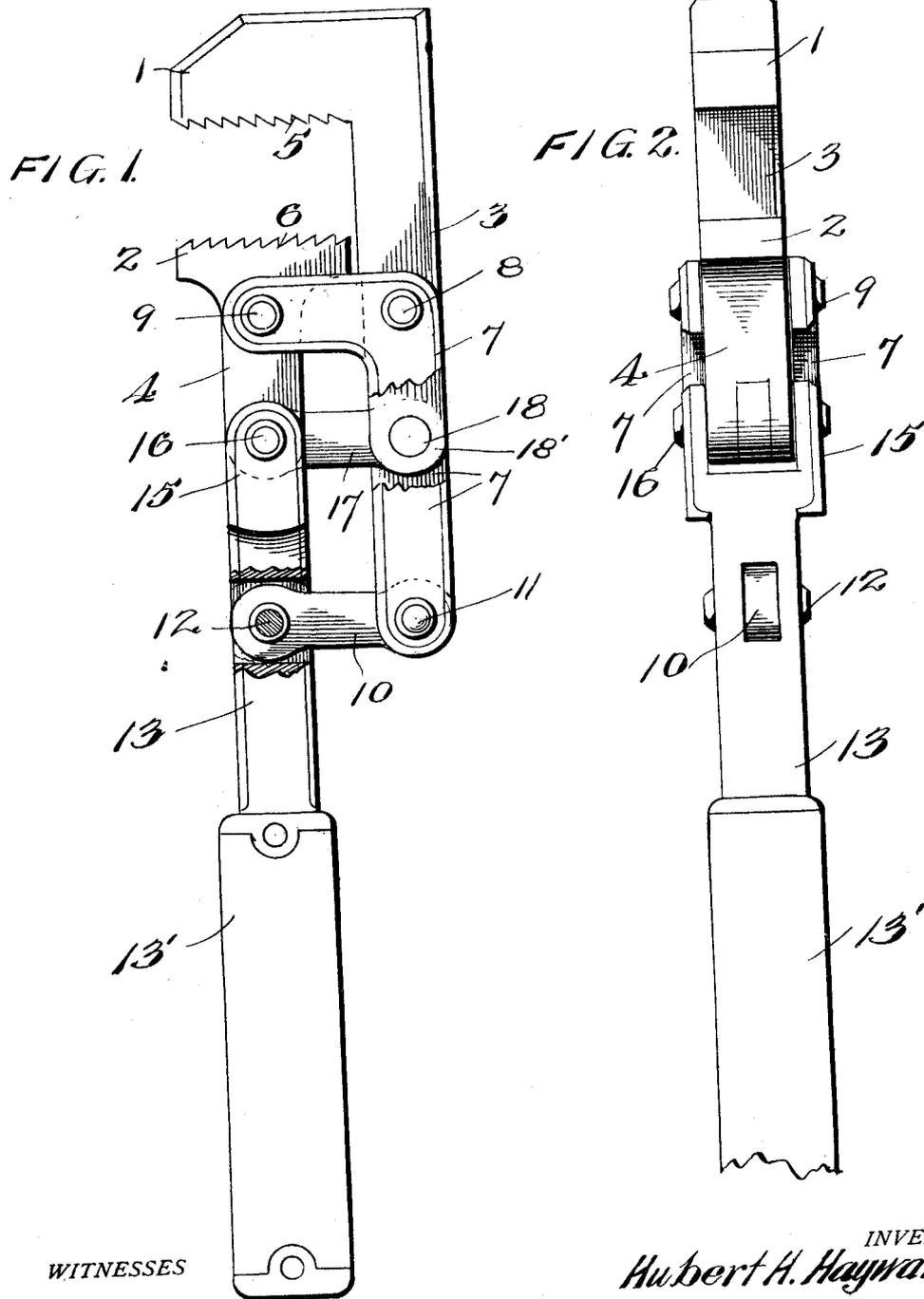


H. H. HAYWARD.
WRENCH.
APPLICATION FILED JULY 11, 1912.

Patented Nov. 4, 1913.

1,077,343.



WITNESSES
C.K. Davis.
M.L. Newcomb

INVENTOR
Hubert H. Hayward
By Herman A. Phillips Attorney

UNITED STATES PATENT OFFICE.

HUBERT H. HAYWARD, OF ALDRICH, MISSOURI.

WRENCH.

1,077,343.

Specification of Letters Patent.

Patented Nov. 4, 1913.

Application filed July 11, 1912. Serial No. 708,890.

To all whom it may concern:

Be it known that I, HUBERT H. HAYWARD, a citizen of the United States, residing at Aldrich, in the county of Polk and State of Missouri, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

My present invention relates to improvements in wrenches of the class designated multiple pivoted jaws, and is designed to provide a tool which may be handled with facility when performing the functions of a wrench, which is comparatively cheap in first cost, durable, and efficient in its work.

The invention consists in certain novel combinations and arrangements of parts as hereinafter set forth and claimed.

In the accompanying drawings I have shown an exemplification of my invention constructed according to the best mode I have so far devised for the practical application of the principles.

In the accompanying drawings: Figure 1 is a plan view of the wrench. Fig. 2 is an edge view of the wrench, as seen from the left in Fig. 1.

In the preferred embodiment of my invention I utilize a pair of jaws as indicated by the numerals 1 and 2, the former being part of a head formed on the shank 3 and the latter having the integral shank 4. The jaws are of suitable size and are formed with the customary teeth 5 and 6. For convenience in description I shall refer to the jaw 1 as stationary and jaw 2 as movable, the latter being movable relative to the former.

Side plates 7, located one at each side of the wrench, perform the function of fulcrumed levers, the fulcrum being the bolt 8 which is passed through the shank 3 and by means of the bolt 9 the short end of the lever is pivoted to the movable jaw. The long end of the lever is pivoted by means of the link 10 and bolts 11 and 12, in a slot in the stem 13 of the wrench. The usual handle 13' is attached to the stem for

manipulating the tool. The short arms of the levers 7 are spaced apart to embrace the shanks 4, and the long arms of the levers are bent toward each other to embrace at their inner ends the link 10.

At its upper end the stem is forked as at 15 and by means of the bolt 16 the lower end of the shank 4 is pivoted in the fork. The bolt also passes through the end of a second link 17, which link, at its opposite end is pivoted in the end 18' of the shank 3, by means of the bolt 18. Upon reference to Fig. 1 especially, it will be apparent that swinging the handle to the right will open the wrench, *i. e.* withdraw the jaw 2 from the jaw 1. This movement is accomplished by swinging the side plates 7 as levers on their fulcrum 8, the pivot 11 swinging to the right and upwardly, and the pivot 9 swinging downwardly. A movement of the handle 13' to the left will draw pivot 11 to the left swing pivot 9 upwardly and thus close the jaw 2 against 1.

What I claim is:—

1. The combination with a pair of jaws each having a shank, of side plates pivotally connecting said shanks, a link pivotally connecting said shanks at their ends, and a handle having a stem connected to one of said shanks and to said side plates, whereby movement of the handle changes the relative position of said jaws.

2. In a wrench, the combination with a pair of jaws each having a shank, of side plates forming levers with the short arm of the levers pivotally connecting said shanks, a link pivotally connecting the ends of the shanks, a stem pivotally connected to the end of one shank, and a link pivotally connecting the stem to the long lever arm of the side plates.

In testimony whereof I affix my signature in presence of two witnesses.

HUBERT H. HAYWARD.

Witnesses:

O. M. COURTNEY,
E. G. SMITH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."