J. F. WHITNEY.

Die-Stock and Tap-Wrench.

No. 218,205. Patented Aug. 5, 1879.

Fig 1.

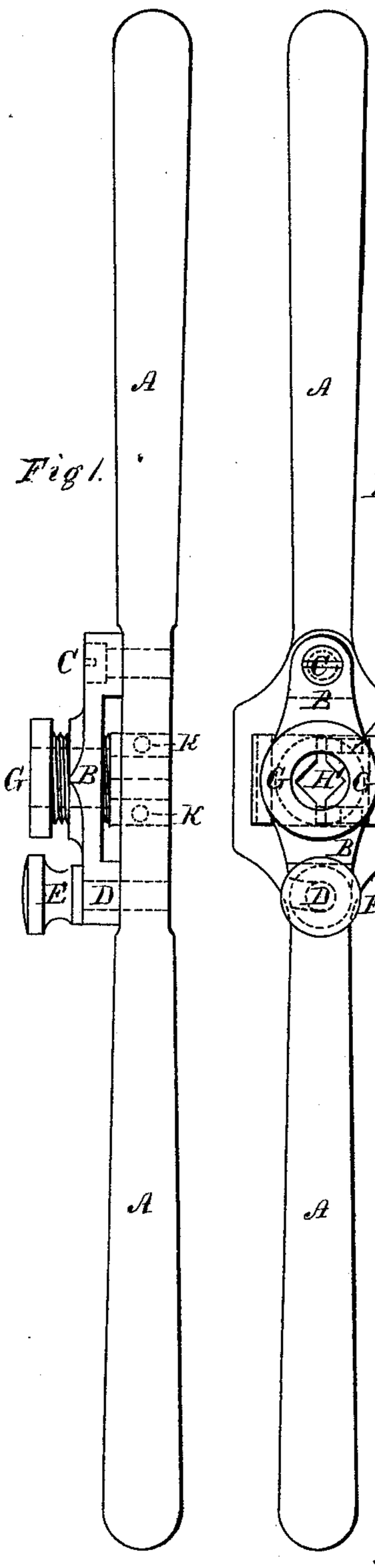
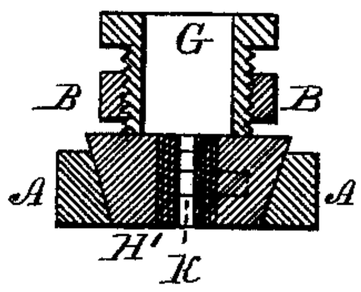


Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.



Witnesses

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JAMES F. WHITNEY, OF HARTFORD, CONNECTICUT.

IMPROVEMENT IN DIE-STOCK AND TAP-WRENCH.

Specification forming part of Letters Patent No. **218,205,** dated August 5, 1879; application filed April 28, 1879.

To all whom it may concern:

Be it known that I, JAMES F. WHITNEY, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Die-Stock and Tap-Wrench; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

My invention relates to an improved form of die-stock and tap-wrench, in which the same handle serves the two purposes, the parts being easily interchangeable, so as to adapt the implement for either purpose. My invention is also applicable to die-stocks only, as different sizes of dies can be fitted to the same handle, and be readily taken out and replaced. By means of my invention, also, the dies while held in the handle or stock can be easily adjusted to cut to an exact gage, even when somewhat worn by use.

My invention consists in the construction and arrangement of the several parts, as will be hereinafter described.

In the accompanying drawings, Figure 1 shows a side view of my improved die-stock and tap-wrench. Fig. 2 is a top view of the same. Fig. 3 is a side view of a pair of dies removed from the die-stock. Fig. 4 is a top view of the same. Fig. 5 is a vertical cross-section through the middle of the tool.

A is the handle or stock, in which the removable parts are held when in use. This part is of the usual form, consisting of two rounded ends and a flat central portion for holding the working parts.

B is a laterally-swinging plate or bar, hinged to the stock A by the screw or pin C, and at its other end hooking upon a pin, D, which projects upward from the stock. D is a pin screwed into the stock, and furnished with a head, E, serving to clamp the end of the plate B firmly in place after it has been hooked upon the pin. G is a screw fitting into a socket in the plate B, which is furnished with a thread, forming a nut in which the screw turns. This screw is situated directly over the middle of the screw-cutting dies when placed in the stock, and is made hollow, so that the screw or bolt, upon which a thread is cut, passes up through the opening. The head of the screw G is milled, for convenience in turning it. Its lower end rests immediately upon the top of the dies, or, if used as a tap-wrench, upon the griping-jaws.

In the middle part of the stock A there is a rectangular opening fitted to receive the dies H, or correspondingly-shaped jaws H′, without a thread, but formed with a square opening for holding a tap-wrench, as shown in Fig. 2. This opening in the stock A has two of its sides inclined, as shown in Fig. 5, and the dies are furnished with similar inclined sides, so as to fit in the opening.

H represents a pair of dies removed from the stock. The two parts are fitted together with a tongue and groove, so that they move out or in upon a line parallel to their upper or lower surfaces. H′ represents a pair of jaws suitable for turning a tap when the tool is used as a tap-wrench. These jaws can be furnished with a sliding tongue and groove, like the dies H; but as shown in the drawings they have sliding pins, moving in sockets, serving the same purpose. When the pins are used the bottoms of the sockets can be furnished with springs to keep the dies or jaws apart. These are not necessary, except as a convenience, as whatever is inserted between the jaws or dies holds them apart when in use.

The sliding tongue-and-groove arrangement is shown at J in Figs. 3 and 4, and the sliding pin-and-socket arrangement is shown at K in Figs. 1, 2, and 5. These two methods of connecting the blocks forming the dies or jaws act upon essentially the same principle to hold the parts in line.

The operation of my invention is as follows: To change from the jaws forming the tap-wrench to dies, or the converse, or to change to different dies, the plate B is freed by loosening the pin D, and is then turned to one side. The parts held in the stock are removed and others inserted. The plate B is then turned back and clamped by the pin D. The jaws or dies are then set to an exact gage by turning the screw G. Turning it down presses

the sides of the dies against the inclined sides of the opening in the stock and forces the parts together. Turning the screw back allows the parts to separate, so as to enlarge the opening between them.

By means of my improvement the parts can be rapidly changed so as to permit of the use of the same stock for the two purposes named, and a ready and easy adjustment is made by the screw G either to gripe the tap or to set the dies at an exact gage.

What I claim as my invention is—

1. The combination, with a stock or handle having an opening with inclined sides, and with adjustable jaws, of the latch-plate B and the hollow adjusting-screw G, substantially as described.

2. The combination of incline-sided jaws, sliding upon one another by means of guides, as described, a stock having an incline-sided opening to fit the jaws, and an adjusting-screw attached to the stock and adapted to operate upon the jaws, substantially as described.

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