

(No Model.)

W. C. MILLER.  
COMBINATION TOOL.

No. 324,145.

Patented Aug. 11, 1885.

Fig. 1

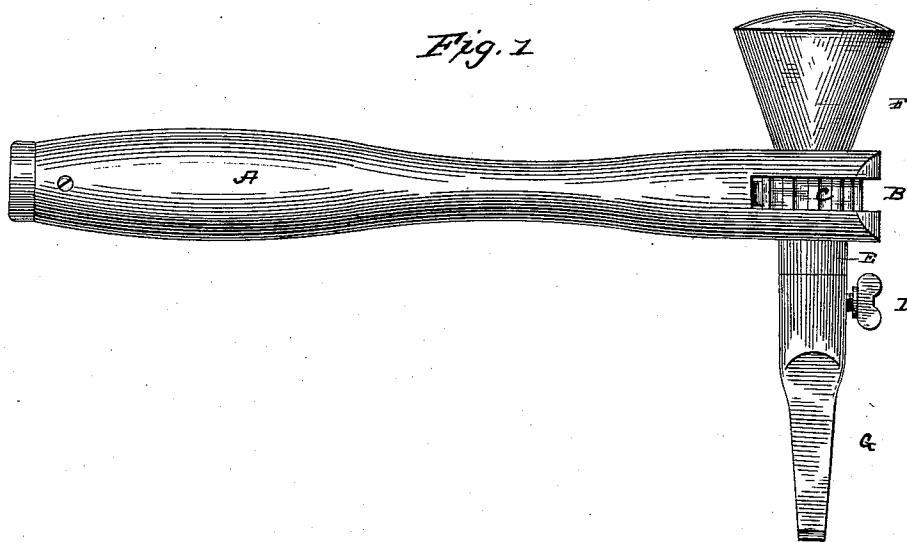
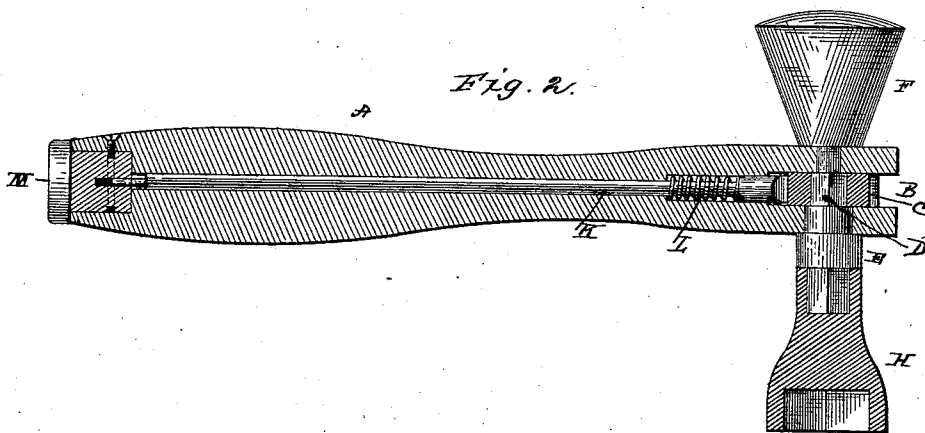


Fig. 2.



WITNESSES

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# UNITED STATES PATENT OFFICE.

WALKER C. MILLER, OF WORTHAM, TEXAS.

## COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 324,145, dated August 11, 1885.

Application filed June 4, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, WALKER C. MILLER, a citizen of the United States, residing at Wortham, in the county of Freestone and State of Texas, have invented certain new and useful Improvements in a Combined Wrench, Hammer, and Screw-Driver, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in combination-tools, and is designed to produce a tool in which the wrench, hammer, and screw-driver are combined in a compact and useful form.

The improvement consists, essentially, in the manner of combining the parts and in the particular construction thereof.

In describing the device, reference is had to the annexed drawings, in which Figure 1 represents a side elevation of the device with the screw-driver attached, and Fig. 2, a longitudinal section with the wrench attached.

The handle A may be of any desired length, and is slotted at the end B to contain a ratchet-wheel, C. This ratchet-wheel has a square or similarly-shaped passage through it.

The spindle D is shaped to pass through the ratchet and has bearings in both sides of the end B, one passage being larger than the other and both circular, so the spindle may turn with the ratchet. Both ends of the spindle project beyond the handle, and one contains a shoulder, E, and is squared or similarly shaped on its continuation beyond the shoulder. The other end of the spindle contains a head, F, secured to it, said head being preferably of the shape of a truncated cone with a slightly convexed base. This head forms the hammer.

To the squared end of the spindle is secured the screw-driver G or the wrench H, both having sockets for the said end, and being secured thereto by a thumb-screw, I, catch, or other similar well-known device. Several screw-drivers or wrench-sockets may be used, being of varying sizes to suit different work.

Passing entirely through the handle is a rod, K, having one end enlarged and beveled to form a ratchet-tooth engaging the teeth of the ratchet-wheel C. The passage through the handle is enlarged to correspond to the en-

largement on the rod, and also forms a seat for the spring L, which keeps the pawl normally against the ratchet-wheel. The other end of the rod is narrowed or flattened and rests in a recess in the head or tap M, let into the end of the handle. This tap has an annular groove in which the end of a retaining-screw rests. The projecting portion of this tap is shouldered, so that it may be grasped and turned thus turning the pawl with it and reversing the operation of the ratchet. The recess in the tap is of sufficient depth to allow the necessary longitudinal movement of the rod without disengagement.

The handle is moved alternately backward and forward, and by means of the ratchet moves the wrench or screw-driver in one direction only, while the hammer-head forms a hand-rest by which the device may be kept to its work.

I claim—

1. A combination-tool consisting of a handle containing a pawl-retained ratchet-wheel, a spindle moved by the handle and attached to the ratchet-wheel, and having one end squared or similarly shaped, and a hammer-head attached to the other end of the spindle, substantially as and for the purpose specified.

2. A combination-tool consisting of a handle with a ratchet-wheel and a reversible pawl, a spindle passing through said wheel and having one end squared or similarly-shaped, a hammer-head attached to the other end, and a screw-driver and a wrench-socket normally attached to the spindle, substantially as and for the purpose specified.

3. In a combination-tool, a reversible ratchet consisting of a ratchet-wheel in a handle, a rod with a beveled enlargement and spring at one end and flattened at the other, and extending through said handle, and a tap entering the handle and receiving the flattened end of the rod in a recess in it, said tap being free to turn, substantially as and for the purpose specified.

4. A combination-tool consisting of a handle, a ratchet-wheel therein, a rod with a beveled enlargement at one end, and spring retained and flattened at the other end, extending there-through, a tap with a recess receiving the flat-

tened end of the rod, a spindle passing  
through the ratchet-wheel and squared or  
similarly-shaped at one end, a hammer-head  
attached to the other end, and a screw-driver  
5 and wrench with sockets for receiving the  
spindle, substantially as and for the purpose  
specified.

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

WALKER C. MILLER.

Witnesses:

G. W. KNOTT,  
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