(No Model.)

W. J. McFEELY.

COMBINATION TOOL.

No. 418,742. Patented Jan. 7, 1890.

Fig. 1.

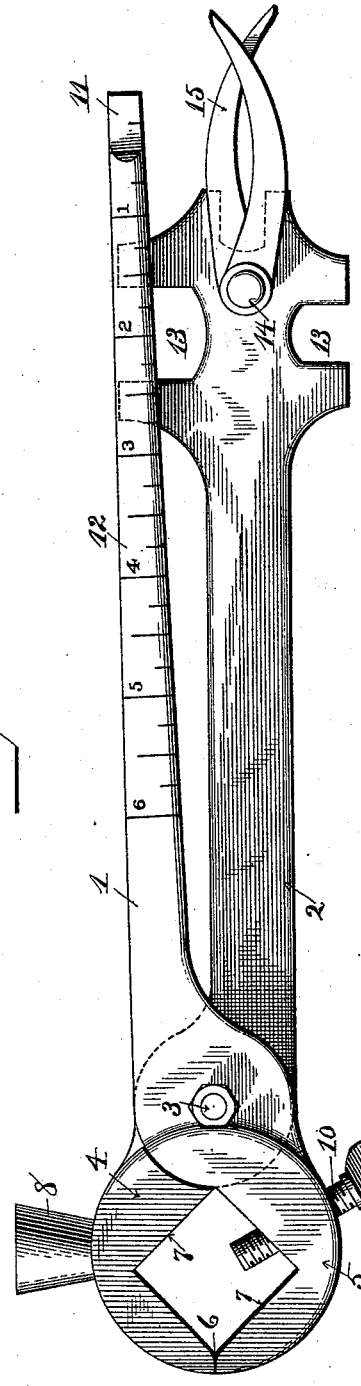
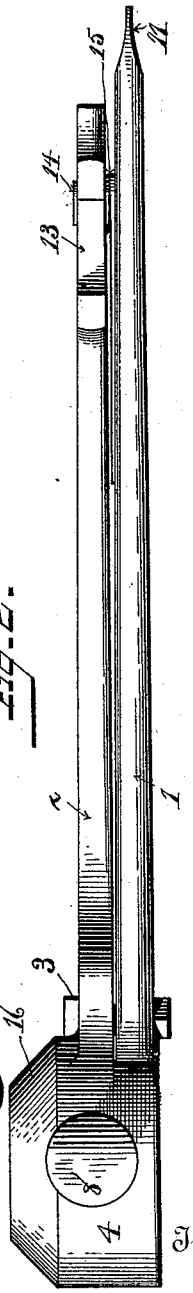


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM J. McFEELY, OF MOUNT VERNON, OHIO.

COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 418,742, dated January 7, 1890.

Application filed May 21, 1888. Serial No. 274,490. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. McFEELY, a citizen of the United States, residing at Mount Vernon, in the county of Knox and State of Ohio, have invented a certain new and useful Combination-Tool; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in the construction of that class of combination-tools wherein a single implement is so shaped and arranged as to constitute a plurality of tools.

My combination-tool comprises, as hereinafter set forth, a pinchers, buggy-wrench, pipe wrench or tongs, hammer, screw-driver, rule, and calipers.

In the accompanying drawings, Figure 1 represents an elevation of my improved combination-tool, and Fig. 2 a view at right angle to Fig. 1.

With the exceptions hereinafter mentioned, my improved tool is two parts or members pivotally connected together.

1 2 represent the legs or handles of my combination-tool, which are pivoted together at 3. The upper end of each leg or handle is formed with a curved enlargement or jawed head 4 and 5, the meeting edges of which are beveled or, if desired, corrugated, to constitute a pair of pinchers or pliers 6. These meeting edges may be formed sharp if desired to form wire-cutting pliers. The inner faces 7 of the jaws 4 5 are of square form, as shown, to serve as a nut or monkey wrench. Integral with the jaw 4, and extending outwardly from the outer face thereof, is formed an offset 8, of suitable shape and size, which constitutes the hammer. Transversely through the jaw 5 is formed a screw-threaded hole 9 to receive a thumb-screw 10. This thumb-screw is passed through said hole, and is adjusted therein to project within the jawed head, as represented, for the purpose of gripping a pipe when it is desired to use the jawed head as a pipe wrench or tongs. When it is desired to use the head as a nut or a monkey wrench, the thumb-screw is turned so as to bring the inner end thereof within the threaded hole or flush with the inner end thereof.

It will be observed that the legs or handles 1 2 of the tool are of unequal length and width, the leg 1 gradually tapering toward its lower end, where it is beveled or flattened, as at 11, to constitute a screw-driver. One or both of the faces of this leg 1 are graduated, as represented at 12, to constitute a rule. The other leg 2 is of increased width, and has formed in its respective edges and also in its outer end notches or recesses 13, of varying sizes, which serve as carriage-wrenches for operating the nuts, washers, and other similar parts of carriages of various descriptions. To a projection or pin 14, projecting from the inner face of this leg 2, is pivoted a pair of calipers 15. This projection or pin 14 may either be cast integrally with the leg 2 or welded thereto, or a hole may be formed in said leg and said pin passed therethrough and riveted in position.

The combined tool, with the single exceptions of the calipers and the thumb-screw, may be easily and cheaply constructed in two parts simply by casting either in steel or other metal; or, if desired, a portion thereof may be formed of cast or wrought iron or steel, or a part of iron and other parts of steel cast or welded thereon in any of the modes known to the art. The pivot-bearing 3 for the two members 1 2 of the tool, as represented, consists of a bolt and nut to facilitate the separation and connection together, as desired, of said parts.

It will be observed on reference to the drawings that the jawed heads on one side are flush, or nearly so, with the plane of the handle 1, by which the wrench 7 is adapted for use on projecting nuts, while on their opposite side they extend outwardly in the form of a converging bevel 16, whereby the wrench 7 is also adapted for insertion in recesses, so as to operate nuts or washers contained therein.

What I claim is—

1. A combination-tool having a pair of pivotally-connected arms or sections, the upper end being of substantially circular form and having a flat face and an outwardly-extending beveled face and a square bore, one of the members of the jawed upper end being pro-

vided with an offset constituting a hammer, while the other jaw has a threaded transverse hole therein and a thumb-screw extending through said threaded hole and within the jaws of the tool, substantially as set forth.

2. A combination-tool consisting of a pair of pivotal arms or sections, the upper end of each of which is of semicircular form exteriorly, and has an angular inner edge and also one flat side face and an outwardly-extending curved beveled face, one of said members at its upper end having a transversely-extending threaded hole, with which a thumb-screw engages, thereby constituting a wrench adapted for use in surface and recessed situations, and also a pipe-tongs, the other member having an offset at its edge to constitute a hammer, and one of the lower or handle ends of the tool having a sharpened lower end to constitute a screw-driver and graduation-marks to constitute a rule, the other handle member having outwardly-extending notched portions to constitute a wrench, and having a pair of calipers pivoted thereto, substantially as set forth.

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

WILLIAM J. McFEELY.

Witnesses:
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JAS. GILLAM.