DAVID HEATON.

Combination Tool.

No. 126,544. Patented May 7, 1872.

Fig 1.

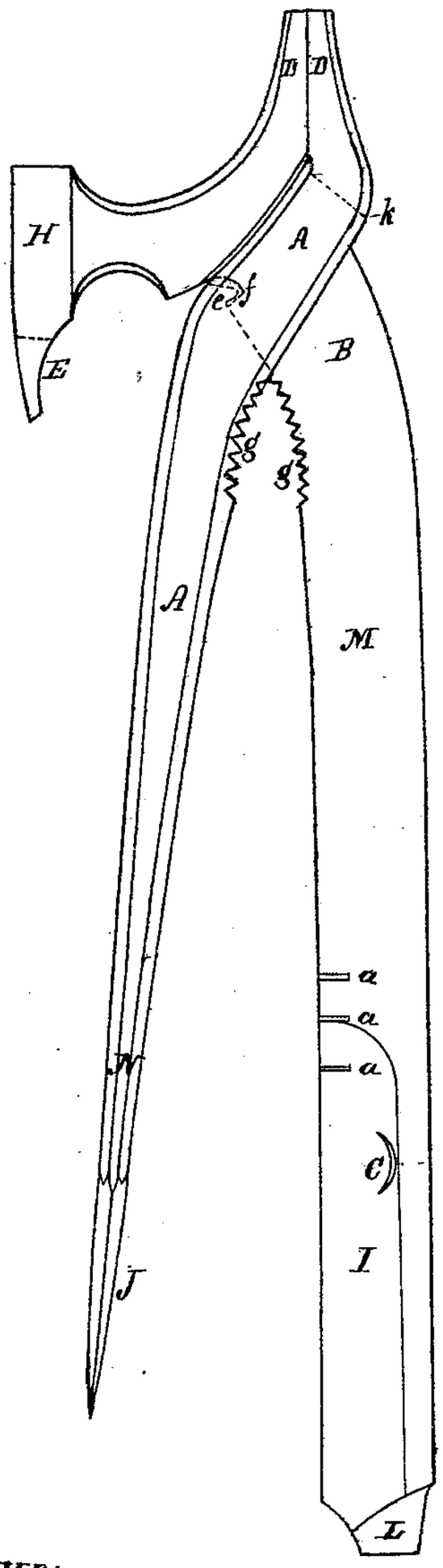


Fig 2.

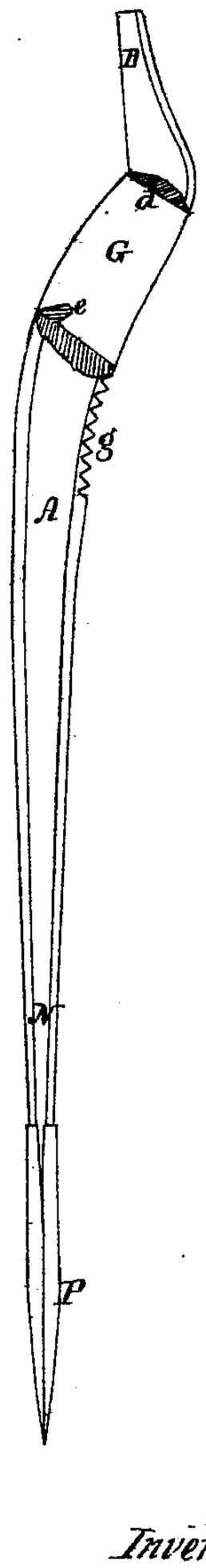
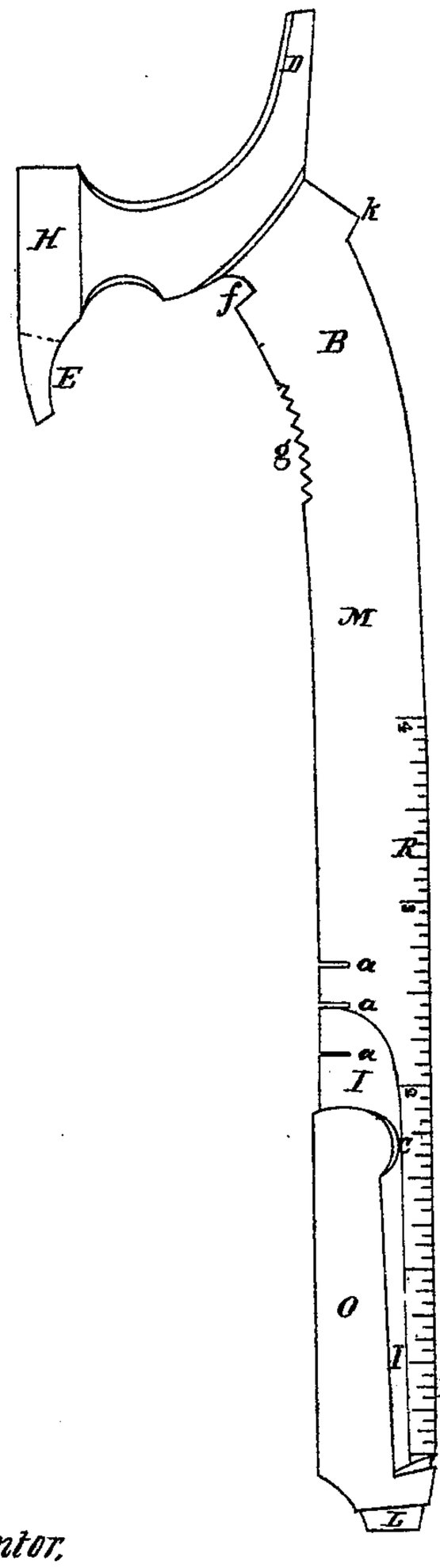


Fig 3.



Witnesses.

Isaac A. Pennell.

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126,544

UNITED STATES PATENT OFFICE.

DAVID HEATON, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN COMBINATION TOOLS.

Specification forming part of Letters Patent No. 126,544, dated May 7, 1872.

SPECIFICATION.

I, DAVID HEATON, of the city and county of Providence and State of Rhode Island, have invented a new and Improved Combination Tool, of which the following is a specification, referring by letters to the accompanying drawing making part of the same, in which—

Figure 1 is a side view of said combination tool. Fig. 2 is a like view and section of the part A of Fig. 1 separately. Fig. 3 is a like view of the part B of Fig. 1 separately.

Similar letters indicate like parts in all the figures.

My invention consists of a combination and arrangement of several well-known tools in one, in convenient form for the separate use of either one of the combination, with the object mainly to produce a belt-mending implement for use in manufactories, &c.

The said combination tool has the general form and appearance of a pair of pinchers or pliers—that is to say, having a pair of griping-jaws, D D, and a pair of handles or shanks, A B. Instead, however, of being pivoted together where the two parts cross each other, in the usual way, they are confined by a novel device at this point, which provides for opening and shutting the jaws freely and forcibly by the handles in the usual way, and at the same time provides for the ready disconnection and separate use of one part, A, from the other, B, as shown in Figs. 2 and 3, whereby the handles may be wrought into the form of tools calculated for separate use, and more conveniently than the same could be if the two parts were permanently pivoted together. The two parts A and B are joined together by putting the shank B through the slot G in the part A. But with this construction no griping action of the jaws is possible unless the two parts are so confined and held in position while the jaws are opened and shut by the handles. This peculiar confinement to admit of this action of the jaws is secured by means of the tooth *e* in the slot G, which enters the notch *f* in the shank B, and is held in said notch by the projection or guide *k* on the opposite side of the shank, which bears against the end *d* of the slot G when the jaws are moving to open and shut the same; the projection *k* and the tooth in the notch combining to afford the same action of the two parts as if they were pivoted together in the old way, but affording greater strength of the parts and a more powerful grip or action than when the entire strain is on a single pivot passing through the two parts.

When it is desired to separate the two parts it is only necessary to swing the slot of the part A clear of the projection *k* on the shank, when the tooth may be withdrawn from the notch in the shank, and the latter from the slot G.

This mode of confining the two parts for the twofold purpose of admitting of the requisite action of two jaws by their handles, and for ready disconnection for separate use of either one of the parts, is obviously applicable in the construction of scissors, heavy shears, tongs, nippers, and similar articles; and is distinguishable from the mere combination of a tooth in the slot of one part engaging with a notch or series of notches in the shank of the other part to give and hold the former permanently in position with the latter, as heretofore employed in the construction of adjustable wrenches, by the introduction of the additional feature—viz., the projection or guide *k*, by means of which the position of the two parts is maintained when in motion like a pair of griping-jaws or shear-blades—an effect which the first-named combination alone is not capable of producing.

Having thus provided for both the combined and separate use of the two parts A and B, I construct the handle of the part B with a plain handle, M, and knife-blade I, and at the end of the latter provide a prying-implement to pry up the ends of the metallic hooks, which are often used to connect the ends of the belts. This implement L may also be used as a screw-driver. A rule, R, may also be cut on said blade and handle to measure and rule the belt ends in repairing, or the wires for the conecting-hooks. At the other end of B, forming a continuation of the jaw D, I provide a hammer, H, to flatten down the belt lacing or rivets, and a nail-claw, E, to remove the nails or rivets in repairing. The handle of the part A I make tapering, with an oval-pointed head, J, at the end, of suitable form for a belt, and merging into an octagon or other-shaped shank, forming a tapering reamer, N. In order to protect the edge of the blade I, and to guard against

accidental cutting, I provide a guard or sheath, O, of sheet-metal, which slips over the screw-driver end and snaps into the crescent-shaped depressions C on the blade, as shown in Fig. 3. For the same purpose I protect the belt-awl with a suitable sheath, P, of sheet metal, as shown in Fig. 2. The outer edge of handle M I make into a file for trimming off smoothly any projecting ends or parts of the wire or rivets.

Having described my invention, I claim—

1. The combination and arrangement of the guide *k*, notch *f*, and toothed slot G with the two parts forming the jaws and handles, constructed substantially as described, for the purpose specified.

2. I claim the combination of the file, the prying-implement L, awl, reamer, knife-blade, rule, and pinchers, substantially as shown and described.

3. I claim, in a belt-mending tool having a knife-blade on one handle and an awl on the other, the sheath O for the blade and the sheath P for the awl, substantially as shown and described.

4. The combination, in a single implement, of the several tools described, and for the purpose set forth.

DAVID HEATON.

Witnesses:

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