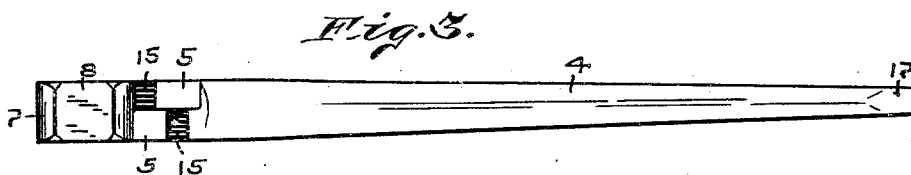
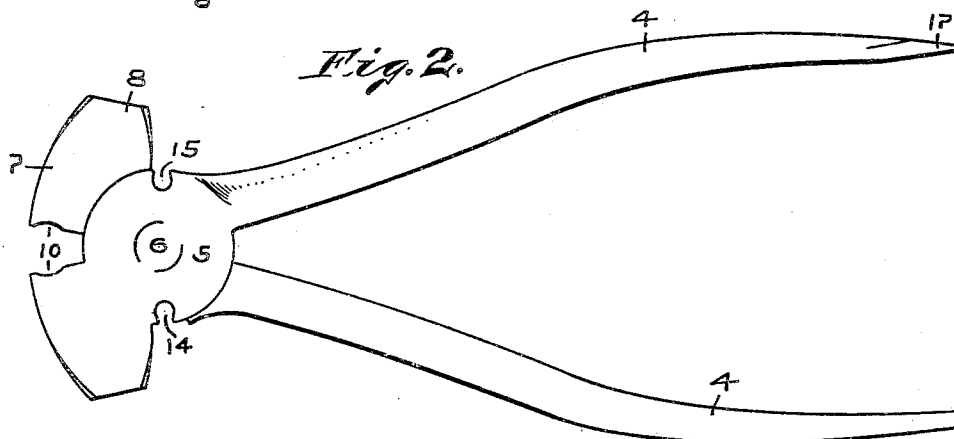
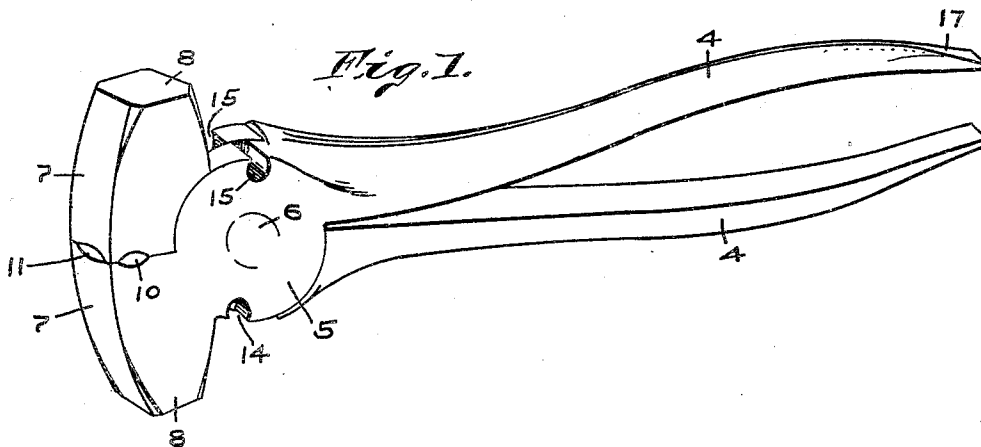


C. E. BONNER.
COMBINATION TOOL.

APPLICATION FILED FEB. 23, 1905. RENEWED JUNE 17, 1909.

929,821.

Patented Aug. 3, 1909.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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COMBINATION-TOOL.

No. 929,821.

Specification of Letters Patent.

Patented Aug. 8, 1909.

Application filed February 23, 1905, Serial No. 246,938. Renewed June 17, 1909. Serial No. 502,799.

To all whom it may concern:

Be it known that I, CLARENCE E. BONNER, a citizen of the United States, residing at Chrisman, in the county of Edgar and State of Illinois, have invented certain new and useful Improvements in Combination-Tools, of which the following is a specification.

This invention relates to improvements in a tool for use by fence builders, line-men and for general purposes on farms and in shops, where the driving of nails and staples, the drawing of same and the cutting and twisting of wires is a part of the work to be done.

The device is a combination hammer, wire cutter, staple and nail puller, wire twister, and screw-driver, and the object of the invention is to combine these parts in a manner to produce a strong compact and practical tool that can be manufactured economically.

I accomplish the objects of the invention by the mechanism illustrated in the accompanying drawing in which—

Figure 1 is a perspective view of my improved tool, showing the nail and staple pulling jaws in closed position. Fig. 2 is a side view of same showing the jaws open and Fig. 3 is an edge view of the tool.

Like characters of reference indicate like parts throughout the several views of the drawing.

My improved tool is comprised of two parts which are pivoted together in the manner shown in the drawing, and which parts are the exact duplicates of each other making it only necessary for a fit in assembling them to turn the hammer-portions of each in opposite directions in order to secure a working fit of the parts.

4 represents a handle-member which is formed on one of said parts of my tool and 5 is a circular plate integral with said handle 4. This plate 5 has a central perforation to receive the pin 6 which forms the pivot that unites the two members of the tool. The plate 5 will be approximately one-half of the thickness of the handle 4 at its junction with the latter thereby providing a shoulder at that end of the handle. This shoulder will be curved on the arc of the circle of the same radius as plate 5, where it contacts with said plate.

At the side of plate 5 diametrically opposite the handle 4 is the integral jaw 7. This jaw is substantially double the thickness of

the plate 5, the thickened portion being on the same side of the plate as the thickened portion of handle 4, and the shoulder formed by this increase is on the same curvature as plate 5. The jaw 7 has the extension 8 to form a hammer-head. The mating faces of the two jaws 7 have the transverse grooves 10 and also the grooves 11 at right angles to and entering the grooves 10. The grooves 10 enable the jaws to engage wires which will occupy said grooves while the tool is in use, and the grooves 11 form nail-seats, or in conjunction with the grooves 10 form seats for the retention of the members of the staple when tool is to be used for pulling the same. In order to facilitate the operations of the tool in a reaching and seizing of objects to be operated on, I provide the outward swell in the forward face of the jaws as shown in the drawings, the greatest extension of said outward portions being on the plane of the meeting faces of the two jaws.

14 and 15 represent notches in the periphery of the plates 5. These are located diametrically opposite each other on a diametrical line which is oblique to the plane of the meeting faces of the jaws 7, whereby, when the two plates of the complete tool are assembled the adjacent notches of the two plates will be out of register with each other when the tool is in its closed position, but by opening the tool the said adjacent notches can be brought into alinement with each other for the introduction of a wire therein, and by the closing of the handles of the tool together the consequent movement of the notches out of alinement will cut the wire. By making the notches 14 and 15 on a diametrical line oblique to the meeting faces of the jaws the formation of the two members of the tool in like duplicate parts will insure the proper positioning of the notches to form a shears for cutting wires when said parts of the tool are assembled. The outer end of one or both of the handles 4 may be finished into a screw-driver as shown at 17.

Having thus fully described my invention what I claim as new and wish to secure by Letters Patent of the United States is—

A tool for the purposes specified, in two duplicate parts, each of which comprises a circular plate with central perforations for the introduction of a pivot whereby the

plates are pivotally united, said plates having handle extension from one edge, a jaw extension from the edge diametrically opposite the handle, transverse wire cutting notches between the handle and jaw extensions in diametrical lines oblique to the plane of the mating faces of the two members of the jaw, said jaw extension having laterally extended hammer-heads, the forward faces of which are extended outwardly adjacent to their mating faces to form cooperating extension extractor-jaws of the same width as the combined width of the two circular plates, the mating faces of the two jaws having transverse concave grooves adjacent

to the outer end of the jaw forming in conjunction an elliptic lanceolate opening, and said jaws having like grooves extending outwardly from the transverse grooves to form an elliptic lanceolate opening, the two grooves forming spurs or teeth between their adjacent ends.

In witness whereof, I, have hereunto set my hand at Chrisman, Ills., Feby., A. D. one thousand nine hundred and five.

CLARENCE E. BONNER. [L. s.]

Witnesses:

E. E. CRETORS,

H. G. OSBORN.