

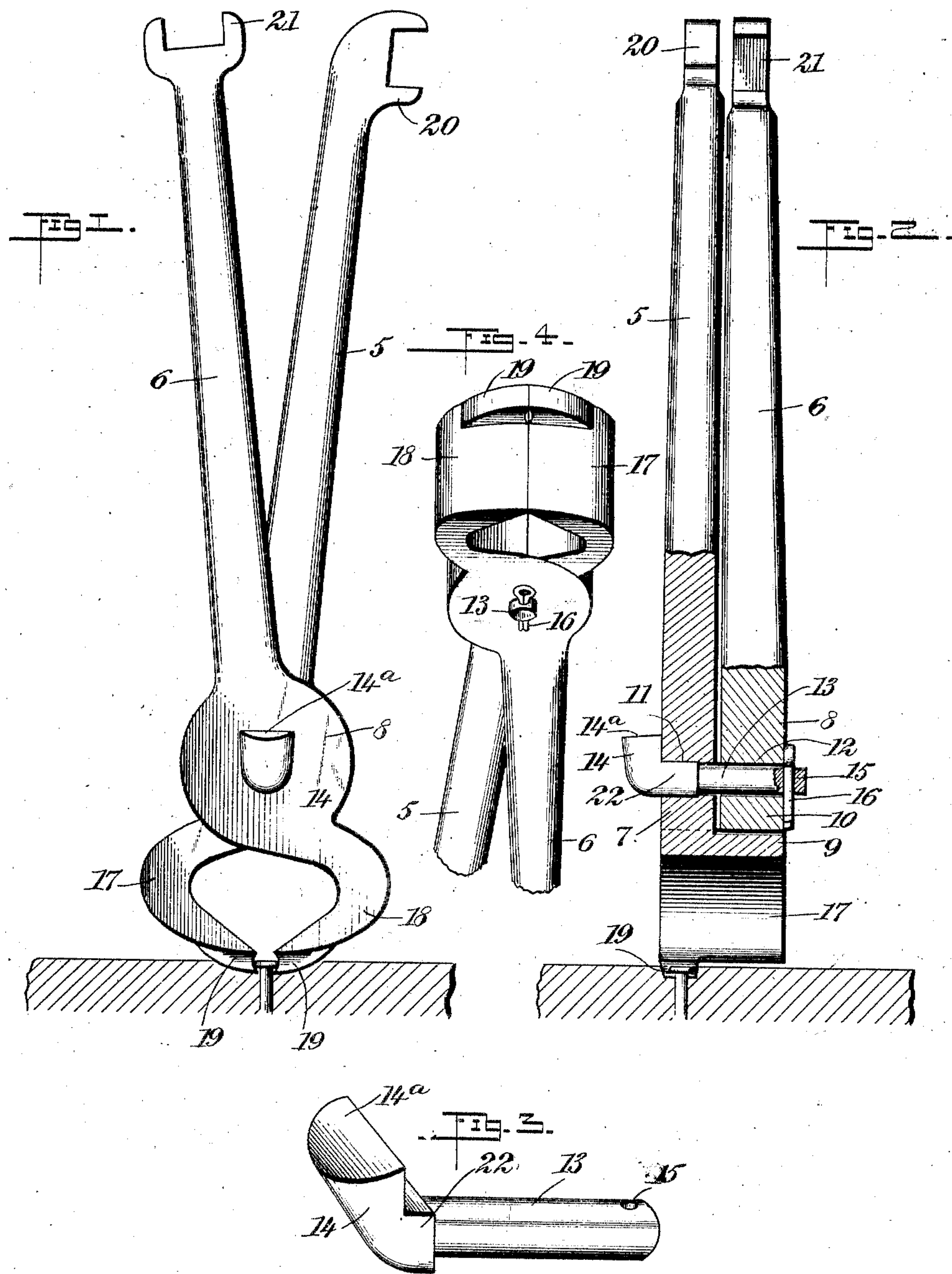
No. 776,987.

PATENTED DEC. 6, 1904.

A. P. BERGGREEN.  
COMBINATION TOOL.

APPLICATION FILED OCT. 26, 1903.

NO MODEL.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 776,987, dated December 6, 1904.

Application filed October 26, 1903. Serial No. 178,554. (No model.)

*To all whom it may concern:*

Be it known that I, ANDREW PETER BERGGREEN, a citizen of the United States, and a resident of Elkhorn, in the county of Shelby and State of Iowa, have invented new and useful Improvements in Combination-Tools, of which the following is a full, clear, and exact description.

This invention relates to certain novel and useful improvements in combination-tools, and has particular application to an implement designed to embody in its construction a carpenter's pincers or pliers, a nail-puller, and a plurality of wrenches.

A further object of my invention is to provide an implement which will be extremely simple in its construction, the arms and jaws forming the body portion thereof being connected in such a manner that they may be easily separated and each one of the members may be used as a wrench.

Still another object of the invention is to form an improved nail-puller at the ends of the jaws of the pincers, said nail-puller being so constructed and arranged that nails flush with the surface of a board or countersunk therein, may be easily and readily removed without cutting, marring, or injuring the board.

With the above-recited objects and others of a similar nature in view my invention consists in the construction, combination, and arrangement of parts, as is described in this specification, delineated in the accompanying drawings, and set forth in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of an implement constructed in accordance with my invention and showing it in position for drawing a countersunk nail from wood. Fig. 2 is a side elevation, partly in section, showing the tool in the position of Fig. 1. Fig. 3 is a detail perspective view of the pivot-bolt detached from the members of the implement, and Fig. 4 is a perspective view looking at the jaws and the claws thereon.

Referring now to the accompanying drawings in detail, 5 and 6 designate the arms or

members forming my improved pincers or pliers, each member having a relatively widened and flattened portion formed thereon, as shown at 7 and 8, the flattened portion 7 having a shoulder or extension 9 projecting therefrom, upon which shoulder is adapted to seat the lower extremity 10 of the flattened portion 8 of the arm 6. The flattened portions 7 and 8 are provided with transversely-extending apertures 11 and 12, said apertures being designed to register when the members are assembled and to permit the passage of the connecting pivot-bolt 13, the head portion 14 of said bolt bearing against one of the flattened sides, while in the opposite end of said bolt is formed a small bore 15, through which passes the securing-pin 16. The lower portions of the members form the ordinary jaws 17 and 18; but formed on each jaw is a relatively small projecting claw 19, these claws being designed to be brought into contact when the jaws are closed and are so shaped and curved that they will readily engage with the head of a nail even though the latter be countersunk, and said nail may be readily removed without bruising or injuring the surface of the wood, as is commonly the case with the ordinary implements now in use. As will be noted, these claws 19 are formed at the edges of the jaws and are relatively short when compared with the length of the working edges of the jaws of the tool.

The member 5 has formed at its upper end a wrench-head, as shown at 20, while a second wrench-head 21 is formed at the end of the member 6, said heads being of relatively different sizes.

By reference to Figs. 1 and 3 of the drawings it will be seen that the claws 19 lie very close to that side of the instrument having the projecting head 14 of the pivot-bolt, and these claws 19 are much narrower than the jaws 17 18 of the implement, said claws being provided with sharpened active edges. The pivot-bolt 13 is provided between its shank and the head 14 with an angular or polygonal portion 22, the same being adapted to fit into a correspondingly-shaped opening which is provided in the large portion 7 of the member 5. It will be understood that the



pivot-bolt 13 is fitted to the openings 11 12 of the members 5 6 in a way to bring the angular or polygonal portion 22 of said bolt into the correspondingly-shaped opening in the member 5, whereby the head 14 is brought quite close to one side of the implement, and the perforated end of the pivot-bolt is adapted to receive the key or fastener 16. The provision of the angular or polygonal portion 22 on the pivotal bolt serves to hold the head 14 at all times in positions to receive the blow of a hammer or other instrument when the implement is employed for the purpose of driving the claws 19 into the wood, so as to make the claws embed themselves in the wood and engage with a nail below the head thereof, substantially as shown by Figs. 1 and 2. The head 14 of the pivotal bolt is tapered from one side of the bolt to the striking-face 14<sup>a</sup>, which is provided at the free end of said head.

In using my implement to draw nails from wood when the heads of the nails project slightly beyond the surface it is not necessary to employ the claws 19, because the biting edges of the jaws 17 18 can easily engage with the nail below the head thereof; but when the nail-head is countersunk in either hard or soft wood it becomes necessary to employ the claws 19. If the implement is used on soft wood, it is only necessary for the workman to press forcibly on the members 5 6, so as to embed the claws 19 into the wood on opposite sides of the nail, after which the claws may be closed to grip the nail, and the implement can be operated to withdraw the nail from the wood by the action of the claws, after which the implement may be shifted so as to bring the jaws 17 18 into engagement with the nail, and by turning the implement in any direction these jaws will extract the nail, the curved faces of the jaws serving to bear and turn easily on the wood for the purpose of extracting the nail without marring or bruising the surface of the wood.

In using the instrument to extract countersunk or flush nails from hard wood the operator should first adjust the jaws adjacent to the nail-head, and by striking the head 14 of the pivotal bolt a blow with a hammer the

claws are forced into the wood and the implement is manipulated in the described manner to extract the nail practically without marring the surface of the wood.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A tool of the character described, comprising members provided with jaws having extracting-claws located at one side thereof and projecting in advance of the face of the jaws, said members of the tool having registering transverse openings extending through them, the opening in one member being round and the opening in the other member being round at its inner end and of enlarged polygonal shape at its outer end, a bolt extending through said openings to pivotally connect the members together, said bolt having one end round and received into the round portions of said transverse openings, and having an enlarged polygonal portion adjacent to its round portion and fitting said polygonal portion of the opening in one of said members to hold the bolt against rotation thereon, the outer end of said bolt beyond the polygonal portion being further enlarged and bent upwardly in direction of the handle end of the tool and having a flat inner side in engagement with the side of the tool, and provided with a flat end facing upwardly to form a striking-surface, said enlarged end of the bolt being on the same side of the tool with the projecting claws and located vertically above the point at which said claws meet.

2. An instrument of the class described, comprising members provided with jaws and with extracting-claws, and a bolt pivotally connecting said members, said bolt having a striking-head bent in direction of the handle end of the members and fitted to one of the members to maintain the striking-head normally in an active exposed position.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ANDREW PETER BERGGREEN.

Witnesses:

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J. J. ESBECK.