D. R. SCHOONOVER.

TOOL.

APPLICATION FILED MAR. 31, 1921.

1,405,339. Patented Jan. 31, 1922.

Fig. 6.

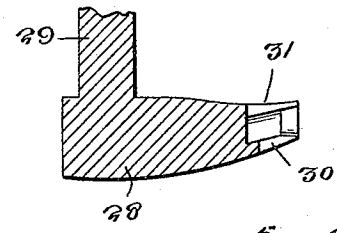


Fig. 1.

Fig. 2.

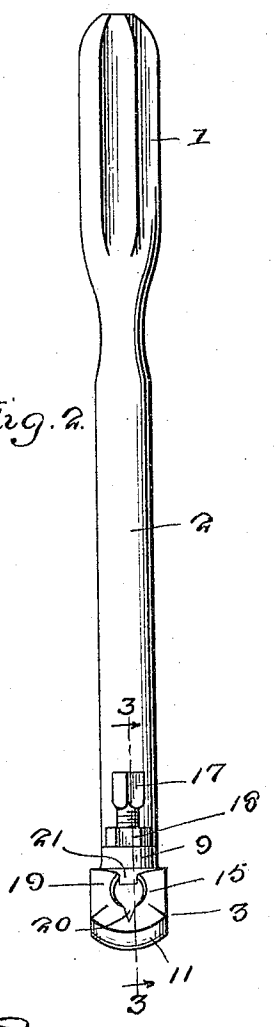


Fig. 3.

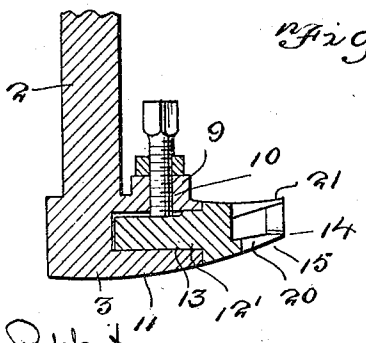


Fig. 4.

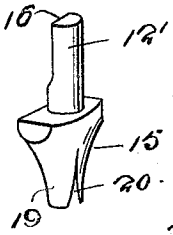
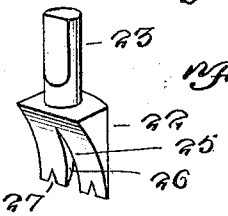


Fig. 5.



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WITNESS:

UNITED STATES PATENT OFFICE.

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TOOL.

1,405,339. Specification of Letters Patent. Patented Jan. 31, 1922.

Application filed March 31, 1921. Serial No. 457,370.

To all whom it may concern:

Be it known that I, DANIEL R. SCHOONOVER, a citizen of the United States, residing at Tuxedo Park, in the county of Orange and State of New York, have invented new and useful Improvements in Tools, of which the following is a specification.

My present invention has reference to an improved tool.

My object is to produce a tool primarily devised for extracting nails but susceptible to other uses, which shall be of a simple construction, cheaply manufactured and marketed, but thoroughly efficient for the purpose for which it is devised.

A further object is to produce a tool comprising a handle having a head at one end thereof in which is removably sustained a jaw member of peculiar and novel construction, said handle having pivotally secured thereon a shank whose outer end terminates in a head which is designed to be swung against the first mentioned head to force the jaw through the wood of a box or the like and into engagement with a nail which has been driven into the box, the jaw, and the head to which it is connected serving as a fulcrum whereby the handle can be tilted to cant the jaw and thus readily remove the nail without inflicting injury to the nail.

A further object is to produce a tool in which a handle member has a head at one end thereof and which is provided with ears to which are pivoted the shank of a second head member designed to be swung against the first mentioned head to bring a jaw member into a box or the like and into engagement with the nail that is driven into the box to permit of the canting of the tool on the box and the withdrawal of the nail therefrom, said head members being constructed of comparatively cheap material, which may be in the nature of castings, while the jaw member is formed of steel or like hardened metal to effectively withstand the strain to which it is subjected.

The foregoing, and other objects which will appear as the nature of the invention is better understood, may be accomplished by a construction, combination and operative association of parts, such as is disclosed by the drawings which accompany and which form part of this application.

In the drawings:—

Figure 1 is a perspective view illustrating the manner in which the tool is operated.

Figure 2 is a fragmentary edge view looking toward the removable jaw.

Figure 3 is a sectional view on the line 3—3 of Figure 2.

Figure 4 is a perspective view of the jaw.

Figure 5 is a similar view of another jaw which may be employed.

Figure 6 is a sectional view through a portion of the tool in which the head is integrally formed with the jaws.

The handle portion of my improved tool is indicated by the numeral 1, the same having a rounded extension providing what I will term a shank 2, the said shank having at its outer end a laterally arranged head 3. On one of the sides of the shank, adjacent to the handle 1 there are upstanding ears 4. Between these ears there is pivoted, as at 5 the angle end 6 of a stem 7. The stem has on its free end a laterally extending head 8.

The face of the head 3, on the end of the head which projects from the shank in the direction of the ears 4 is of a materially less length than the portion of the head which projects beyond the opposite edge of the shank, this last mentioned portion having its inner face formed with a boss 9 that surrounds a threaded opening 10. The outer surface of the head 3 is rounded, as at 11 from its referred to inner face 12 to the outer face thereof. The outer face is thus of a materially less width than the inner face 12, and the said head has a socket 13 entering from its said outer face, the threaded opening 10 communicating with the said socket. The socket is designed to receive therein the rounded shank 12′ of a member 15. The shank has a flattened surface 16 disposed opposite the opening 10, the said surface designed to be engaged by a bolt member 17 which is screwed in the opening 10. On the threaded shank of the bolt, and contacting with the outer face of the boss 9 is a binding nut 18. Except for the member 15, the parts above described may be constructed of comparatively cheap metal, and if desired may be cast, the member 15, however, being of hardened steel. The member 15 has an outer tubular end 19, the bore thereof being beveled inwardly so that the edge of the tubular portion 19 is sharpened. The member 15 has its under face rounded at a curvature corresponding to that of the rounded portion 11 of the head 8, the said outer surface of the member 15, including its extension 19 being also rounded in cross section, which is

true with respect to the rounded surface 11 of the head 8. The outer face of the tubular extension of the member 15 is formed with a V-shaped slot 20, and the upper face of the said extension is formed with a rectangular slot 21 which is of a length equalling that of the bore of the said extension.

As disclosed in Figure 1 of the drawings, the head and the member 15 are arranged at an inclination on a surface which is nailed, such as a box. The stem 7 for the head 8 is swung on its pivot first outwardly with respect to the shank 2, and thence brought forcibly in an opposite direction to cause the head 8 to forcibly contact with the inner face 12 of the head 3. This impact of force will drive the sharpened tubular end of the member 14 through the wood, either with or against the grain. The V-shaped slot of the member 15 is arranged in a position to receive therein the shank of the nail, so that the head of the nail will be received in the socket of the said member 15. The rounded outer surface of the member 15, and the rounded end of the head 3 serve as a fulcrum on which the tool is rocked to cant the head and the member 15, thus readily withdrawing the nail from the box. The walls of the slot 20 do not engage the shank of the nail sufficiently to bite into the said shank, and as a consequence, no injury is inflicted to the nail. In the withdrawal of the nail, the head thereof rides on the lower wall of the bore of the member 15 and is only subjected to what may be termed a rocking movement of the bore of the said member. The portions of the member to the opposite sides of the slots therein form the jaws thereof, and therefore, the member 15 and its extension may be properly referred to as a jaw member.

When it is desired to remove metal bands from around a box, I employ a jaw member of a different construction to that described. This member, indicated by the numeral 22 includes a shank 23 which is received in the socket of the head 3 and engaged by the bolt 17. The member has its body portion of substantially rectangular formation, the under face of which being rounded from its inner to its outer edge and its upper face concaved downwardly from its upper to its lower corner. The member is thus provided with a sharpened outer edge, and is centrally formed with a V-shaped slot 25 that enters from its said edge. The walls of this slot are inclined outwardly in opposite directions, as indicated by the numeral 26, and the portions of the member between the slot 25 provide the same with the jaws. Each jaw has its sharpened edge centrally provided with a substantially V-shaped depression 27 that forms the said edge of the jaws with notches. The jaws are inserted over a box beneath the metal strap in a line with a nail. The device is canted and the nail partly withdrawn. The device may be then arranged over the strap to engage with the nail between the jaws and wholly withdraw the said nail. The sharpened walls of the depressions 27 are employed for severing the strap at the corners of the box, it being understood that the impact member or hammer 8 is forcibly brought against the head 3 in the operation of the device.

Other jaw members may be arranged in the socket of the head 3 when the tool is to operate on other securing means than nails, as for instance, the device can be employed with efficiency for pulling staples in fence or other constructions. The stem 7 is arranged parallel with the shank 2, when the heads 3 and 8 are in contacting engagement, and are not materially spaced away from each other. This permits of the operator grasping both the stem and shank of the tool and employing the outer face of the head 8 in the usual manner for driving nails, staples or the like.

In Figure 6, a head 28 is integrally formed with a shank 29. The inner face of the head is designed to be contacted by a pivotally supported head, such as the head 8. The head 28 is substantially similar in construction to the head 3, except that the said head 28 is formed of hardened metal and is integrally formed with a projection, tubular in cross section, flared inwardly from its end to provide a sharpened edge. The extension is formed with a lower substantially V-shaped slot 30 and an upper rectangular slot 31, both of which entering the bore of the said extension. The extension cuts and engages the nail in a manner as previously described.

It is believed that the foregoing description, when taken in connection with the drawings will fully set forth the construction and advantages of the improvement, but it is to be stated that the invention is not to be restricted to the description and showing of the drawings, and that I am entitled to all such changes therefrom as fall within the scope of what is claimed.

Having described the invention, I claim:

1. A tool as herein described comprising a handle having an extension forming a shank and a laterally extending head at the outer end of the shank, said shank having ears projecting from one edge thereof, a stem pivotally connected to the ears, a head on the outer end of the stem disposed opposite and in the path of contact with the inner face of the first mentioned head, said first mentioned head having a socket entering from its outer face, a jaw having a shank designed to be received in the socket, and binding means carried by the said head and engaging the shank for holding the latter in the socket.

2. A tool for the purpose set forth comprising a handle having a shank extension

provided with a laterally extending head at the outer end thereof, said head having one of its faces nearer the shank than its opposite face and the outer surface of the head being rounded from the first mentioned to the last mentioned face, said head having a socket entering from its last mentioned face, a boss on the inner side of the head having a threaded opening therethrough, a jaw member having a shank received in the socket, a bolt screwed through the opening and contacting with the shank, a lock nut for the bolt, said jaw member including a body having a tubular extension, the bore of which being inclined inwardly from the outer edge thereof and the said outer edge being sharpened, the lower face of the said extension having a V-shaped slot therein and the opposite face having a rectangular opening therein, a stem pivotally connected to the edge of the shank opposite the jaw, and a head on the outer end of the shank disposed opposite and designed to contact with the first mentioned head.

3. In a tool for the purpose set forth, a member having a head, a second member pivoted to the first member also provided with a head which is designed to be forcibly swung against the head of the first member to influence the same longitudinally when the tool is employed for one purpose and to rest against the said head of the first member when the members are in parallel relation to permit of the head of the second member serving as a driving implement, and a removable hardened jaw member removably secured to the outer face of the first mentioned head.

4. In a tool of the class described, a member designed to be contacted by another member, and including a head having a tubular extension which is flared inwardly from its outer edge and which has both its upper and lower walls formed with longitudinal slots.

In testimony whereof I affix my signature.

DANIEL R. SCHOONOVER.