Jan. 9, 1923. 1,441,903.

M. BALAZIUK.

COMBINATION TOOL.

FILED MAR. 31, 1921.

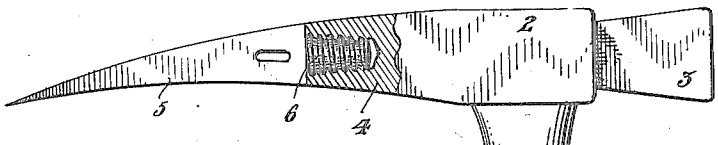
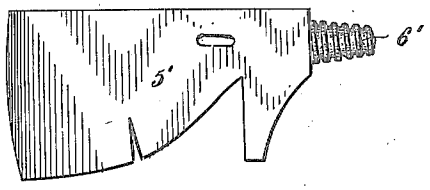


FIG. 1.

FIG. 2.



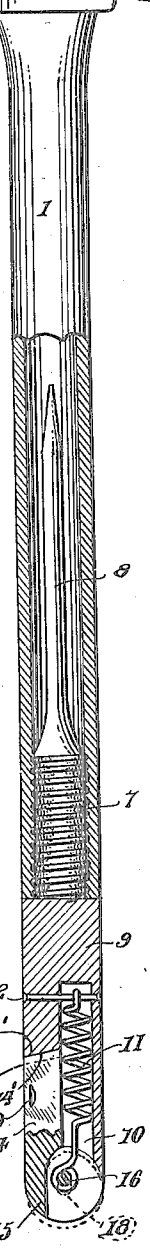


FIG. 6.

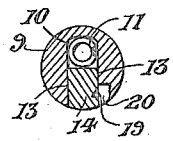


FIG. 5.

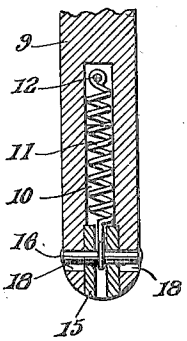


FIG. 3.

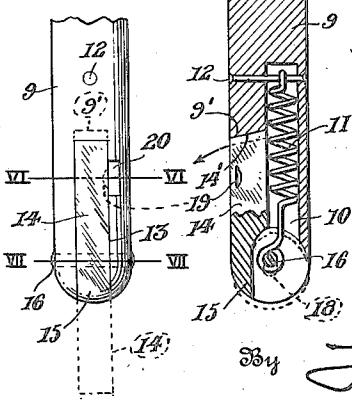


FIG. 4.

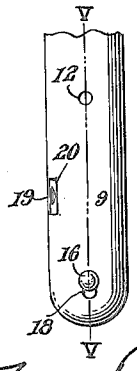
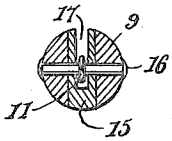


FIG. 7.



Inventor

M. Balaziuk

By T. H. Bryant.

Attorney

Patented Jan. 9, 1923. 1,441,903

UNITED STATES PATENT OFFICE.

MICHAEL BALAZIUK, OF REVLOC, PENNSYLVANIA.

COMBINATION TOOL.

Application filed March 31, 1921. Serial No. 457,411.

To all whom it may concern:

Be it known that I, MICHAEL BALAZIUK, a citizen of Ukraine, residing at Revloc, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Combination Tools, of which the following is a specification.

This invention relates to certain new and useful improvements in combination tools, and has particular reference to a tool having a head provided with removable bit members with the handle of the tool being of tubular construction, and threadably receiving a tool in the outer end thereof.

One of the objects of the invention resides in the provision of a combination tool wherein a magnet is adjustably secured to the inner end of the handle portion thereof adapted for picking up articles of different types, with the magnet substantially housed within the handle portion when out of use.

With these general objects in view and others that will appear as the nature of the invention is better understood, the same consists of the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the appended claims.

In the drawing forming a part of this application, and in which like designating characters refer to corresponding parts throughout the several views,

Figure 1 is a side elevational view partly in section with the combination tool constructed in accordance with the present invention showing a removable bit or point attached to the head of the tool, and a removable tool secured within the inner end of the handle and the magnet resiliently supported by the tool handle;

Fig. 2 is a side elevational view of a hatchet blade attachment for the tool head;

Fig. 3 is a fragmentary front elevational view of the inner portion of the tool handle showing the magnet in its open position by dotted lines;

Fig. 4 is a side elevational view of the inner end of the tool handle taken at right angles to the showing in Fig. 3;

Fig. 5 is a sectional view taken on line V—V of Fig. 4, showing the spring mounting for the magnet and the slotted bearing for the pivot pin supporting the magnet;

Fig. 6 is a cross-sectional view taken on line VI—VI of Fig. 3, showing the fingernail slot for moving the magnet on its pivot; and

Fig. 7 is a cross-sectional view taken on line VII—VII of Fig. 3, showing the grooved pivoting head for the magnet.

Referring more in detail to the accompanying drawing, there is illustrated a combination tool embodying a tubular handle 1 carrying a head 2 with a radial hammer head 3 and a socket portion 4 extending opposite the hammer head 3. As shown in Fig. 1 a bit 5 provided with a threaded stem 6 is received in a threaded opening formed in the socket portion 4, this bit being removable from the head 2 to permit the substitution of implements of different types, there being illustrated in Fig. 2 a hatchet blade 5′ provided with a threaded stem 6′ for reception in the socket portion 4 of the tool head 2.

As shown in Fig. 1, the inner end of the tubular handle 1 is internally threaded and receives the threaded shank 7 of the screw-driver 8, the handle 9 of the screw-driver forming a continuation of the tubular handle 1 as shown.

A magnet is associated with the handle 9 of the screw-driver member, or if desired the handle portion 1 may be constructed at its inner end to accommodate the mounting of the magnet, the screw-driver handle 9 being provided with a longitudinal socket 10 with a coil spring 11 received in the socket and having the inner end thereof anchored to the cross-pin 12. The wall at one side of the socket 10 is cut away as at 13, to receive a magnet body 14, the magnet being provided at its inner end with a circular head 15 closing the lower end of the socket 10 and cutaway portion 13, and pivotally mounted upon the transverse pin 16. The bearing head 15 is provided with a side opening slot 17 into which the lower end of the spring 11 extends for anchoring upon the pin 16. As shown in Figs. 4 and 5 the bearing pin 16 is mounted in oppositely disposed slotted openings 18. The free end of the magnet 14 is cut on an incline as at 14′ for engagement with the inclined upper wall 9′ of the cutaway portion 13 of the handle 9, these inclined engaging walls retaining the magnet 14 in the closed position shown in Fig. 1.

When it is desired to move the magnet 14 on its pivotal mounting, the operator en-

gages the finger-nail groove 19 in the side of the magnet body, facilitated by the clearance opening 20 in the tool handle 9, as shown in Figs. 3 and 6, to move the magnet longitudinally of the handle 9 against the pull of the spring 11 to disengage the inclined opening walls 9′ and 14′, whereupon the magnet may be moved upon the pin 16 and retained in an extended axial position with the tool handle by the spring 11. The magnet in this position may then be used for lifting articles of different kinds or sizes, without necessitating the operator bending over. The handle 9 of the screw-driver is capable of removal from the tool handle 1 and the screw-driver may be employed for magnetically lifting screws and placing the same in their correct position. The magnet 14 may also be employed for lifting nails to be driven home by the hammer head 3, the entire tool being serviceable in various arts by the features herein set forth.

While the form of the invention herein shown and described is what is believed to be the preferred embodiment thereof, it is nevertheless to be understood that various forms, modifications, and arrangements of the parts may be made without departing from the spirit and scope of the invention as claimed.

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

1. In a device of the class described, a tool embodying a handle portion, a magnet pivotally supported at the inner end of the handle and capable of sliding movement relative thereto, means for retaining the magnet in its inoperative position, said means including a spring and inclined engaging walls formed on the magnet and tool handle maintained in contact by said spring.

2. In an implement of the type described, a tool embodying a handle portion, and having a socket formed at the inner end thereof with oppositely disposed slotted openings formed in the sides of the handle, a cross-pin journaled in said slotted openings, a magnet pivotally mounted on said pin, a coil spring fixed at its inner end to said handle and at its outer end to said pin, and inclined engaging walls formed on said magnet and handle to be retained in engagement by said spring to hold the magnet within the handle socket.

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

MICHAEL BALAZIUK.

Witnesses:
J. R. WEAVER,
Mrs. J. R. WEAVER.