G. N. COBURN.

SCREWDRIVER.

APPLICATION FILED OCT. 7, 1918.

1,360,368. **Patented Nov. 30, 1920.**

Fig. 1.

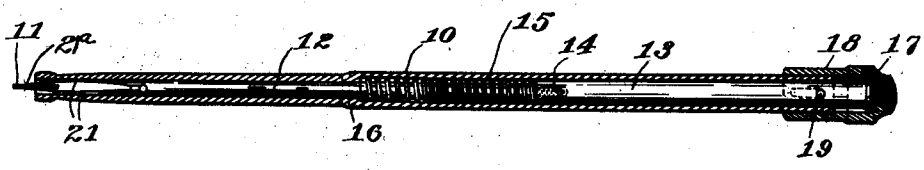


Fig. 2.

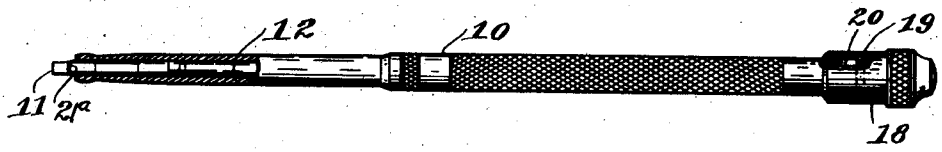
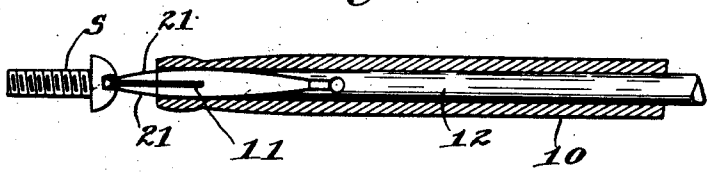


Fig. 3.



Inventor,
George N. Coburn
by Clyde R Rogers
his Attorney

UNITED STATES PATENT OFFICE.

GEORGE N. COBURN, OF BOSTON, MASSACHUSETTS.

SCREWDRIVER.

1,360,368. Specification of Letters Patent. Patented Nov. 30, 1920.

Application filed October 7, 1918. Serial No. 257,191.

To all whom it may concern:

Be it known that I, GEORGE N. COBURN, a citizen of the United States, and resident of Boston, county of Suffolk, Commonwealth of Massachusetts, have invented an Improvement in Screwdrivers, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts in each of the several views.

This invention relates to screw drivers and has for its principal object the equipment of a screw driver bit with means whereby the head of a screw may be grasped and held securely so that the screw may be located and held in place by the bit preliminary to the screwing in thereof, this being a feature of special importance with small and short screws which are difficult to locate in position otherwise, and in cases generally where screws are to be inserted in more or less inaccessible positions. In accordance with my invention means is provided whereby the head of the screw is grasped securely and without mutiliating or weakening the bit. To this end I provide improved means that in one embodiment is adapted to engage in the kerf of the screw head with a wedging grip against the walls thereof, and in another form is adapted to frictionally engage over the head of the screw while the bit is seated in the kerf thereof. The foregoing and other objects and advantages of the invention will more fully appear from the following detailed description, and the distinctive features of novelty will be pointed out in the appended claims.

Referring to the drawings:

Figure 1 is a lengthwise section showing one form of the invention with the bit shown edgewise;

Fig. 2 is a side elevation with portions broken away in section and with the bit shown sidewise; and

Fig. 3 is an enlarged partial lengthwise section showing the manner of engaging the screw head in the form of Figs. 1 and 2.

My improved screw driver consists in a tubular handle or body 10 in the forward end of which is fixed a bit 11, this bit extending transversely across the passage in the end of the body. The passage through this tubular body is relatively smaller in the forward portion thereof and in this portion is fitted a sliding rod portion 12 which has rigid therewith a larger rod portion 13 slidably fitted in the enlarged rear portion of the passage through the body, these two rod portions being shown as threaded together at 14, with a spiral spring 15 held under compression to re-act against the end of the larger rod 13 with a backing at 16 against the shoulder of the body and tending normally to draw the composite rod 12—13 backward. The outer end of the rod portion 13 projects some little beyond the end of the tube 10 and has fixed thereon as by a threaded connection 17 a cap 18 which fits over the end of the body 10 and has a pin 19 extending through a lengthwise slot 20 adjacent the end of the handle, this pin and slot connection limiting the relative endwise movement of the sliding rod with respect to the handle and permitting the rod to be pushed inward against the tension of the spring 15 by pressure on the end of the cap 18. The inner end of the rod portion 12 has fixed therein spring strips 21 preferably of thin steel which extend out beyond the end of the tube 10 at each side of the bit 11 and are bowed so as to press against the bit. The extremities of these strips are slightly turned outward as seen at 21^a and are located normally some little back from the end of the bit as the rod is held retracted by the spring 15. In use for engaging the head of a screw S the cap 18 is pressed inward forcing the spring strips or prongs 21 out beyond the end of the bit 11 so that they spring together beyond the end of the bit presenting in effect a relatively thin bit extension adapted to be easily inserted in the kerf of the screw. Thereupon as the cap 18 is released, and the screw held engaged with said strips or prongs, the bit will be projected relatively forward between said strips forcing them apart and causing them to engage the walls of the kerf with a strong wedging action as best illustrated in Fig. 3, the bit thus entering within the kerf and being in position to turn the screw up into place while it is held securely by the wedging action described. I am aware that the invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and I therefore desire the present embodiment to be considered in all respects as illustrative and not restrictive, reference being had to the

appended claims rather than to the foregoing description to indicate the scope of the invention.

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

1. A screw driver comprising a tubular body bearing at its front end a kerf engaging bit, a rod mounted for sliding movement within said body and extending substantially the full length thereof, relatively thin resilient plate strips borne by the front end of said rod and normally located at opposite sides of said bit, a spring housed in said body normally holding said strips retracted from the end of said bit, and a cap fixed at the outer end of said rod and slidably fitted on the end of said body adapted to be pressed for causing sliding endwise movement of said rod to cause said strips to extend beyond the end of said bit.

2. A screw driver comprising a tubular body having a bit fixed at its inner end, a rod slidably fitted in said body and extending substantially the full length thereof, said rod bearing relatively thin resilient strips at its inner end located respectively at opposite sides of said bit and normally back from the end thereof, a spring housed in said body and engaging said rod to normally hold said strips in retracted position, and a projection of said rod extending without said body adapted to be engaged for pressing said rod to cause said strips to extend beyond the ends of said bit at will.

In testimony whereof, I have signed my name to this specification.

GEORGE N. COBURN.