

R. J. NORTHAM.
TOOL HOLDER.
APPLICATION FILED APR. 29, 1909.

953,434.

Patented Mar. 29, 1910.

Fig. 1.

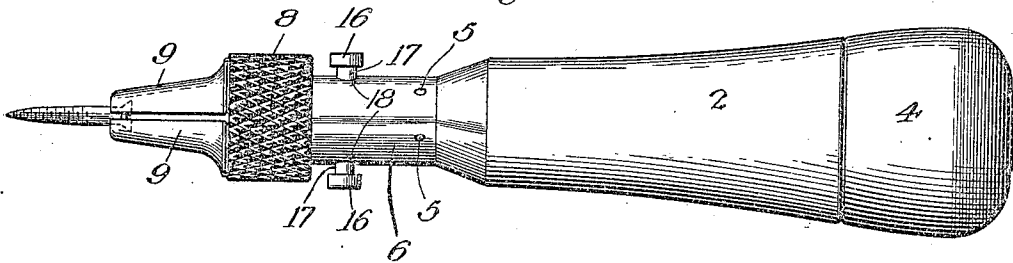


Fig. 2.

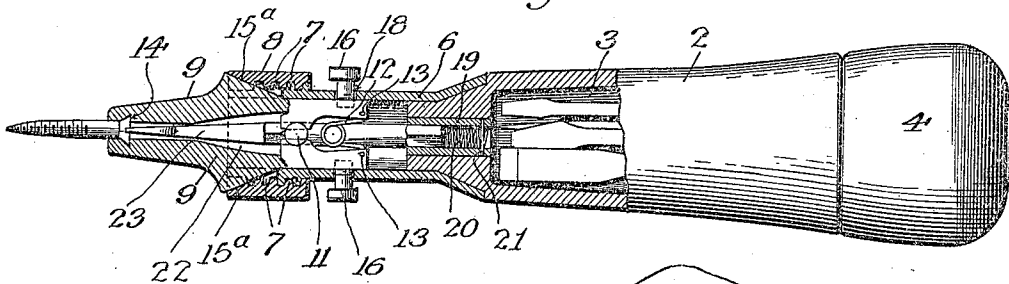


Fig. 3.

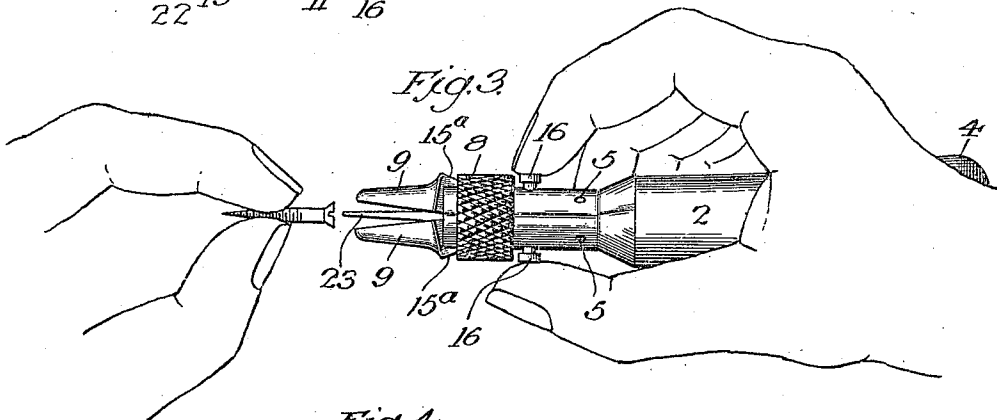


Fig. 4.

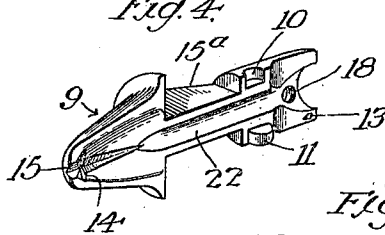
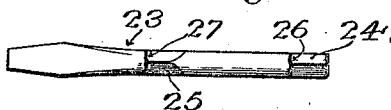


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

ROBERT J. NORTHAM, OF LOS ANGELES, CALIFORNIA.

TOOL-HOLDER.

953,434.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROBERT J. NORTHAM, a citizen of the United States of America, residing at Los Angeles, county of Los Angeles, State of California, have invented a certain new and useful Tool-Holder; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a tool holder, more particularly to one which is adapted for use in connection with bits for driving screws.

One object of the invention is to provide in a device of this class improved means whereby a screw may be firmly held and positively rotated while its point is being driven into material.

Another object is to provide means whereby the bit may be readily positioned in the slot of a screw.

A further object is to provide a holder and a bit therefor that may be positively held with varying portions of its length protruding from the holder.

Still further objects of the invention are to provide a device such as set forth, that is simple and compact in construction, cheap to manufacture, durable in use, effective in action, and neat in appearance.

Further objects and the advantages of the invention will be apparent to those skilled in the art from a consideration of the following description of one form of construction in which the invention may be embodied, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation of the device, showing a screw in position to be inserted into material; Fig. 2 is a longitudinal section of the device; Fig. 3 is an elevation of the device showing the jaws pressed open; Fig. 4 is a perspective of one of the jaws, showing one of the pivot disks associated therewith, and Fig. 5 is an elevation of one of the specially formed bits.

The handle 2 of the device is provided with a magazine 3 wherein a plurality of bits may be retained by means of cover 4. Secured to handle 2 by means of pins 5 is a tube 6 having thereon a threaded portion 7 upon which screws a knurled sleeve 8. Within tube 6 are disposed jaws 9 having at each side thereof semi-cylindrical re-

cesses 10 in which fit pivot disks 11. The inner ends of the jaws are normally held apart by spring 12, the ends of which are secured in holes 13 in the jaws. The outer portions of the jaws are of reduced cross-section to permit insertion thereof into confined places and the opposed sides thereof are each provided with a semi-conical recess 14 intersected by an angular groove 15, the recesses and grooves facing each other and adapted for the reception of the head portion of a screw. The remote sides of the jaws have a diverging portion 15^a adapted to be engaged when the sleeve 8 is screwed outwardly to force the outer ends of the jaws together. The outer portions of the jaws are separated by means of buttons 16 attached to stems 17 passing through apertures 18 in the tube 6 and affixed to jaws 9 at their inner ends, it being understood that the jaws are fulcrumed on the pivot disks at a point intermediate of their inner and outer ends. A socket 19 for the reception of the shank of a bit and which is of such section (in the present instance square) as to prevent rotation of the bit relatively to handle 2, is affixed to the handle within tube 6. A spring 20 is arranged within socket 19 and secured by means of pin 21 passing through a loop formed on the inner end of the spring and also passing through the walls of the socket. A longitudinal channel 22 is formed in the opposed faces of the jaws 9 to afford clearance for the shanks of the bits.

Referring now particularly to Fig. 5 of the drawings, the bit 23 has a shank substantially cylindrical in form but is provided with a reduced squared portion near the end of its shank, which portion is adapted to fit socket 19. The bit has also intermediate of its length a second reduced squared portion 25. Shoulders 26 and 27 are formed at the junction of the cylindrical and squared portions of the bit.

The manner of use of the device may be as follows: Sleeve 8 being screwed inwardly, buttons 16 may be depressed to separate the outer portions of the jaws 9 against the action of spring 12, whereupon any suitable size of bit 23 may be inserted, spring 20 holding the bit yieldingly so that the working end of the bit protrudes slightly beyond the tips of the jaws. The head of a screw may then be brought into position to have the working end of the bit enter its slot, where-

upon the head of the screw may be pushed between the ends of the jaws 9 and buttons 16 relieved of pressure. Spring 12 now acts to force the outer ends of the jaws together, 5 the head of the screw being engaged by the jaws and held in the recesses 14 thereof. Sleeve 8 may then be screwed outwardly to engage the diverging portions of the jaws to thereby clamp the screw in position in the 10 jaws. The point of the screw may now be placed against material into which it is desired to insert the screw and may be driven therein by rotating the handle, the squared end portion of the shank of the bit fitting in 15 socket 19 preventing movement of the bit relatively to the handle. When the screw has penetrated the material a distance sufficient to steady it, sleeve 8 may be screwed inwardly and buttons 16 depressed to separate 20 the ends of jaws 9, allowing them to be withdrawn from the head of the screw. The holder may then be held vertically with the jaws separated and the bit 23 allowed to drop until squared portion 25 is between the 25 outer portions of the jaws. Sleeve 8 is then screwed outwardly to clamp the bit in position, after which the driving of the screw in the material may be completed.

While one form of apparatus in which the 30 invention may be embodied has been illustrated and described, it is obvious that various modifications and changes may be made, and the right is reserved to all modifications and changes which do not depart from the 35 spirit and scope of the invention.

I claim:

1. In a tool holder, the combination of a handle formed with an angular socket, screw engaging jaws carried by the handle and 40 formed with angular grooves, means for operating the jaws, and a longitudinally movable bit carried by the handle in co-operative relation to the jaws and formed with an angular portion which is slidably 45 mounted within the before mentioned angular socket of the handle, the said bit being movable so as to project beyond the jaws and be clamped between the same and being also formed with an angular portion de- 50 signed to be received within the angular grooves of the jaws when it is clamped in such a position.

2. In a tool holder, the combination of a handle, a tube applied to the handle, a pair

of screw engaging jaws mounted within the 55 tube and formed at intermediate points in their lengths with recesses, pivotal disks received within the recesses, a spring applied to the jaws and normally tending to force the same together, finger pieces applied to 60 the rear ends of the jaws for forcing them apart, means for holding the jaws in an operative position, and a bit carried by the handle in coöperative relation to the jaws.

3. In a tool holder, the combination of a 65 handle formed with an angular socket, a tube applied to the handle, a pair of screw engaging jaws mounted within the tube and formed with angular grooves, means for operating the jaws, and a longitudinally 70 movable bit formed with an angular portion which is slidably mounted within the before mentioned angular socket of the handle, the said bit being movable so as to project be- 75 yond the jaws and be clamped between the same and being formed with an angular portion which is received within the angular grooves of the jaws when it is clamped in such a position.

4. In a tool holder, the combination of a 80 handle formed with an angular socket, a tube applied to the handle, a pair of screw engaging jaws mounted within the tube and having a pivotal connection at a point be- 85 tween their ends, the said jaws being formed with angular grooves and also with inclined portions, finger pieces applied to the rear ends of the jaws for forcing the jaws apart, a sleeve mounted upon the tube for coöper- 90 ation with the inclined portions of the jaws for forcing the jaws together, and a longi- tudinally movable bit formed with an an- gular portion which is slidably mounted 95 within the socket of the handle, the said bit being movable so as to project beyond the jaws and be clamped between the same and being also formed with an angular portion which is then received within the before mentioned angular grooves of the jaws.

In testimony whereof, I have signed my 100 name to this specification in the presence of two subscribing witnesses at Los Angeles, county of Los Angeles, State of California, this 22nd day of April A. D. 1909.

ROBERT J. NORTHAM.

Witnesses:

WALTER E. SANDHAM,
EDWARD E. RUSSELL.