F. M. JACOBS.

SCREW HOLDER.

APPLICATION FILED NOV. 15, 1907.

915,770. Patented Mar. 23, 1909.

Fig. 1.

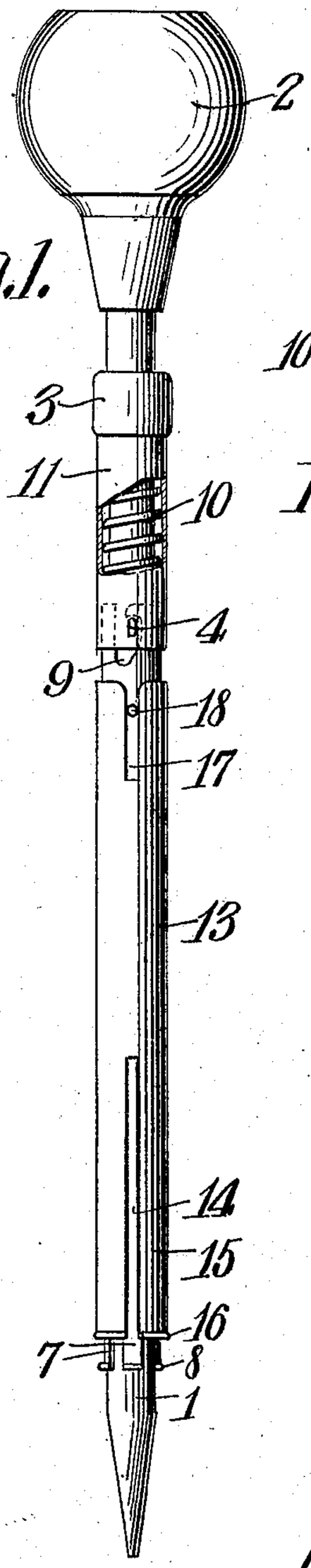


Fig. 5.

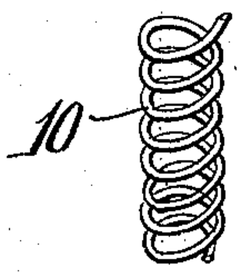


Fig. 6.

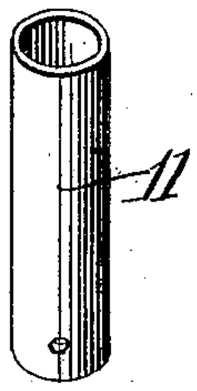
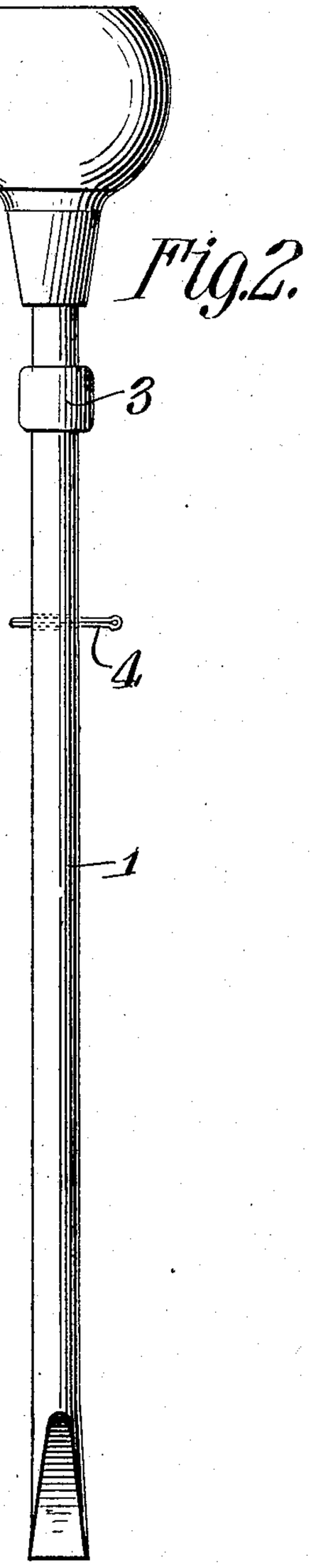


Fig. 2.



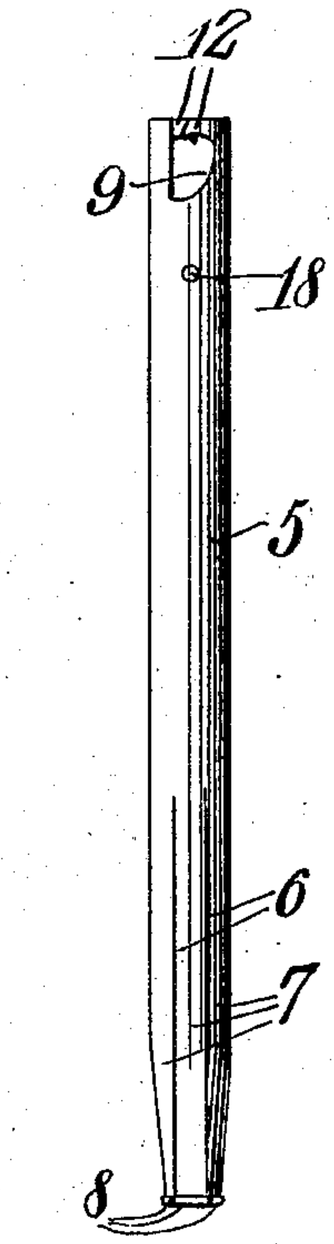


Fig. 3.

Fig. 4.

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UNITED STATES PATENT OFFICE.

FRANK M. JACOBS, OF WAYNESBURG, PENNSYLVANIA.

SCREW-HOLDER.

No. 915,770. Specification of Letters Patent. Patented March 23, 1909.

Application filed November 15, 1907. Serial No. 402,309.

To all whom it may concern:

Be it known that I, FRANK M. JACOBS, a citizen of the United States, residing at Waynesburg, in the county of Greene and State of Pennsylvania, have invented a new and useful Screw-Holder, of which the following is a specification.

This invention relates to screwdrivers and screw-holding attachments therefor.

The object of the invention is to provide an article of this character that may readily be applied to or removed from the screwdriver bit or stock, that shall be thoroughly effective in holding the screw while being seated or unseated, and that will protect the user from injury as by the slipping of the bit point from the screw nick.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a screwdriver and a screw-holding attachment therefor, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like characters of reference indicate corresponding parts: Figure 1 is a view in side elevation, partly in section, of a screw-driver, exhibiting the improvements of the present invention applied thereto. Fig. 2 is a similar view of the screw-driver, showing certain added features that are necessary in adapting it for use in connection with the screw-holding attachment. Fig. 3 is a view in side elevation of the screw-holder and bit-guide. Fig. 4 is a similar view of a screw-holder bracing sheath. Fig. 5 is a perspective detail view of a coiled spring that is employed in holding the screw-holder and bit assembled against accidental separation when not in use. Fig. 6 is a perspective detail view of a spring case for housing the spring shown in Fig. 5.

Referring to the drawings, 1 designates the bit or stock of a screw-driver which is cylindrical in cross-section and is provided with a handle 2 of any preferred construction. Adjacent to the handle there is rigidly secured to the bit a collar or stop 3, and below the collar, at any suitable distance, is arranged a locking pin 4, which, in this instance, is shown as an ordinary split or cotter pin.

Arranged for sliding movements upon the bit is a screw-holder 5 which is constructed of a length of tubular metal, one end portion of which is provided with a plurality of slits 6 that define resilient fingers 7, the terminals of which are outturned or flattened to provide stops 8. The end portion of the holder opposite the stops is provided with two open-ended oppositely disposed slots 9, that are substantially of a bayonet type, and are adapted to interlock with the pin 4 to retain the screw-holder upon the bit, as clearly shown in Fig. 1. Arranged upon the bit is a coiled spring 10 one end whirl of which bears against the outer face of the stop 3, and the other end whirl against the locking pin 4 by which it is held in position. The spring is housed by a tubular casing 11 which bears against the outer face of the stop 3 and is also held in place by the locking pin 4. The casing 11 is of an internal diameter to receive one end of the screw-holder, as shown in Fig. 1, and when the holder is turned to the position to bring the curved fingers or members 12 formed by the slots 9 into engagement with the locking pin 4, the spring will prevent accidental disconnection of the bit from the holder. To remove the bit, it will only be necessary to thrust it inward slightly against the pressure of the spring 10, and then turn it until the locking pin can clear the fingers 12, whereupon the holder will be free to be slipped from the bit.

In order to reinforce the holder, there is a bracing sheath 13 provided, one end of which is furnished with a plurality of longitudinal incisions 14 that define resilient fingers 15 that are designed to bear against the similar fingers of the screw-holder. The terminals of the fingers are out-turned to provide stops 16 which, by contact with the stops 8 of the screw-holder, will serve to prevent accidental separation of the two parts.

It will be observed from an inspection of the drawings that the fingers 15 of the tubular sheath 13 cover the incisions forming the fingers 7 of the holder 5, and by this arrangement, the springing of the fingers 7 in an outward direction to such a degree as to disengage from the head of a comparatively small screw will be prevented.

At the end of the sheath 13 opposite the stops 16 are two oppositely disposed slots 17 that are designed to be engaged by laterally projecting pins 18 carried by the holder, the object of the slots and pins being to prevent the sheath and holder from having any rotary movement relative to each other

It will be observed by reference to Fig. 1 that the fingers of both the screw holder and the sheath are at all times free to expand, or, in other words, no means is provided that would interfere with such expansion, such as a collar or sleeve, as is commonly employed to hold the fingers in engagement with the screw.

In the use of the implement, the bit is removed from the holder, and a screw is dropped into the upper end of the latter, after which the bit is inserted and is caused to engage with the screw nick. As the screw takes hold in the wood it will gently flex the fingers 7 and 15, but will be held positively in place until its head passes beyond the outer end of the holder. While it will generally be preferred to supply the screws to the holder at the larger end thereof, they may be supplied at the smaller end, if advantageous.

It will of course be obvious that the screw holder and sheath will be adapted for use in connection with screw drivers in common use, and for this reason it will be understood that the invention is not to be limited to a screw driver having a stop 3 nor to the employement of the spring 10, casing 11, and locking pin 4. Furthermore, the slots 9, and the parts 12 and 18 of the screw-holder and 17 of the sheath may also be omitted, as the inward flexing of the fingers 7 of the screw-holder and fingers 16 of the sheath will hold these two named parts relatively assembled.

It will be seen from the foregoing description that this implement will be positive in holding the bit in engagement with the screw-nick in the operation of seating a screw, and further, all danger of the user injuring himself, as from the screw-driver jumping from the screw-nick, will be positively prevented.

Having thus described the invention what is claimed is:—

In a screwdriver, the combination with a bit provided with a stop and with a transverse orifice, of a coiled spring mounted upon the bit and bearing at one end against the stop, a casing inclosing the spring and bearing against the stop and provided with orifices to register with that of the bit, a locking pin passing through the series of orifices and against which the other end of the spring bears, a tubular screw-holder fitted upon the bit and provided at one end with normally inwardly flexed, freely expansible screw head engaging fingers and its other end provided with bayonet slots to interlock with the locking pin, and with laterally projecting pins adjacent to the slots, and a tubular sheath inclosing the holder and having at one end normally inwardly flexed, freely expansible fingers to cover the spaces between those of the holder, and at its other end with longitudinal slots to engage the pins of the holder.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

FRANK M JACOBS.

Witnesses:

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J. WARREN JACOBS.