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CENTER PUNCH, NAIL SET, &c.

APPLICATION FILED JUNE 10, 1908.

925,978.

Patented June 22, 1909.

Fig. 1.

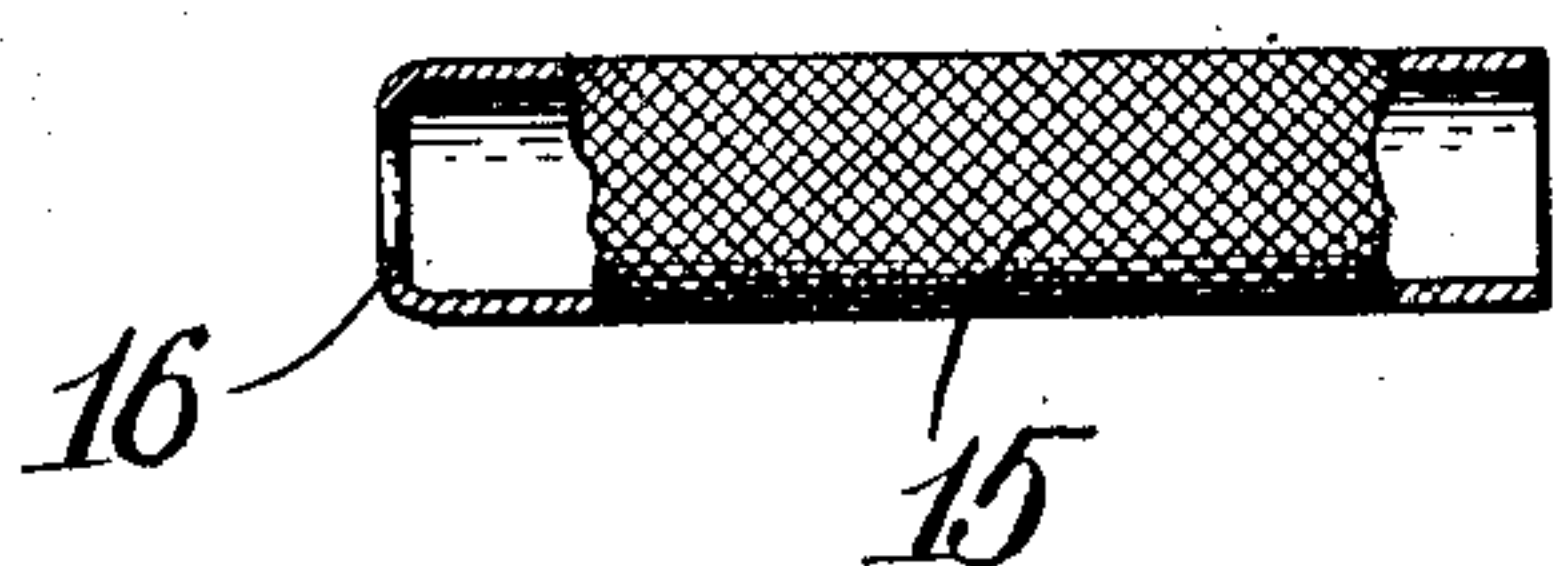
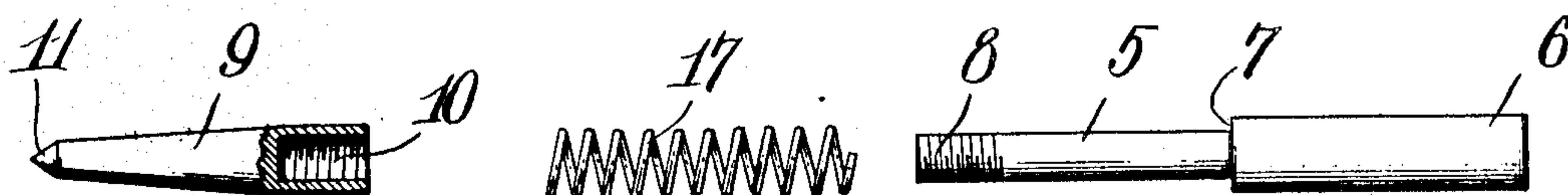
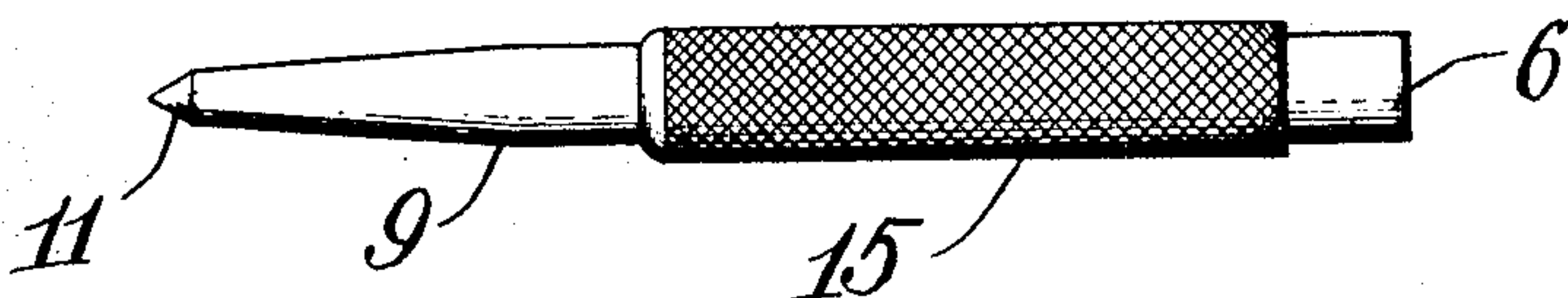


Fig. 2.

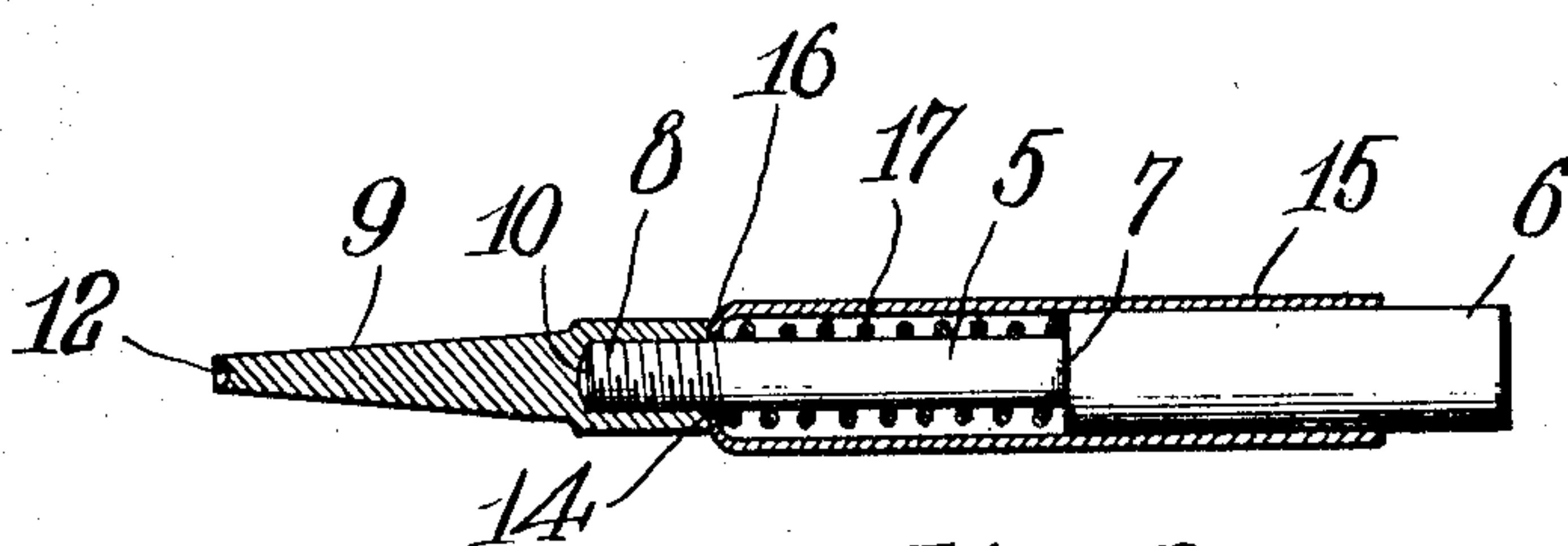


Fig. 3.

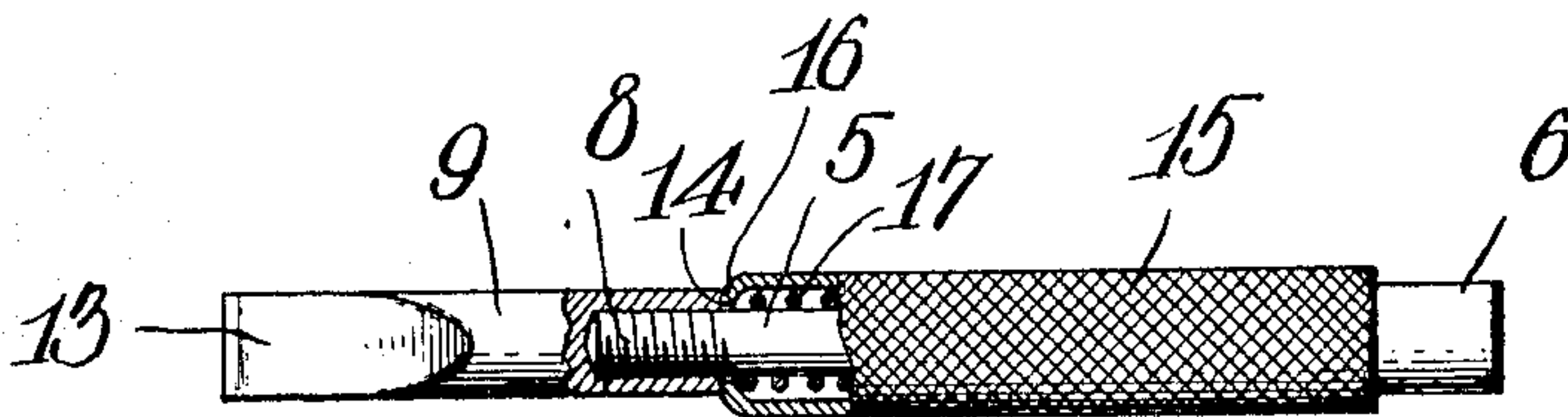


Fig. 4.

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UNITED STATES PATENT OFFICE.

FREDERICK WILLIAM BACHO AND PETER EDWARDS DRAUGHON, OF MOBILE, ALABAMA.

CENTER-PUNCH, NAIL-SET, &c.

No. 925,978.

Specification of Letters Patent.

Patented June 22, 1909.

Application filed June 10, 1908. Serial No. 437,719.

To all whom it may concern:

Be it known that we, FREDERICK WILLIAM BACHO and PETER EDWARDS DRAUGHON, citizens of the United States, residing at Mobile, in the county of Mobile and State of Alabama, have invented certain new and useful Improvements in Center-Punches, Nail-Sets, &c., of which the following is a specification.

This invention relates to impact tools, such as center-punches, nail-sets, chisels and the like that are operated by the blow or impact of a hammer, mallet or similar implement while the tool is being held with one hand by the operator. When a tool of this character is struck with a hammer, it is subjected to a concussion or jar which not only is extremely unpleasant to the operator, and apt to injure his hand when frequently repeated, but owing to which it is found extremely difficult to hold and to guide the tool properly so as to cause the blow to take effect precisely in the spot required. This is especially the case when a series of blows have to be delivered in quick succession, and when it is desired that two or more blows shall be delivered in the same spot.

The principal object of the present invention is to present a tool of this character which shall be constructed in such a manner that it may be forcibly struck with a hammer, while being held with one hand by the operator, without causing any jar or concussion to the hand of the operator, who will thus be enabled to hold and to guide the tool very conveniently and with great precision.

Further objects of the invention are to simplify and improve the construction and operation of this class of devices.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claim.

In the accompanying drawing has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawing—Figure 1 is a side elevation of a center punch constructed in accordance with the invention. Fig. 2 is a view

showing, in side elevation, the component parts of the tool illustrated in Fig. 1, separated from each other, as they appear before being assembled; a similar portion of the shank of the tool being shown in section. Fig. 3 is a longitudinal sectional view showing a nail-set constructed in accordance with the invention. Fig. 4 is a side elevation, partly in section, showing a chisel constructed in accordance with the invention.

Corresponding parts in the several figures are denoted by like characters of reference.

This invention is applicable to all kinds of tools that are operated by a blow or impact of a hammer or mallet while being held by the operator, such as center-punches, nail and rivet sets, chisels, gouges, washer cutters and the like, and it will be understood that such tools may be made of any desired sizes and dimensions.

The tool proper in each case consists of a shank or body 5, provided at one end with a cylindrical enlargement forming a striking head 6, which is provided with a shoulder or offset 7 at the point where it joins the shank, said shank and head being preferably integral. The opposite or lower end of the shank is screw threaded as shown at 8, for the reception of the bit 9, which is provided with an internally threaded recess or socket 10 for the reception of the threaded lower extremity of the shank. The bit 9 may be provided with a working point constituting the center punch, as shown at 11, in Fig. 2; said working point may constitute a nail-set, as shown at 12 in Fig. 3; or it may be adapted or constructed to constitute a tool of any desired character as hereinbefore stated; thus, for instance, the bit may be provided with an edge forming a chisel, as shown at 13, in Fig. 4. The bit is of such dimensions that, when connected with the shank, it will form a shoulder or offset 14 surrounding the shank.

The handle of the improved tool is formed by a piece of metallic tubing 15, which is preferably milled, corrugated or roughened in such a manner as to enable it to be firmly clasped and held by the hand of the operator. The tube 15 is of an interior diameter equal to the exterior diameter of the head 6, at the upper end of the shank 5; and said tube is provided at what is regarded at its lower end with an inturned or inwardly offset, flange or collar 16, which is preferably

of an internal diameter equal to the external diameter of the shank 5. It follows that when the shank 5 is placed within the tubular handle, the head or enlargement 6 may be guided in the body of the tube, while the shank will project through and be guided in the flanged end of said tube, the flange 16 being engaged, or abutted upon, by the upper end of the bit, thus causing the parts, when properly assembled, to be held in the desired relation without wobbling, and enabling the shank to slide freely longitudinally within the tubular handle. A coiled spring 17 is placed upon the shank prior to the insertion of the latter into the tube; one end of said spring bearing against the shoulder 7 and the opposite end of the spring exerting tension against the annular flange 16 of the tubular handle. After adjusting the spring 17 upon the shank 5 and projecting the latter through the tube 15 until the screw-threaded end of said shank projects beyond the flanged end of the tube, the bit 9 is adjusted upon the projecting screw-threaded end of the shank by placing the latter in engagement with the internally threaded recess or socket 10 of the bit; the latter, as hereinbefore stated, forms an annular shoulder 14 abutting upon the flanged end of the tubular handle, thus preventing the withdrawal of the shank, and properly assembling the parts ready for use.

The operation and advantages of this invention will be readily understood from the foregoing description when taken in connection with the drawings hereto annexed. The tube or sleeve constituting the handle of the device is grasped by the fingers of one hand and the tool is thus held while the working point or edge of the bit is adjusted in the desired position, and the head of the shank, which projects at the upper end of the handle is now struck a smart blow with a hammer, the blow being repeated as often as may be desired. No matter how forcible a blow is struck, the blow will impact upon the shank of the tool only, and the handle, which is slidably connected with the shank, and which is cushioned by the spring, will not be jarred in

the least degree, thus enabling the operator to hold the tool firmly and tightly without danger of being shocked or jarred. To prevent slipping from the hand of the operator the surface of the handle is knurled or milled, as shown.

By connecting the bit detachably with the stem or shank in the manner described, the parts of the improved tool may be readily and securely assembled without danger of becoming accidentally separated; another advantage resides in the fact that it is possible under this construction to provide a tool with a plurality of bits which may be used alternately and interchangeably, enabling a single stem or shank and a single tubular handle to serve in connection with any desired number of bits, thus effecting a decided economy in the construction of the device.

Having thus described the invention what is claimed is—

A tool of the character described, comprising a tubular handle provided at one end with a turned flange, a stem longitudinally slidable in said tubular handle, said stem comprising a portion of relatively small diameter terminally threaded and guided and extending through the flange at one end of the tube and a portion of relatively large diameter guided in and extending through the opposite end of the tube, a spring coiled upon the stem and bearing at one end upon the shoulder formed by the enlarged portion of said stem and at the other end upon the turned terminal flange of the tube; and a bit having an internally threaded socket whereby it is detachably mounted upon the threaded end of the stem that projects through the flanged end of the tube; said bit abutting externally upon the flange in the tube.

In testimony whereof we affix our signatures in presence of two witnesses.

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Witnesses:

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