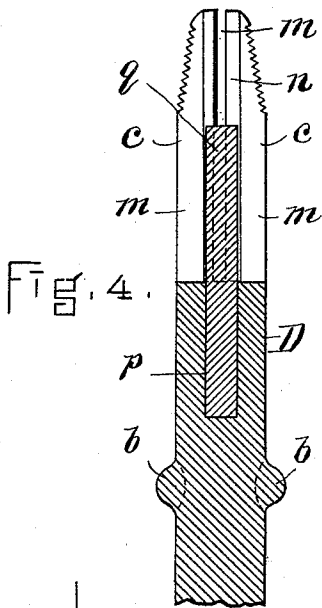
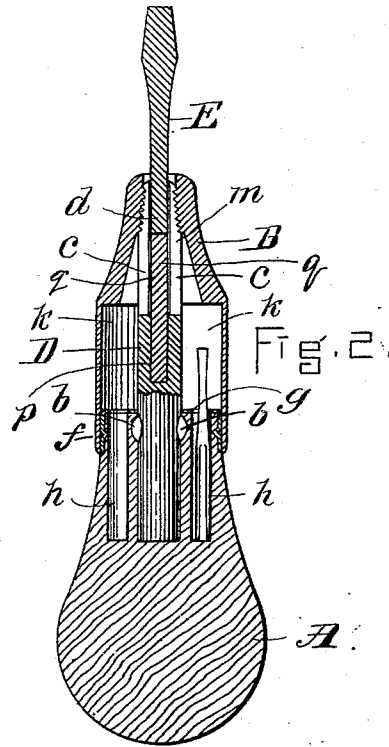
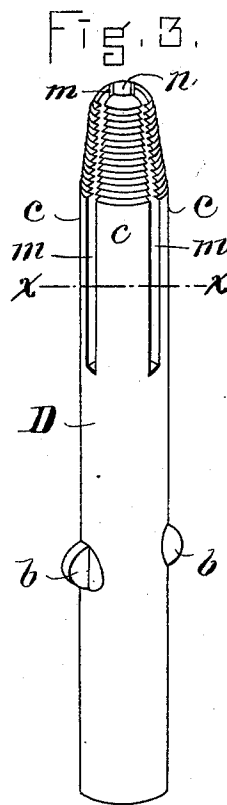
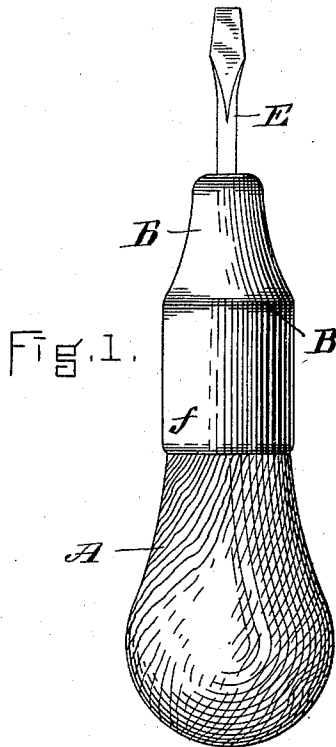


(No Model.)

H. E. BRITTON.
TOOL HOLDER.

No. 509,851.

Patented Nov. 28, 1893.



WITNESSES.

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UNITED STATES PATENT OFFICE.

HORACE E. BRITTON, OF STOUGHTON, MASSACHUSETTS.

TOOL-HOLDER.

SPECIFICATION forming part of Letters Patent No. 509,851, dated November 28, 1893.

Application filed August 14, 1893. Serial No. 483,115. (No model.)

To all whom it may concern:

Be it known that I, HORACE E. BRITTON, a citizen of the United States, residing at Stoughton, in the county of Norfolk and State of Massachusetts, have invented certain Improvements in Tool-Holders, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of a tool-holder having my improvement applied thereto. Fig. 2 is a longitudinal section through the center of the same. Fig. 3 is an enlarged view of the socket-piece. Fig. 4 is a longitudinal section of the same. Fig. 5 is a transverse section on the line *x, x*, of Fig. 3.

My invention relates to that class of tool-holders having a furcated metallic socket-piece for the reception of the shank of the tool which is clamped in place between the holding jaws by means of a conical cap or nut screwed over the conical threaded end of the said socket-piece. In the construction of these socket-pieces it has hitherto been customary to first make the two longitudinal slits or saw-cuts at right angles to each other to form the spring-jaws and then ream out the axial passage formed by the intersection of the saw-cuts as far as it is desired to have the shank of the tool enter between the jaws. This reaming operation forms a small shoulder at the inner angle or corner of each jaw, the four corner shoulders thus produced forming a rest for the bottom of the shank of the tool. These shoulders however frequently become broken down or destroyed by the pressure of the tool thereagainst, especially when the tool-handle is subjected to the blow of a mallet or hammer, in which case the stock of the tool is driven down or wedged into the narrow part of the passage below the shoulders, spreading the jaws and rendering it difficult to withdraw the tool from the socket-piece, resulting in a permanent injury to the socket-piece and rendering the tool nearly or quite worthless.

My invention has for its object to remedy all of these difficulties and objections and consists in providing the socket-piece with a pin inserted within the same at the bottom of

the axial passage formed at the intersection of the longitudinal slits or saw-cuts; said pin extending up within said axial passage above the bottom of the slits and forming a solid rest or support at the desired point for the base of the tool, and at the same time enabling the slits to be made of sufficient length to give the necessary spring to the jaws as hereinafter more fully set forth.

In the said drawings, A, B, represent the two portions of the handle, the solid part A being composed of wood or other suitable material and having the shank of the furcated socket-piece D driven axially therein as shown in Fig. 2 in such manner that it will be held firmly in place, said socket-piece being provided with suitable ears or lugs *b* made integral therewith and projecting out into the wood to prevent the socket-piece from rotating independently of the handle. The part B consists of a tubular shell or cap preferably composed of metal, its outer portion being of conical or bell-shape and provided at the extreme end with an internal screw-thread forming a nut which is adapted to fit a corresponding thread on the outer conical end of the furcated socket-piece D, whereby the jaws *c* of the latter may be clamped tightly over the shank *d* of the tool E inserted between the same. The inner portion *f* of the cap B is of a little greater diameter than the part A over which it fits, to enable it to slide freely thereon when turned to clamp or release the tool. The end *g* of the part A is preferably provided with a series of holes *h* arranged circumferentially around it to receive the shanks of a set of supernumerary tools which extend up into the chamber *k* formed between the hollow cap B and the socket-piece D, as seen in Fig. 2, the construction of the parts thus far described being well known and forming no part of my invention.

In the construction of my improved socket-piece the longitudinal slits or saw-cuts *m* are first made at right angles to each other by means of a saw or other suitable tool, said slits extending down to a sufficient distance to give the jaws *c* the desired amount of spring. The axial passage *n* formed at the intersection of the two saw-cuts *m* is then reamed out for its entire length, after which a hole *p* is bored

in the solid portion of the socket-piece into which is driven a pin *q* which extends up some distance above the bottoms of the slits *m* as shown in Figs. 2 and 4, forming a solid rest or support for the base of the shank *d* of the tool, said rest being at the proper distance from the outer ends of the jaws to accommodate a tool-shank of ordinary length. The pin *q* is made of a diameter slightly less than that of the reamed-out axial opening or passage *n*, so that a space will be left all around the pin *q* as shown in Figs. 4 and 5, to give the jaws full play and prevent the pin *q* from interfering in any way with the jaws when sprung inward by the screw-cap to firmly clamp the shank of the tool between them. The pin *q* thus forms a solid rest for the shank of the tool which will successfully resist any excessive pressure or the force of any blow on the handle, and while it allows free play of the jaws, will avoid any liability of the tool becoming wedged between the same and the resultant damage to the socket-piece.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A furcated socket-piece for tool-holders, provided with a pin *q* inserted within the axial passage or opening formed at the intersection of its longitudinal slits or saw-cuts, and extending up above the bottom of said slits toward the outer end of said socket-piece

to form a solid support or rest for the shank of the tool, substantially as set forth.

2. In a tool-holder, the combination, with a furcated socket-piece, of the pin *q* inserted within the axial passage or opening formed at the intersection of its longitudinal slits and extending up above the bottom of said slits toward the outer end of the socket-piece to form a solid rest or support for the shank of the tool, said pin *q* being of less diameter than the axial passage or opening within which it is placed, substantially as and for the purpose described.

3. In a tool-holder, the combination, with the handle composed of two parts A, B, and the furcated socket-piece D secured to the part A, of a pin inserted within the axial passage formed at the intersection of the longitudinal slits formed between the jaws of the socket-piece, said pin extending up above the bottoms of said slits and forming a solid rest or support for the base of the shank of the tool, all constructed to operate substantially in the manner and for the purpose set forth.

Witness my hand this 12th day of August, A. D. 1893.

HORACE E. BRITTON.

In presence of—

P. E. TESCHEMACHER,
HARRY W. AIKEN.