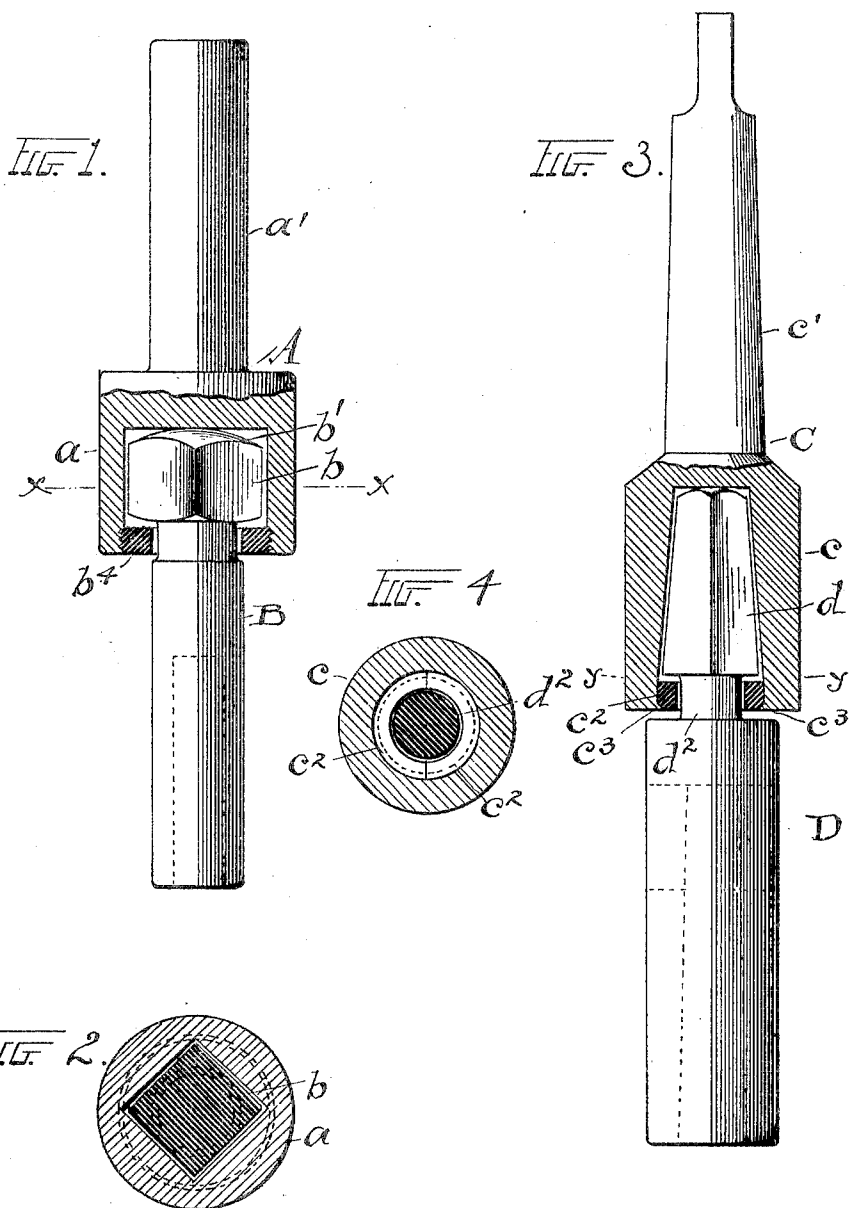


No. 797,820.

PATENTED AUG. 22, 1905.

E. C. PECK.
TOOL HOLDER.

APPLICATION FILED NOV. 28, 1904.



WITNESSES:
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TOOL-HOLDER.

No. 797,820.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EUGENE C. PECK, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Tool-Holders; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a new and useful improvement in tool-holders—such as are employed in different machines, like drilling, reaming, boring, and other machines—adapted to retain or operatively carry taps, reamers, boring-tools, chucks, and like tools, all substantially as shown and described, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, of one form or embodiment of my invention; and Fig. 2 is a cross-section thereof on line *x x*, Fig. 1. Fig. 3 is a side elevation of another or modified form or style of the invention, partly in section; and Fig. 4 is a cross-section thereof on line *y y*, Fig. 3.

One of the objects of my invention is to provide means for holding various tools, as above enumerated, in such operative relation or adaptation between the holding member and the tool-retaining member that compensation or self-adaptability is provided to accommodate the tool-holding member to any slight variation or inaccuracy in the hole operated in or upon by the tool as compared with the axial alinement of the holder and whereby the tool may practically sustain an alinement of its own or wobble more or less and yet do the work practically as well as if it were in fixed alinement with the holding member or members, as heretofore required. This contemplates such looseness or play in the immediate connection or socket relation between the holder and the retaining member for the tool that both a direct and a wobbling effect or action is obtained for such tool-retaining member in relation to the holder as the work may require, but which also assures the positive driving of the tool as effectually as if all the connections were rigid.

Having reference now to Figs. 1 and 2, A represents the driving member, which is provided with a head *a* at one end and a shank *a'* at the other end, adapted to be mounted in

the spindle or head of a machine-tool, similar to other well-known tool-holders and not shown herein. In Fig. 1 the head *a* of the said holder is shown as having a polygonal recess or socket portion, and the tool-retaining member B has a polygonal head *b*, adapted to enter and operatively engage in said recess or socket, as shown. Preferably the said socket and the head *b* are four-sided or of other angular formation, and the immediate top *b'* of the polygonal head *b* is rounded somewhat and adapted to bear on the flat upper or inner surface of said socket, but otherwise has such freedom within the head *a* that it can rock or play to positions more or less out of direct alinement with the said holder or member A, so as to adapt it to variations in the alinement of the work as compared with said holder, as hereinbefore described, as well as allowing for a measure of transverse movement of head *b* in said socket, whereby it becomes possible for both parts A and B to work in exact parallels, though not of corresponding alinement otherwise. The upper end of the tool-retaining member B is engaged about by collar *b¹*, which is shown in this instance as externally threaded and screwed into head *a* beneath head *b* and serving to confine the said head, and thus operatively confine the member B with member A. Any good mechanical way other than threading may be employed for engaging collar *b¹* in or with head *a*, as may be preferred, and the opening in said collar is large enough to accommodate the free movements of the said member B in respect to actuating member or holder A, as hereinbefore described, assuming, however, that member A is always held rigidly and definitely in its own engagements.

In Figs. 3 and 4 I show a modification of the invention as to certain particulars. Thus the holder or member C has a socket-head *c* for the tapered head *d* of the tool retaining or supporting member D and a shank *c'* of its own for engagement in the machine, (not shown,) and the socket relations of the portion *c* and shank or head *d* are substantially the same as the relations of the corresponding parts in Fig. 1 so far as freedom in operation is concerned. In this case, however, the collar *c²* about neck *d²* is made in two sections and confined by a lip *c³* on the bottom inner edge of head *c*.

Obviously such changes or departures from

the details of the invention as thus shown and described may be made as will keep within the law of equivalents and not constitute a departure from the nature and spirit of the invention claimed.

What I claim is—

A tool-holder provided with a socket, in combination with a tool-retaining member having a head mounted in said socket and a shank beneath said head, the head and socket being of such form as to compel the tool-holder and retaining member to rotate together and a collar engaged in said socket about said shank and constructed to confine

the tool-retaining member in said socket, said head and collar each being smaller in cross-section than the said socket and the space within the collar occupied by said shank, whereby the entire tool may take a working position at one side of the axial line of the holder and parallel thereto.

In testimony whereof I sign this specification in the presence of two witnesses.

EUGENE C. PECK.

Witnesses:

C. O. PETERSON,
GEO. F. KOST.