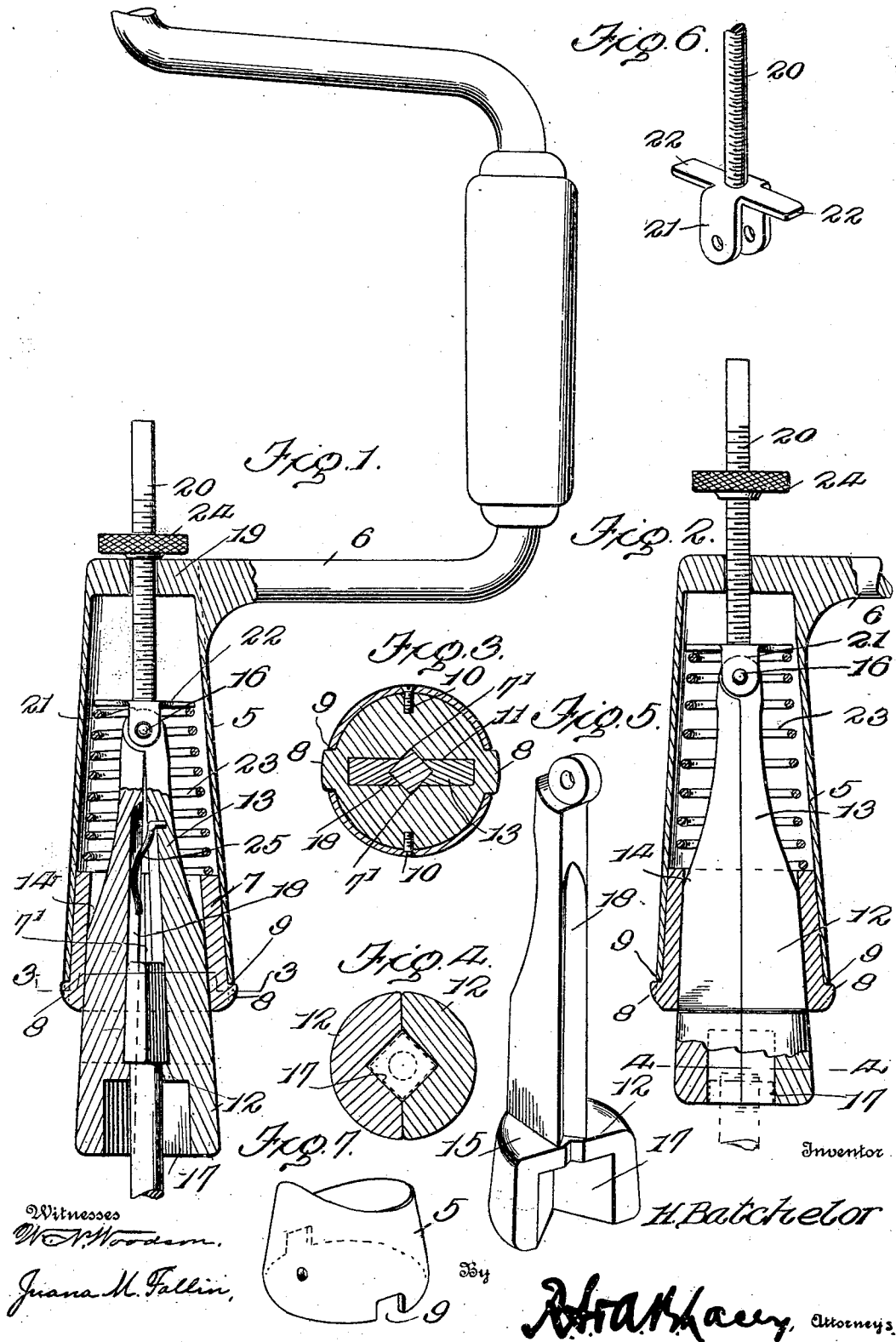


TOOL HOLDER.

**961,203.**

Patented June 14, 1910.



# UNITED STATES PATENT OFFICE.

HENRY BATCHELOR, OF SHOALS, INDIANA, ASSIGNOR OF ONE-FOURTH TO THOMAS E. ALLBRIGHT AND ONE-TWELFTH TO FRANK E. GILKISON, BOTH OF SHOALS, INDIANA.

## TOOL-HOLDER.

961,203.

Specification of Letters Patent. Patented June 14, 1910.

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*To all whom it may concern:*

Be it known that I, HENRY BATCHELOR, citizen of the United States, residing at Shoals, in the county of Martin and State of Indiana, have invented certain new and useful Improvements in Tool-Holders, of which the following is a specification.

This invention relates to bit stocks and has for its object to provide a comparatively simple and thoroughly efficient device of this character which may be used for supporting a bit when boring or reaming, and which may also be used as a wrench.

A further object is to provide a bit stock including a casing having co-acting spring actuated jaws pivotally mounted therein and provided with angularly disposed sockets, one of which is adapted to receive a nut or similar object, and the other the shank of a bit.

A further object is to provide the pivoted clamping jaws with a threaded extension or rod which projects through one end of the casing for engagement with a clamping nut, so that by adjusting the latter on the rod until the nut bears against the adjacent end of the casing, the jaws may be locked in closed position, thereby to securely hold the bit in the chuck when the tool is used for boring or reaming.

A still further object of the invention is generally to improve this class of devices, so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions, and minor details of construction may be resorted to within the scope of the appended claim.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a longitudinal sectional view of a bit stock constructed in accordance with my invention showing the jaws locked in engagement with the shank of a bit; Fig. 2 is a similar view showing the nut adjusted on the threaded rod to permit the use

of the device as a wrench; Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 1; Fig. 4 is a plan view; Fig. 5 is a detail perspective view of one of the clamping jaws; Fig. 6 is a similar view of the lower end of the threaded rod showing the construction of the clip and spring engaging lips; Fig. 7 is a detail perspective view of the lower portion of the casing.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The improved chuck forming the subject matter of the present invention comprises a casing or housing 5 preferably tapered in shape, as shown, and having its upper portion fastened in any suitable manner to a brace 6 of the ordinary construction.

Seated in the lower end of the casing 5, is a correspondingly tapered guide member or block 7 having oppositely disposed ears 8 extending laterally therefrom and adapted to enter correspondingly shaped recesses 9 formed in the casing 5, said ears being projected laterally beyond the exterior walls of the casing so as to form finger pieces and thus assist in removing the guide member 7 from the casing when it is desired to obtain access to the interior of said casing.

The guide member 7 is detachably secured to the casing 5 by screws or similar fastening devices 10, while the central portion of the member 7 is provided with a recess 11 for the reception of a pair of spring actuated jaws 12.

The jaws 12 are provided with a reduced shank 13, the side walls of which are tapered for engagement with correspondingly tapered walls 14 of the guide member 7, there being shoulders 15 formed on the lower ends of the jaws and adapted to engage the adjacent end of the guide member 7 for limiting the longitudinal movement of said jaws.

The upper ends of the jaws 12 are pivotally united at 16, while the lower ends thereof are formed with angular recesses which together constitute a socket 17 for the reception of a nut or similar object when the device is used as a wrench, there being longitudinally disposed grooves 18 formed in the inner faces of the jaws and adapted to register with each other to form a socket

ror the reception of the shank of a bit when the tool is used for boring or reaming purposes.

Extending through an opening in the head 19 of the casing, is a threaded rod 20 having its lower end provided with spaced depending ears 21 which receive the pivot pin or bolt 16 of the clamping jaws 12, the metal between said ears being extended laterally at 22 to form intermediate lips.

Surrounding the pivoted ends of the jaws 12, is a coil spring 23, one end of which bears against the inner end of the guide member 7, while the other end thereof encircles the ears 21 and bears against the lips 22, said springs serving to normally and yieldably retain the shoulders 15 in contact with the lower end of the guide member 7.

One end of the rod 20 is extended longitudinally beyond the upper end of the casing, and mounted on the extended end of the rod, is a nut 24, which by engagement with the adjacent head 19 of the casing, serves to limit the longitudinal movement of the jaws 12.

A spring 25 is interposed between the inner faces of the shanks 13, one end of the spring being provided with an angular extension embedded in one of the shanks, and the other end thereof being bowed or curved for engagement with the inner face of the other shank, thus to spread or separate the shanks when the lower ends thereof are projected beyond the lower end of the guide member 7.

When the device is used as a wrench, the nut 24 is rotated until the latter is near the upper or free end of the rod 20, after which a longitudinal pressure is exerted on the free end of the rod so as to expand the lower ends of the jaws and thus permit the nut to be seated in the socket of said jaws, the adjustment of the nut on its bolt being effected by rotating the bit 6, in the usual manner.

When the device is used for supporting a bit, the latter is introduced between the jaws 12 with the angular shank thereof engaging the walls of the socket after which the nut 24 is adjusted on the rod until the lower face of said nut bears against the upper surface of the casing and in which position the jaws

will be effectually locked in engagement with the bit during the boring or reaming operation.

Attention is here called to the fact that the nut not only serves to lock the jaws in engagement with a bit, but also serves to limit the longitudinal movement of said jaws, the opening movement of the jaws being regulated by adjusting the nut on the rod 20.

Thus it will be seen that there is provided a comparatively simple and thoroughly efficient device admirably adapted for the attainment of the ends in view.

The guide member 7 is preferably formed with oppositely disposed angular recesses 7<sup>1</sup> which communicate with the recess 11, and serve to accommodate bits having relatively large shanks.

Having thus described the invention, what is claimed as new is:

A bit stock including a casing, a guide member arranged within the casing and provided with a tapered seating recess, co-acting jaws having reduced tapered shanks slidably mounted in the seating recess and defining square stop shoulders adapted to bear against the guide member, the upper end of the shanks being pivotally connected and their inner longitudinal edges provided with registering grooves, a threaded rod projecting through one end of the casing and having spaced depending ears provided with perforations for the reception of the pivot pin of the jaws, the metal between the ears being extended laterally to form oppositely disposed horizontal lips, a coil spring surrounding the shanks of the jaws and having one end thereof bearing against the guide member and its other end engaging the horizontal lips, a spring interposed between the jaws at the registering grooves thereof, and a nut engaging the threads on the projecting end of the rod.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY BATCHELOR. [L. s.]

Witnesses:

H. M. STEELE,  
L. C. STILES.