

(No Model.)

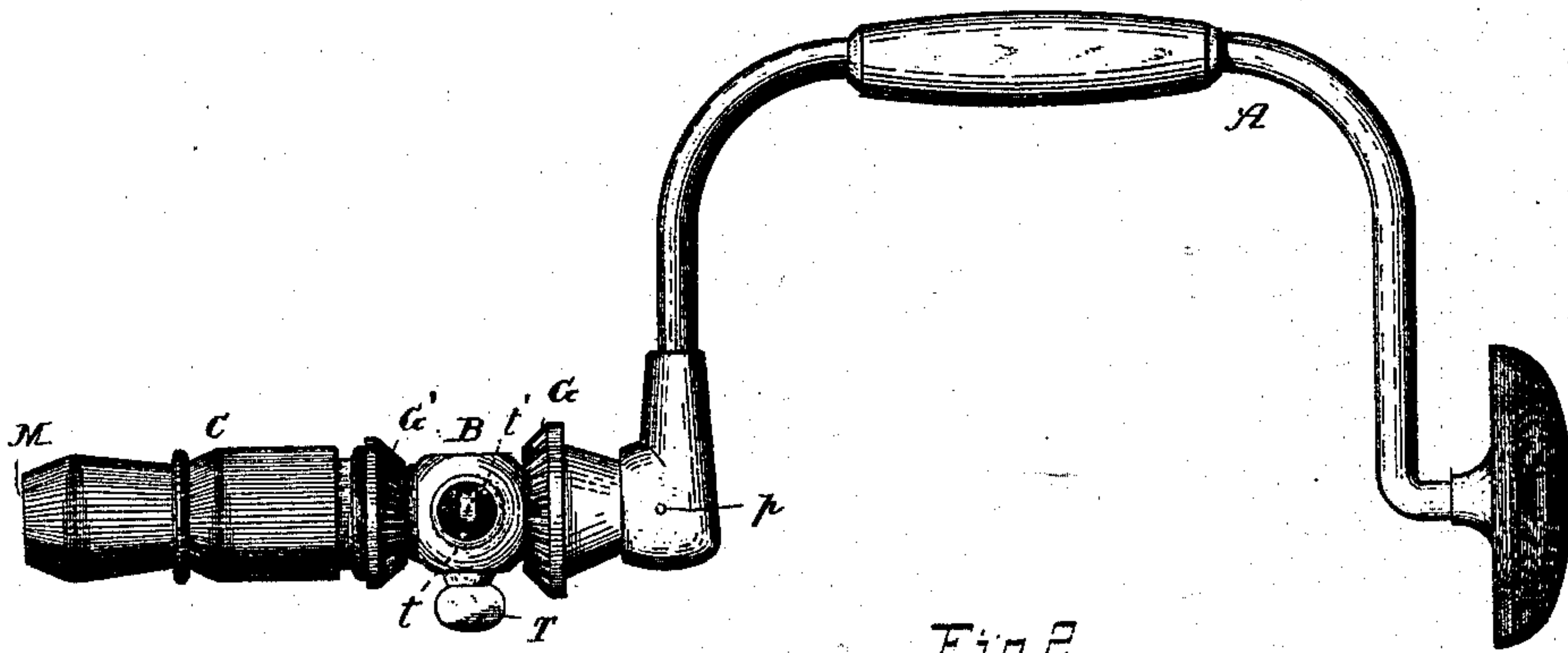
L. McMARSH.

BIT STOCK.

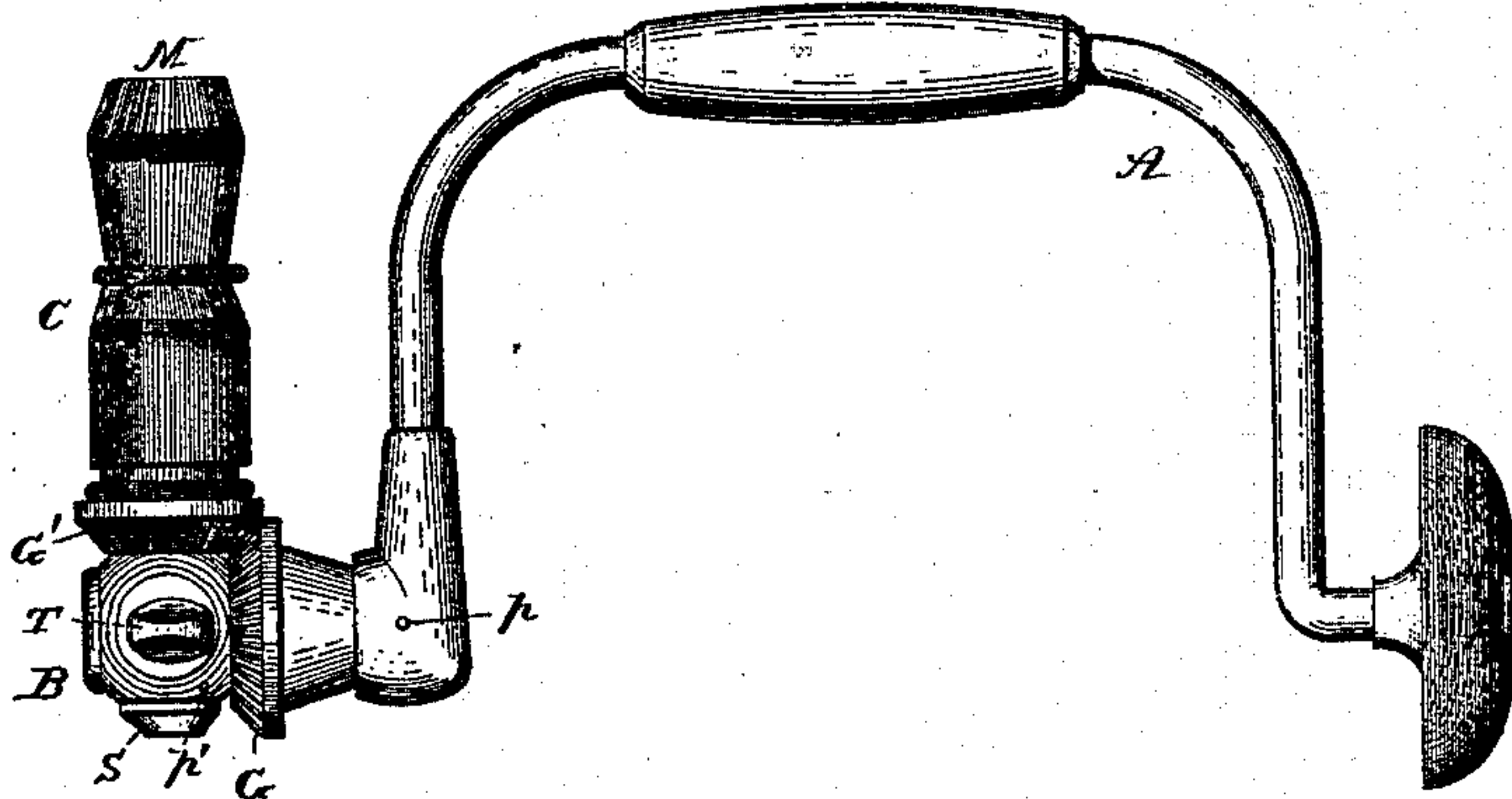
No. 413,203.

Patented Oct. 22, 1889.

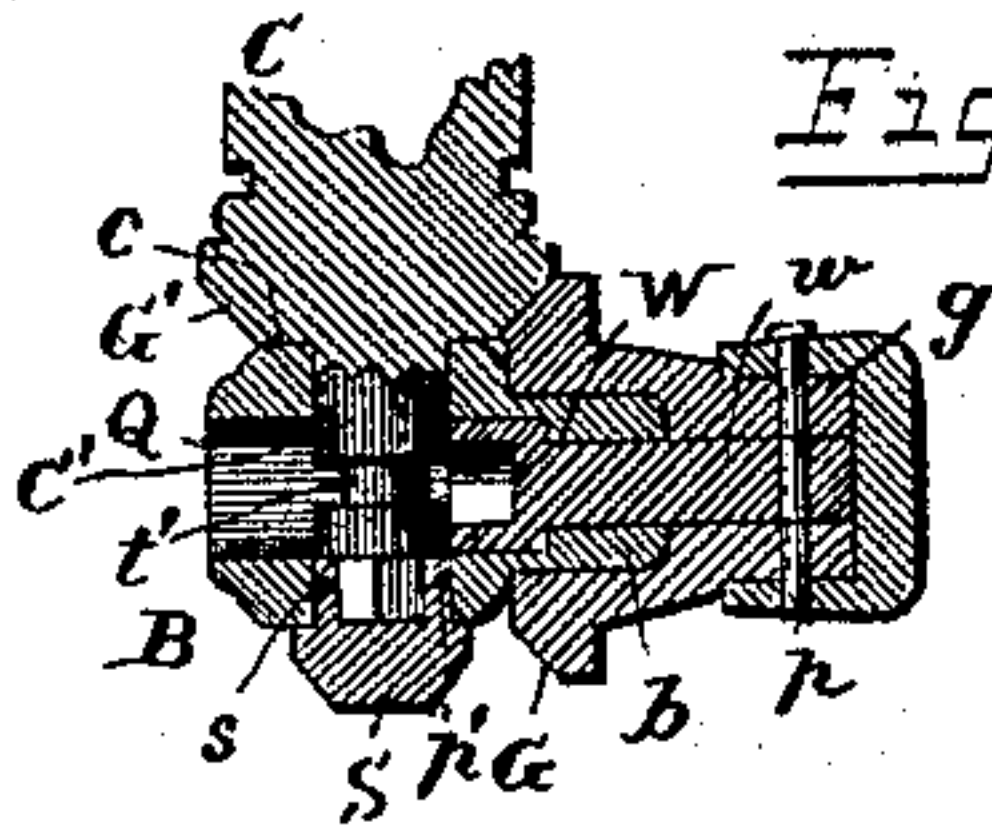
*Fig. 1.*



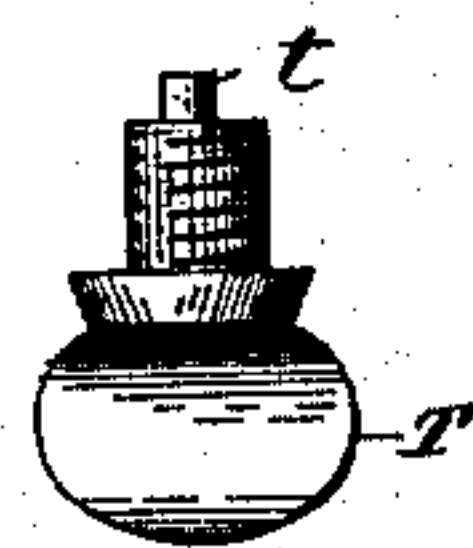
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses

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# UNITED STATES PATENT OFFICE.

LEONARDO MCMARSH, OF SPAULDING, NEBRASKA.

## BIT-STOCK.

SPECIFICATION forming part of Letters Patent No. 413,203, dated October 22, 1889.

Application filed January 14, 1889. Serial No. 296,260. (No model.)

*To all whom it may concern:*

Be it known that I, LEONARDO MCMARSH, a citizen of the United States, residing at Spaulding, in the county of Greeley and State of Nebraska, have invented certain new and useful Improvements in Bit-Stocks; and I do declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to bit-stocks of that class in which the chuck may be locked either in line with the handle or at right angles to it, as use or necessity may require; and it consists of a chuck having a squared upper end provided with a bevel-gear, a box perforated to receive the shank of said chuck in either of two angles, a handle having a square recess in its face for engaging the squared upper end of said shank when the latter is in alignment therewith, and also having a bevel-gear for engaging the gear on said chuck where the latter is at right angles thereto, and certain other details necessary or convenient in their use, all as will be herein-  
after fully described.

In the drawings, Figure 1 is a side elevation of my complete bit-stock arranged with the chuck in line with the handle. Fig. 2 is a similar view with the chuck arranged at right angles to the handle. Fig. 3 is a central longitudinal section of the several parts at their point of connection, and Fig. 4 is an enlarged view of the locking thumb-screw detached.

The same letters of reference have been applied to corresponding parts throughout.

The letter A designates, broadly, the auger-handle; B, the box, and C the chuck. The handle A comprises the ordinary crank with swiveled button at its upper end, as now in ordinary use. At its lower extremity it is provided with a cavity in its face, within which snugly fits the hub of a bevel-gear G. Said gear and hub are longitudinally perforated, and within the perforation snugly fits

the shank *w* of what we will term the "wrench," which has an enlarged head W, provided with a squared recess, for a purpose hereinafter described. The handle A, hub *g*, and shank *w* are firmly connected and held in relative position by a small transverse pin or bolt *p*, as will be readily understood. The box B has an elongated bearing *b*, which embraces and turns loosely upon the shank and over the head W of the wrench and within the perforated hub of the gear G, by which means it is held in firm connection with the handle, and yet a relative rotation is permitted between these parts.

S is a cap provided with an annular groove *s*, and fitted loosely into one side of the box B. A pin or bolt *p'* passes through the box and engages said groove, thereby preventing the displacement of said cap but permitting its rotation. The inner face of the cap S is provided with a squared recess similar in size to that in the face of the wrench W, for a purpose hereinafter described. The box has apertures through its face opposite the wrench-head and through its side opposite the cap, as shown at Q in Fig. 3.

The chuck C is of ordinary construction, with or without the ratchet "one-way" mechanism, as commonly used, and at its mouth M is adapted to receive a bit, screw-driver, or other implement, as will be readily understood. At its upper end, however, it is provided with a shank C', of a size adapted to loosely fit either of the apertures Q, its extremity being squared to fit the recess in either the wrench or the cap. Below this shank C' the body of the chuck has a shoulder *c*, which rests firmly against the outer face of the box B when in use, and immediately below said shoulder a bevel-gear G', its teeth and size adapting it for engagement with the gear G. The box B is approximately in the form of a cube with rounded corners and edges. Its face contains one of the apertures Q. Its back is elongated in the bearing *b*, above described. One of its sides contains the other aperture Q. Directly opposite is located the cap S. The fifth face of the cube is closed. Directly opposite that face is a small screw-threaded perforation, in which



fits the thumb-screw T. The latter has a rounded and reduced point *t*, which, when the thumb-screw is screwed home into place, engages an annular groove *t'* in the shank C' of the chuck, and while permitting the rotation of such shank prevents its removal from the box B.

The operation is as follows: The handle and box being secured together by pin *p*, as described, if it is desired to use a "straight bit," as in Fig. 1, the chuck-shank C' is inserted in the aperture Q in the face of the box and pressed home until the squared end of said shank enters and engages the recess in the head W of the wrench, after which the thumb-screw T is inserted in place, its point *t* engaging groove *t'* in the chuck-shank, and the bit or tool may be turned direct by rotating the handle. If, however, it is desired to use an "angular bit," as in Fig. 2, wherein the bit is at right angles to the line of the handle, the chuck-shank C' is inserted in the other aperture Q in the side of the box and pressed home until its squared end is seated in the recess in cap S, after which the thumb-screw T is inserted, as above, with similar results, and the bit or tool is turned by the engagement of the gear G on the handle with the gear G' on the chuck. The implement may thus be used either as a straight or angular bit with equal effect, and in either case the thumb-screw prevents the displacement of parts, yet permits immediate change from one form of bit to the other. In either event the box B is stationary and may be grasped in the hands of the operator, thus facilitating the use of the tool.

The several parts may be made of cast or wrought iron, steel, brass, or other desirable material, and ornamented by nickel or silver plating, or by enameling, painting, or embossing, to suit the fancy of the manufacturer. By removal of pin *p* the several members of the handle may be taken apart for cleaning or other purposes, and a wrench of different-sized recess may be substituted to fit chucks having a larger or smaller squared shank.

What I claim as new is—

1. The stationary box provided with apertures at right angles to each other, and the chuck having a shank adapted to enter either of said apertures, in combination with the rotary handle swiveled to said box and engaging and turning said chuck in either position, substantially as described.

2. The stationary box having an elongated bearing at its rear and provided with two apertures at right angles to each other, one in its face opposite said bearing and the other in its side, and the rotary handle turning on said bearing, in combination with a chuck having a shank adapted to enter either of said apertures and to engage with and be rotated by said handle in either position, substantially as described.

3. The stationary box B, having a hollow

elongated bearing *b* at its rear end and provided with two apertures Q, one in its face opposite said bearing and the other in its side at right angles thereto, and the handle A, bevel-gear G thereon having hollow hub *g*, and a wrench having an enlarged head W, provided with a squared recess, the shank *w* of said wrench fitting within said hollow bearing *b* and hub *g* and both being secured to said handle, in combination with the chuck C, having a reduced shank C', fitting loosely in either of said apertures Q, and squared at its end to fit said squared recess in the wrench, and a bevel-gear G' on said clutch, adapted to mesh with said gear G when the shank is inserted in the side aperture of the box, substantially as described.

4. The stationary box B, having a hollow elongated bearing *b* at its rear end and provided with two apertures Q, one in its face opposite said bearing and the other in its side at right angles thereto, and the handle A, bevel-gear G thereon, having hollow hub *g*, and a wrench having an enlarged head W, provided with a squared recess, the shank *w* of said wrench fitting within said hollow bearing *b* and hub *g* and both being secured to said handle, in combination with the chuck C, having a reduced shank C', fitting loosely in either of said apertures Q, and squared at its end to fit said squared recess in the wrench, and a bevel-gear G' on said chuck adapted to mesh with said gear G when the shank is inserted in the side aperture of the box, and with a thumb-screw T in one side of said box provided with a rounded point *t*, engaging an annular groove *t'* in said shank C', substantially as described.

5. The box B, having an elongated bearing *b*, the handle A, journaled upon said bearing, and the cap S, swiveled in one side of said box and having a squared recess in its inner face, said box having two recesses Q, one opposite said bearing, the other opposite said cap, in combination with the chuck C, having a reduced shank C', fitting either of said apertures Q, and squared at its end to fit said recess in the cap S, as and for the purpose described.

6. The handle A, having a cavity in its face, the bevel-gear G, having a hollow hub *g* fitting said cavity, and a wrench having an elongated shank *w* fitting within said hollow hub, said wrench also having an enlarged head W, in combination with the pin *p*, passing through said handle, hub, and shank, and with the box B, having a hollow bearing fitting within said hollow gear and swiveled upon said elongated shank *w* and over said head W, as and for the purpose described.

7. The handle A, carrying bevel-gear G, wrench W, secured thereto and having a squared recess in its face, the box B, journaled upon said wrench, and the cap S, swiveled in the side of said box and having a squared recess in its inner face, in combi-



5 nation with the chuck C, having a reduced shank C' with squared end adapted to enter an aperture in the face of said box and engage with said recess in the wrench, and a bevel-gear G' on said chuck adapted to engage said bevel-gear G when the shank C' is passed into an aperture in the side of said box and its squared end seated in the recess in the cap, as and for the purpose described.

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

LEONARDO McMARSH.

Witnesses:

W. E. HANNON,  
L. M. HANNON.