

(No Model.)

J. W. GRAY.  
BIT STOCK.

No. 571,267.

Patented Nov. 10, 1896.

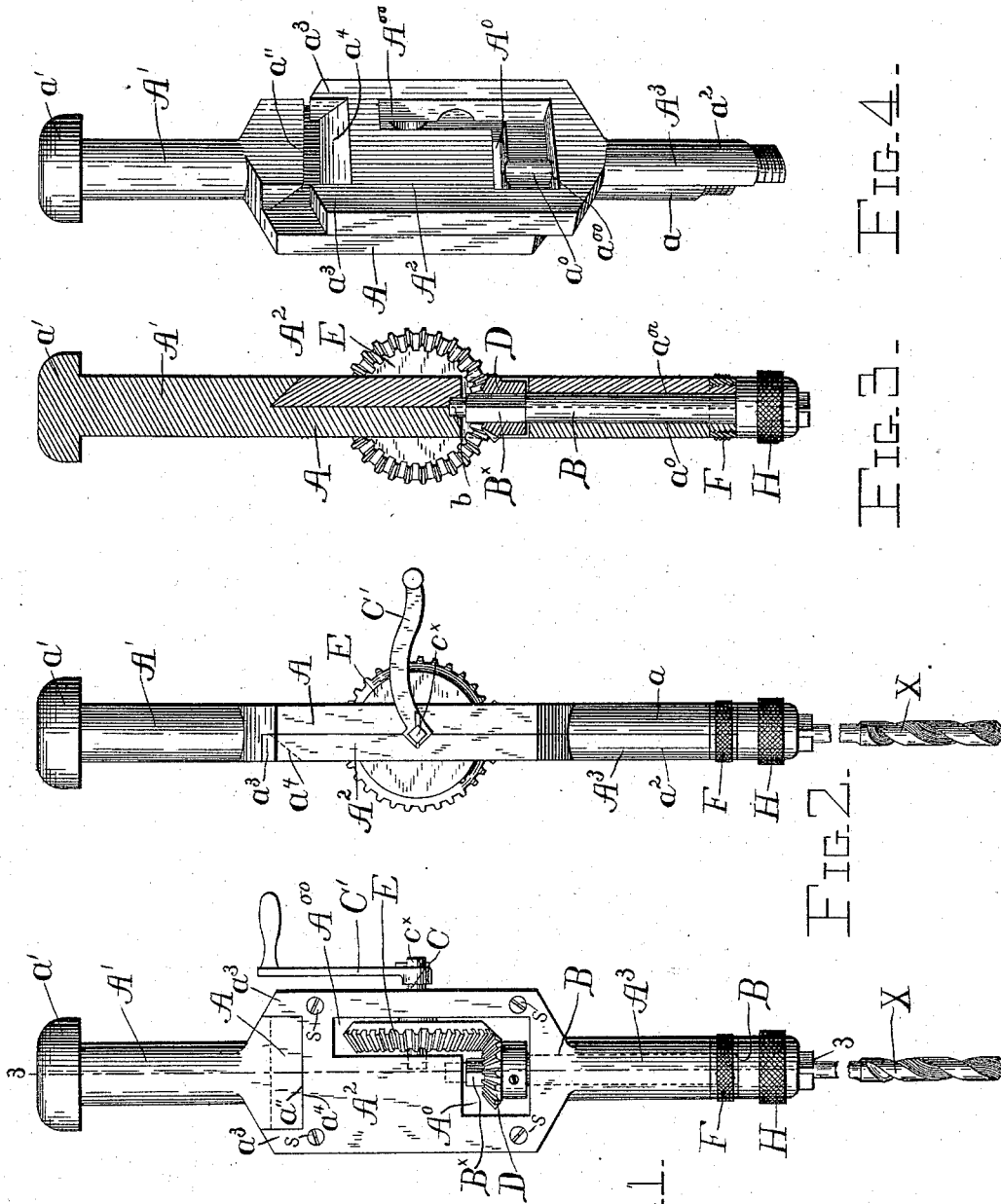


FIG. 4.

FIG. 3.

FIG. 2.

FIG. 1.

Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN W. GRAY, OF STILLWOOD, SOUTH CAROLINA.

## BIT-STOCK.

SPECIFICATION forming part of Letters Patent No. 571,267, dated November 10, 1896.

Application filed April 3, 1896; Serial No. 586,087. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. GRAY, a citizen of the United States, residing at Stillwood, in the county of Barnwell and State of South Carolina, have invented certain new and useful Improvements in Bit-Stocks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in bit-stocks; and it consists of the novel devices hereinafter claimed and described.

Reference is had to the accompanying drawings, wherein the same parts are indicated by the same letters throughout the several views.

Figure 1 is an elevation of my improved bit-stock. Fig. 2 is an elevation of the same, as seen from the right in Fig. 1. Fig. 3 is a longitudinal section taken on the line 33 of Fig. 1, and Fig. 4 is a perspective view of the stock itself with the bit-operating devices removed.

The body of my bit-stock is composed of the two sections A and A<sup>2</sup>, the section A having the beveled overhanging lug a'', fitting into the inclined slot a<sup>4</sup> between the shoulders a<sup>3</sup> a<sup>3</sup> on the section A<sup>2</sup>, and the two sections held together by means of screws s. The section A has an extension A' at one end, forming a hand-grip, which terminates in a knob or rest a'. The two sections A and A<sup>2</sup> are provided with semicylindrical extensions a and a<sup>2</sup>, respectively, which extensions, when the two sections are fitted together, combine to form the cylindrical shank A<sup>3</sup>, as shown in Figs. 1 and 2.

A longitudinal slot A<sup>00</sup> and a transverse slot A<sup>0</sup>, opening into each other, are formed through both sections A and A<sup>2</sup>, so that when the two sections are fitted together the slots in each will coincide. The large bevel-gear E is mounted in the slot A<sup>00</sup> rigidly upon the shaft C, which shaft is journaled in bearings provided in the adjacent faces of the two sections of the body of the stock. The outer end of the shaft C is squared, as at c<sup>x</sup>, and a hand-crank C' is mounted upon this squared end for rotating the shaft. Each of the semicylindrical extensions a and a<sup>2</sup> has a longitudinal semicylindrical groove, as shown at a<sup>0</sup> and a<sup>00</sup>, which combine to form a cylin-

dricul opening when the two sections are fitted together. This cylindrical opening in the shank A<sup>3</sup> leads from the outer end of the said shank to the transverse slot A<sup>0</sup> in the stock, and in this opening the chuck-spindle B fits and is adapted to rotate. The inner end of this chuck-spindle B terminates in a reduced portion b, fitting in journal-bearings in the adjacent faces of the sections A and A<sup>2</sup>. The chuck-spindle B is also provided with a squared portion B<sup>x</sup>, which crosses the transverse slot A<sup>0</sup>, and upon which squared portion and in which slot the beveled pinion D is rigidly mounted.

The beveled pinion D meshes with the larger beveled gear E and is driven thereby to rotate the chuck-spindle.

The outer ends of the semicylindrical extensions a and a<sup>2</sup>, forming the shank A<sup>3</sup>, are held firmly together by means of an internally-screw-threaded band or collar F, which engages corresponding screw-threads on the ends of the parts a and a<sup>2</sup>, and when screwed thereon binds the two halves of the shank firmly together. The periphery of the band or collar F should be milled, as shown, to render it easier to turn.

The outer end of the spindle B carries the chuck H for holding the bit X. This chuck may be of any suitable construction, and I do not wish to limit myself to the use of the exact form of bit-holding chuck herein shown.

The operation of my device is too evident to need any explanation.

It will be seen that my stock may be readily taken apart and put together when that be desired for any reason.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a bit-stock, the combination with a body or frame composed of two superposed members the one having a beveled overhanging lug engaging in a correspondingly-beveled slot in the other, each having a plurality of semicylindrical grooves in its inner face coincident with similar grooves in the other member, and each having a longitudinal slot and a transverse slot communicating with each other formed coincident with similar slots in the other member; a shaft journaled

in one set of said grooves in said members across said longitudinal slot, a bevel-gear rigidly mounted upon said shaft and a crank mounted upon said shaft for turning same; 5 a chuck-spindle journaled in another set of grooves in said members with its inner end across said transverse slot, a pinion rigidly mounted upon said chuck-spindle in said transverse slot and meshing with said bevel-gear; means for holding the two members together, and means for attaching the bit to said chuck-spindle, substantially as described.

2. In a bit-stock, the combination with a 15 body or frame composed of two superposed members the one having a beveled overhanging lug engaging in a correspondingly-beveled slot in the end of the other, and the former having a hand-grip thereon; each having 20 a plurality of semicylindrical grooves coincident with similar grooves in the opposite member, and each having a longitudinal slot and a transverse slot communicating with each other formed coincident with similar slots in 25 the other member; a chuck-spindle journaled in one set of grooves in said body; a bevel-pinion rigidly mounted upon said chuck-spindle in said transverse slot; a bevel-gear mounted in said longitudinal slot upon a shaft 30 journaled in another set of grooves; a crank mounted upon said shaft for rotating same; means for holding said members together, and means for attaching the bit to said chuck-spindle, substantially as described.

3. In a bit-stock, the combination with a 35 body or frame composed of two superposed members the one having a hand-grip formed thereon, and a beveled overhanging lug engaging in a correspondingly-beveled slot in the end of the other; each having an extension at the opposite end from said hand-grip having a semicylindrical groove longitudinally thereof, and each having a longitudinal slot and a transverse slot in communication 45 with the other; a chuck-spindle journaled in the semicylindrical grooves in said extensions, and crossing said transverse slot; a bevel-pinion rigidly mounted upon said chuck-spindle in said slot; a bevel-gear meshing 50 with said pinion mounted in said longitudinal slot upon a shaft journaled in said frame; a crank mounted upon said shaft; means for holding said members together and means

for attaching the bit to said chuck-spindle, substantially as described

4. In a bit-stock, the combination with a 55 body or frame composed of two superposed members the one having a hand-grip formed thereon, and a beveled overhanging lug engaging in a correspondingly-beveled slot in the end of the other; each having an extension at the opposite end from said hand-grip provided with a semicylindrical groove longitudinally thereof, and each having a longitudinal slot and a transverse slot in communication with each other; a chuck-spindle 60 journaled in said extensions and crossing said transverse slot; a bevel-pinion rigidly mounted upon said spindle in said slot; a bevel-gear meshing with said pinion mounted in said longitudinal slot upon a shaft journaled in said frame; a crank mounted upon 70 said shaft; screws passing through the said members and binding the same together; an internally-screw-threaded collar or band engaging upon screw-threads upon the ends of 75 said extensions; and means for attaching the bit to said chuck-spindle, substantially as described.

5. In a bit-stock, the combination with a 80 body or frame composed of two superposed members the one having a hand-grip formed thereon, and a beveled overhanging lug engaging in a correspondingly-beveled slot in the end of the other; each having an extension at the opposite end from said hand-grip provided with a semicylindrical groove longitudinally thereof, a chuck-spindle journaled in said extensions; a bevel-pinion rigidly 85 mounted upon said spindle in a slot in said frame; a bevel-gear meshing with said pinion mounted in a slot in said frame at right angles to said pinion, upon a shaft journaled in said frame; a crank mounted upon said 90 shaft; screws binding said members together; an internally-screw-threaded collar or band engaging upon screw-threads upon the ends of said extensions; and a chuck for holding the bit, substantially as described.

In testimony whereof I affix my signature 100 in presence of two witnesses.

JOHN W. GRAY.

Witnesses:

J. D. GRAY,  
HENRY COBB.