

J. W. ANTHOINE.
ANGULAR BIT-STOCK.

No. 171,255.

Patented Dec. 21, 1875.

Fig. 1.

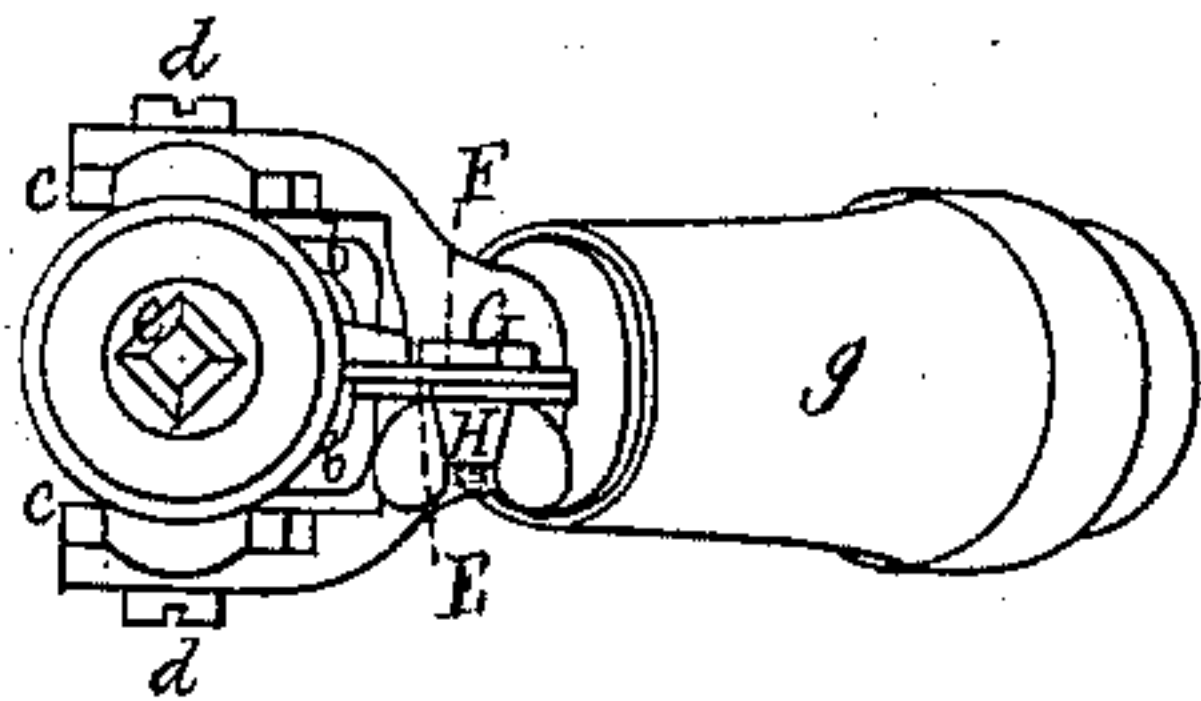


Fig. 2.

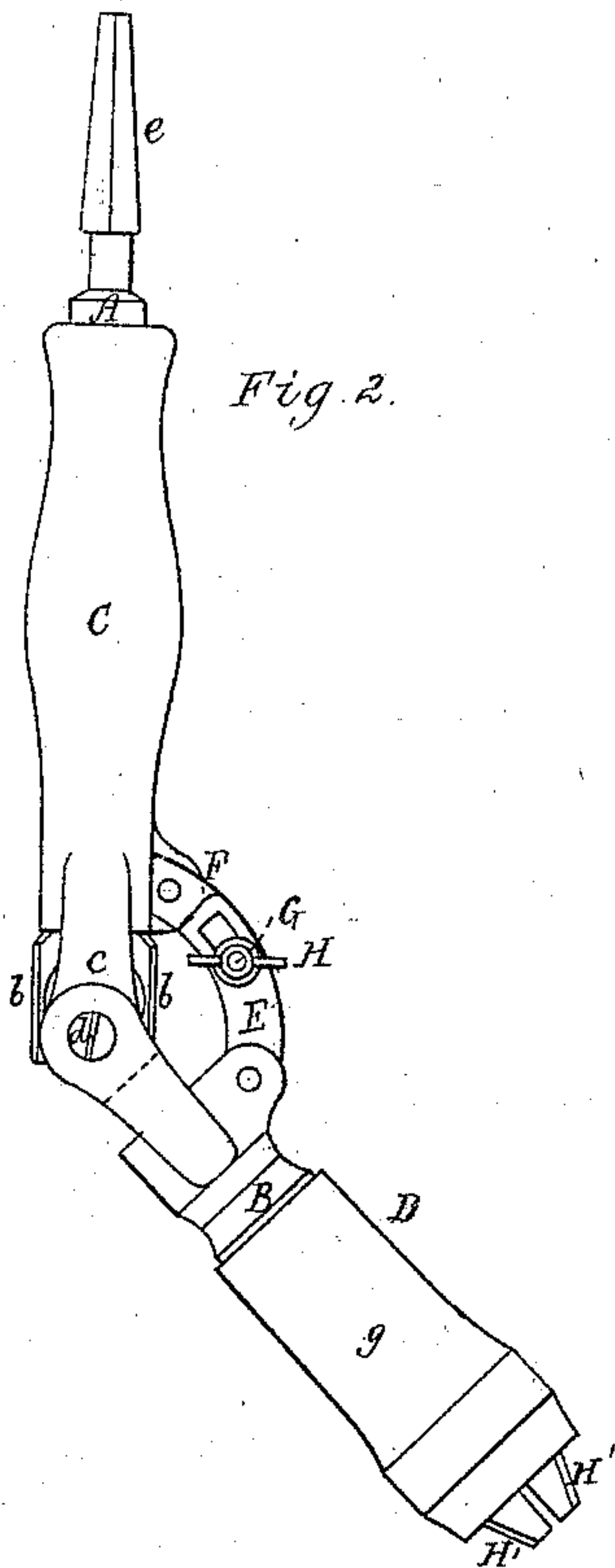
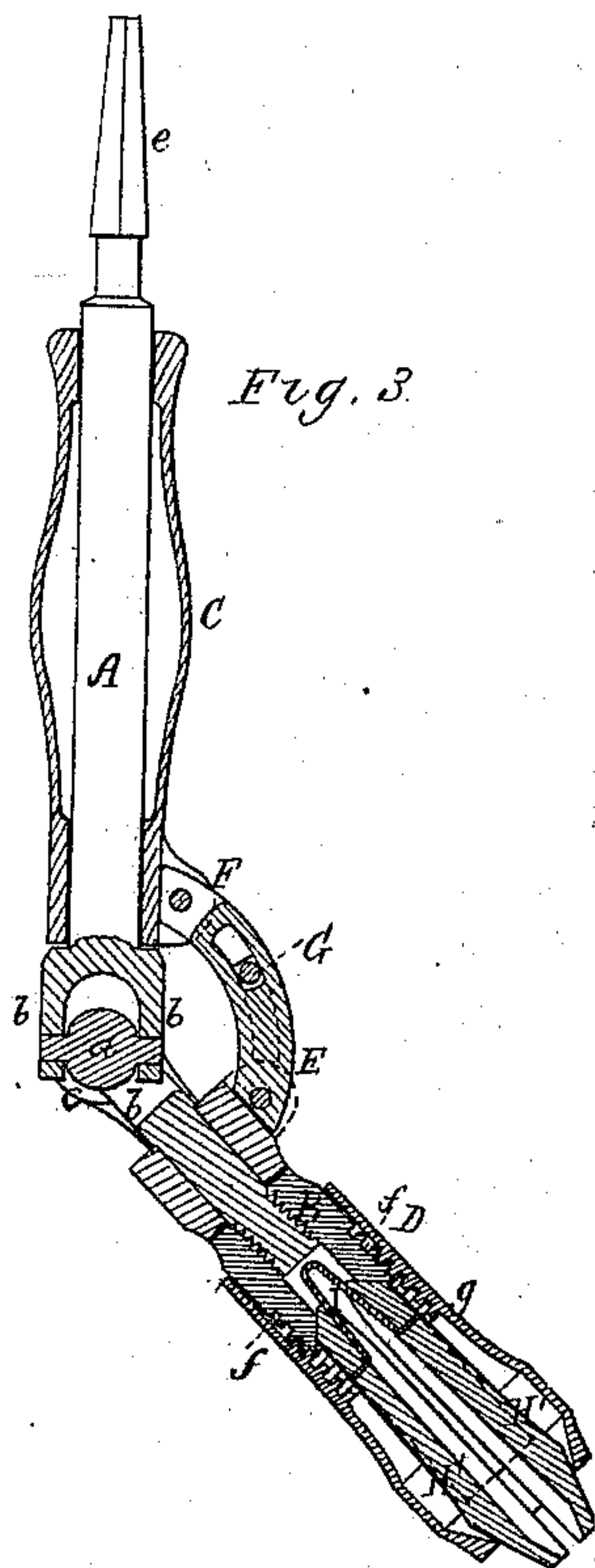


Fig. 3.



Witnesses.

S. W. Piper.

L. H. Müller.

James W. Anthoine

by his attorney.

R. H. Eddy

UNITED STATES PATENT OFFICE.

JAMES W. ANTHOINE, OF MILLER'S FALLS, MASSACHUSETTS.

IMPROVEMENT IN ANGULAR BIT-STOCKS.

Specification forming part of Letters Patent No. **171,255**, dated December 21, 1875; application filed October 28, 1875.

To all whom it may concern:

Be it known that I, JAMES W. ANTHOINE, of Miller's Falls, in the county of Franklin and State of Massachusetts, have invented a new and useful Improvement in Angular Bit Stocks or Braces; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a side elevation, and Fig. 3 a longitudinal section, of an angular bit stock or brace provided with my invention; in the carrying out of which I combine with two furcated bit-shanks, connected by a universal joint, a bifurcated handle (of a form to be grasped by the palm and fingers of a person's hand) and a bifurcated supporter, hinged together at their prongs, and provided with slotted curved arms and a clamp-screw and nut, all being substantially as hereinafter described, and also as represented in the aforesaid drawings, in which—

A and B denote two furcated bit-shanks, connected by a cross or universal joint-piece, *a*, the prongs *b b b b* and joint-piece constituting a universal joint. These bit-shanks, formed as shown, are arranged within and so as to revolve in two bifurcated supporters, C D, the prongs *c c* of one of such supporters being extended between those of the other, and connected thereto by pivot-screws *d d*, all as shown. Thus, one supporter becomes hinged to the other. From these supporters two slotted curved arms, E F, are extended and lapped on each other, they being provided with a clamp-screw, G, to go through their slots, and with a thumb-nut, H, to engage with said screw.

The bit-shank A, where projecting beyond the handle or supporter C, is pyramidal, as shown at *e*, to enter the socket of a common bit-brace, as the shank of a bit or boring-tool usually does. Furthermore, the shank B is forked, and on its outer surface is provided with a screw, *f*, to receive a sleeve, *g*, there being placed within the said part B, and between the prongs thereof, a pair of jaws, H' H', shaped as shown, and provided with a spring, I, for separating them. The sleeve, also shaped as shown, is for closing the jaws or forcing them toward each other, while it may be in the act of being screwed upon the shank B. These jaws are for holding a boring tool or bit by the head of its shank.

I do not claim, in a bit-stock, to combine

with two shafts geared together, means of supporting them and adjusting and clamping them at different angles to each other, such being as represented in the United States Patent No. 150,108. Nor do I claim, for the support of the driving-shaft, a tubular handle, as represented in the aforesaid Patent No. 132,790.

In carrying out my invention I have combined with the handle the driven shaft-supporter and their curved arms and clamp-screw, the two connected pairs of prongs *c c*, one pair being projected directly from the handle, and the other from the driven or lower shaft-supporter.

By my invention the article is not only much simpler in construction and rendered less expensive to make, but it can be supported by the left hand of an operator hold of its handle, while he operates the bit-brace with his right hand.

As the handle C is not only to enable an operative with one hand to steady the article, but to force it forward while in use, such handle, if connected with the shaft-supporter D only by the slotted and curved arms E F, and their clamp-screw G and nut H, would be very liable to cause one arm to slip on the other, so as to vary the angular position of the two shafts, and the directions of bore of the bit.

By having the lower shaft-supporters and the handle connected by the four prongs and their pivots, the liability of accidental change of angular position of the shafts under forward pressure of the handle is greatly lessened, if not entirely obviated.

I do not claim an angular bit stock or brace having its shank-supporters not hinged together, except by the universal joint of their shanks, such being as shown in the said patent.

I claim—

In the described angular bit stock or brace, in combination with the furcated bit-shanks A B, connected by a universal joint, as described, the bifurcated tubular handle C and shaft-supporter D, hinged together at their prongs, and provided with slotted curved arms, and a clamp-screw and nut therefor, all substantially as set forth.

JAMES W. ANTHOINE.

Witnesses:

R. H. EDDY,
J. R. SNOW.