

C. H. AMIDON.
Bit-Brace.

No. 226,646.

Patented April 20, 1880.

Fig. 1.

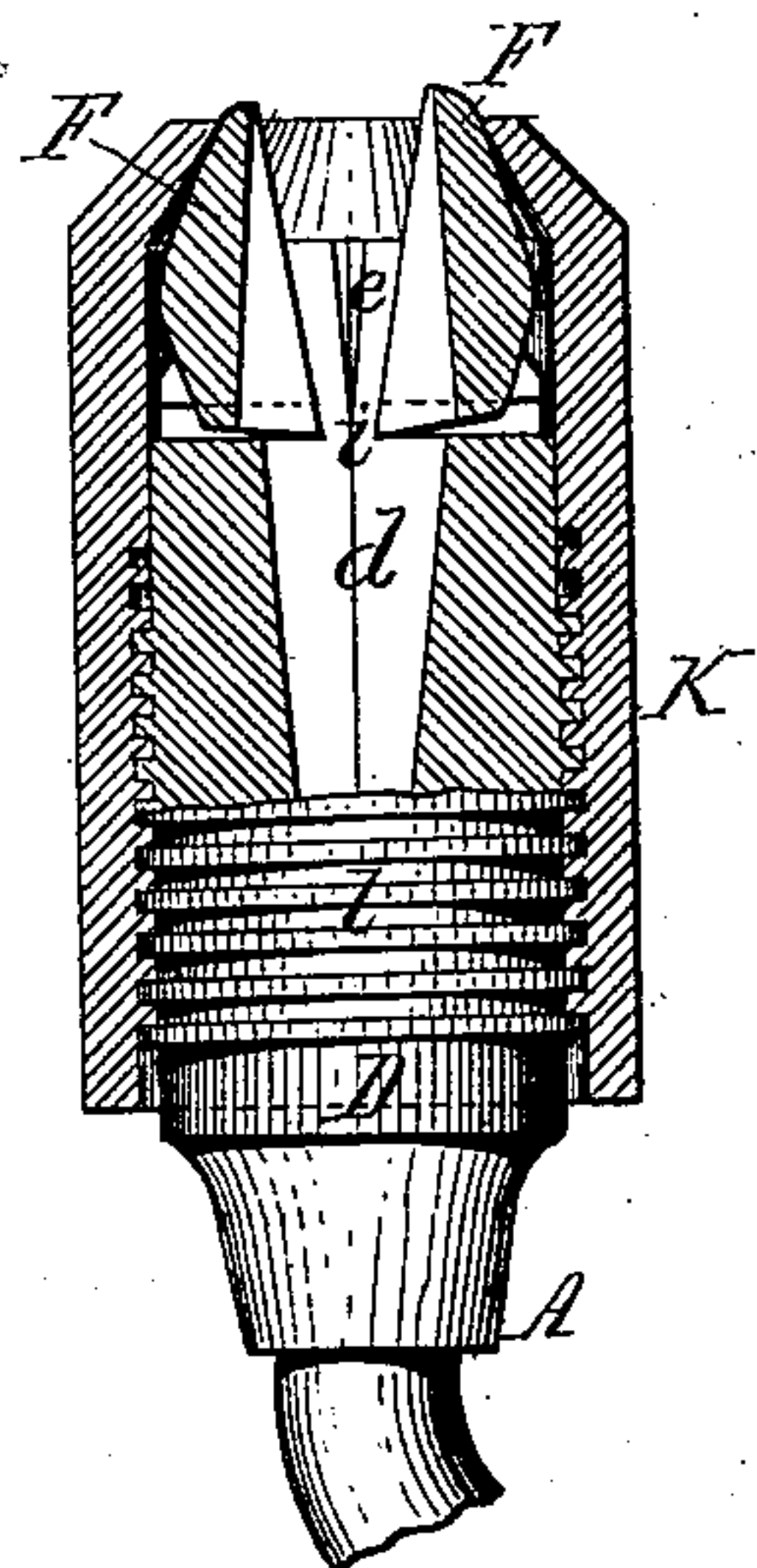


Fig. 2.

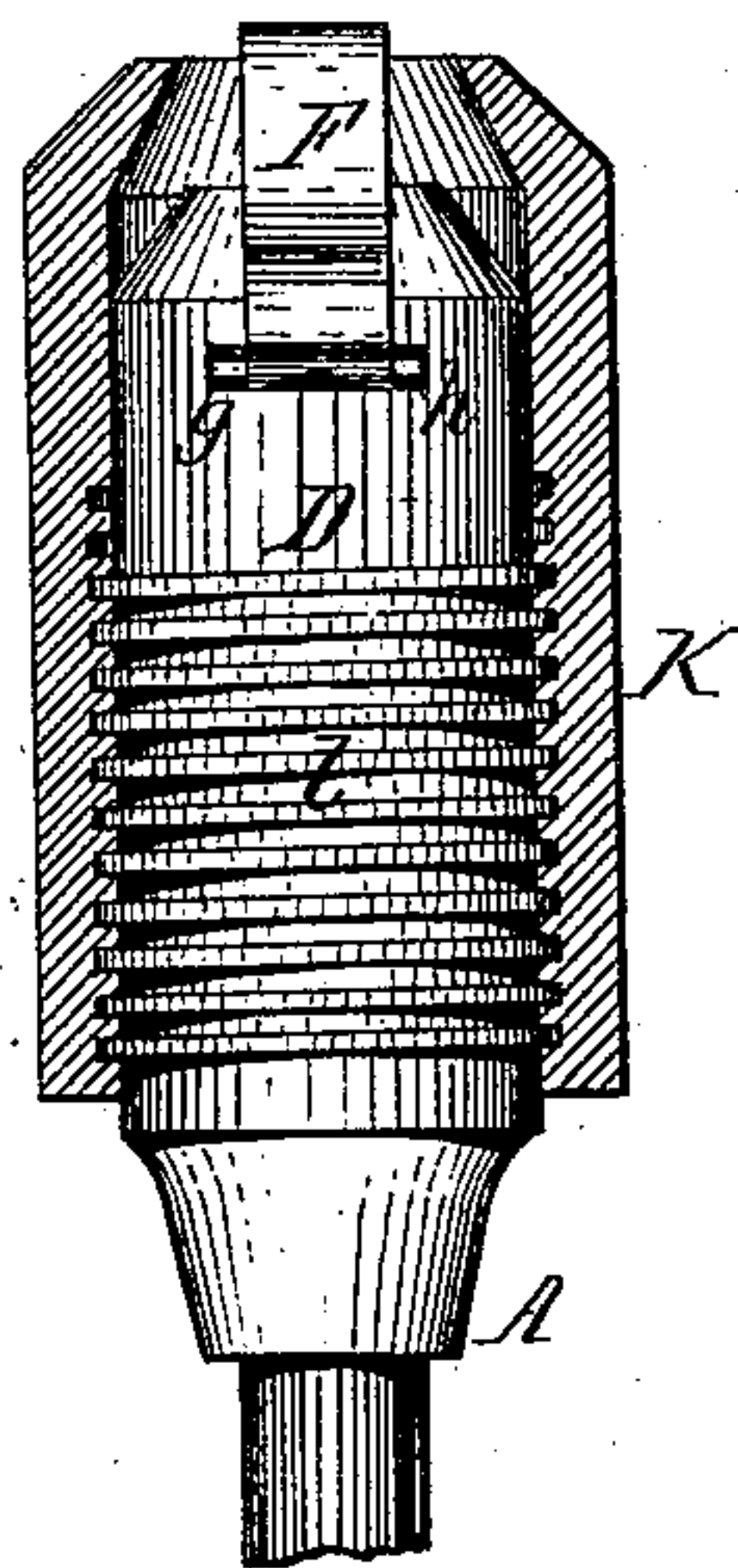


Fig. 3.

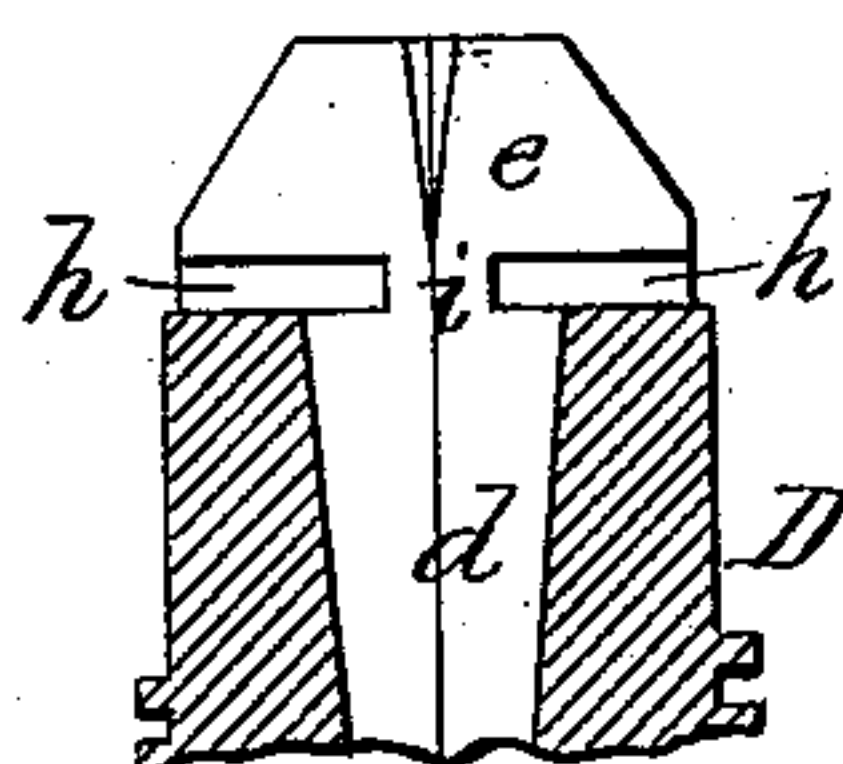
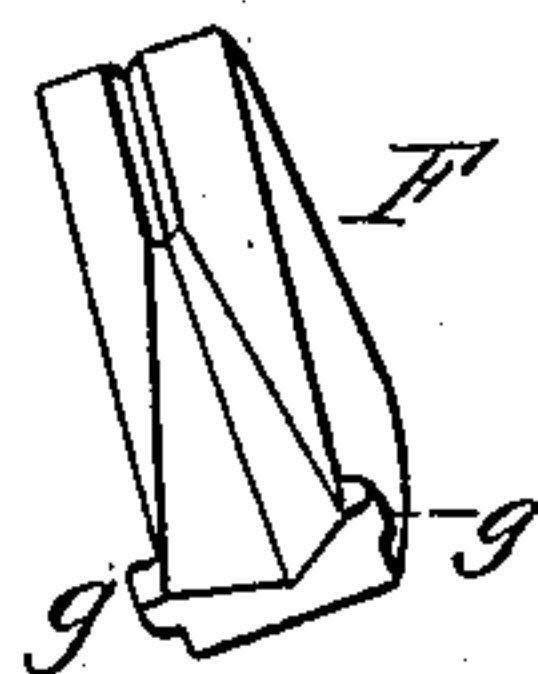


Fig. 4.



Witnesses:

Chas. J. Buchheit.
Edw. J. Brady

Chas. H. Amidon Inventor.
By Melhuus & Barnes
Attorneys.

UNITED STATES PATENT OFFICE.

CHARLES H. AMIDON, OF BUFFALO, NEW YORK.

BIT-BRACE.

SPECIFICATION forming part of Letters Patent No. 226,646, dated April 20, 1880.

Application filed September 18, 1879.

To all whom it may concern :

Be it known that I, CHARLES H. AMIDON, of the city of Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Bit-Braces, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to a peculiar construction of that part of the brace in which the bit is secured; and it has for its object to render the construction of that part of the brace simple, cheap, and durable, and to enable it to readily center the bit and to firmly hold the same.

My invention consists of the particular construction of the parts whereby the bit is held in place, as will be hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a sectional elevation of that part of the brace in which the bit is secured. Fig. 2 is a section at right angles to Fig. 1, showing the socket portion in elevation. Fig. 3 is a fragmentary section of the bit-socket with the clamping-jaws removed. Fig. 4 is a perspective view of one of the clamping-jaws.

Like letters of reference designate like parts in the several figures.

A represents the end of the brace, which is of any ordinary and suitable construction.

D represents the socket portion of the brace, and *d* the tapering socket, of rectangular cross-section, formed therein.

e is a diametrical slot formed in the end of the socket portion D, and F F are the clamping-jaws, arranged in the slot *e* on opposite sides of the socket *d*.

The jaws F are provided at their inner ends with short projecting lugs *g*, which fit in grooves *h* in the bottom of the slot *e*. The grooves *h* extend nearly to the middle of the socket, and are separated by a rib, *i*, arranged centrally on each side of the slot *e*, so as to prevent the inner ends of the jaws F from coming in contact with each other.

The jaws F are each provided on their con-

tiguous sides with a V-shaped recess, which receives the shank of the bit.

K represents the screw-sleeve, which surrounds the socket portion D, and engages with a screw-thread, *l*, on the inner portion thereof, so that by screwing the sleeve K down the outer contracted portion of the sleeve will close the jaws F F upon the bit and securely fasten the latter in the socket.

The projections *g* retain the jaws in their proper position in the socket, and serve as journals, on which the jaws swing when they are tightened against the bit by the screw-sleeve K.

The socket portion D, with its slot and grooves, and the jaws F are readily and cheaply constructed, and form a compact, reliable, and durable fastening device for the bit.

In inserting the square shank of the bit into the socket the inner narrow end of the shank enters the socket *d* and is held thereby, while the outer large portion of the shank is grasped by the jaws F, the inner pivoted ends of the jaws not coming in contact with the shank. In this manner the shank is held at two points—namely, at its inner end, where it is wedged into the socket *d*, and at its outer end, where it is grasped by the edges of the jaws F—and the bit is thereby readily centered and firmly secured in place.

I claim as my invention—

1. The combination, with the socket portion D, provided with a tapering socket, *d*, and a transverse slot, *e*, having grooves *h*, of the jaws F, having lugs *g*, fitting in the grooves *h*, whereby the inner end of the shank of the bit is held in the socket *d*, and the outer end of the shank by the jaws F, substantially as set forth.

2. The socket portion D, constructed with a transverse slot, *e*, and grooves *h*, separated by a central rib, *i*, substantially as set forth.

CHARLES H. AMIDON.

Witnesses:

JNO. J. BONNER,
EDW. J. BRADY.