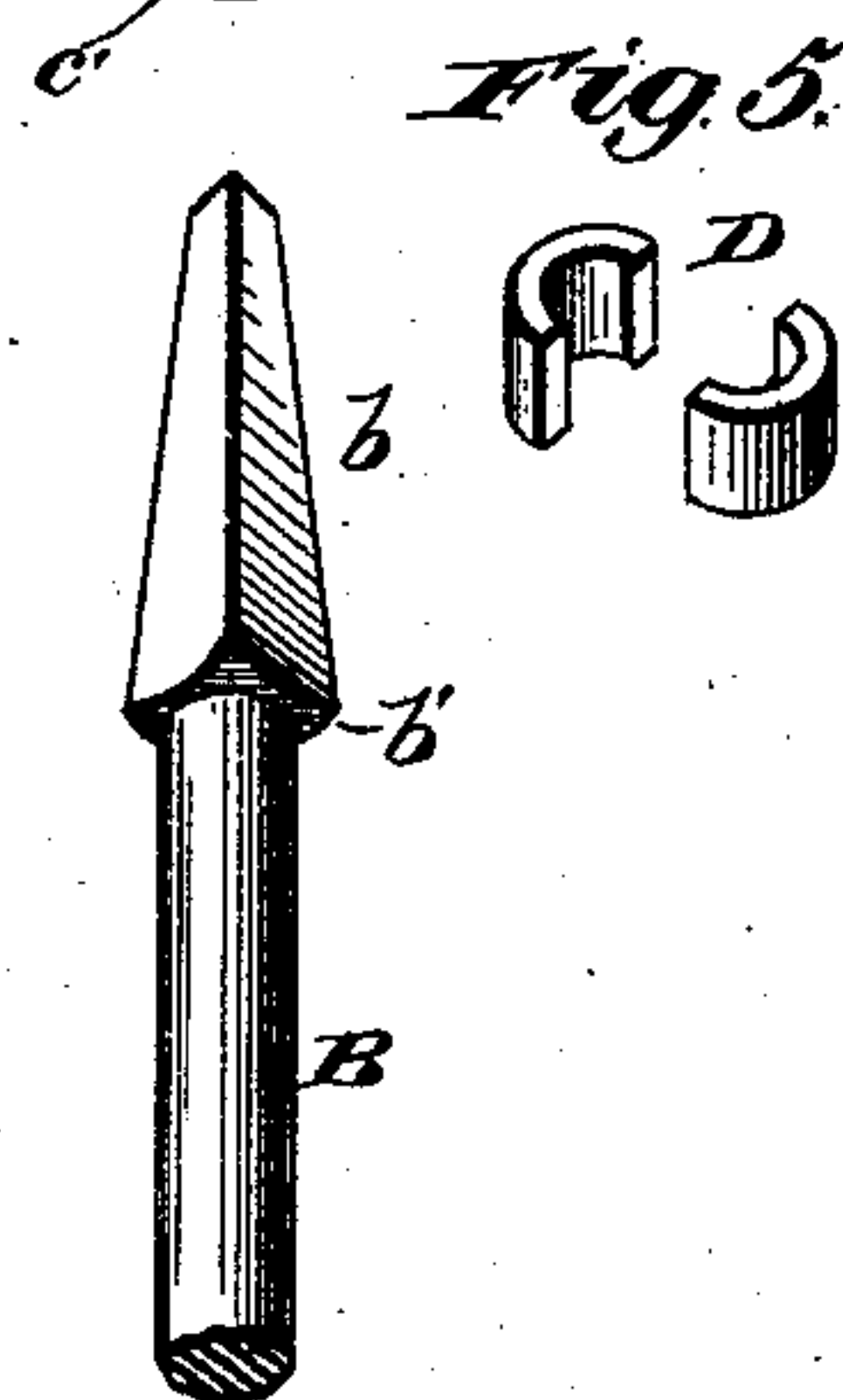
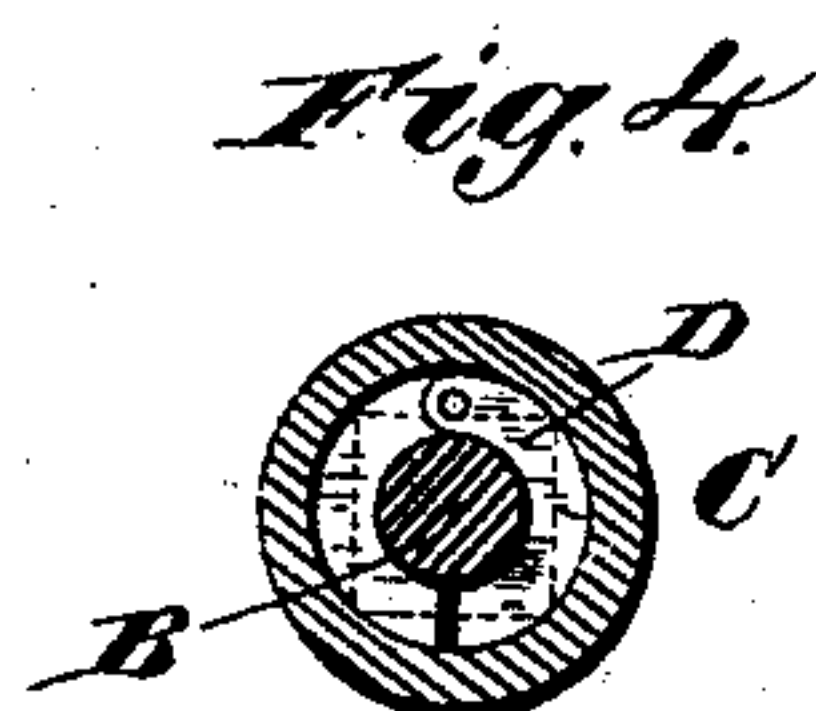
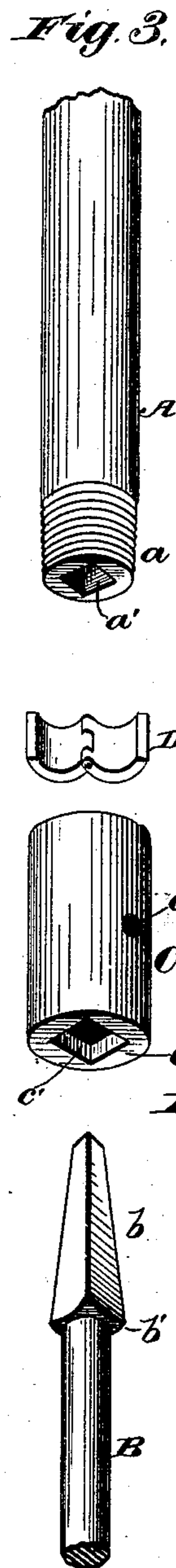
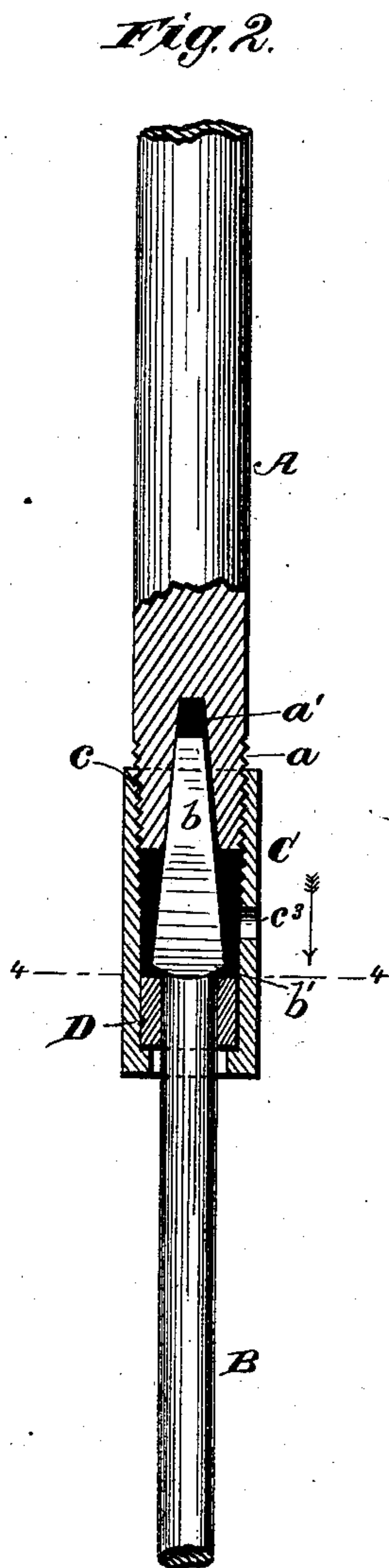
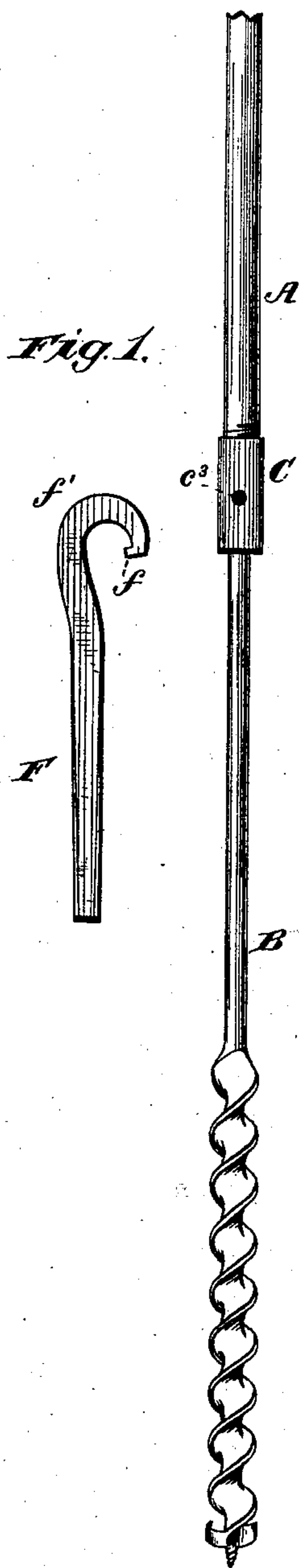


(Model.)

C. SCHOCH.
EXTENSION SHANK FOR BITS.

No. 281,568.

Patented July 17, 1883.



WITNESSES
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J. M. Rutherford.

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CASPAR SCHOCH, OF TRUCKEE, CALIFORNIA.

EXTENSION-SHANK FOR BITS.

SPECIFICATION forming part of Letters Patent No. 281,568, dated July 17, 1883.

Application filed June 15, 1883. (Model).

To all whom it may concern:

Be it known that I, CASPAR SCHOCH, a citizen of the United States, residing at Truckee, in the county of Nevada and State of California, have invented new and useful Improvements in Extension-Shanks for Boring-Bits, of which the following is a specification.

My invention relates to auger-bits and bit-stocks, and means for locking them together; and the novelty consists in the construction and arrangement of parts, as will be more fully hereinafter set forth, and specifically pointed out in the claims.

The object of the invention in general may be said to be to provide a construction of bit stock or connection by means of which the auger-shafts may be extended to any desired length, which shall be comparatively uncomplicated and inexpensive of manufacture, simple, and efficient in operation, and certain in its functions and action; and to these ends the invention consists in the mechanisms fully illustrated in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is an elevation of my invention, showing the auger-bit lock in operative position and the operating tool or wrench detached. Fig. 2 is an enlarged elevation, broken away to show the internal locking devices. Fig. 3 shows enlarged detached perspective views of the several parts of the device except the wrench. Fig. 4 is a transverse section taken through the line 4 4 of Fig. 2, and Fig. 2 is a perspective view of the two-part abutting-ring.

Referring to the drawings, in which similar letters of reference indicate like parts in all the figures, A designates the shank of the bit-stock, having an externally-threaded lower portion, *a*, and an angular socket, *a'*, which is adapted to receive the corresponding head, *b*, of the auger B. The main shank of the auger B is of less diameter than the largest portion of the angular head *b*, to form an abutting-shoulder, *b'*, as shown.

C designates the locking-ferrule, of cylindrical form, and having an internal thread, *c*, at one, end to engage the screw *a* of the shank A, its opposite end, being closed, except in regard to an angular aperture, *c'*, formed in the head

*c*², which aperture is of sufficient dimensions to allow the ready insertion of the head *b* within the ferrule.

D designates the two-part locking-ring, which is formed in two pieces, so that it may be readily made to engage the shank of the auger-bit below its head *b*; and I prefer that it should be constructed as shown in Fig. 3—that is to say, with the two parts hinged together—although some of its advantages would accrue if constructed as shown in Fig. 5. This ring operates within the ferrule, being inserted at the threaded end thereof.

The ferrule, head end first, having been passed over the head *b* of the auger B, and the ring D having been inserted in the ferrule embracing the shank of the auger, the ferrule is screwed upon the shank A until the ring D is clamped between the head *c*² of the ferrule and the shoulders *b'* of the auger-shank. To firmly lock the parts together as thus conditioned requires force, and to make such force practically successful I provide an aperture, *c*³, in the side of the ferrule, in which operates the lug *f* of the tool or wrench F, which has a curved portion, *f'*, which partially embraces the ferrule when the tool is in operation.

The construction and operation of the parts being fully understood, it is only necessary to state that the ferrule is preferably made of steel, as also is the shank A, or, at least, case-hardened. The parts are readily applied and locked, and as readily disengaged when occasion requires.

I deem it important that the bearings of the operating articulating parts should be as extended as possible; and hence it will be observed that while the ring D embraces the shank of the bit, it bears all around on the shoulder *b'* with one edge and on the head *c*² of the ferrule with the other. The bit bears firmly in the inclined socket *a'* and for the full length of the ring D. The ferrule bears firmly on the threaded portion of the shank A and along the entire length of the ring, as well as upon one end thereof.

The details of construction may be varied without departing from the principle or sacrificing the advantages of my invention, and some of its advantages will accrue from the use of some of its features without the others.

Having thus described my invention, what I claim is—

1. The combination, with a shank having a threaded portion, and an angular socket to receive the corresponding head of an auger-bit, of a ferrule adapted to inclose said head, and a two-part ring adapted to embrace the auger-shank within the ferrule, the whole being secured firmly together by engaging the threads upon the ferrule and shank, substantially as described.

2. In combination with the shank and bit, as described, the ferrule C, having head c^2 , with apertures c' , and the hinged two-part ring D, all arranged and operating substantially as specified.

3. The combination, with the shank A, having threaded portion a and socket a' , of the bit B, having head b and shoulder b' , the ferrule C, having internal thread, c , head c^2 , with angular aperture c^3 , and the two-part ring D, all constructed and arranged to serve relatively to the tool F, having curved portion f' , substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

CASPAR SCHOCH.

Witnesses:

JAMES L. NORRIS,
J. A. RUTHERFORD.