

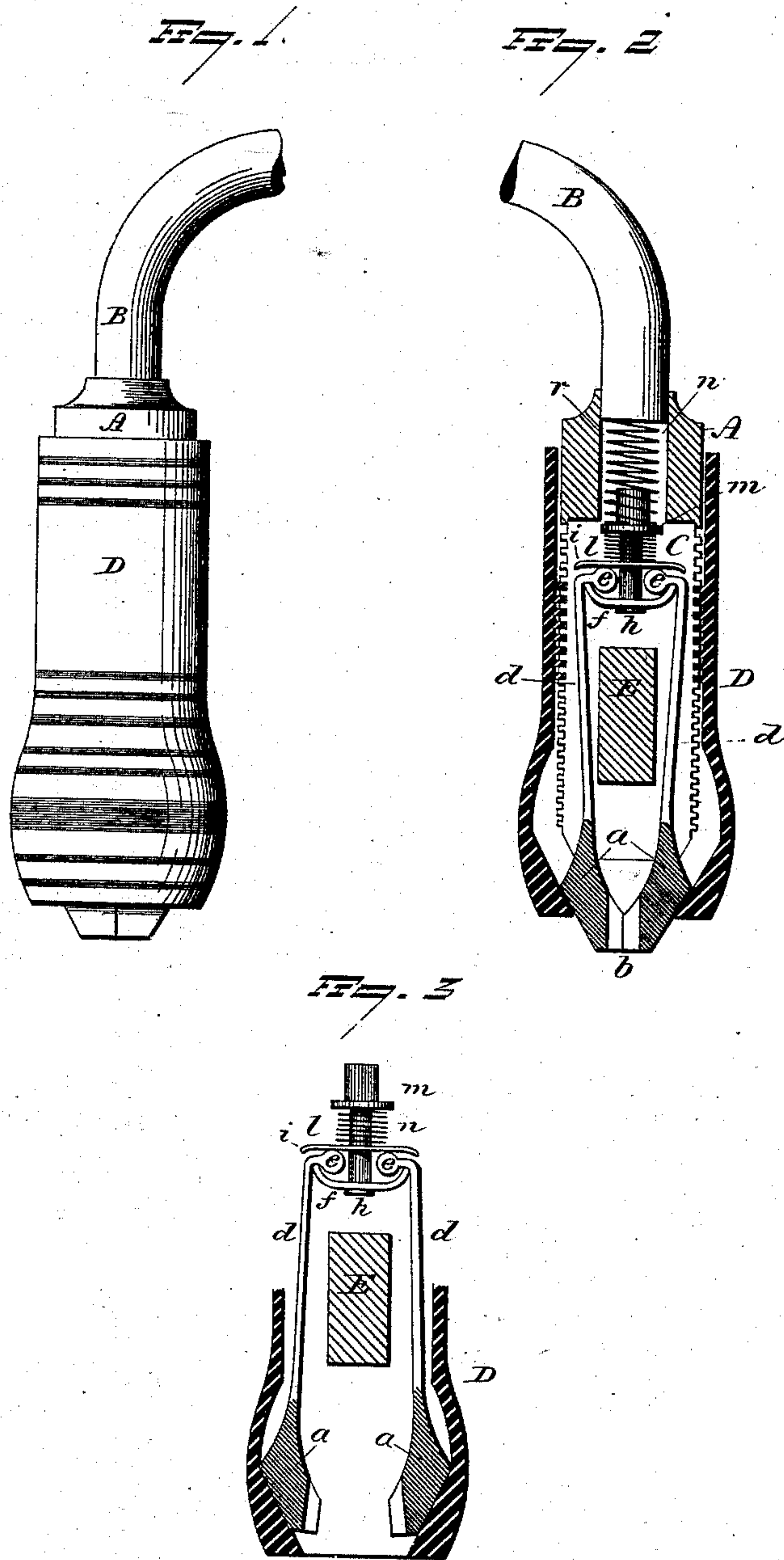
(No Model.)

H. V. SMITH.

BIT STOCK.

No. 274,041.

Patented Mar. 13, 1883.



Witnesses.
John H. Murray
John D. Parle

Henry V. Smith
Inventor
By *Atty.*
John H. Murray

UNITED STATES PATENT OFFICE.

HENRY V. SMITH, OF PLANTSVILLE, CONNECTICUT.

BIT-STOCK.

SPECIFICATION forming part of Letters Patent No. 274,041, dated March 13, 1883.

Application filed January 11, 1883. (No model.)

To all whom it may concern:

Be it known that I, HENRY V. SMITH, of Plantsville, in the county of Hartford and State of Connecticut, have invented new Improvements in Bit-Braces; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view; Fig. 2, a vertical central section, the jaws closed; Fig. 3, a vertical section, the jaws open.

This invention relates to an improvement in that class of bit-braces which are provided with a pair of jaws arranged in a vertical slot through a socket, the said socket threaded, combined with a sleeve working on the thread of the socket, its outer end fitted to close the jaws as the sleeve is run onto the socket, or open as the sleeve is unscrewed, the object of my invention being to provide a spring-pressure upon the tails of the jaws to impart to the jaws an outward or opening force which will hold them open and close against the head at all times to prevent rattling when the bit is not on the socket, and also to insure the proper condition of the jaws for the insertion of the bit; and it consists in the construction, as hereinafter described, and more particularly recited in the claim.

A is the socket, which is attached to the arm B of the brace in the usual manner. It is constructed with the usual longitudinal transverse slot, C, within which the jaws are arranged, and on its outer surface it is screw-threaded, and over this screw-threaded surface the usual sleeve, D, is applied, so that by turning in one direction the sleeve is drawn onto the socket, or in the opposite direction it is forced off.

a a are two jaws, beveled or chamfered on the back of their outer ends, so that the correspondingly-inclined inner surface of the sleeve will draw the jaws together when the sleeve is screwed onto the socket, or permit them to open as the sleeve is unscrewed, in the usual

manner, the inner faces of the jaws at *b* fitted to grasp the shank of the bit, also in the usual manner. The tails *d* of the jaws extend into the socket, and at their inner ends are turned inward at nearly right angles to the tail of the jaws, and their extreme turned-in end enlarged, as at *e*.

f is a saddle attached to a spindle, *h*, one end setting over the enlargement *e* of the one part, and the other end over the enlargement *e* on the other part. This spindle extends inward between the two enlargements *e*, and on the opposite side of the enlargements *e* is a collar, *i*, and upon this collar a spring, *l*, bears, the opposite end of the spring resting upon a collar, *m*, made fast to the spindle *h*, so that the pressure of the spring *l* is upon one side of the enlargements *e* and inside of the line of bearing of the two ends of the saddle *f*, so that the action of the spring tends to turn the jaws upon the ends of the saddle as a fulcrum, throwing their clamping ends *a* outward against the sleeve, as seen in Fig. 3, the spring *l* yielding, so that as the sleeve is screwed onto the socket the jaws will be permitted to close.

In a seat, *n*, in the socket a spring, *r*, is introduced, upon which the spindle *h* rests, the tendency of this spring being to force the jaws forward—a device common and well known in this class of braces.

Across the socket, between the jaws, is a bar, *E*, upon which the end of the tang of the bit will rest, while the jaws grasp the shank in the usual manner.

I claim—

The combination of the socket A, constructed with the longitudinal transverse slot, screw-threaded upon its outer surface, the sleeve D, correspondingly screw-threaded upon its inner surface, jaws *a a*, constructed with the enlargements *e* at their tail ends, the spindle *h*, saddle *f*, collar *i*, and spring *l*, substantially as and for the purpose described.

HENRY V. SMITH.

Witnesses:

L. W. ROBBINS,
ROBERT HOLCOMB.