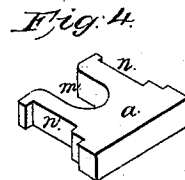
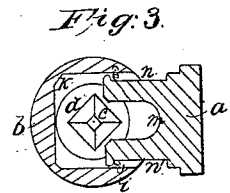
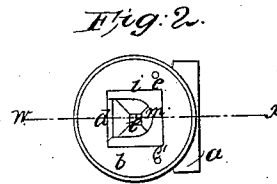
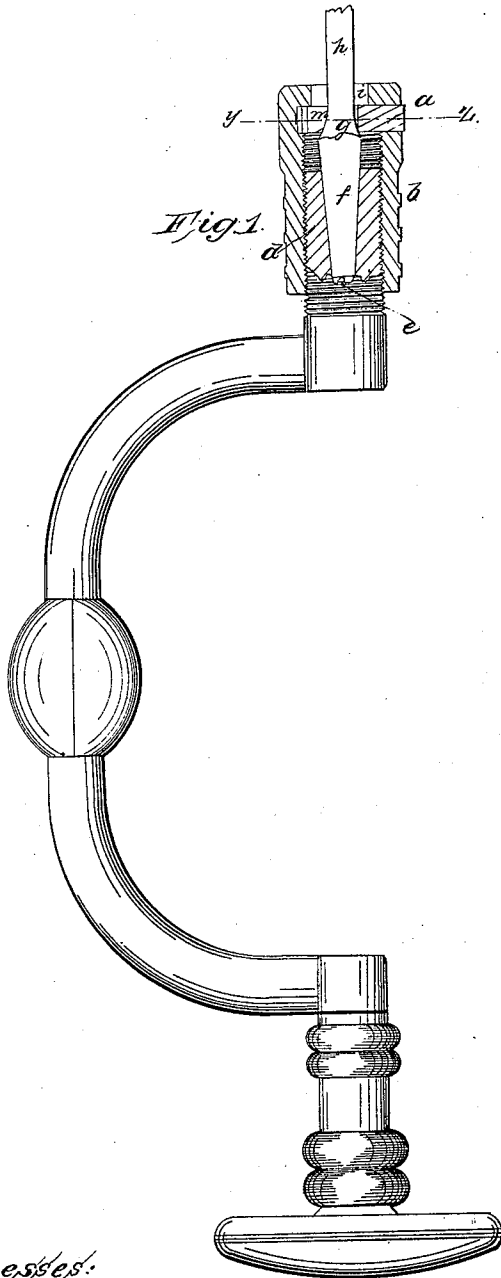


S. B. Hill,
Bit Stock.

No 76,632,

Patented Apr. 14, 1868.



Witnesses:
John M. Stebbins
Edward L. Allen

Inventor:
S. B. Hill,
By his attorney
Sidney S. Lander.

United States Patent Office.

S. B. HILL, OF CHICOPEE, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND
LEVI B. TAYLOR, OF SAME PLACE.

Letters Patent No. 76,692, dated April 14, 1868.

IMPROVEMENT IN BRACES FOR BITS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, S. B. HILL, of Chicopee, in the county of Hampden, and State of Massachusetts, have made and invented certain new and useful Improvements in Bit-Braces; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, in which—

Figure 1 is a longitudinal section through line *w x*.

Figure 2, a top elevation of brace with slide closed.

Figure 3, a transverse section through line *y z*, with slide open; and

Figure 4, an isometric projection of the forked or slotted slide.

My invention, which relates to a bit-brace, is designed to facilitate the fixing and unfixing of the bit, to prevent the wobbling in, and the pulling of the same out of the brace.

The essence of my invention consists in the combination of a forked or slotted slide with a revolving jacket and a relatively fixed socket, in such a manner that the shank of the bit is embraced by the slotted slide, and the bit secured or released, simply by the revolution of the jacket.

In carrying out my invention, I make the body of the stock in any of the ordinary forms, providing the neck thereof, *d*, with a male screw, and also with a socket, *e*, figs. 1, 2, and 3. I also construct a slide, *a*, essentially as seen in fig. 4, that is to say, providing the same with a central slot, *m*, of sufficient width to receive the shank *h* of any ordinary bit. And further, on the sides parallel with slot *m*, I provide slide *a* with rebates, *n n'*, figs. 3 and 4, which rebates, in combination with the pins *c c'*, are for the purpose of allowing the slide to play freely in and out of the jacket without danger of being wholly detached therefrom. And this jacket *b*, I construct essentially as seen in figs. 1, 2, and 3, that is to say, of a cylindrical form, providing the same with a female screw, and at one end with a square opening, *i*, for the passage of the bit-head *f* to the socket *e*. And I make the opening *i* square, as that is the form of the ordinary bit-head, and for the purpose of keeping such opening as small as possible, thereby securing a more firm and equal pressure of the jacket-head on the slide, and of the slide on the shoulder *g*, fig. 1.

On one side of the jacket *b*, I make a mortise or recess, *k*, figs. 1 and 3, of a size sufficient for the ready play of slide *a* therein, where it is secured by means of the pins *c c'*, as above stated.

The slide and jacket being thus constructed and arranged, I screw the latter on to the neck *d*, fig. 1, and opening the slide, I pass the bit-head *f* into the socket *e* again. Closing the slide, I bring the same firmly down on the shoulder *g* by turning the jacket *b*, whereby it is evident the bit is secured. And it is particularly to be observed, that by this arrangement not only is the bit, but the slide *a*, firmly fixed, and thus held until released, by turning the jacket in the opposite direction, when the bit also may at once be removed.

The advantages resulting, which I claim as obvious, are that no fitting of the head *f* is necessary; that it is practically impossible for the head to escape from the socket *e* when in use; that all wobbling of the bit is prevented; that the essential parts are few and simple; and that their operation is quick and easy. I make the several parts of iron, in the ordinary manner of working.

Having thus described the construction and operation of my invention, what I claim as new, is—

The slide *a*, in combination with the screw-jacket *b*, both constructed, arranged, and operating substantially as herein described.

S. B. HILL.

Witnesses:

JOHN M. STEBBINS,
SIDNEY SANDERS.