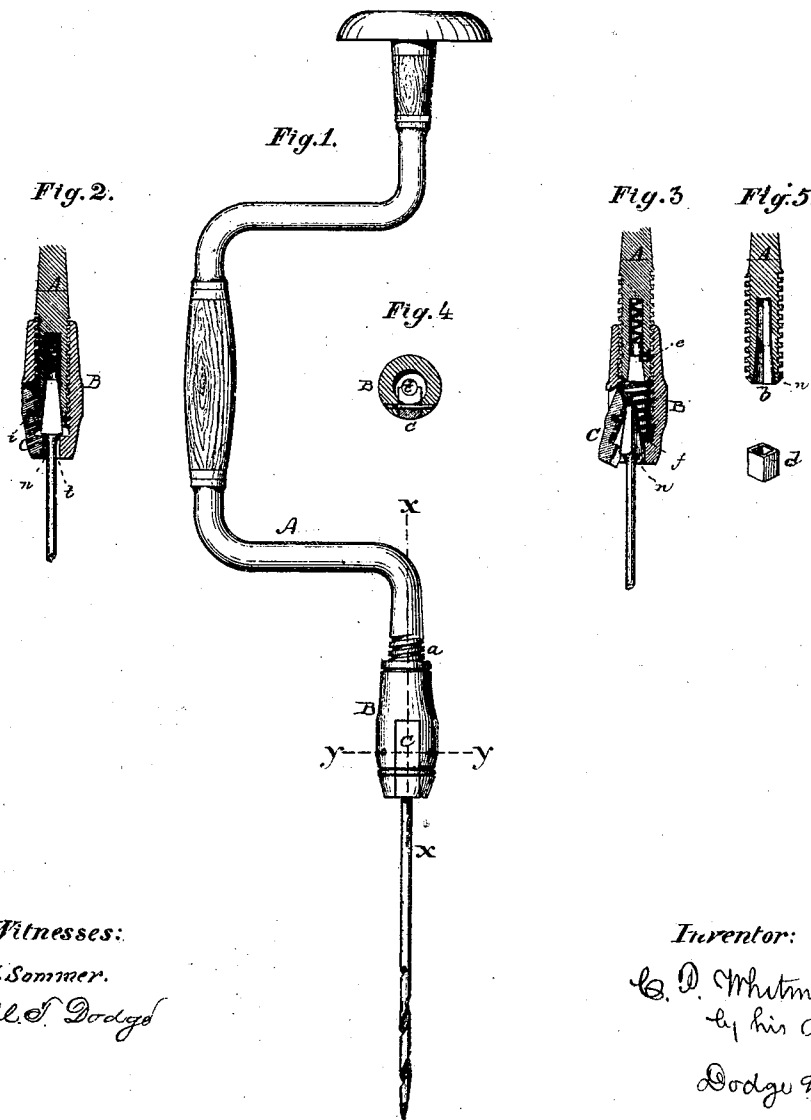


C. P. Whitman,

Bit Stock.

No. 106,754.

Patented Aug. 23, 1870.



Witnesses:

C. F. Sommer.
Phil. S. Dodge

Inventor:

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by his attys
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United States Patent Office.

CHARLES P. WHITMAN, OF CHARLEMONT, MASSACHUSETTS.

Letters Patent No. 106,754, dated August 23, 1870.

IMPROVEMENT IN BIT-STOCKS.

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, CHARLES P. WHITMAN, of Charlemont, in the county of Franklin and State of Massachusetts, have invented certain Improvements in Bit-Stocks, of which the following is a specification, reference being had to the accompanying drawing.

My invention consists in certain improvements in the heads or jaws of bit-stocks, for securing the bits or other tools to the stock, as hereinafter described.

Figure 1 is a side view of a bit-stock having my improved head applied, and a bit secured therein;

Figure 2 is a vertical section through the center of the head, with a bit secured therein;

Figure 3, the same, with the head unscrewed and the bit released and partially withdrawn;

Figure 4, a cross-section of the head on the line *y*; and

Figure 5, a section of the end or neck of the stock, showing the socket therein.

The body of my stock I construct in the usual manner, except its lower end or neck, which I provide, on the outside, with a screw-thread, *a*, and in its end with a square recess or socket, *b*, made of a taper form at its outer end.

Into the back end of the socket *b* I insert a spiral spring, *c*, and in front of the spring place a tubular square chuck, *d*, which is free to slide back when sufficient pressure is brought upon it to compress the spring, and through from the outside of the neck *a* I insert a pin, *e*, so as to protrude on the inside of the socket, in front of chuck *d*, and thereby prevent the escape of the latter from the socket, as shown in fig. 3.

I next provide a tubular head, *B*, having a screw-thread cut upon its interior, and of the proper size to fit upon the end or neck *a* of the stock, the opening in the front end of the head being reduced in diameter so as to form on the inside an annular flange or shoulder, *f*, as shown in figs. 2 and 3.

In one side of the head *B*, I cut a recess or opening, extending from the front end back about midway of the head, and in this opening I pivot a jaw, *C*, which may be turned outward, as in fig. 3, so as to leave an opening in the side of the head sufficient to allow the insertion of a bit-shank, or which may be closed so as to be flush with and form a continuation of the head, as shown in figs. 1, 2, and 4, the jaw being provided with a shoulder to correspond with that in the head.

When the jaw *C* is closed and the neck screwed back onto the neck *a*, the back end of the jaw *C* is carried outside of the neck, and thereby the jaw locked shut, as in fig. 2, but upon again turning forward the head until the end of the jaw clears the

neck, the former is released, and may be reopened, as in fig. 3.

To insure the closing of the jaw when the head *B* is turned up, I bevel the inner side of the back end of the jaw, as shown in figs. 2 and 3, and also bevel the outer edge of the end of neck *a*, as shown at *n*, fig. 5.

The opening in the side of the head *B*, I make of sufficient size to readily admit the shanks of ordinary-sized tools, and the opening *n*, through the end inside of shoulder *f*, of sufficient size to admit the stem but not the shanks of the same.

When it is desired to secure a bit or other tool in the stock, the head *B* is unscrewed until the jaw *C* is released, and the end of the jaw then turned out, and then the shank of the tool inserted through the side-opening, so that its shoulders engage behind the flange or shoulder *f* of the head, and the jaw *C* then closed.

The head *B* is then screwed up, when the shoulders of the head and its jaw force the shank back into the socket *b*, and thereby secure the bit rigidly in place.

The chuck *d* is held by the spring so far forward that, whenever a tool is inserted into the stock the end of its shank enters the hole in the chuck, which latter is forced back until the forward portion of the shank bears upon the sides of the socket, as shown in fig. 2, so that, when the shank is seated, its rear end is centered and held by the chuck, and its forward or large end by the sides of the socket.

Thus it will be seen that, whether the shank of the tool inserted is large or small, long or short, or of the same or a different taper from the socket *b*, it will, by means of the sliding chuck, be afforded a solid bearing in the socket, while the flange of the head and the jaw bearing upon the front of its shoulders and around its stem holds it securely and rigidly to the stock.

If desired, a spring may be applied in such manner as to throw open the jaw when released.

Having thus described my invention,

What I claim is—

1. The sliding chuck *d*, arranged within the socket of a bit-stock head, so as to receive and center the end of the shank of the bit or other tool, substantially as described.

2. The screw-cap *B*, provided with the pivoted jaw *C*, constructed and arranged to operate substantially as set forth.

CHARLES P. WHITMAN.

Witnesses:

F. E. NIMS,
H. M. PUFFER.