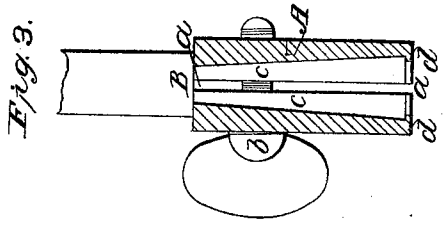
N. Spofford,
Bit Stock.

No. 25,984. Patented Nov. 1, 1859.

Fig. 3.



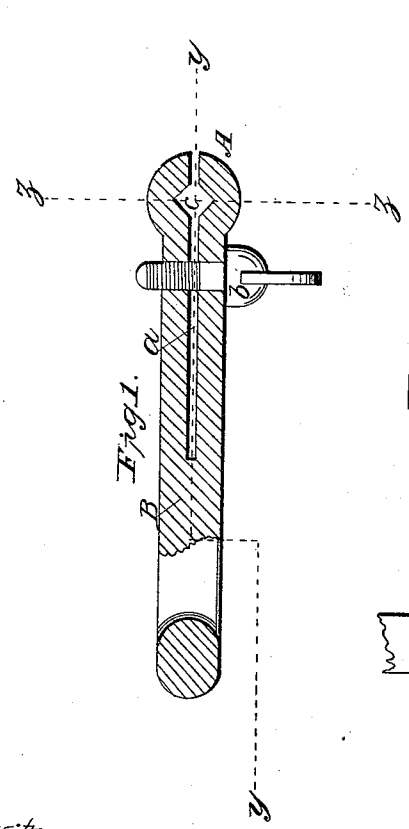


Fig. 1.

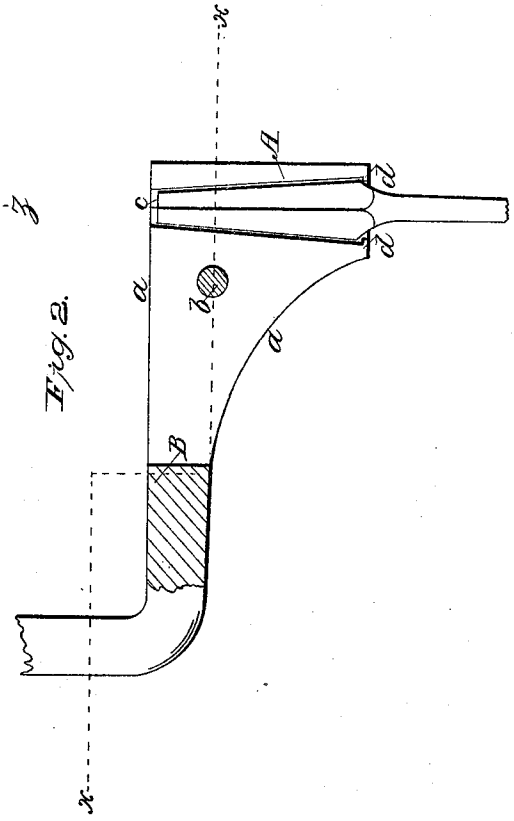


Fig. 2.

Witnesses.
John Preston.
John P. Bradstreet.

Inventor.
N. Spofford.

A.M. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

N. SPOFFORD, OF HAVERHILL, MASSACHUSETTS.

BIT-STOCK.

Specification forming part of Letters Patent No. 25,984, dated November 1, 1859; Reissued April 23, 1867, No. 2,576.

To all whom it may concern:

Be it known that I, N. SPOFFORD, of Haverhill, in the county of Essex and State of Massachusetts, have invented a new and Improved Mode of Fastening Bits in Braces; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 represents a horizontal section of my invention the line *x*, *x*, Fig. 2, indicating the plane of action. Fig. 2 is a longitudinal vertical section of ditto, taken in the plane indicated by the line *y*, *y*, Fig. 1. Fig. 3 is a transverse vertical section of ditto, the line *z z*, Fig. 1, indicating the plane of section.

Similar letters of reference in the three figures indicate corresponding parts.

This invention consists in arranging the socket of a brace with a slot that extends a certain distance into the arm of the brace dividing said socket into two parts which are forced together by means of a thumb screw so that the same accommodates itself to different sizes and different levels of the shanks of bits, the lower end of said socket being furnished with a projection that serves to retain the bit even with quite a moderate pressure of the thumb screw.

To enable those skilled in the art to make and use my invention I will proceed to describe it.

The socket, A, of the brace, and the arm, B, to which it is attached is made of steel. A slot, *a*, is cut into it, which divides said socket into two jaws, that are forced together by a thumb screw, *b*. The arm, B, and the socket, A, are tempered so that the same on relaxing the screw resume their original position. The socket is formed by a four-sided hole, *c*, perfectly smooth from the top nearly to the bottom and tapering so as to fit to the usual taper of the shanks of bits. The lower or larger end of the hole is furnished with a projection, *d*, which is so low that the bits can be inserted quite freely, when the thumb screw is turned back, but sufficiently high to retain the bits when the thumb screw is turned on. The shank of the bit is passed up into the socket, A, until its largest end is beyond the projection, *d*, and the thumb screw is turned on. The two jaws of the socket accommodate themselves to the bevel of the shank, and the bit is retained perfectly secure. No notch or spring is required, and it must be remarked that the bevel of the shanks may differ considerably, and still by turning up the thumb screw the jaws will adapt themselves to each shank equally well and the bits will all be retained perfectly secure. With my brace, therefore, it is not at all necessary to bestow particular care in making all the shanks of the bits exactly of the same size or of the same bevel, whereas with the common brace each shank has to fit exactly into the socket of the brace, in order to be able to retain the bit firmly. The shank of each bit has also to be furnished with a notch for the purpose of retaining it in the socket, whereas with my brace the projection, *d*, serves for all the bits so that the labor which has to be bestowed on the bits in order to make them fit for the brace is considerably reduced, if not entirely avoided.

Having thus fully described my invention what I claim as new, and desire to secure by Letters Patent, is:—

Arranging the socket, A, of a brace with a slot, *a*, as described, in combination with a thumb screw, *b*, and projections, *d*, or their equivalents substantially as and for the purpose specified.

N. SPOFFORD.

Witnesses:

JOHN PRESTON,

JOHN P. BRADSTREET.