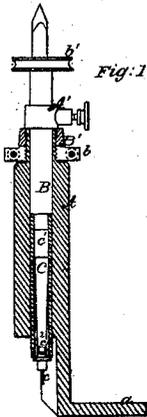


*Barnum & Schreiber,*

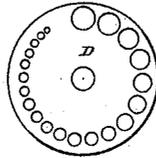
*Watchmakers' Tool.*

*N<sup>o</sup> 65,991.*

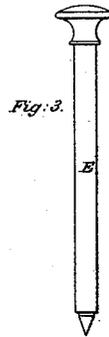
*Patented June 25, 1867.*



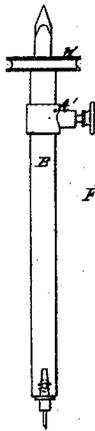
*Fig. 1*



*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



*Fig. 6.*

*Witnesses*

*Geo. S. Kertzel  
Chas. W. Poyle*

*Inventors:*

*W. Barnum  
George Schreiber  
by W. H. and O. Co. atty*

# United States Patent Office.

NELSON BARNUM AND GEORGE C. SCHREIBER, OF ST. LOUIS, MISSOURI,  
ASSIGNORS TO NELSON BARNUM, OF THE SAME PLACE.

Letters Patent No. 65,991, dated June 25, 1867.

## IMPROVEMENTS IN DRILLING-INSTRUMENTS.

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

### TO ALL WHOM IT MAY CONCERN:

Be it known that we, NELSON BARNUM and GEORGE C. SCHREIBER, have invented a new and useful Drilling-Instrument for watchmakers' use and other like purposes; and we do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of this invention consists in constructing the drill and drill-stock in such a manner as to make the drill or tool set in the stock eccentrically, and also to make this eccentricity adjustable, by means of a set-screw, so that diameter of the path described by the tool may be made of any required size, simply by turning the set-screw in or out.

To enable those skilled in the art to make and use our improved drilling-instrument, we will proceed to describe its construction and operation.

Figure 1 is a sectional elevation of the improved instrument, and the socket in which it works.

Figure 2 is a plan of the gauge used for setting it.

Figure 3 is an elevation of the pin used for centring the socket on the gauge previous to the insertion of the drill-stock.

Figure 4 is an elevation of the drill-stock.

Figure 5 is an enlarged view, showing the tool and its adjusting-spring, also the set-screw used for adjusting the eccentricity of the tool.

Figure 6 is one of the tools or bits shown in elevation.

A is the socket in which the drill-stock B revolves. On the lower end of it there is a shelf or flange, *a*, which is used for securing it to the lathe or adjusting it on the gauge, as will be hereinafter more fully described. A portion of the lower end of the socket should be left open, so as to disclose the tool, for the purposes of adjustment. A nut or screw-head, *A'*, is screwed on to the top end or head of the socket A, and may be screwed up or down, for the purpose of regulating the depth to which the tool is intended to cut. A loose collar, *B'*, on the top end of the drill-stock B, may be used for the same purpose. A small set-screw, *b*, may be used to set the collar fast at any desired position. The stock B is fitted into the socket A, so that it may turn easily therein, and it is provided with a pulley, *b'*, on its upper end for the purpose of transmitting motion to it. All of the foregoing parts of this instrument are similar to machinery of the kind now in use, and hence are not claimed as our invention. A cylindrical cavity is bored in the bottom end of the drill-stock B of sufficient depth and area to receive the spring C, to the lower end of which the drill or other tool, *c*, is attached. An enlarged head, *c'*, at the upper end of the spring, just fills the cavity bored in B to receive it, and holds that end of the spring in a fixed position. The spring is set so as to draw to one side of the orifice at the bottom of B, and near its lower end it is perforated for the screw *c''*, and the female threads for the said screw are cut in the said spring. There are tapering slots in the sides of the drill-stock at its lower end, for the reception of the ends of the screw *c''*, as clearly shown in fig. 4. These slots and the two ends of the screw are so nicely adjusted to each other that when the spring is shoved into its place in the stock, the ends of the screw fit tightly to the said stock, and prevent the spring from slipping out. A collar shown on the head of the screw slips inside of the cavity of the stock, and rests against the same, so as to enable the screw to be turned, and thereby force the spring off from or let it up to one side, as may be required to set the tool *c* in the required position. By means of the screw *c''* the tool *c* may be set to travel in a larger or smaller circle, just as may be required, and a smaller or larger hole may thus be bored with the same bit by merely changing the adjustment. By having a slot cut up into the tool from its lower end, a ridge may be formed around a hole that is bored by this instrument suitable for the setting of a jewel in a watch-plate. Then, by inserting a burnishing-instrument in place of the tool *c*, the setting of a jewel may be completed. The tool *c*, suitable for forming the ridge above referred to, is shown in fig. 6. When this instrument is to be set to any required sized hole, the stock B is to be withdrawn from the socket A, and the foot *a* set on the gauge D. The pin E will then be inserted in the stock, and its cone-pointed end placed in the desired cavity of the gauge, so as to properly centre the socket. The pin

E will then be removed from the socket, and the stock B inserted in its place, when the tool *c* may be set so as to bore out the hole indicated on the gauge.

Having described our invention, what we claim, is—

1. The stock B, with a tool-cavity and tapering slots for the screw *c*<sup>2</sup> in its lower end, combined with the spring C and the set-screw *c*<sup>2</sup>, substantially as described and set forth.
2. The slotted tool *c*, in combination with the spring-holder C and its set-screw *c*<sup>2</sup>, and the tool-stock B, when acting substantially as set forth.

NELSON BARNUM,  
GEORGE C. SCHREIBER.

Witnesses:

M. RANDOLPH,  
S. M. RANDOLPH.