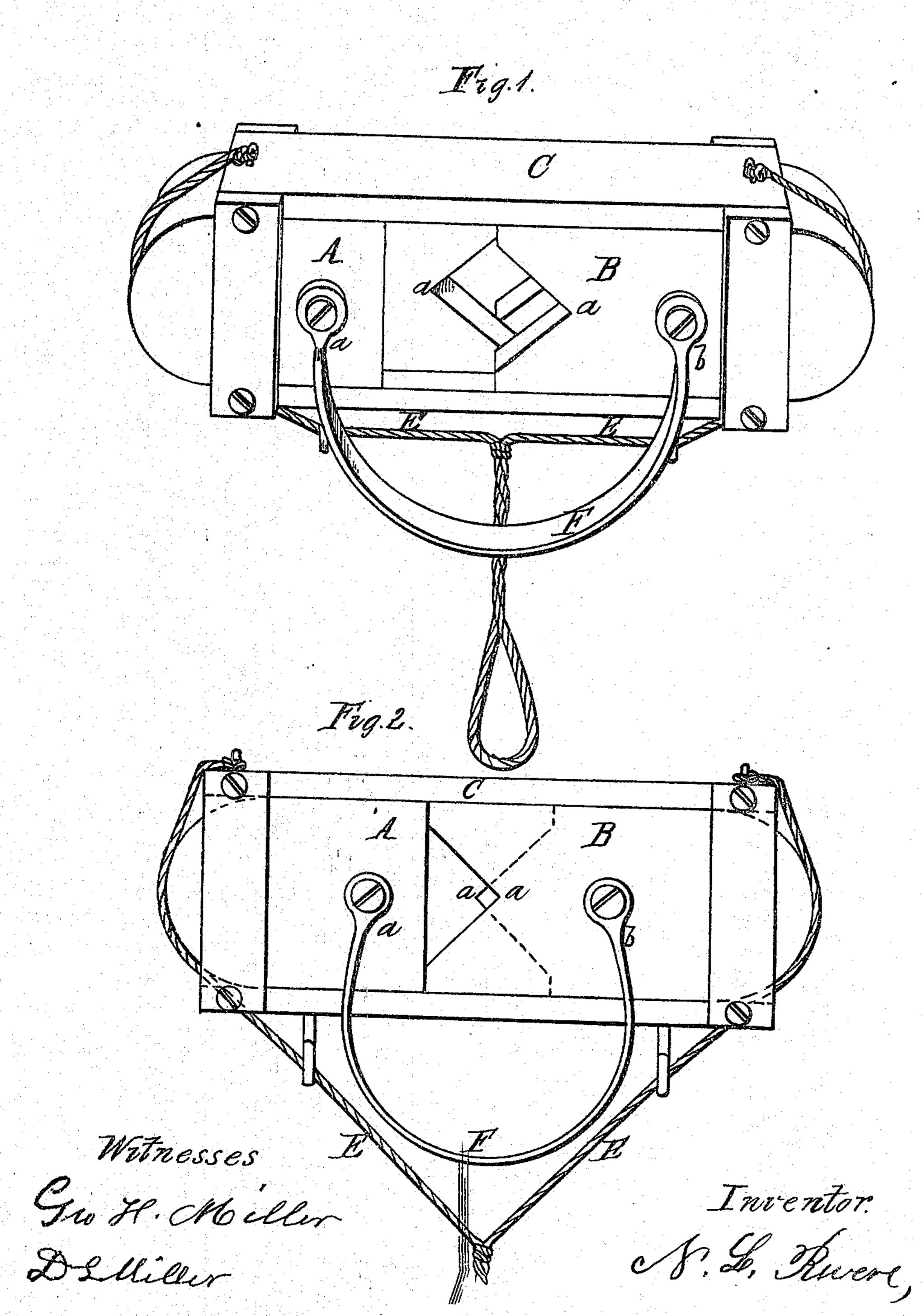
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## Contoning Machine.

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## N. L. REVERE, OF WORCESTER, MASSACHUSETTS.

Letters Patent No. 87,431, dated March 2, 1869.

## IMPROVED CENTRING-DEVICE.

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

Know all men by these presents:

That I, N. L. REVERE, of the city of Worcester, county of Worcester, and Commonwealth of Massacliusetts, have invented certain new and useful Improvements in Centring-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and in which-

Figure I represents a perspective view of so much of a centring-machine as is necessary to illustrate my

present invention, and

Figure 2 represents a side view of the same.

To enable those skilled in the art to which my invention belongs, to make and use the same, I will proceed to describe it more in detail.

In the drawings—

A B represent the centring-jaws, which are fitted to slide back and forth in a frame, C, and which frame is to be properly supported upon the ways of a lathe, in such a manner as to bring the points a of the notches in the jaws A B on a line with the centre of the lathedrill.

The jaws are forced together by drawing down the cords E E, while they are forced apart by the bowspring F, when the cords E E are released, as fully indicated in the drawings, the ends a b of spring F being

fastened to respective jaws A B.

The nature of my invention consists in combining the bow-spring F with the jaws A B, substantially as shown and described, and is an improvement upon the centring machine patented by N. F. Newell, on the 29th day of January, 1861.

In Newell's machine, the centring-jaws are operated by metal levers, instead of cords, and which arrangement may be employed in connection with my present invention.

In the Newell machine referred to above, the centring-jaws do not open freely after the shaft has been squared and centred, and there is great liability of breaking the drill-point in working the jaws back, by a lateral motion of the end of the centred shaft.

By my invention, the centring-jaws are thrown back by the spring F, thus releasing the end of the shaft as soon as the foot is removed from the treadle, which depresses the cords E, or the metal levers, when the latter are used to compress the centring-jaws.

It may be remarked that, so far as the construction of the parts of the centring-machine is concerned, except the bow-spring, they may be made and operated the same as shown and described in said Newell's patent above referred to.

Having described my improvement in centring-ma-

chines,

What I claim therein as new and of my invention, and desire to secure by Letters Patent, is-

The improved centring-device herein described, consisting of the several parts specified, all constructed, arranged, and operating substantially as shown and set forth.

N. L. REVERE.

Witnesses:

GEO. H. MILLER, D. L. MILLER.