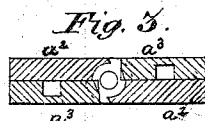
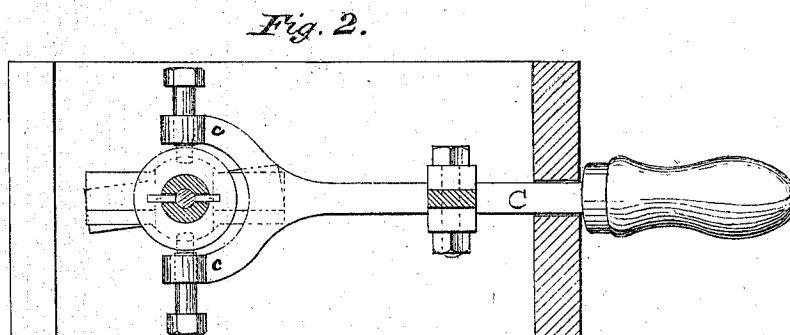
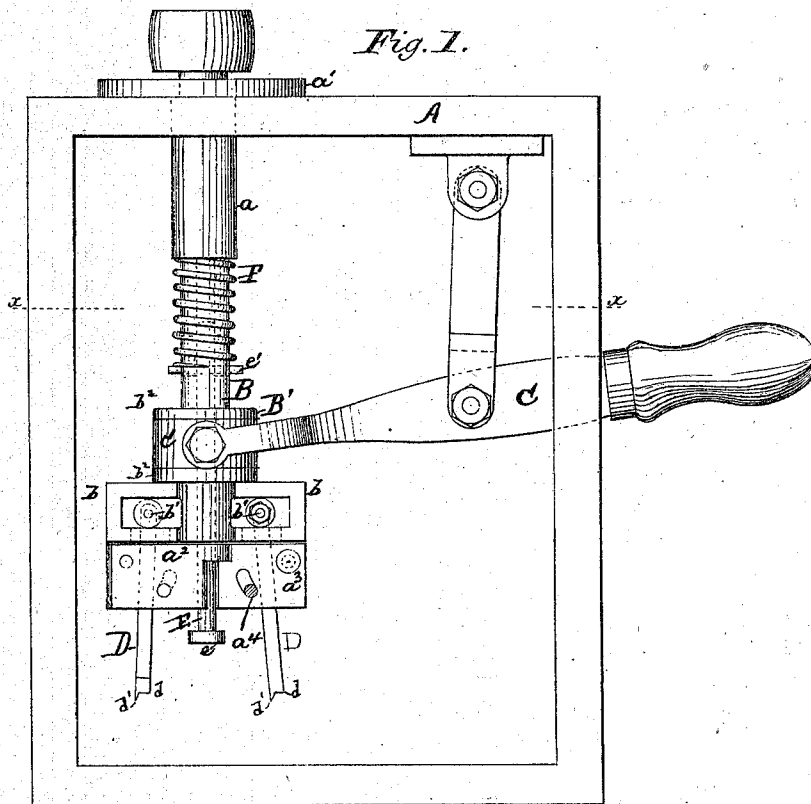


A. W. C. STERNBERG.
Improvement in Bung-Cutters.

No. 115,253.

Patented May 23, 1871.



Witnesses:

W. B. Raymond
S. J. Hayes

Inventor

A. W. C. Sternberg by
H. M. Beadle atty.

United States Patent Office.

ADOLF WILHELM CRISTIAN STERNBERG, OF DAVENPORT, IOWA.

Letters Patent No. 115,253, dated May 23, 1871.

IMPROVEMENT IN BUNG-CUTTERS.

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, ADOLF WILHELM CRISTIAN STERNBERG, of Davenport, in the county of Scott and State of Iowa, have invented a new and improved Machine for Cutting Cylindrical and Conical Forms; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

This invention has for its object the production of a machine capable of cutting cylindrical and conical forms, which may be readily adjusted to cut any desired size within the limits of the machine, and consists in certain details of construction, as will be fully described hereinafter.

In the drawing—

Figure 1 represents a side elevation of my improved machine;

Figure 2, a plan view through the line $x x$, fig. 1; and

Figure 3, a sectional view of the arms of the vertical shaft and of the face-plates.

To enable others skilled in the art to make and use my invention, I will now proceed to describe fully its construction and manner of operation.

A represents any suitable frame-work or support for the machine:

B represents a vertical shaft, which may revolve in any proper bearings, and be actuated by any suitable power.

I preferably employ as a bearing a cylindrical socket, a , which projects through the supporting-beam, and is provided above with a bearing-flange, a^1 , as shown.

The lower end of the shaft is provided upon opposite sides with arms a^2 , fig. 3, consisting of suitable pieces of metal, of proper strength and size, which furnish a bearing, against which the cutters press when in operation.

B' represents a cylindrical socket, located upon the shaft A above the arms a^2 , which is provided with boxes $b b$, the lower sides of which are slotted, to receive the upper ends of the cutters, the latter being secured to transverse shafts $b^1 b^1$, provided with friction-rollers, as shown.

The socket B revolves with the shaft A, but is capable of a vertical movement thereon, being actuated by means of a lever, C, which is secured to it by means of the bifurcated arms $c c$, which are attached, by set-screws, to the collar c' , held in place by flanges $b^2 b^2$, as shown.

D D represent the cutters, which are held above by the boxes $b b$, as described, and below by the plates

$a^3 a^3$, fig. 3, secured to the arms $a^2 a^2$, the plates a^3 being provided with a suitable recess to receive the cutter, as shown.

One of the holding-screws a^4 passes through a slotted opening in the face-plate a^3 , by which means the latter may be swung up or down upon the other screw as a pivot, for the purpose of adjusting the position of the cutters, as may be desired.

The lower ends of the cutters are provided with cutting-edges $d d$, the edge d' being located upon the outside of one and the inside of the other, in order that both edges of the groove may be properly cut.

E represents a vertical shaft provided with a disk, e , at its lower end, as shown. This shaft has a vertical movement in a socket in the lower end of the main shaft B, which is made hollow for that purpose, and is secured from displacement by means of a transverse pin, e' , which moves in a slot of the shaft B, as shown.

F represents a coiled spring, which is located upon the shaft B between the pin e' and the lower edge of the socket a , as shown.

The operation is as follows:

The cutters are first adjusted either in vertical lines to cut a cylinder, or inclined lines to cut a cone. This adjustment is made by simply loosening the holding-screws and by moving the face-plates a^3 to throw the cutters into the desired position, where they may be readily secured again by turning on the screws.

Motion is communicated to the machine in any proper manner. The material to be cut is then placed beneath the cutters, the latter being raised by means of the lever C, which lifts the socket B', to which the cutters are attached, (the latter moving upward in the recesses of the face-plates a^3). When the material is thus placed, the lever is operated to bring the rapidly-revolving cutters down upon it, and to depress them as the operation of cutting proceeds. When the desired distance has been gone through, the cutters are again raised by the levers. During this movement, the disk e operates to prevent the work from rising with the cutters until the latter are free from it. When this point has been reached, however, the disk e is raised with the same movement of the lever, by means of the socket B', the upper edge of which comes in contact with the pin e' and causes it to rise with the shaft E.

By means of the friction-rollers on the shaft b^1 the necessary movement of the upper ends of the cutters, as the lever is elevated and depressed, takes place, without undue friction and consequent injury to the machine.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the sliding socket B' with the pin e', adapted to lift the shaft E within the stationary shaft B, as described.

2. The slotted face-plate a', pivoted at a^s, combined with and constructed to adjust the cutter D, substantially as described.

This specification signed and witnessed this 22d day of February, 1871.

ADOLF WILHELM CRISTIAN STERNBERG.

Witnesses:

HENRY C. F. JENSEN

JOHN HEUERMANN.