

HENRY C. ROSIN.

Improvement in Devices for Cutting Concaves.

No. 118,489.

Patented Aug. 29, 1871.

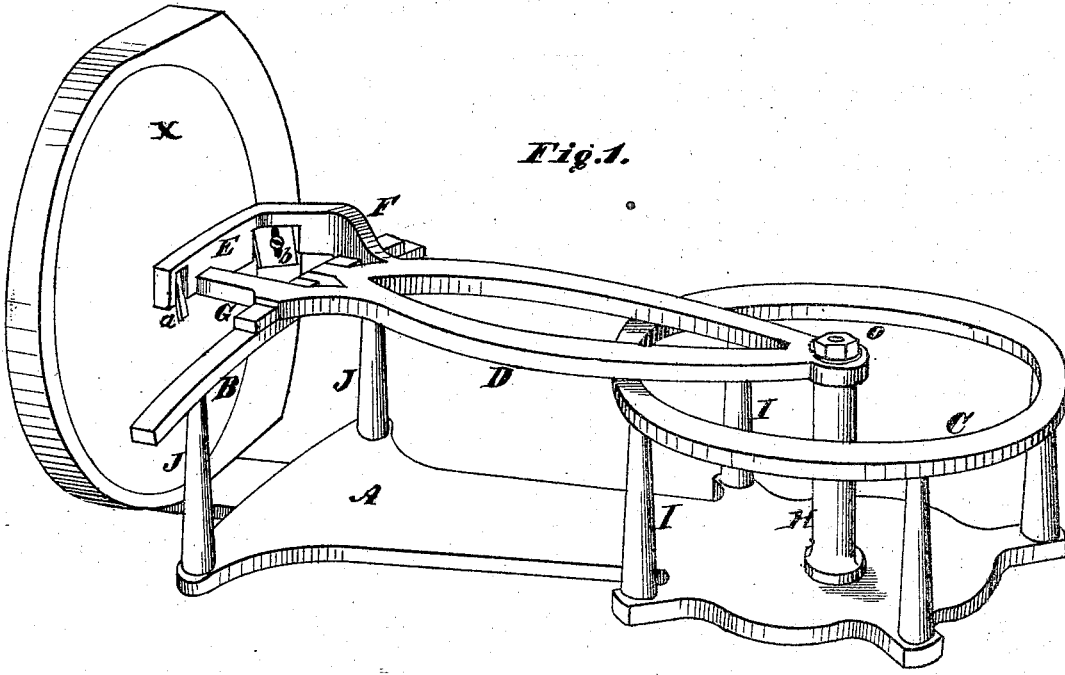


Fig. 1.

Fig. 3.

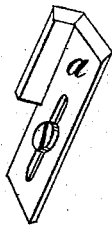
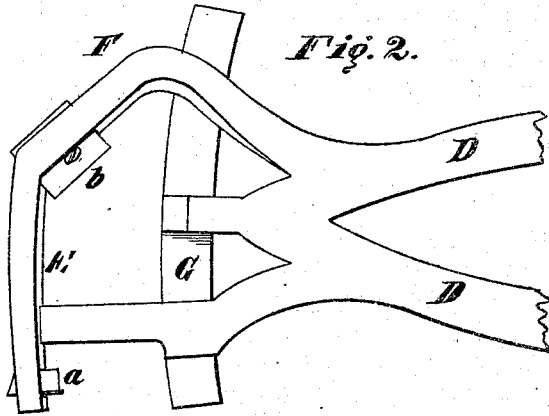


Fig. 2.



Witnesses.

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HENRY C. ROSIN, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN DEVICES FOR CUTTING CONCAVES.

Specification forming part of Letters Patent No. 118,489, dated August 29, 1871.

To all whom it may concern:

Be it known that I, HENRY C. ROSIN, of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Machines for Cutting Concaves, of which the following is a full description, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 represents a perspective view; Fig. 2, a top or plan view of the cutting-head and end of the arm or lever; and Fig. 3, a perspective view of the plane-bit for smoothing.

This machine or device is constructed for the purpose of turning chair-bottoms or any other thing concave, where only a slight concavity is desired, or where it is not desirable to save the piece or pieces taken out; and also for smoothing or finishing the work as the machine passes across or over it; and its nature consists in providing a lever or arm swinging or moving from a fixed center, so that it will move in an arc across the face of a rotating article to be hollowed; in providing the head of such arm or lever with a cutting-bit and a smoothing-bit; and in an improved form and construction of the bits.

To enable others skilled in the art to make and use my improved device, I will describe the construction and operation of the same.

In the drawing, A indicates any suitable base or platform; B, a guide-rest or frame; C, a supporting-frame; D, the arm or lever; E, the head of the arm; F, bent portion of the head; G, guide or cross-bar of the arm; H, center-post or pivot; I and J, supporting-posts; X, a chair-bottom; *a*, smoothing-bit; and *b*, cutter or cutting-bit.

The chair-bottom X or other article to be hollowed is held in place and centered by a chuck in any suitable lathe. The guide-rest B is so located and arranged with the cross-bar G of the arm, or with the arm, that the line of movement of the cutters is across the center of movement in X. The concavity of the cutting depends upon the length of the arm D, as the shorter it is the deeper it will cut at the center. This arm is

pivoted to the post H or to any other suitable device, which post should be in line with the lathe to insure proper cutting. I have supported the rear end of the arm by a frame, C. This frame I prefer to make annular, as shown, so that, in case it is desired, the arm can be swung clear around; but this is not essential; and a part of this frame or the whole of it may be omitted. The head E of the arm has a bent portion, F. I place the cutter *b* in this bent portion, so as to give it the proper position for giving a smooth and easy cut. Both of the bits *a* and *b* are inserted in the cutter-head at an upward angle, and they are gauged to cut at a greater or lesser depth by the continuity of the cutter-head, like plane-bits. The bit *b* should be three or four inches wide, while *a* may be much narrower. The bit *a* is for the purpose of smoothing after the cutting-bit *b*; and for this purpose I find it necessary to turn or bevel up and sharpen the back edge, as shown at Fig. 3. When made as shown it smooths the work perfectly. These two bits or cutters, in order to work perfectly together, are placed the same distance from the center of motion of the arm, so as to work on the same arc of a circle.

The arm D or the frame may be made adjustable, so as to cause the cutter-head to move on a greater or lesser circle in the same machine.

Having thus fully described my machine, what I claim as new is—

1. The non-rotating swinging arm D provided with a cutter-head, E, and mounted upon a supporting-frame so as to swing in the arc of a circle, substantially as described.

2. The swinging cutter-head E having the cutting-bit *b* and the smoothing-bit *a* arranged on opposite sides of the central radial line of the arm D, as herein described.

HENRY C. ROSIN.

Witnesses:

L. L. BOND,
O. W. BOND.