J. A. Safford,

Cutting Leather.

No. 47,340. Patented Apr. 18, 1865.

Fig. 1.

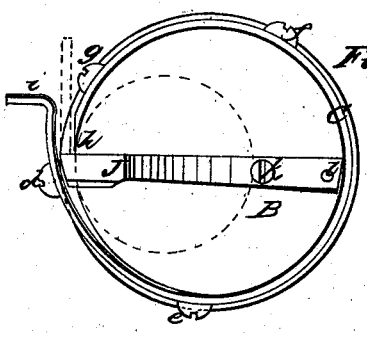
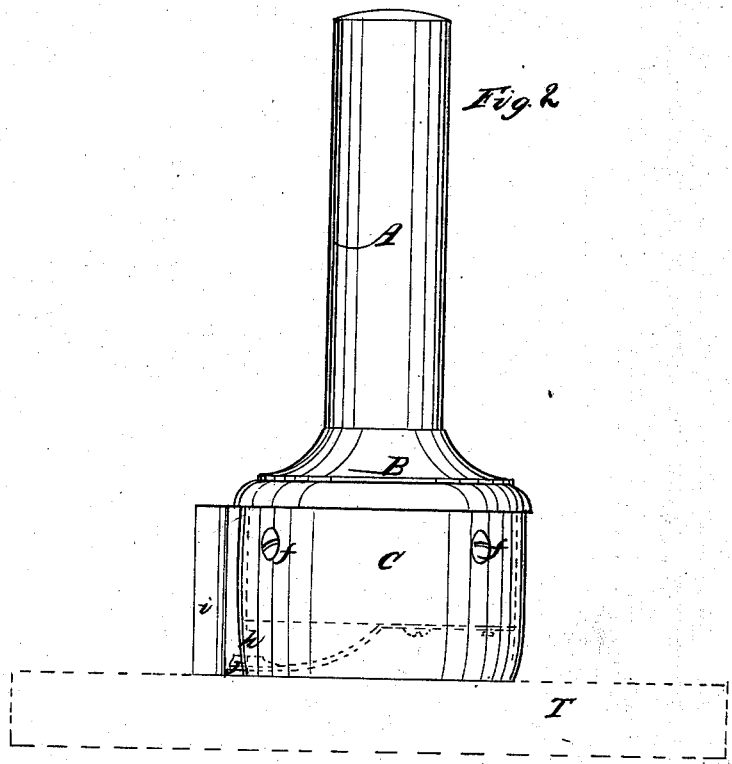


Fig. 2



Witnesses

Samuel D. Ritter

N. Ames

Inventor

J. A. Safford

UNITED STATES PATENT OFFICE.

J. A. SAFFORD, OF BOSTON, MASSACHUSETTS.

LEATHER-SHOE-STRING CUTTER.

Specification forming part of Letters Patent No. **47,340**, dated April 18, 1865.

To all whom it may concern:

Be it known that I, J. A. SAFFORD, of Boston, in the county Suffolk and State of Massachusetts, have invented a new and useful Leather-Shoe-String Cutter, and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation, and Fig. 2 a plan of the bottom.

Like parts are indicated by the same letters in both figures.

The nature of my invention consists, first, in the employment of a circular punch or cutter, C, provided with a tangential opening or throat and a vertical cutting-edge, *h*, whereby the leather may be cut into a circular disk and drawn immediately out into shoe-strings or a long continuous strip with great precision and dispatch; second, in the employment, within the circular punch of a spring, J, whereby the leather, while being drawn out into strings, is kept in proper position on the table and prevented from turning up edgewise; third, in rendering the aforesaid throat adjustable, so as to cut out stings of various widths; and, fourth, in continuing the circular cutter outward from the throat, so as to form a wing, *i*, in order to cut through the circular hole made in the leather by said cutter, and thereby leave a free end for the operator to grasp as he begins to draw out the string.

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

The cutter-head B and handle A are made of cast-iron or other suitable metal or material. The head B is circular, with a flat bottom or end about two inches (more or less) in diameter.

C is a steel punch or cutter-blade, which is bent into a nearly circular form, as represented in Fig. 2, *i* being a tangential continuation of the same, and forming the adjustable throat or opening through which the string is drawn. This circular cutter C is attached to the cutter-head B by means of screws *d e f g*, the cutter-head having a rabbe (shown by dotted lines in Fig. 1) to receive it. The bottom of the punch C and wing *i*, as well as the end *h* of the punch, are ground to a cutting-edge.

J is a flat spring (the shape and position of which are clearly shown in the drawings) attached to the bottom of the cutter-head B by means of the screw *k* and steady-pin *l*. The design of this spring is to press upon the leather and prevent it from turning up edgewise while revolving under the punch upon the block or table T, (see dotted lines in Fig. 1,) on which the punching and cutting operation is performed. The throat or opening through which the string is drawn may be diminished or enlarged, at pleasure, by turning in or out the screw *d*.

The punch C is represented in the drawings as made of a continuous strip of metal. It may, however, be made in two or more sections, if desirable, so that the cutting end *h* may be removed and readily sharpened without removing the other part or parts.

The leather to be cut into strings is laid upon the table T, of wood or other suitable material, and the punch, being placed upon it in the required position, is driven through the leather by the blow of a mallet or by pressure on the top of the handle A. This cuts the leather into a circular disk, with a tangential end projecting through the throat or opening between the cutting end *h* and the wing *i*. The punch being still held in this position on the table, the operator seizes the strip projecting through the throat and draws it out in the direction represented by the dotted line S in Fig. 2, the sharpened end *h* of the punch cutting from the periphery of the revolving disk a strip or string, the width of which is determined by the gage of the throat.

My machine is very simple, cheap, and easily kept in working order, and by it leather may be cut into strips or shoe strings with great rapidity and precision.

Having thus described the construction and operation of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The circular cutter C, with a tangential opening and a cutting end, *h*, substantially as set forth, and for the purpose described.

2. The employment of the spring J, or its equivalent, within the circular cutter C, substantially as and for the purpose described.

3. Rendering the tangential opening or throat adjustable, substantially as and for the purpose described.

4. The tangential wing or cutter *i*, substantially as set forth, and for the purpose specified.

J. A. SAFFORD.

Witnesses:
N. AMES,
SAMUEL D. TILTON.