

Cutting Leather.

Patented June 30, 1863.

Fig. 1.

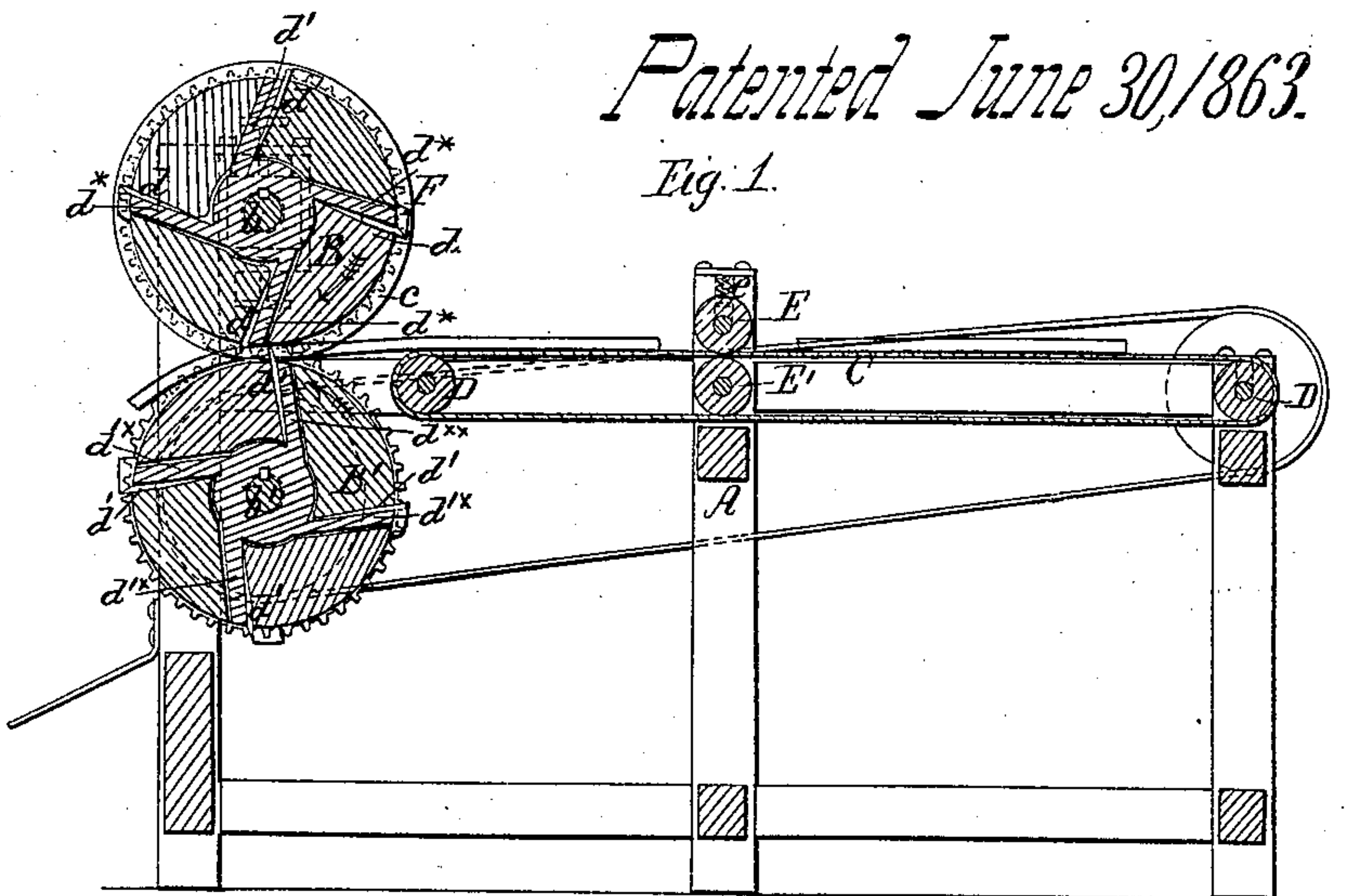


Fig. 2.

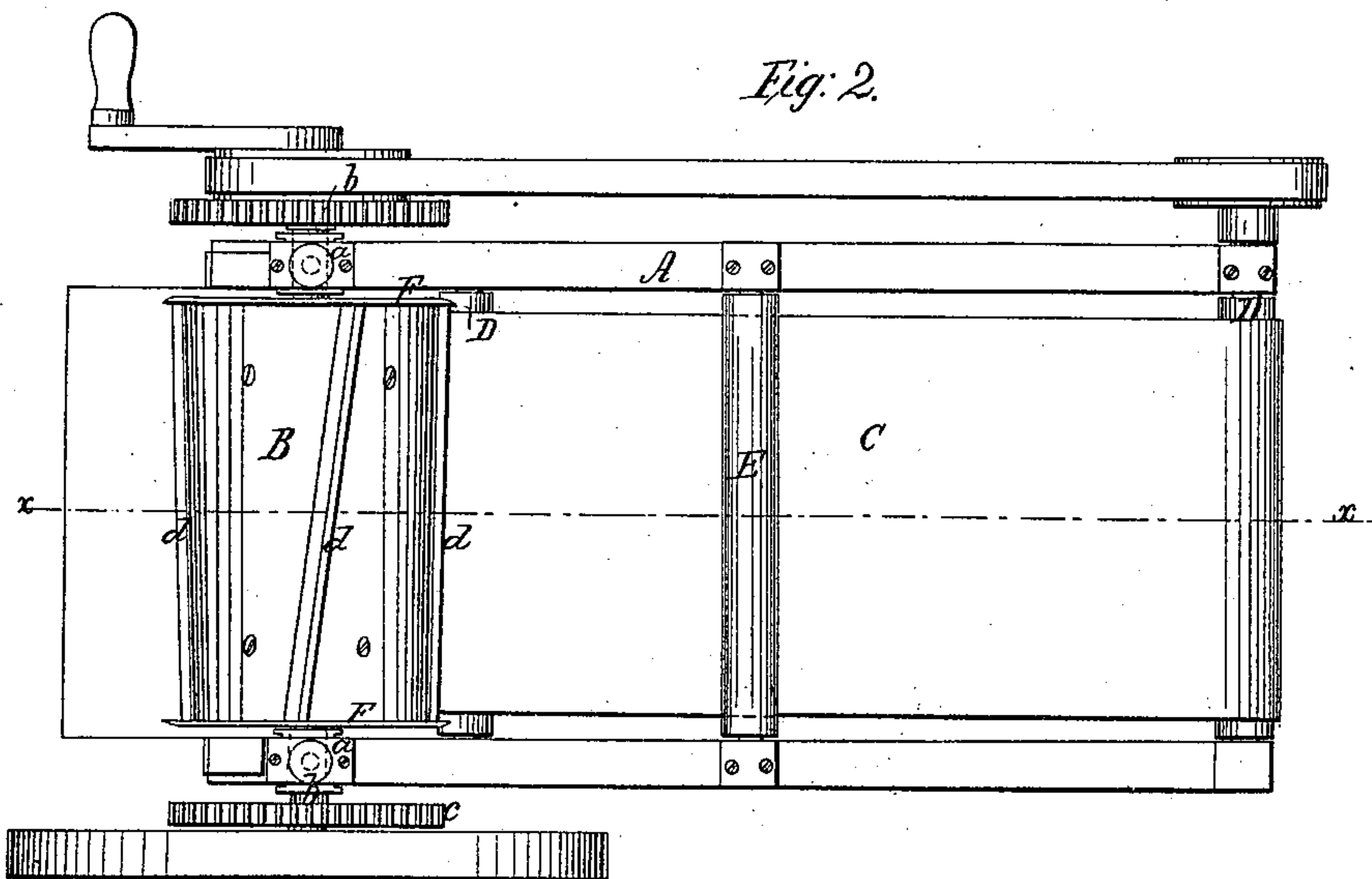


Fig. 3.

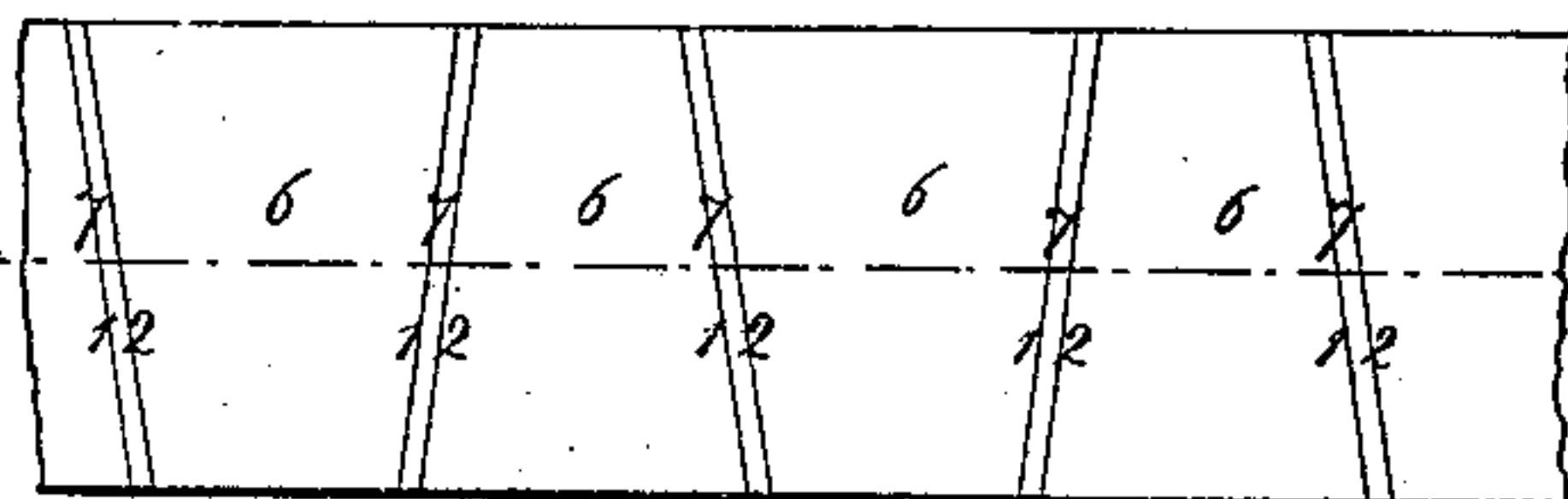


Fig. 4

Witnesses,
M. S. Partridge
Emory Thine

Inventor;

Henry G. Smith

UNITED STATES PATENT OFFICE.

HENRY D. SMITH, OF NEW YORK, N. Y.

IMPROVED MACHINE FOR CUTTING OUT BAYONET-SCABBARDS.

Specification forming part of Letters Patent No. **39,074**, dated June 30, 1863; antedated June 16, 1863.

To all whom it may concern:

Be it known that I, HENRY D. SMITH, of the city, county, and State of New York, have invented a new and Improved Machine for Cutting Out Bayonet-Scabbards; 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, in which—

Figure 1 represents a longitudinal vertical section of my invention, the line *xx*, Fig. 2, indicating the plane of section. Fig. 2 is a plan or top view of the same. Fig. 3 is a plan of a piece of leather after the same has passed through my machine. Fig. 4 is a longitudinal vertical section of the same.

Similar letters of reference in the several views indicate corresponding parts.

The object of this invention is to cut up a piece of leather or other material in pieces suitable to make scabbards for bayonets.

To enable those skilled in the art to make and use my invention, I will proceed to describe it with reference to the drawings.

A represents a frame made of timber or any other suitable material, of sufficient strength and durability for the operation. Secured to this frame are four journal-boxes, *a*, which form the bearings for the axles *b b'* of two cylinders, B B'. The axles *b b'* extend beyond the journal-boxes *a*, and they are geared together by means of cog-wheels *c*—one pair on either end—thereby insuring a uniform and equal pressure. The journal-boxes of the upper cylinder are adjustable in a vertical direction by set-screws, so that the surfaces of the two cylinders can be set at the desired distance apart.

Each of the cylinders B B' is provided with four (more or less) knives, *d d'*, which are secured to oblique inclined arms *d* d'** at such distances apart that the spaces between them are equal in size and shape to the blank required for a bayonet-scabbard, the narrow end of one space being adjacent to the wide end of the adjoining space, as clearly shown in Fig. 2 of the drawings. The knives project beyond the surfaces of the cylinders, to which they are attached sufficiently far to cut clear through the leather or other material from which the scabbards are to be manufac-

tured, and the two cylinders are so adjusted that on rotating said cylinders the cutting-edges of the knives of one cylinder just come in contact with the surface of the other cylinder, and the leather or other material passing through between the two cylinders is cut clear through. The arms *d* d'**, to which the knives are secured, are inclined in opposite directions, so that the knives in cutting through the leather or other material leave the edges of the blanks beveled off in opposite directions, as indicated in Fig. 4, where the direction in which the knives of the upper cylinders cut is shown by the lines 1, and the direction in which the knives of the lower cylinder cut by the lines 2.

The inclined position of the knives renders it indispensable that the knives of the upper cylinder cut in advance of those of the lower cylinder, thus preventing the cutting-edges of one set of knives coming in contact with the other set. The small strips situated between the lines 1 and 2, Figs. 3 and 4, are waste, but such waste cannot be avoided if it is desired to give the proper bevel to the edges of the blanks. When the blanks have been thus cut out, the beveled edges are brought together, so as to produce a "flat seam," no thread being visible on the inside of the scabbard, so that by inserting the bayonet the seam is not liable to be injured.

The leather or other material from which it is intended to cut the scabbards is fed to the cutting-cylinders by an endless apron, C, which is stretched over rollers D, which have their bearings in the frame A, and two rollers, E E', one of which is subjected to the action of springs *e*, hold the leather or other material in contact with said apron. Disk-cutters F, which are secured to the ends of the upper cylinder, B, cut the leather or other material to the desired width. After having passed through the machine, the leather or other material is cut up in pieces, as indicated by the lines 1 2 in Figs. 3 and 4. The pieces 6 are the blanks for the scabbards, having their edges beveled, as clearly shown in Fig. 4, and the pieces 7 are waste, as previously stated.

By this machine, the operation of cutting blanks for bayonet-scabbards is rendered very easy, and one operator is enabled to accomplish much more work with less exertion than

a number of operators working in the ordinary manner.

I do not claim, broadly, the placing of knives upon cylinders for cutting leather; but,

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

1. Having the inclined oblique knives of one cylinder arranged in reverse position to those of the opposite cylinder, so that each

edge of each scabbard-blank will be cut with an inward bevel, substantially as herein shown and described.

2. The combination, with the knives, arranged as above described, of the feeding device C, as herein shown and set forth.

HENRY D. SMITH.

Witnesses:

TIMOTHY SHINE,
M. S. PARTRIDGE.