

(No Model.)

2 Sheets—Sheet 1.

H. T. ROHRMOSER.
APPARATUS FOR CUTTING HIDES INTO STRIPS.
No. 435,381.
Patented Aug. 26, 1890.

Fig. 1.

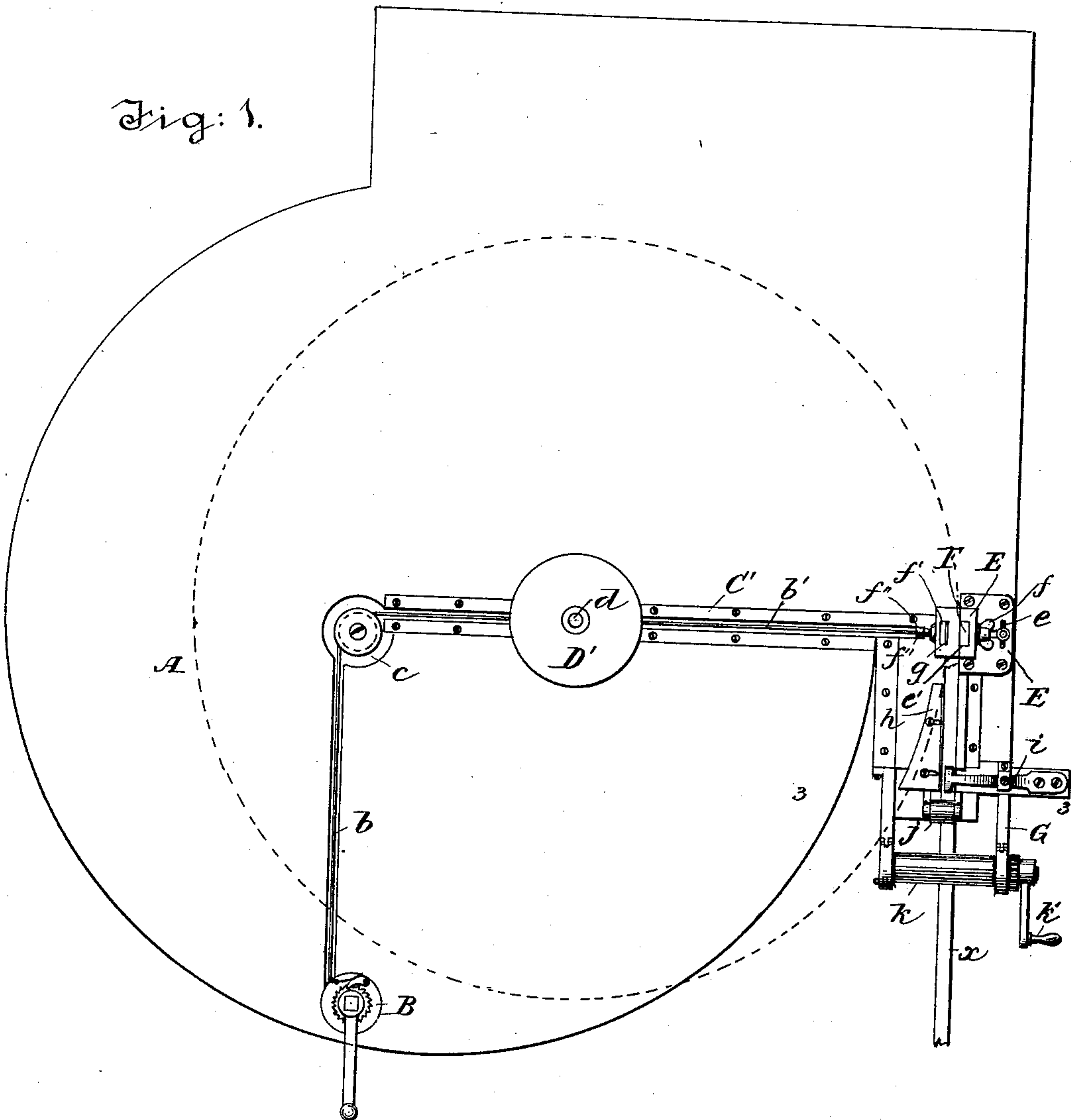
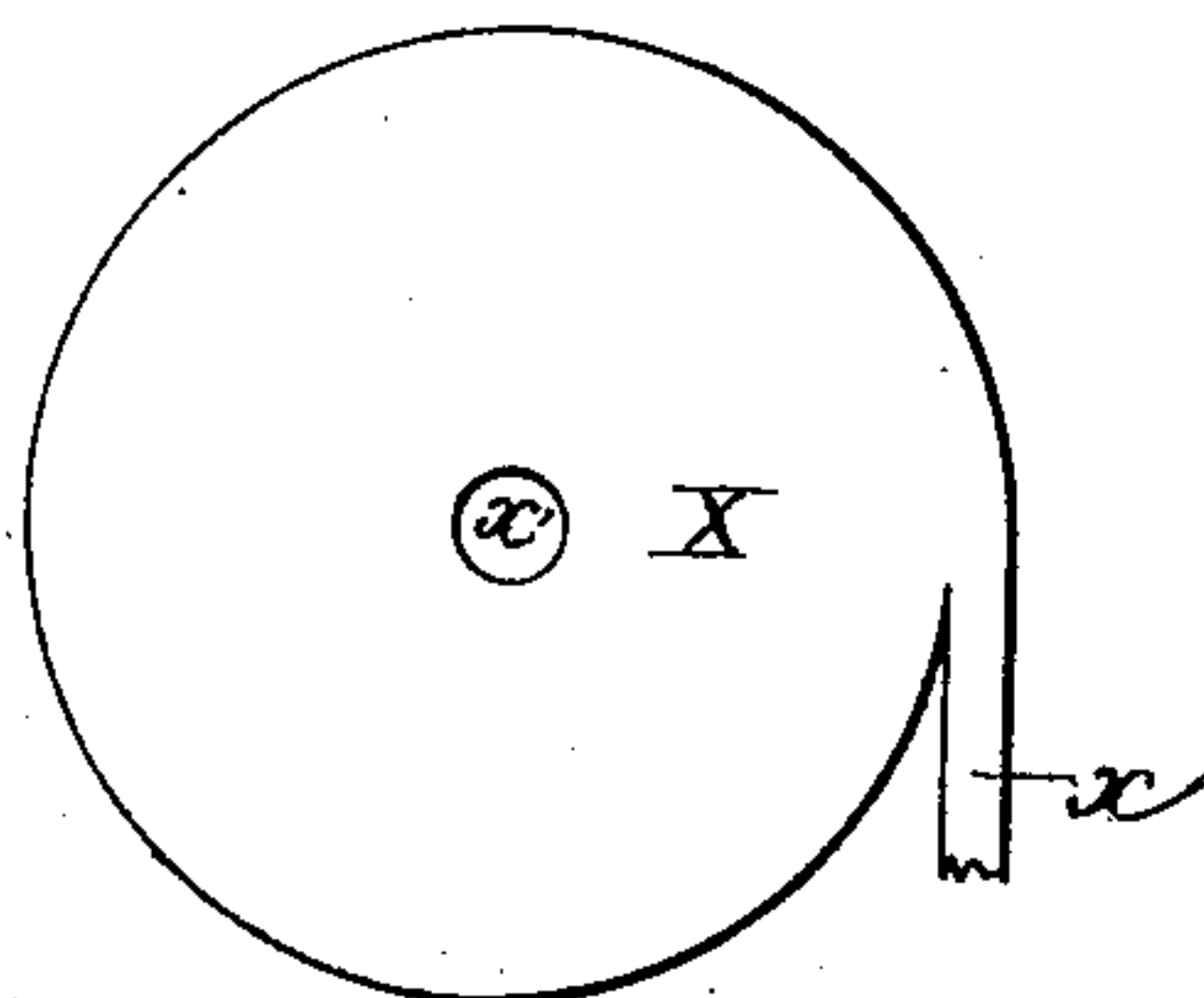


Fig. 4.



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Fig. 2.

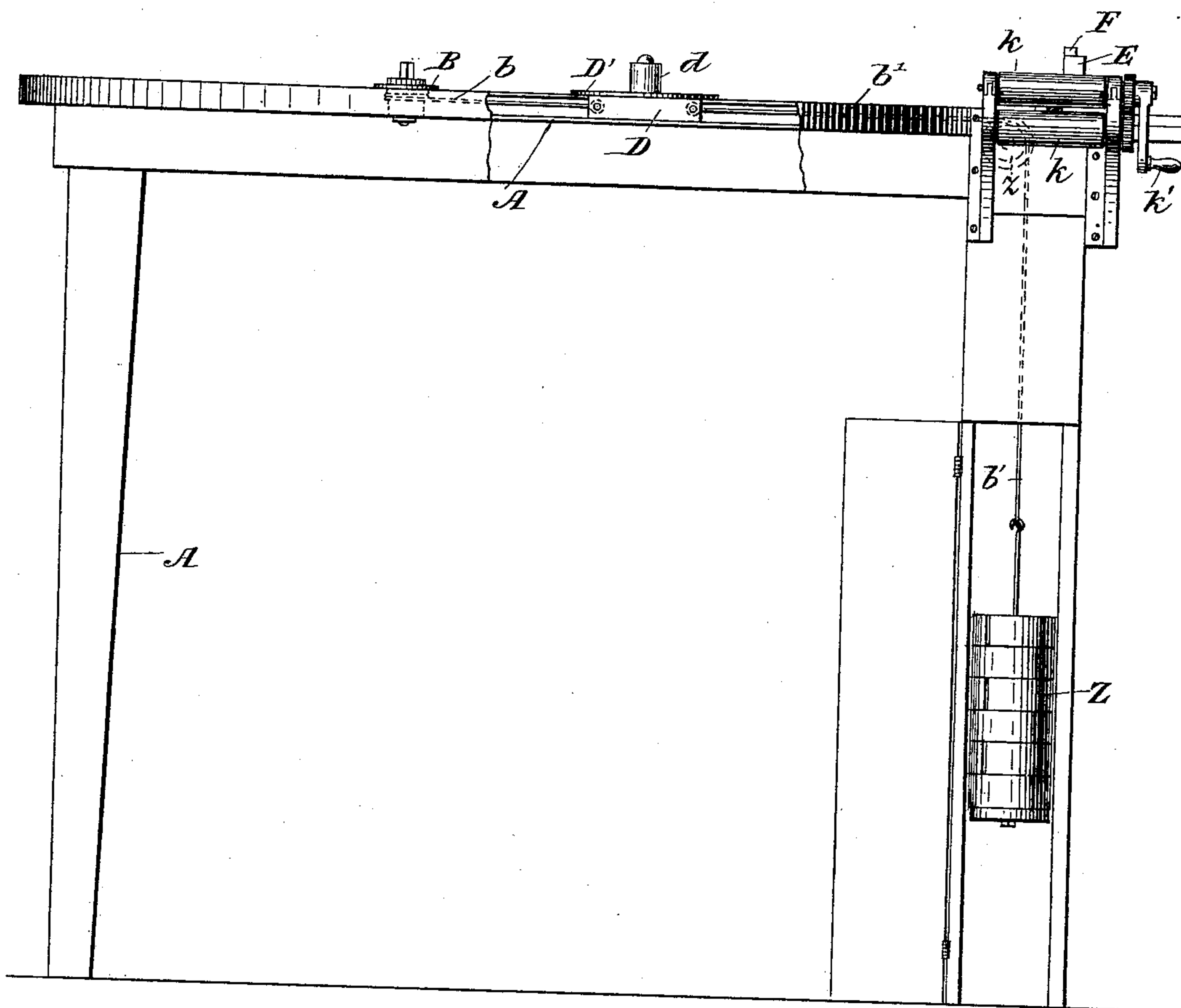
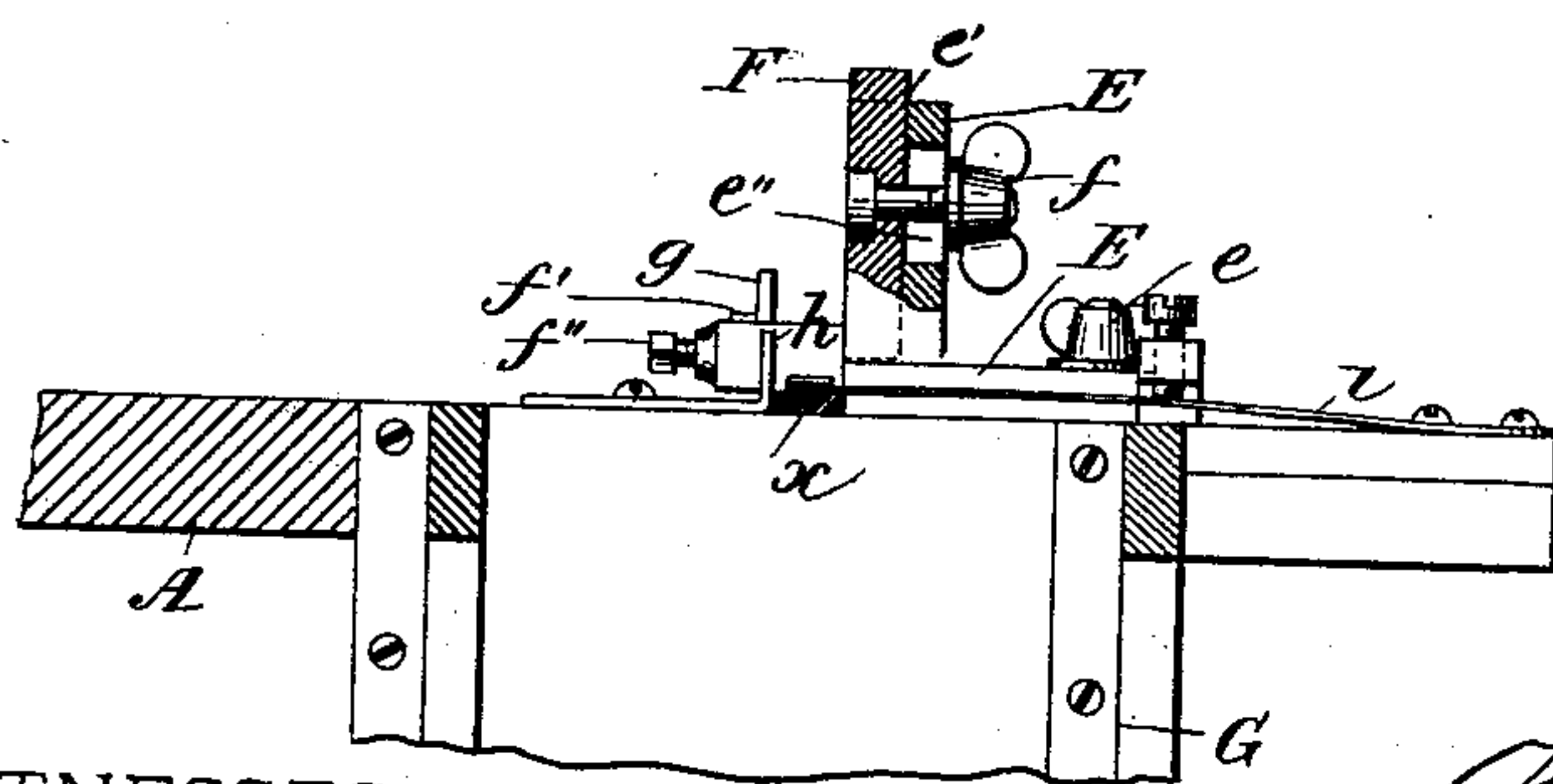


Fig. 3.



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UNITED STATES PATENT OFFICE.

HANS T. ROHRMOSER, OF HOBOKEN, NEW JERSEY.

APPARATUS FOR CUTTING HIDES INTO STRIPS.

SPECIFICATION forming part of Letters Patent No. 435,381, dated August 26, 1890.

Application filed March 12, 1890. Serial No. 343,672. (No model.)

To all whom it may concern:

Be it known that I, HANS T. ROHRMOSER, a subject of the Emperor of Germany, who has declared his intention of becoming a citizen of the United States, residing at Hoboken, Hudson county, New Jersey, have invented certain Improvements in Apparatus for Cutting Hides into Strips, of which the following is a specification.

My invention relates to improvements in the art of leather manufacturing; and the object of my invention is in part to provide a simple and improved method of operation, whereby raw or dressed hides may be cut into straps or bands of varying widths—such as are employed for “welts”—and in part to a novel and inexpensive machine for carrying my improved method into effect.

In carrying out my invention I take the raw cured undressed hide, or in some cases in a dressed state, and cut it to substantially the form or outline of a volute, the size and curve of the volute depending of course on the size of the hide employed, and to some degree on the width of the strap or band to be cut therefrom. In cutting this “blank,” as I will term it, I prefer to continue the spiral cut which forms the outline of the volute up into the body of the blank, as will be readily understood by reference to Figure 4 of the accompanying drawings, employing for the purpose of laying out the volute curve on the leather a metal pattern, of which there will be any number, varying in form and size, as desired. Such patterns will also have marked on them the center of the volute curve, in order that the blank may be properly set or adjusted when applied to the machine on which it is to be cut. The blank thus prepared and centered is then properly set on a flat table on which is fixed a cutter or stationary knife, and the edge of the blank nearest said cutter being properly guided and the knife inserted in the primarily-formed cut, which forms the continuation of the volute outline of the blank and separates the end of the strap from the remainder of the blank, a rotary movement of said blank about its center and toward said cutter or knife is imparted thereto, and simultaneously with this latter movement a sidewise movement of said

blank, also toward the cutter, is imparted thereto. By this means the cut started for the separation of the end of the strap or band of leather from the hide is continued, and these two movements are continued until the blank has been cut up as much as possible, when the small volute center piece is removed and another blank is applied, the operation being continued in like manner. By increasing the pitch of the volute curve a strap of greater width may be cut, and likewise by diminishing the pitch a narrower strap may be cut, as will be readily understood. In each case, however, the line of the cut which separates the band or strap from the remainder of the blank will be a continuation of the volute outline of the primarily-formed blank.

I will now describe the machine I prefer to employ for carrying my improved method into operation, with reference to the accompanying drawings, wherein—

Fig. 1 is a plan view of the machine, showing every part thereof; and Fig. 2 is a side elevation, partly in section, of the same. Fig. 3 is a detail sectional view, on an enlarged scale, showing the cutting device for separating the strap or band from the volute-blank. Fig. 4 is a face view, on a small scale, illustrating the form of the volute-blank as cut by the pattern in the preferred manner.

In the drawings, A represents a stout iron frame or table, the upper face of which is plain, and is of the form seen in Fig. 1, being of a semicircular form with a rectangular end for supporting the work, as shown.

B is a winding-on drum provided with a crank and pawl-and-ratchet device and mounted on the upper face of the table A, as shown. By means of the crank a connector *b*, preferably in the form of a rope, is wound about said drum B. This rope passes from the drum B across the face of the table A to a point opposite the center thereof, where it passes about a sheave or roller C and into a guideway C', formed on the face of the table A, in which slides a slide-piece D, guided therein, and to which the other end of the connector is attached. This guide-piece D may be of any form, being designed merely to form a movable support for the blank while

being cut; but in the drawings I have shown it formed of the slide-piece proper D, provided with a circular roof-plate D', from the center of which plate projects a stout centering-pin *d*, adapted to receive the blank when in position, said pin passing through the aperture primarily formed in the center of the volute-blank, as will be readily understood.

To the outer end of the slide-piece D is attached a connector *b'*, similar to the connector *b*, which passes along the guideway C', formed on the upper face of table A and over the edge of said table, at which point I prefer to provide a grooved roller or pulley *z* to receive it, and it bears at its end a weight Z, which is inclosed in a stout box, which may form one of the legs of the table A.

On the edge of the table, just beyond the sheave *z*, which is opposite the open end of the guideway C', is secured by screws or bolts a guide-plate *h*, preferably mounted adjustably, against the upright face of which the edge of the blank bears when in place on the machine.

The blank, as shown in Fig. 4, consists of a piece of leather X cut to the form, substantially, of a volute, the cut forming the outline being continued up into the body thereof to form the end *x* of the strap or band to be cut.

A bracket E, secured adjustably to the table A by a clamp-screw *e*, is provided on its inner vertical face toward the slide-piece D with a vertical guideway *e'*, in which plays the upright arm of an L-shaped cutter-holder F for the cutter or knife *g*. These parts E and F are also secured adjustably together by a clamp-screw *f*, which passes through an aperture in the upright slide-arm of the holder F and also through a slot *e''* in the upright arm of the bracket E, whereby the holder may be adjusted to permit the passage of a strap of any thickness below it. The cutter *g* is in the form of a knife, and is secured in a slot in the horizontal arm of the holder F by means of wedges *f'* and a set-screw *f''*. By using wedges of varying thickness the cutter may be adjusted for cutting straps of varying thickness, the cutter being set nearer the slide-piece D for a wider strap and farther therefrom for a narrower strap, as will be understood. The cutter-holder F and bracket E are secured to the table in such a position that the knife *g* in said holder will stand opposite the guideway C' in position to enter the severing cut between the end of the strap primarily formed in making the blank and the body thereof.

On the table A, just beyond the last-named bracket E, is secured a presser-foot *i*, which bears on the leather strap *x* as it is cut and passes along behind the guide-plate *h*, and in the edge of the table, just ahead of said presser-foot and directly in the path of the strap as it emerges past the knife *g*, is set a

small roller or sheave *j*, under which said strap passes.

G is a frame, preferably of angle or channel iron, bolted or otherwise secured to the table A, which bears in its outer arms two feed-rollers *k k*, geared together and provided with roughened surfaces, which surfaces stand at some little distance apart, in order to permit of the strap *x* passing between them, and driven from a crank *k'* or other suitable means. These rollers *k k* are arranged directly in the path of the strap as it passes over the roller *j*, and will be of course of sufficient width or length to admit of a strap of maximum width passing between them.

In operating the machine a blank X, cut to the form seen in Fig. 4, is set in position on the table A, the centering-pin *d* on the slide-piece D, which has been of course drawn back by the winding up of the conductor *b* on the drum B, taking into the aperture *x'* in the center of said blank. The edge of the blank will be then pressed against the guide-plate *h* by the strain imposed on the slide-piece D and blank X by weight Z, and the knife or cutter *g* is inserted in the end of the cut, which severs the end *x* of the strap from the remainder of the blank X, said end *x* being drawn along under the presser-foot *i* and under roller *j* back of the guide-plate *h*, which is also thereby interposed between the strap *x* and the blank X and into the bite of the feed-rollers *k k*. The crank *k'* is now turned, and the end of the strap *x* will be drawn along through said rollers, the knife *g* cutting or severing the strap *x* from the blank along a volute-curved line started in the formation of the blank. The blank being under a side strain toward the knife *g*, imposed by the weight Z, is thereby held firmly against the guide-plate *h*, whereby a uniform and regular cut is obtained. The drawing of the strap *x* between the rollers *k k* is continued until the blank, which constantly lessens in diameter, owing to the volute character of the cut, is of such a small diameter that no further cutting can be effected, when the remaining center-piece about the pin *d* is cut loose and removed and the end of the strap drawn out from the bite of the rollers *k k*.

While my machine is particularly adapted to cutting wide bands or strips of leather for use in cutting welts, it is also well adapted for cutting straps of narrower cross-section, as the width of the band may be regulated by the adjustment of the several adjustable parts—namely, knife *g*, bracket E, holder F, and guide-plate *h*.

I do not wish to be understood as limiting myself to the primary formation of the blank X, as the hide might with a proper formation of the parts be centered on the table and cut down to a strap of the proper width; but I prefer to primarily form the hide into blanks of suitable size and of a substantially volute

form with the end of the strap α also severed therefrom, as described. The mechanisms herein shown may also be varied to some extent without materially departing from the principles of my invention.

Having thus described my invention, I claim—

1. In an apparatus for cutting hides into strips, the combination, with a table having a knife adapted to be fixed thereupon, and a longitudinal guideway, of a slide-piece forming a movable support for the strip-blank and traveling in said guideway, a weight connected to one side of said slide-piece for drawing the same and the blank toward the knife, and a pawl-and-ratchet device connected by a strap to the opposite side of the slide-piece,

whereby the same may be held at any point in the guideway, for the purpose set forth.

2. The combination, with the table and a knife carried thereby, of a pair of fixed rollers carried in brackets affixed to said table and a crank connected with one of said rollers, whereby the strip may be drawn out as the cutting of the blank proceeds, substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HANS T. ROHRMOSER.

Witnesses:

J. A. REWNIE,
AUGUST BERTRAM.