

No. 644,182.

Patented Feb. 27, 1900.

M. MAY, JR.
MACHINE FOR DRESSING HIDES.

(Application filed Sept. 29, 1899.)

(No Model.)

Fig. 3.

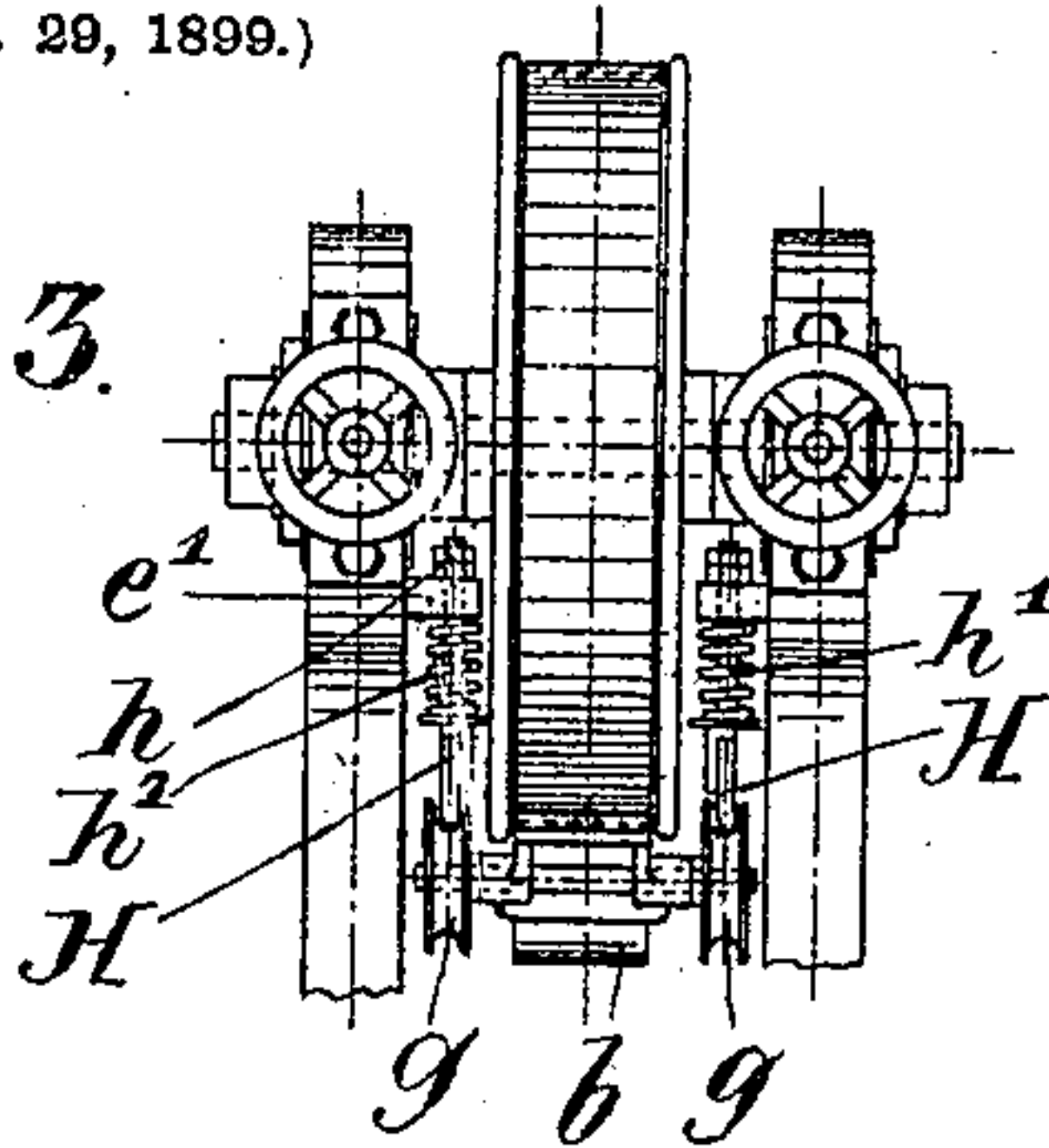


Fig. 1.

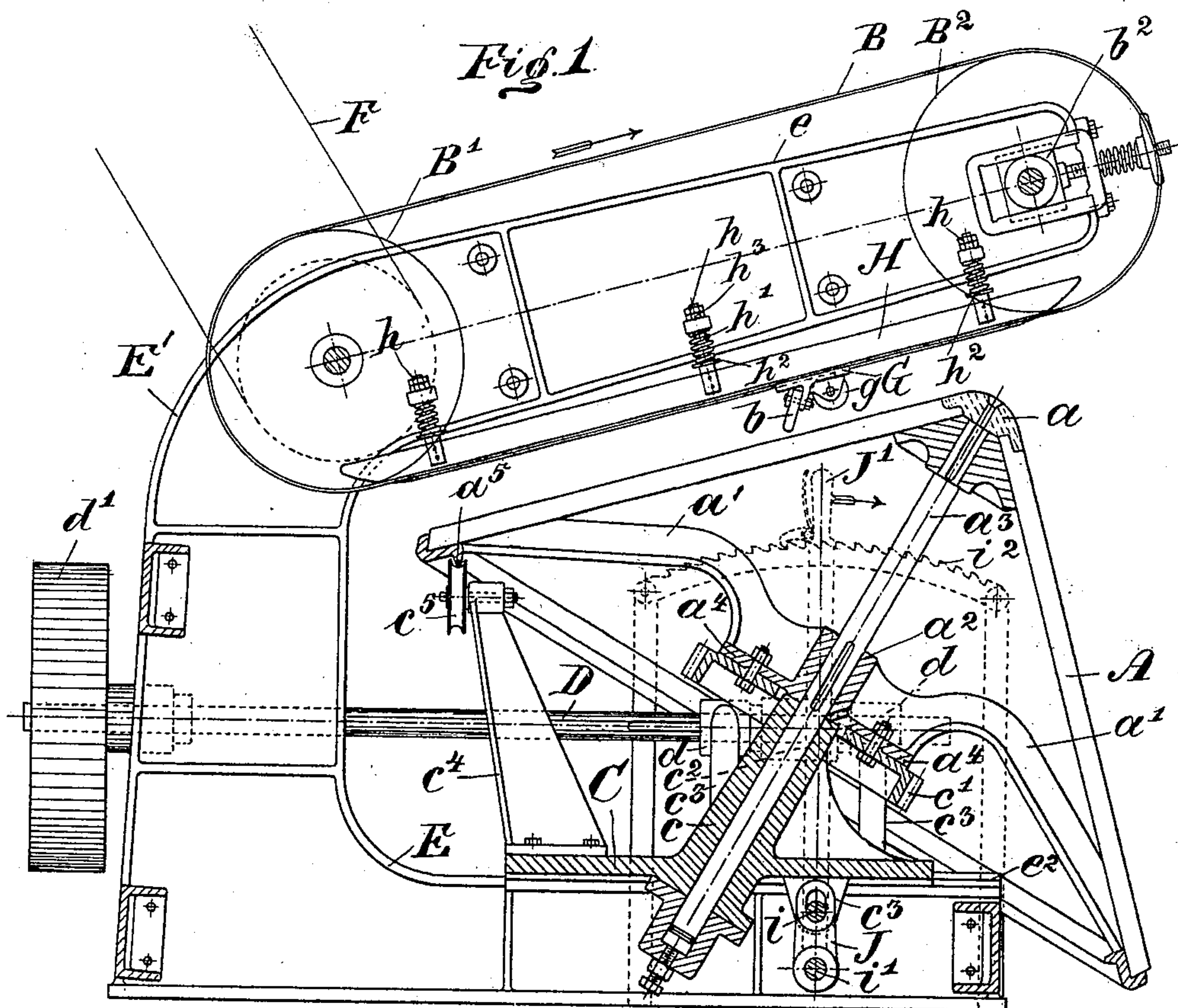
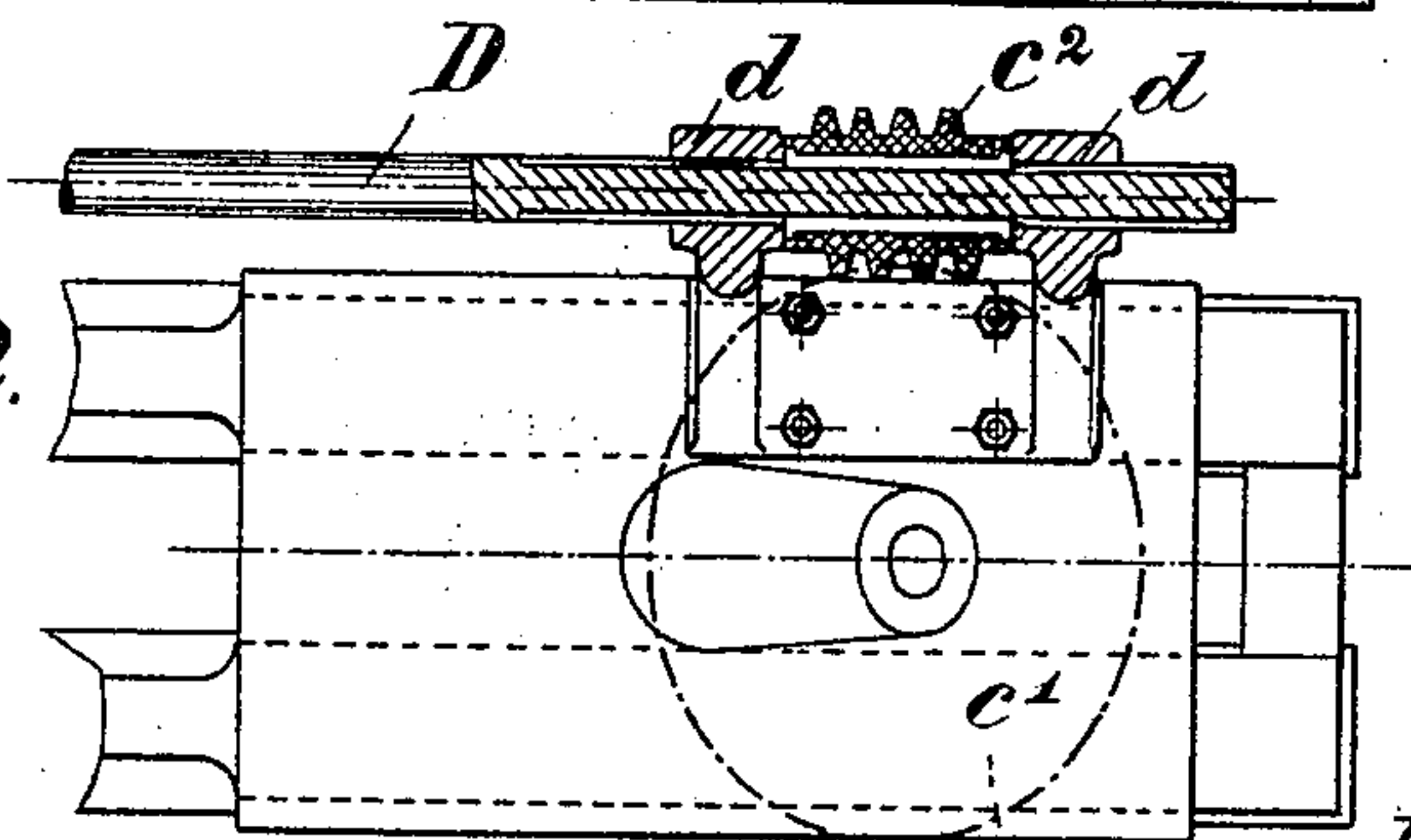


Fig. 2.



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UNITED STATES PATENT OFFICE.

MARTIN MAY, JR., OF FRANKFORT-ON-THE-MAIN, GERMANY.

MACHINE FOR DRESSING HIDES.

SPECIFICATION forming part of Letters Patent No. 644,182, dated February 27, 1900.

Application filed September 29, 1899. Serial No. 732,098. (No model.)

To all whom it may concern:

Be it known that I, MARTIN MAY, Jr., leather-manufacturer, residing at No. 27 Darmstädter Landstrasse, Frankfort-on-the-Main, Germany, have invented new and useful Improvements in Machines for Dressing Hides, (for which I have applied for Letters Patent in Germany, D. 9,677 IV/28^a, of March 3, 1899,) of which the following is a specification.

10 The present invention relates to apparatus for dressing hides, including the operations of depilating or fluffing, fleshing, and smoothing, the object being to provide a machine which will automatically perform these operations in a manner which has been hitherto
15 attainable only by handwork when carried out by a skilled operator. For this purpose a machine embodying my invention comprises a conical support or beam to which rotation
20 is imparted, in combination with a scraping-tool—such as a brush, scraper, or knife—which is adapted to slowly travel along a straight line over the hide from the center to its periphery, and which tool is yieldingly held
25 against the surface of the conical beam or the hide mounted on the same, so as to adapt itself to varying thicknesses of the hide. Suitable means are provided whereby this yielding pressure may be adjusted with
30 nicety. It will thus be seen that as the hide is slowly rotated on the beam the tool is caused to pass over every part of its surface in successive and adjacent paths running from the center of the hide to its periphery, thus carrying out mechanically the preferred
35 method of dressing hides hitherto carried out by hand.

40 The traveling tool is preferably secured to a traveling apron, and for the purpose of causing it to exert a yielding pressure it is preferably mounted in a carriage which rides on yielding rails, preferably one on each side of the traveling apron. It is manifest that instead of one tool several may be applied to
45 the traveling apron, an arrangement which is advantageous in some cases.

50 The conical supporting-beam is preferably rounded at its apex, and its axis is so inclined from an upright position and the angle of its surface with respect to its axis is such that when the hide to be dressed is laid thereon, with its center substantially at its apex, the

weight of the depending hide will be almost, though not quite, sufficient to counteract the tendency of the working tool as it travels 55 from the apex to the base of the conical beam to drag or throw the hide off the said beam. There is, however, sufficient drag left to enable the tool to draw the central portion of the hide which lies over the rounded apex 60 into the path of the tool in all directions, so that this portion of the hide will also be dressed at the end of the operation.

The traveling tool-carrying apron is preferably somewhat inclined to the horizon, and 65 the conical beam is so arranged that the portion of the same nearest to the apron will always be parallel thereto. The conical beam is, moreover, mounted on a horizontally slidable and adjustable carriage. By these means the 70 space between the beam and the traveling apron and tool may be increased for thicker hides or for the purpose of removing a finished hide or diminished for thinner hides, as the case may be. 75

Other features of my invention will be set forth in the following description and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a front elevation, partly in section. 80 Fig. 2 is a horizontal section of a detail. Fig. 3 is a side view of the upper part of the machine embodying my invention.

Referring to the drawings, it will be noted that A represents a conical beam for supporting the hide to be dressed, said beam being rounded or slightly truncated at the apex *a* and adapted to slowly rotate on its axis. Above the conical beam A is mounted the movable tool-carrier, consisting of a traveling apron B, to 90 which is secured the tool *b*, which may be a scraper or knife of stone, porcelain, metal, or other suitable material of any suitable or desired form. The conical beam A in the present case is supported by spokes or arms *a'* 95 from a hub *a*², secured to shaft *a*³, which is journaled in a standard *c*, extending upward and forward from a carriage C. A slow rotary motion is imparted to the shaft *a*³ by the following means: 100

To a flange *a*⁴ of the hub *a*² is secured a worm-wheel *c'*, with which meshes a worm *c*², mounted on shaft D, journaled in bearings *d d*. The shaft D receives its motion from

any source of power by means of a belt running over its pulley d' , as will be understood.

In order to effectually steady the beam A and to prevent any yielding or vibrating of the same, however slight, it is provided at its base with a guide-rail a^5 , adapted to engage the guide-roller c^5 , arranged opposite the apron B, as shown, and journaled in the standard c^4 , forming part of or mounted on the carriage C.

The endless traveling apron B, carrying the tool or tools, is carried by its drums B' B^2 , which are journaled in an overhanging portion e or bracket of a standard E' , rising from the frame E of the machine. A comparatively-rapid movement is imparted to this apron B by a belt F, deriving its motion from the power-shaft and passing over drum B' . The drum B^2 is preferably journaled in an adjustable bearing-block b^2 in order to regulate the tension of the apron B. The said tool b is mounted, preferably, obliquely to the direction of the apron B in the tool-carriage G, in which are mounted two guide-rollers $g g$, one on each side of the apron B, said guide-rollers engaging the yielding guide-rails H H. These guide-rails are each provided in the present case with three studs h , passing through lugs e' on the bracket, a spiral spring h' being arranged between a shoulder h^2 on said studs and the lugs $f' e'$. The studs are held in position by nuts h^3 , and by this means a yielding pressure is exerted by the guide-rails on the tool-carrier and may be varied at pleasure, especially to cause a higher pressure at the periphery of the cone A, where the tool b works on a comparatively-larger piece of the hide than at the apex. In order to further vary this pressure, also to adjust the machine to varying thicknesses of hides, and also to put the machine into or out of operative position when inserting or removing hides, the carriage C is made adjustable by mounting the same on rails e^2 of the frame E and providing it with means for shifting it backward or forward at pleasure. These means in the present instance consist of a slotted lug c^3 , depending from the carriage C and engaged by a pin i in the crank I, journaled at i' in the frame E and provided with a handle I' , by throwing which to one or the other direction the carriage C, with the beam A supported thereon, may be shifted to the right or left at pleasure. The lever is held in its various positions of adjustment by a spring-latch therein, which is adapted to travel over and engage one of the serrations of the ratchets i^2 . In order to permit this shifting of the carriage without interfering with the worm-gearing, the worm c^2 is secured to the shaft D by a spline-and-groove connection, so as to enable it to slide on said shaft.

It will be observed that the axis of the conical beam is inclined with respect to a vertical and also that the apron B and the surface of the beam opposite thereto are inclined to a horizontal direction. The angle which the

axis of the beam makes with a horizontal toward the forward part of the machine is preferably fifty to sixty degrees, while for this inclination the angle of the cone at the apex will be about ninety degrees. This disposition of the parts will best serve to hold the hide in proper position to be worked over its entire surface, as explained in the introductory part of this specification.

The operation of the machine is obvious from the foregoing. The conical beam A having been moved outward by releasing and drawing the lever I' outward in the direction of the arrow, Fig. 2, the hide is placed therein, with its central portion resting on the rounded apex a , and the lever is then pushed in the opposite direction, thereby forcing the carriage and the beam A inward until the tool b rests upon the hide with the proper degree of pressure. Power being then applied, the beam A is slowly rotated by the worm and worm-wheel $c' c^2$, while the tool b is carried over the hide from the apex to the base of the conical beam. Each time the said tool travels over this path it has a new surface of the hide presented to it, and it will be seen that thus the entire hide will be worked over by the tool in radial lines or strips from the center outward. The inclination of the cone and the surface of the same opposite the tool is such that the weight of that portion of the hide which depends from the apex of the beam will almost counteract the tendency of the tool to drag the hide off the beam, but to leave just sufficient movement to cause the central portion of the hide to be also traveled over by the tool.

This machine serves for dehairing and for fleshing and smoothing of hides.

I am aware that cylindrical rotating beams have been employed for similar purposes; but this I do not claim.

Now, what I claim, and desire to secure by Letters Patent, is the following:

1. In a hide-dressing machine an inclined rotary conical beam in combination with a traveling tool.

2. In a machine for dressing hides the combination of a conical beam with a traveling tool-holder and a yielding rail over which the tool-holder travels.

3. In a machine for dressing hides a movable conical beam in combination with a traveling tool-holder carrying a tool provided with a roller and a yielding rail over which the said roller travels.

4. In a machine for dressing hides a traveling tool-holder and a carrier for the same inclined to the horizon in combination with a conical beam whose surface adjacent to the carrier is substantially parallel thereto.

5. In a machine for dressing hides an inclined carrier for a tool-holder in combination with a conical beam whose adjacent surface is parallel thereto and means for shifting the said conical beam horizontally.

6. In a machine for dressing hides an inclined apron provided with a hide-working tool in combination with an inclined conical beam whose adjacent surface is parallel to the
5 apron.

7. In a machine for dressing hides a carrier for a tool-holder in combination with a belt, whereto it is attached, means to regulate the tension of the belt and a yielding rail

on which rollers attached to the holder behind the tool travel.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MARTIN MAY, JUNIOR.

Witnesses:

KARL HEINRICH GENTT,
RICHARD WIRTH.