

No. 630,122.

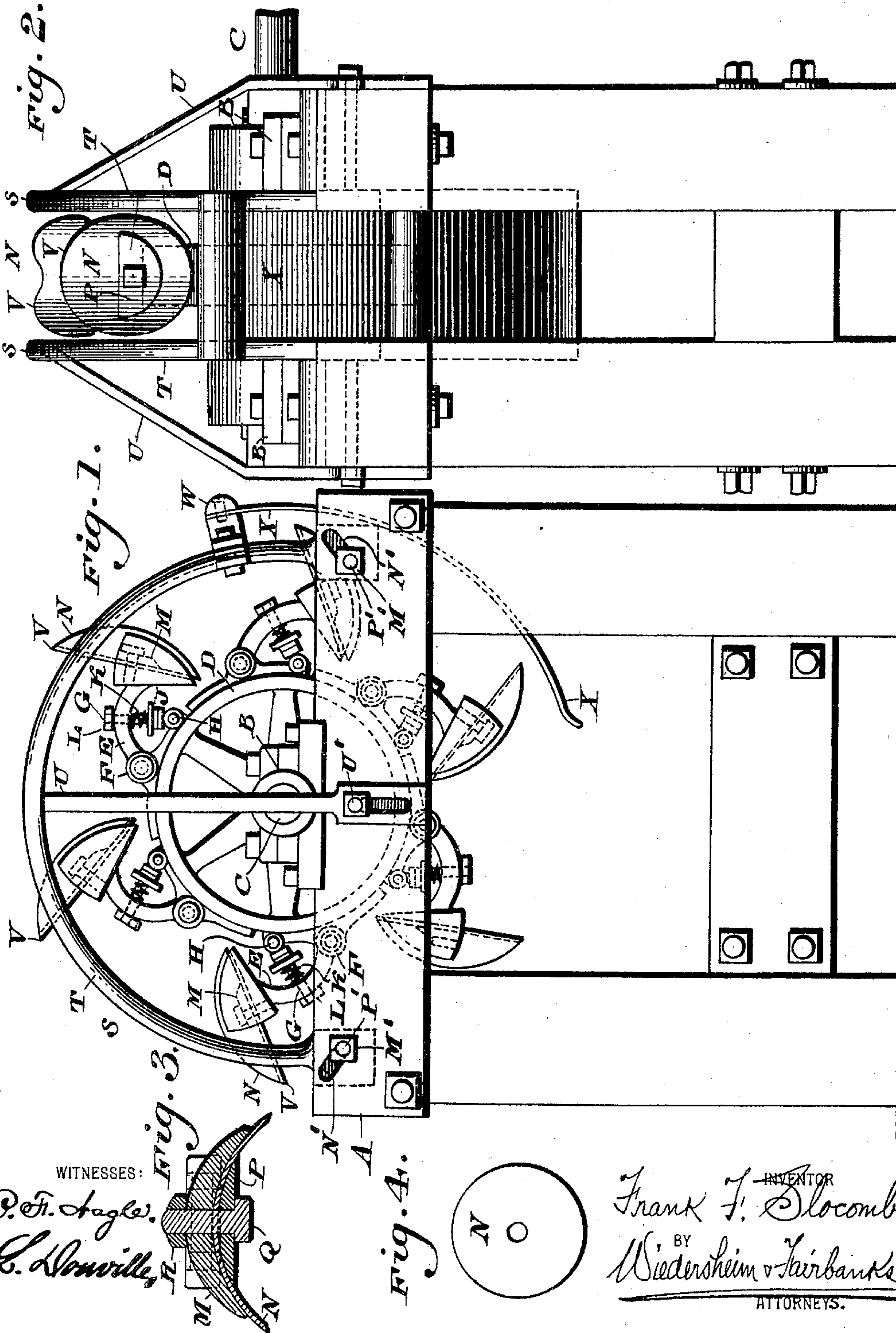
Patented Aug. 1, 1899.

F. F. SLOCOMB.
LEATHER WORKING MACHINE.

(Application filed Jan. 26, 1898.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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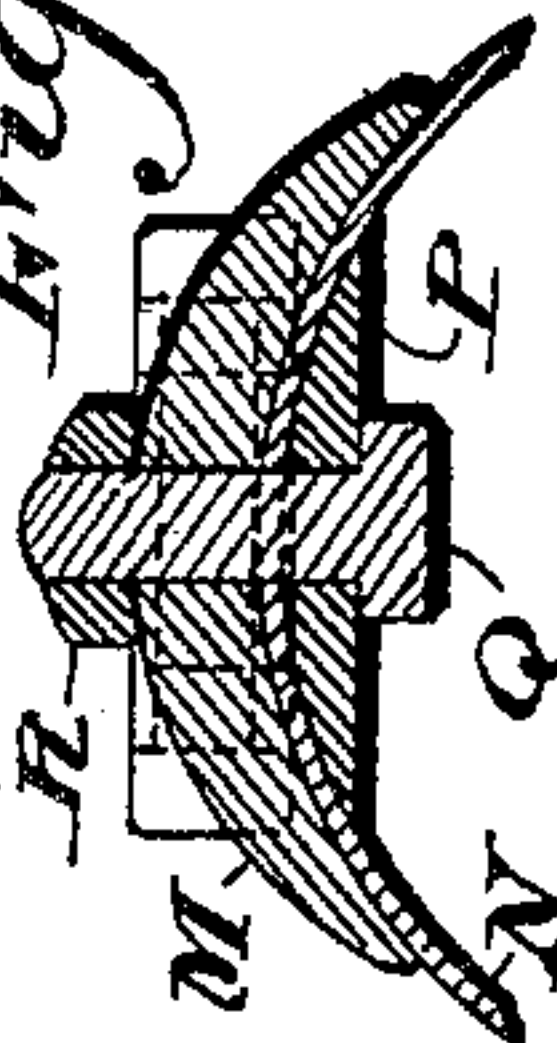
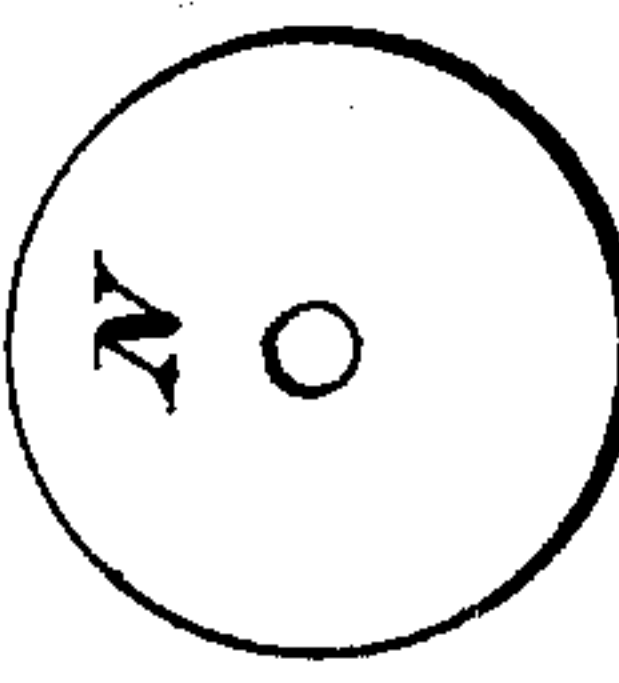


Fig. 4.



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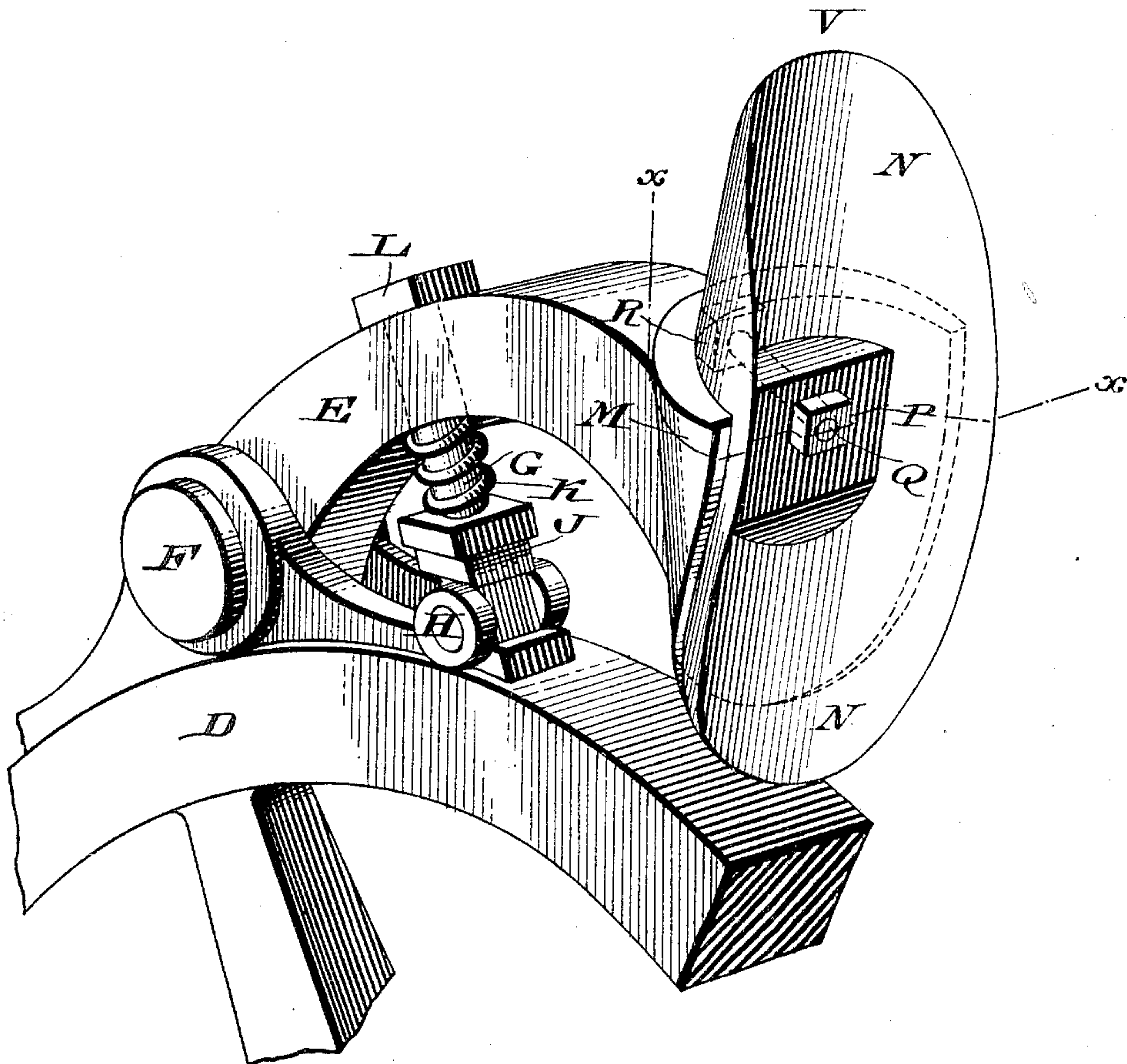
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2 Sheets—Sheet 2.

Fig. 5



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UNITED STATES PATENT OFFICE.

FRANK F. SLOCOMB, OF WILMINGTON, DELAWARE.

LEATHER-WORKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 630,122, dated August 1, 1899.

Application filed January 26, 1898. Serial No. 668,014. (No model.)

To all whom it may concern:

Be it known that I, FRANK F. SLOCOMB, a citizen of the United States, residing at Wilmington, in the county of New Castle, State of Delaware, have invented a new and useful Improvement in Leather-Finishing Machines, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to leather-finishing machines; and it consists of a plurality of knives mounted upon a rotatable wheel, said knives being arranged so as to project forwardly or at an angle to the axis of the wheel, as may be desired, and being capable of adjustment according to requirements.

It also consists of a novel construction of guard or skeleton framework adapted to surround the wheel carrying said knives and to serve as a support for the leather during treatment, said guard being adjustable with respect to the cutting edges of said knives.

It also consists of a novel manner of supporting and adjusting the knives employed, whereby a single knife can be shifted axially in case a portion of its periphery becomes dull or otherwise damaged.

It further consists of novel details of construction, all as will be hereinafter fully set forth, and particularly pointed out in the claims.

Figure 1 represents a side elevation of a leather-finishing machine embodying my invention. Fig. 2 represents a front elevation of Fig. 1, showing the relative position of the guard or skeleton frame inclosing the knives, the latter being removed. Fig. 3 represents a section on line *xx*, Fig. 5, showing a knife in position and the means for supporting and clamping the same. Fig. 4 represents a plan view of one of the knives prior to being placed in the position seen in Figs. 1 and 3. Fig. 5 represents, on an enlarged scale, a perspective view of an arm carrying a head which is concave in cross-section and has a knife attached thereto.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates the framework or housing of the machine, the same having supported thereupon the bear-

ings B, in which the shaft C is rotatably mounted, said shaft carrying the wheel D, which revolves in unison therewith.

E designates a series of arms which are pivotally mounted at or near the points F upon the wheel D, said arms having openings therein, through which pass the eyebolts or similar devices G, the heads of said eyebolts being pivotally attached to the wheel at the points H.

J designates a flanged nut or similar device mounted on the bolt G and having one end of the spring K abutting against it, while the other end of said spring is in contact with the adjacent portion of the arm E, said eyebolts being retained in proper position relative to said arm by means of a nut L.

M designates the head or extremity of the arm E, which is concave in cross-section, as will be understood from Figs. 3 and 5, and is adapted to have the knife N clamped thereupon, said knife being a thin resilient plate or disk of steel or other material, as will be understood from Fig. 4, and being held in position by means of the washer P and the bolt or other fastening device Q, which is common to said head, plate, and washer, as will be understood from Fig. 3, the cutting edge of said knife being caused to assume the convex shape seen in Fig. 3 by reason of its resiliency, as is evident, while the body portion of said knife assumes substantially a uniform curvature throughout its length. By loosening the nut R, which holds the bolt Q in position, it will be evident that the knife N can be rotated or shifted axially, so as to present a fresh cutting-surface to the leather to be treated, so that the necessity for replacing the knife when the cutting edge thereof becomes dull is obviated, as a fresh cutting edge can be readily presented to the leather upon the proper manipulation of the nut and bolt, (seen in Fig. 3,) as is evident.

S designates a skeleton frame or guard which serves as a support during the treatment and is mounted on the upper portion of the housing A, said guard consisting of the curved members or sections T, which may be pipes or tubing, and are located on either side of the wheel D and have the upright member C extending therefrom to said housing, whereby a guard for each side of the wheel

is formed, the upper portion of said guard being preferably just below the cutting edges V of the knives N, as will be understood from Fig. 1.

5 N' designates inclined slots in the framework, through which the bolts P' pass, which have the nuts M' thereon, wherefrom it will be seen that by loosening said nuts and springing the sections T outwardly and at the same
10 time loosening the nut U' and allowing the slotted member U to move upwardly the frame S can be raised or lowered with respect to the knives N.

W designates a cross-bar which is adjust-
15 ably attached to the guards T, said cross-bar having the curved strip or plate X depending therefrom.

The operation is as follows: Power having been applied to the shaft C, the wheel D and
20 the knives N will be rotated in unison, the operator placing the skin or leather to be treated upon the upper portion of the guard or frame S and holding a portion of said leather against the cross-piece W by means
25 of his body. It will thus be apparent that by the proper manipulation of the leather the latter will be softened, stretched, and scraped to the desired extent by the contact of the knives N therewith during their rota-
30 tion, especial emphasis being laid upon the fact that by mounting said knives at an angle to the axis of rotation of the wheel or tangentially to the periphery thereof in the manner indicated the desired effect is speedily
35 and thoroughly attained, while said knives are also caused by their contour to give a spreading action and draw cut.

The tension of the springs K can be readily adjusted by manipulating the nuts J and
40 L, the latter acting as stops or abutments to limit the movement of the arms E, while a fresh cutting edge of the knives can be readily presented to the leather at all times upon loosening the clamping device therefor, as is
45 evident.

It will be understood that I do not limit myself to the employment of the arms E or the exact manner of supporting the knives shown, since it will be evident that other supporting
50 devices may be employed. The knives may also be V-shaped instead of convex, if desired, and various other changes made by those skilled in the art which will come within the scope of my invention, and I therefore reserve
55 to myself the right to make all such changes as will come within the spirit of the same.

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

60 1. In a leather-finishing machine, a wheel rotatably supported, a normally rigid knife having a curved periphery mounted thereupon and provided with a convex cutting edge, and means for enabling said knife to be turned
65 on its support and rigidly secured in its adjusted position so as to present a fresh cutting edge to the leather to be treated.

2. In a leather-finishing machine, a wheel rotatably supported, and a knife mounted upon said wheel, and rotating in unison there-
70 with, means for adjusting said knife axially, said knife being concave in cross-section at right angles to its line of rotation and having a convex cutting edge, extending evenly on
75 opposite sides from its foremost cutting edge.

3. In a leather-finishing machine a wheel rotatably supported and a plurality of knives mounted on yielding supports thereon so as to project forwardly and at an angle to the
80 axis of said wheel, said knives being concave in cross-section.

4. In a leather-finishing machine, a wheel, rotatably supported, an arm pivotally attached to said wheel and carrying a knife, a
85 bolt pivotally mounted on said wheel and passing through said arm, a spring intermediate the latter and the point of attachment of said bolt, means on the latter for limiting the movement of said arm, a head on said arm
90 and a knife secured to said head, the cutting edge of said knife being convex.

5. In a leather-finishing machine, a plurality of knives each consisting of a resilient plate, having a curved periphery, and oscil-
95 latory arms on which said knives are supported, the cutting edge of each knife being convex, in combination with a guard or frame located on either side of said knives and adapted to serve as a support for said leather, and
100 to limit the amount of contact or pressure of said leather against said knives.

6. In a leather-finishing machine, a housing, a wheel rotatably mounted thereupon, arms pivotally attached to said wheel, con-
105 caved heads mounted on said arms, means for limiting the extent of movement of the latter, convex knives mounted upon said heads, means for shifting the cutting edges of said knives, a skeleton frame or guard on either
110 side of said knives and wheel, and adapted to serve as a support for the leather to be treated, and a cross-piece attached to said frame, said cross-piece having a strip or plate depending therefrom.

7. In a leather-finishing machine, an arm,
115 means for rotating the latter, a concaved head attached to said arm, a resilient plate or disk forming a knife adapted to be clamped to said head, the cutting edge of said knife becoming convex after clamping, and fasten-
120 ing devices for holding said knife in contact with said head.

8. In a leather-finishing machine, a knife consisting of a resilient plate or disk, means
125 for supporting the latter and for causing said knife to assume a convex contour, and means for enabling said knife to be turned axially and rigidly secured in its adjusted position, whereby a fresh cutting-surface can be pre-
130 sented.

9. In a leather-finishing machine, a wheel rotatably supported, knives mounted on said wheel, guards or frames supported on either
side of said wheel, and means for varying the

radii of said frames thereby adjusting the sides and tops thereof, relative to the cutting edges of said knives.

10. In a leather-finishing machine, a wheel 5 rotatably supported, knives mounted on said wheel, frames supported on either side of said wheel, means for varying the radii of said frames thereby adjusting the sides and tops thereof relative to the cutting edges of said 10 knives, and a cross-bar attached to said frames.

11. In a leather-finishing machine, a wheel rotatably supported, knives mounted on said wheel, frames supported on either side there- 15 of, said frames each consisting of a curved member, having its lower portions adjustable in the housing of the machine, and means for securing said members in adjusted position.

12. In a leather-finishing machine, a wheel 20 rotatably supported, knives mounted on said wheel, frames supported on either side thereof, said frames each consisting of a curved member, having its lower portions adjustable in slots in the housing of the machine, a slot-

ted member attached to each of said curved 25 members intermediate their ends, and means for locking said members in their adjusted positions.

13. In a leather-finishing machine, a housing, a wheel rotatably mounted thereon, arms 30 pivotally attached to said wheel, concaved heads mounted on said arms, means for limiting the extent of movement of said arms, convex knives mounted upon said heads and means for shifting the cutting edges of said 35 knives.

14. In a leather-finishing machine, a wheel rotatably supported, knives mounted on said wheel, frames supported on either side of said wheel, and means for varying the radii of said 40 frames, thereby adjusting the sides and tops thereof relative to the cutting edges of said knives.

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Witnesses:

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