

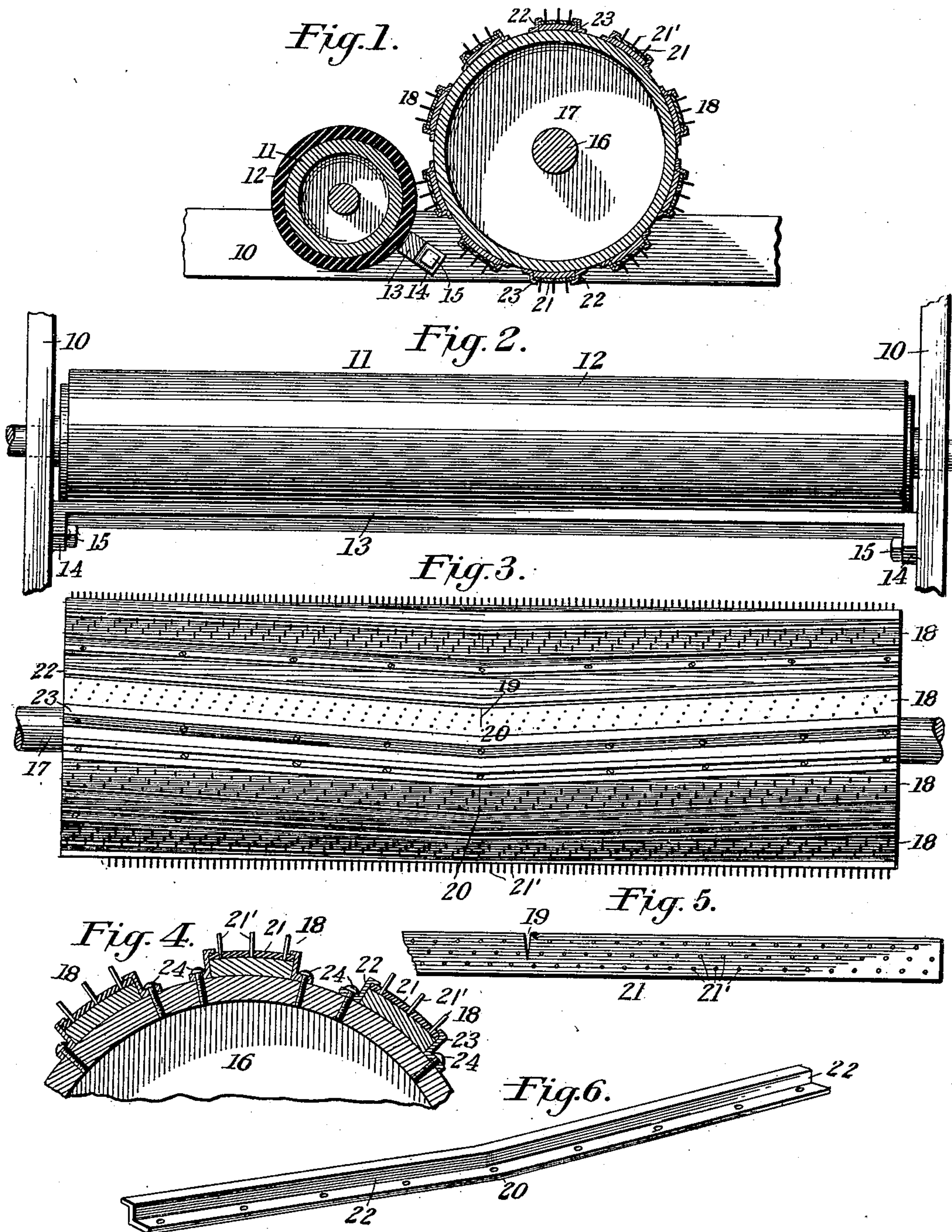
No. 667,305.

Patented Feb. 5, 1901.

O. F. FEIX.
LEATHER DRESSING CYLINDER.

(Application filed Feb. 24, 1900.)

(No Model.)



Witnesses

B. S. Foster.
W. J. Burroughs

By Otto F. Feix, Inventor

E. G. Siggers
Attorney

UNITED STATES PATENT OFFICE.

OTTO FELIX FEIX, OF GLOVERSVILLE, NEW YORK, ASSIGNOR OF ONE-HALF
TO GODFREY GOTTSCHALK, OF SAME PLACE.

LEATHER-DRESSING CYLINDER.

SPECIFICATION forming part of Letters Patent No. 667,305, dated February 5, 1901.

Application filed February 24, 1900. Serial No. 6,364. (No model.)

To all whom it may concern:

Be it known that I, OTTO FELIX FEIX, a citizen of the United States, residing at Gloversville, in the county of Fulton and State of New York, have invented a new and useful Dressing-Cylinder for Leather-Machines, of which the following is a specification.

My invention relates to a leather-dressing machine, and more particularly to a dressing-cylinder for taking the grain out of the leather or skin and for producing or finishing leather of the character known as "undressed kid," which is especially adapted to be used in the manufacture of gloves.

One object of the invention is to provide a novel dressing-cylinder which will operate on the leather in a way to keep it from wrinkling during treatment and which overcomes the tendency of the leather to become heated due to the rapid rotation and frictional contact of the cylinder with the leather.

A further object is to provide for secure clamping of the members which have the toothed working surfaces and for the ready removal of said members when worn to such an extent as to impair the efficiency thereof.

A further object is to provide means which prevents the adhesion of the skin in either a wet or dry condition to a flexibly-covered pressure-roll arranged in coactive relation to the dressing-cylinder.

Further objects and advantages of the invention will appear in the course of the subjoined description, and the novelty in the construction and arrangement of parts will be pointed out in the claims.

In the drawings, Figure 1 is a transverse section through a coating dressing-cylinder and pressure-roll forming a part of a leather-dressing machine and embodying the improvements which I have made. Fig. 2 is a detail plan view of a part of the machine, showing the relation of a scraper to the pressure-roll and the means for supporting said scraper within the machine-frame. Fig. 3 is an enlarged plan view of the dressing-cylinder removed from the machine. Fig. 4 is a cross-section through a part of this dressing-cylinder, on an enlarged scale, to illustrate the detailed construction thereof. Fig. 5 is a detached view of the card-clothed member

adapted to be secured to the dressing-cylinder. Fig. 6 is a detail perspective view of one of the clamping-plates for the card-clothed member.

The same numerals of reference are used to indicate like and corresponding parts in each of the several figures of the drawings.

The improvements which I have made relate more especially to that type of leather-dressing machines disclosed in my prior Letters Patent, No. 636,970, dated November 14, 1899, in which I have disclosed a pressure-roll arranged in coactive relation to a leather-treating cylinder having an abrasive surface. In the accompanying drawings the numeral 10 indicates part of the machine-frame in which is journaled the shaft of a pressure-roll 11, which is provided with a yieldable cover or jacket 12, of soft rubber. This pressure-roll coacts with a dressing-cylinder, and in the service of the machine it is found that the hide or skin under treatment in either a wet or dry condition has a tendency to adhere to this yieldable cover of the pressure-roll during the period when the hide or skin is fed between the cylinder and the roll, so as to be treated by the active surface of the cylinder. To minimize this adhesion of the hide or skin upon the surface of the pressure-roll and to properly expose said skin throughout a large area of its surface to the action of the dressing-cylinder, I have provided a guide-bar 13, which is arranged in close relation to the pressure-roll, so as to frictionally sweep the latter and to lie in the path of feed of the skin between the adjacent surfaces of the roller and the cylinder. This guide-bar is provided at its ends with the flanges 14, adapted to receive the bolts 15, which secure the bar to the frame 10, between the sides thereof, as shown by Fig. 2. By reference to Fig. 1 of the drawings it will be noted that the guide-bar below the contiguous surfaces of the cylinder and the roll operates to deflect the hide or skin from the under surface of the roll, thus minimizing any tendency of the skin to wrap around or to adhere to the roll and exposing a large area of the surface of the skin to the action of the dressing-cylinder.

The dressing-cylinder of the present invention is of peculiar construction in that it is equipped with card-clothing arranged at in-

tervals to leave intervening air-spaces and adapted to act on the hide or skin, so as to take off the grain thereof and produce leather of the character known in the art as "undressed kid," especially adapted to the manufacture of gloves. This cylinder comprises in its construction a hollow or drum-like core 16, the ends of which are closed by heads adapted to receive the shaft 17, to which the core is firmly secured and by which the entire dressing-cylinder is revolubly mounted in the framework of the machine in a manner similar to the abrasive cylinder of the machine disclosed in my former patent. On this core is seated a series of card-clothed members 18, which may be either of wood or metal, and each member is notched, as at 19, at a point intermediate of its length. This construction of the member provides for bending the same at its middle to secure an angular shape and a crest 20 between the reversely-inclined portions. Each member has its active surface formed by card-clothing 21, provided with the pointed pins or needles 21', and this card-clothing extends the full length of the member, so as to constitute the active surface thereof. The series of angular members are applied or seated on the core in spaced relation one to the other for the purpose of leaving air-spaces in the intervals between the card-clothed active surfaces of the cylinder, and said members are disposed in corresponding positions on the floor for the crests 20 of the members to lie in the same plane transversely to the cylinder, whereby the reversely-inclined portions of each member lie in parallel relation to the similar portions of adjacent members. Each member 18 and the card-clothing therefor are clamped or held on the surface of the core by the employment of a pair of clamping-strips 22 23, the same being disposed on opposite sides of the member and fashioned to embrace said member and its card-clothing. Each clamping-strip is substantially Z-shaped in cross-section, so as to form a base-flange and an overhanging outer flange, as shown more clearly by Figs. 4 and 6. The pair of clamping-strips for each member and its card-clothing are arranged in reverse positions with respect to the member, so that the bases of the strips will rest upon the core, while the overhanging outer flanges thereof will extend over the top edges of the member and rest upon the card-clothing. These clamping-strips are fastened to the core by screws 24, which pass through the base-flanges of said strips and serve to draw the same in a direction toward the core, whereby the outer flanges are drawn inward against the card-clothing, and thereby firmly clamp said clothing to the member and also clamp the member upon the core. It is to be observed that the pair of clamping-strips, disposed on opposite sides of the member, and the card-clothing thereof operate to hold these parts against displacement circum-

ferentially on the core and to seat the parts firmly in planes radial to the axis of the core, whereby each member and its card-clothing are confined so firmly and securely that they cannot become displaced through ordinary service of the machine. At the same time one or both clamping-strips may be removed by taking out the screws to enable the attendant to take off the card-clothing when worn and to replace the worn card by a fresh card.

The members 18 and the card-clothing thereof are grouped quite closely around the cylindrical core; but at the same time they are spaced at intervals, so as to leave alternate air spaces or openings 25 between the active surface of the dressing-cylinder, which is formed by the card-clothing 21. The card-clothing conforms to the angularity or bend of the members, and the hide or skin is designed to be fed to the cylinder at the middle thereof, so that the central portion of the card-clothing over the crest 20 on each angular member will act first on the hide or skin. As the active surface of the angular member formed by the card-clothing conforms to the divergence of the member, the needle or pin points of the clothing will act on the skin not only to take off the grain and produce the desired finish on the surface, but also have a tendency to work the skin toward the flanks or edges thereof, thus making ample provision for the elimination of wrinkles from the skin, and obviate any tendency to cut or injure the skin in the operation of dressing the same.

The dressing-cylinder of my invention is driven or rotated at a comparatively high speed, and if it were provided with a continuous card-clothing the frictional action of the card on the skin would have a tendency to unduly heat the leather, and thereby cause deterioration thereof. This objection is overcome by the spacing of the members and the cards, so as to form the air-spaces, which alternate with the active surfaces of the cylinder. In the operation of the cylinder the cards act to take the grain off the leather, the series of cards acting successively; but as the leather is not exposed to a continuous action of the cards an opportunity is allowed for the leather or skin to cool somewhat in the interval between the frictional engagement with the cards therewith. The rapid rotation of the cylinder and the successive frictional engagement of the spaced series of cards with the leather give the latter a chance to cool and provides for the circulation of air, so that the quality of the leather is not injured by the treatment given thereto by my machine.

Changes within the scope of the appended claims may be made in the form and proportion of some of the parts, while their essential features are retained and the spirit of the invention is embodied. Hence I do not desire to be limited to the precise form of all

the parts as shown, reserving the right to vary therefrom.

Having thus described the invention, what I claim is—

5 1. A dressing-cylinder for leather-working machines having its active surface formed by a plurality of longitudinally-disposed series of flesh-removing teeth, said series of teeth being separated by intervening spaces to permit a brief interval to elapse between each frictional application of the cylinder to the hide, whereby the lateral stretching of the hide is effected and its heating is prevented.

15 2. A dressing-cylinder for leather-working machines having its active surface formed by longitudinally-disposed series of flesh-removing teeth disposed radially, each series of said teeth being angular in form and separated from the adjacent series by intervening spaces, whereby the hide is worked from the center toward the flanks to prevent wrinkling and is permitted to cool after each frictional application of the dressing-cylinder thereto.

25 3. A dressing-cylinder for leather-working machines, comprising a core, a series of longitudinally-disposed angular members in spaced relation on the cylinder, and radial flesh-removing teeth distributed over the outer surfaces of said angular members.

30 4. A dressing-cylinder for leather-working machines comprising a core, a series of longitudinally-disposed tooth-retaining members extending continuously from end to end of the cylinder, independent means for con-

necting each of said members with the core, 35 and flesh-removing teeth distributed over the surface of each of said members.

5. A dressing-cylinder for leather-working machines having its active surface formed by radial flesh-removing teeth, said teeth being 40 arranged in series extending from end to end of the cylinder, and said series having an angular formation the advance portion or crest of which is located at the middle of the cylinder, whereby the operation of the cylinder 45 effects the lateral stretching of the hide.

6. A dressing-cylinder for leather-working machines provided with a series of longitudinally-disposed teeth-carrying members extending from end to end of the cylinder and 50 having an angular formation, card-clothing located flatwise upon said strips and having a notch formed in one edge to permit said clothing to conform to the angular contour of the member, clamping devices secured to the 55 outer face of the cylinder and serving to clamp the card-clothing and members to the cylinder, and flesh-removing teeth disposed radially to the cylinder and extending from the flat outer faces of the card-clothing. 60

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

OTTO FELIX FEIX.

Witnesses:

RICHARD KING JACKSON,
JOHN K. BELDING.