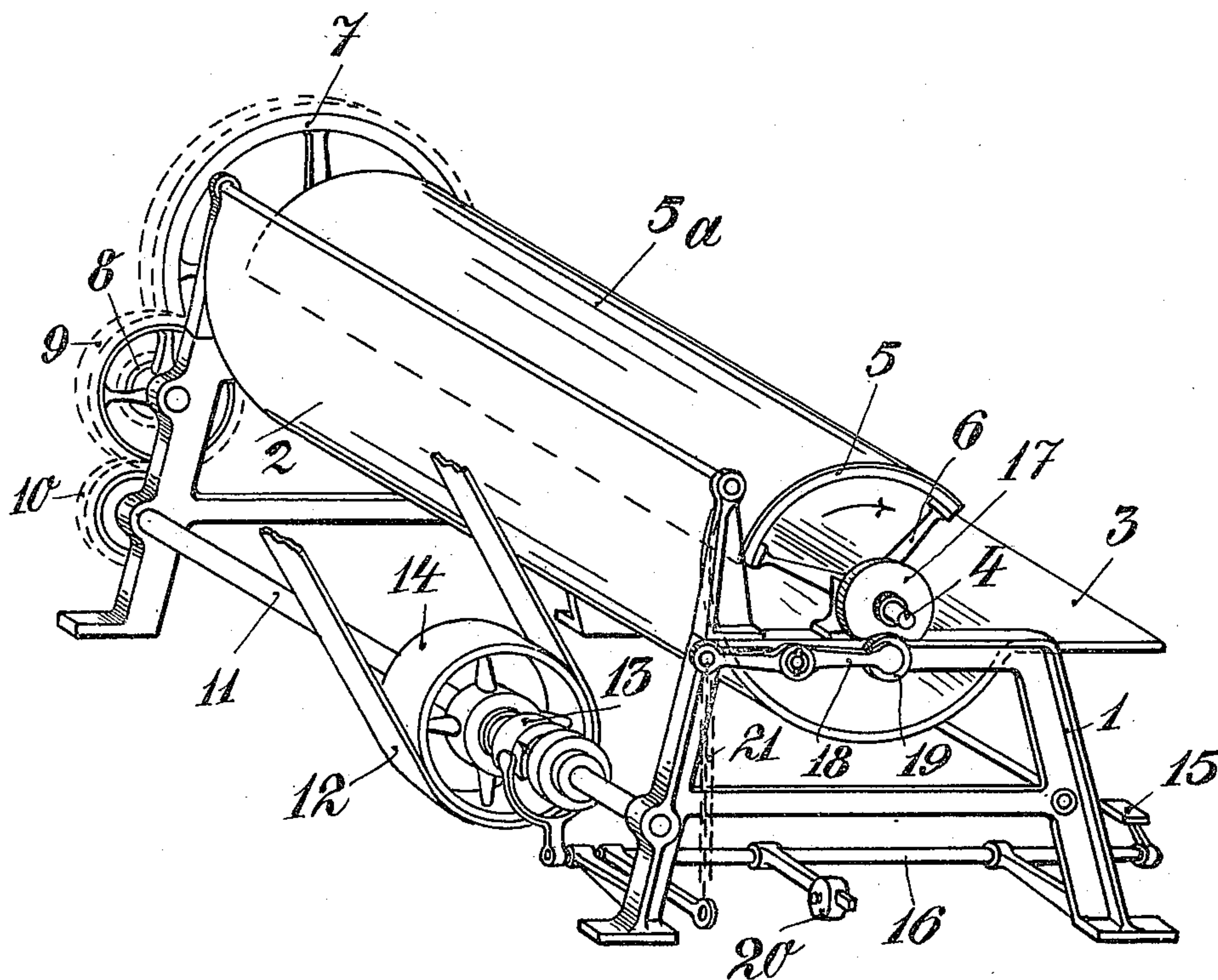


A. M. MARX.
 DEVICE FOR BOARDING LEATHER.
 APPLICATION FILED SEPT. 23, 1908.

962,157.

Patented June 21, 1910.



Witnesses:-

C. H. Crawford
 E. Schallinger

Inventor:-

Arthur Mirtel Marx
 by B. Singer Attorney

UNITED STATES PATENT OFFICE.

ARTHUR MIRTIL MARX, OF FRANKFORT-ON-THE-MAIN, GERMANY.

DEVICE FOR BOARDING LEATHER.

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Specification of Letters Patent. Patented June 21, 1910.

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To all whom it may concern:

Be it known that I, ARTHUR MIRTIL MARX, citizen of Germany, subject of the King of Prussia and Emperor of Germany, residing at 70 Höchsterstrasse, Frankfort-on-the-Main, in the Kingdom of Prussia and Empire of Germany, have invented a new and useful Device for Boarding Leather, of which the following is a specification.

The present invention substantially consists in mechanically performing the operation, so-called graining or boarding, which is necessary for producing a uniform grained structure on leather, which has been smoothed by pommeling, which operation has heretofore been generally performed by hand. For this purpose two surfaces are provided, of which at least the one is arranged movable mechanically close along the other. The smoothed leather is inserted between these two surfaces with the grained side folded inward. When it is moved past the stationary surface the moved surface then drives the one half of the hide situated next to it in consequence of its adhesion on the coarse flesh-side of the leather facing it, whereas the other half is held stationary in consequence of its adhesion to the stationary surface. In this manner the folded leather is gradually unfolded and the grain of the leather is caused to appear again owing to the motion of the particles of leather against one another at the constantly moving fold.

In order that the invention may be clearly understood reference will be made to the accompanying drawings in which one embodiment is represented in perspective by way of example, and in which: The figure is a view of the entire device.

Referring to the drawing, the part 2 which serves as a support for the hide which is to be grained, is mounted on a frame 1. This support 2 is curved upwardly substantially cylindrically concave and at its front end has a table-like level extension 3 for facilitating the insertion of the hide.

In the center above the hollow cylindrical part of the support 2 is provided a shaft 4 which extends the entire length of the support. A cylindrical segment 5 is attached to this shaft 4 by means of arms 6, and is preferably provided with a suitable cover-

ing 5^a of velvet, caoutchouc, cork, or the like, for increasing the adhesion. A corresponding covering may also be provided on the inside of the concave part of the support 2.

The shaft 4 is connected by the gear-wheels 7, 8, 9, 10 with a shaft 11 which is rotated by means of the driving belt 12 when the loose pulley 14 is coupled positively in known manner with the shaft 11 by means of the movable friction coupling 13, as clearly shown in the figure. For throwing the coupling into gear a foot-lever 15 is arranged at the front end of the machine, which lever is connected with the coupling 13 by the shaft 16. In order to enable the machine to be disconnected automatically there is provided at one end of the shaft 4 an irregular disk or cam 17, against which the one end 19 of a lever 18 slides, the other end of which is connected by a chain 21 with the shaft 16 provided with a counter-weight 20.

When the device is used the hide which is to be treated and which has been pommelled smooth is folded across the center with the grained side inward and is placed with the fold to the rear on the cylindrical curved part of the support 2. By depressing the lever 15 the cylindrical segment 5 is rotated in the direction of the arrow and drives the upper half of the hide to the rear, so that the leather which was previously folded double is gradually opened out again. During this movement the relative motion of the particles of leather necessary for producing the grain occurs at the fold which gradually changes its position. The lever 15 can be released as soon as the shaft 4 has begun to rotate, because the coupling is then kept in gear by the coöperation of the cam 17 with the lever 18, by means of which members the machine is automatically also thrown out of gear at the end of one revolution. The hide thus treated is then withdrawn, folded afresh with the smooth half, which was underneath, upward, inserted again and opened out again in a corresponding manner with the aid of the cylindrical segment 5.

Many modifications may be made in the machine. For example, one or both working faces may be formed more or less level,

in which case of course the two faces must be able to be removed from one another in a different manner for the purpose of placing the hide in position. As compared with
 5 such an arrangement, that above described has the important advantage of greater simplicity, and in addition the moved surface can always rotate instead of being reciprocated. Nevertheless a reversing device may
 10 also be provided on the machine for the forward and backward motion which will enable one part of the hide, *i. e.* the same surface, to be treated repeatedly similarly as when boarding by hand.

15 Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

20 1. A device for boarding leather comprising in combination, two rounded members between which the folded leather can be placed by hand, both of said members comprising segments of cylinders and one being concave and the other convex, the
 25 convex segment being of sufficient size to receive and contain an entire hide, the convex segment being sufficiently reduced in size with respect to said concave segment to lie wholly outside thereof in one position of said
 30 convex segment thereby leaving said concave segment free and unobstructed for insertion of the next hide, means for revolving said convex segment abreast of said concave segment to board the hide, and a
 35 device for automatically arresting movement of said convex segment upon arrival thereof to an outside position with respect to said concave segment.

40 2. A device for boarding leather comprising in combination, two rounded members between which the folded leather can be placed by hand, both of said members comprising segments of cylinders and one being concave and the other convex, the convex
 45 segment being sufficiently reduced in size with respect to said concave segment to lie wholly outside thereof in one position of the convex segment thereby leaving the concave segment free and unobstructed by insertion
 50 of the next hide, means for revolving said convex segment abreast of said concave segment to board the hide, and a gravity acting device automatically arresting movement of said convex segment upon arrival thereof
 55 to an outside position with respect to said concave segment.

60 3. A device for boarding leather comprising in combination, two rounded members between which the folded leather can be placed by hand, both of said members comprising segments of cylinders and one being concave and the other convex, the convex segment being sufficiently reduced in size with

respect to the concave segment to lie wholly outside thereof in one position of the con- 65
 vex segment thereby leaving the concave segment free and unobstructed for insertion of the next hide, means for revolving said convex segment abreast of said concave segment to board the hide, and mechanism including 70
 a cam and a gravity acting device for automatically arresting movement of said convex segment upon arrival thereof to an outside position with respect to said concave segment. 75

4. A device for boarding leather comprising in combination, two coacting rounded members between which the leather is boarded, means for rotating one member abreast of the other, a cam rotated by said 80
 rotating member and provided with concentric and eccentric portions, a foot operated device for connecting said rotating member in driven relation with said means, and an element controlled by said cam and 85
 connected with said device for maintaining said member in driven relation with said means until said member has reached a predetermined point in its travel, said cam thereupon serving to cause disconnection of 90
 said member from said means.

5. A device for boarding leather comprising in combination, two coacting rounded members between which the leather is supported, means for rotating one member 95
 abreast of the other, a cam rotated by said rotating member and provided with concentric and eccentric portions, a weighted foot operated device for connecting said rotating member in driven relation with said means, 100
 and an element controlled by said cam and connected with said device for maintaining said member in driven relation with means until said member has reached a predetermined point in its travel, said cam thereupon 105
 serving to release said elements and permit said device to disconnect said member from said means.

6. A device for boarding leather comprising in combination, two coacting rounded 110
 members, means for rotating one member abreast of the other to board the leather, a cam operated by said rotating member, a foot operated device for connecting said member in driven relation with said means, 115
 and mechanism connected with said device and operated by said cam for maintaining and releasing connection between said member and said means.

7. A device for boarding leather comprising 120
 in combination, two coacting rounded members, means for rotating one member abreast of the other to board the leather, a cam rotated by said rotating member, a foot operated device for operatively connecting 125
 said rotating member with said means and

provided with a weight normally tending to
disconnect said member from said means,
and mechanism operatively connected with
said device and cam for maintaining said
5 member in connection with said means and
subsequently and automatically permitting
said member to be disconnected from said
means by said weight.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit- 10
nesses.

ARTHUR MIRTIL MARX.

Witnesses:

JEAN GRUND,
CARL GRUND.