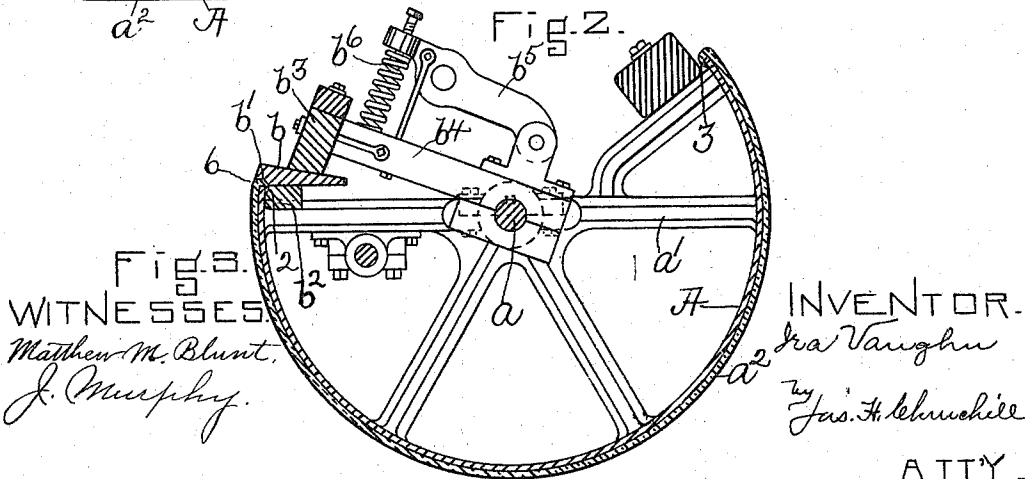
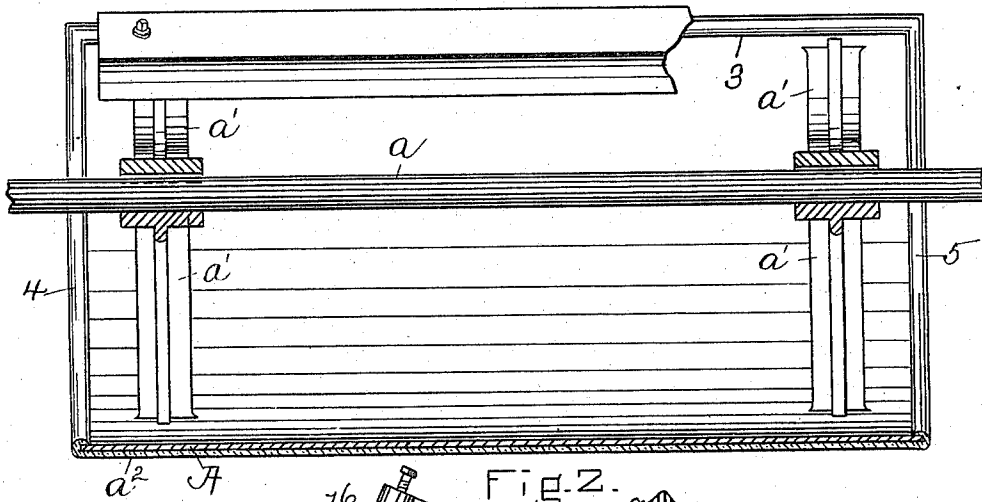
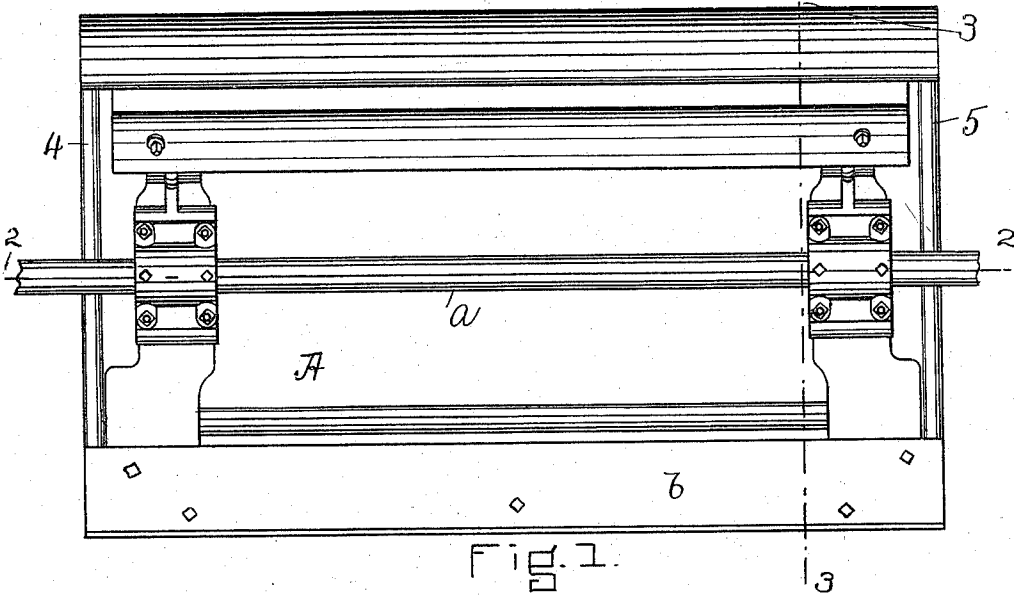


(No Model.)

I. VAUGHN.
DRUM FOR LEATHER WORKING MACHINES.

No. 580,353.

Patented Apr. 6, 1897.



UNITED STATES PATENT OFFICE.

IRA VAUGHN, OF SALEM, MASSACHUSETTS, ASSIGNOR TO THE VAUGHN MACHINE COMPANY, OF PORTLAND, MAINE.

DRUM FOR LEATHER-WORKING MACHINES.

SPECIFICATION forming part of Letters Patent No. 580,353, dated April 6, 1897.

Application filed June 30, 1896. Serial No. 597,543. (No model.)

To all whom it may concern:

Be it known that I, IRA VAUGHN, residing in Salem, in the county of Essex and State of Massachusetts, have invented an Improvement in Drums for Leather-Working Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

This invention is an improvement in leather-working machines of that class employing a segmental drum or bed upon which the hide or skin is secured while being acted upon by the operating-tool, usually a revolving cylinder or roll provided with blades or knives and substantially as shown and described in United States Patent No. 535,777, granted to me March 12, 1895.

In machines of the class described the segmental drum as heretofore constructed and known to me has been made of wood, to which is tacked a blanket or bolster composed of rubber, the rubber bolster being tacked or nailed to the outside of the drum at its opposite ends. The rubber blanket or bolster is used on the segmental drum to obtain a soft and pliable bed or cushion for the hide or skin to rest upon when being stretched or otherwise worked by the cylindrical roll; but practice has demonstrated that such a construction is defective because the pressure of the working cylinder or operating-roll exerted upon the hide against the loose rubber bolster stretches the said bolster, which becomes thinnest at the point of contact of the operating-roll with the hide, thereby obtaining the least cushioning effect, softness, and pliability at the point where these requisites are most desired; and this construction of bolster and segmental drum is also defective because the continual stretching of the rubber bolster chafes and rubs the same, so that in a short time it becomes worn through and useless, thus entailing a large expense upon the users of the machines to keep these rubber bolsters in order.

My present invention has for its object to provide the segmental drum of a leather-working machine with a rubber bolster which is free from the objections or defects above referred to; and I accomplish this object by

making the segmental drum of metal and covering the outside of the drum with a rubber bolster, which has its ends extended into and lapped over the edges and sides of the said metal segmental drum and vulcanized onto the said segmental metal drum. The rubber overlapping one end of the segmental drum is provided with a guard, of wood or other suitable material, upon which the hide rests and is clamped by a suitable presser-bar, when the hide is secured in operative position upon the segmental drum, the said guard protecting the portion of the rubber which overlaps the end of the segmental drum and relieving it from the strain which would fall upon it if the presser-bar was permitted to clamp the hide or skin directly on the outer edge of the said drum, and the said guard also prevents the rubber overlapping the end of the drum from being cut through by the thin edge of the drum. These and other features of this invention will be pointed out in the claim at the end of this specification.

Figure 1 is a plan view of a sufficient portion of a leather-working machine provided with a segmental drum embodying this invention to enable it to be understood; Fig. 2, a longitudinal vertical section on the line 2 2, Fig. 1; and Fig. 3, a transverse section on the line 3 3, Fig. 1.

Referring to the drawings, A represents the segmental metal drum, preferably of iron or steel and secured to a shaft *a* by spokes or arms *a'*, substantially as shown and described in the patent referred to.

The segmental drum A, in accordance with this invention, is provided with a bolster *a*², of rubber or its compounds, which bolster is carried over the ends of and within the segmental drum, as at 2 3, and is also carried over the sides of and within the said drum, as at 4 5, and the said bolster is firmly attached to the outer and inner sides of the said drum by vulcanizing it onto and within the said drum, so that substantially every point of the bolster on the outside of the segmental drum is firmly attached to the said drum, and as a result the said rubber bolster remains soft and pliable and affords an excellent cushion for the hide when acted upon by the operating-roll. (Not herein shown, but

which may be substantially such as shown in the patent referred to.)

In the treatment of a hide with machines of the class herein represented the said hide is laid over one end of the drum, which in the present instance may be supposed to be the end 6, (see Fig. 3,) and in order to prevent the rubber covering the edge of the end 6 from being cut through by the said end 10 when pressure is applied to the hide by the operating-roll referred to a guard is provided to protect said rubber-covered end, which guard may and preferably will be made as herein shown, it consisting of a plate or bar 15 *b*, of wood or metal, extended substantially the length of the drum and provided on its under side with a longitudinal groove, slot, or channel *b'* to fit over and embrace or partially embrace the rubber-covered edge or end 6 of 20 the segmental drum.

The guard *b* may be supported in any suitable manner, and in the present instance it is shown as resting upon a bar *b*², supported upon the spokes *a'*, as represented in Fig. 3, and to which bar the said guard may be bolted 25 or otherwise secured. The guard *b* practically forms the stationary member of a clamping mechanism for the hide, the other or movable member of which is formed by the presser-bar *b*³, secured to arms *b*⁴, mounted on the 30 shaft *a* and actuated by levers *b*⁵, only one of which is shown, a spring *b*⁶ being interposed between the lever *b*⁵ and the arm *b*⁴, all substantially as shown and described in the 35 patent referred to. Let it be supposed that a hide is clamped between the presser-bar *b*³ and the guard *b*, that the drum is moved in the direction indicated by arrow 20, and that

the hide is carried upon the drum under an operating-roll substantially as in the patent 40 referred to. In this case it will be seen that the hide is drawn taut by the operating-roll, which revolves in opposition to the drum, and a very considerable strain or pressure 45 falls upon the guard *b*, which, if permitted to fall on the rubber-covered end 6 of the segmental drum, would soon cause the rubber to be cut through by the edge or end of the metal segmental drum. Furthermore, it will be seen that by reason of the rubber bolster 50 being vulcanized onto and within the segmental drum the entire outer surface of the segmental drum has firmly attached to it a rubber cushion, which is soft and pliable, and which does not stretch so as to defeat the 55 purpose for which it is intended, and which is not torn apart by the operating-roll, so that improved results are obtained at a minimum cost to the users of this class of machines.

I claim— 60

In a leather-working machine, a segmental metal drum provided with a bolster of rubber or its compounds vulcanized onto the outer side of the drum and overlapping one 65 end thereof, and a guard for the overlapping end of the bolster which fits over and protects the overlapping end of the bolster from injury, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of 70 two subscribing witnesses.

IRA VAUGHN.

Witnesses:

F. W. THOMAS,
M. E. JONES.