E. W. McQUAY.

LEATHER CLEANING MACHINE.

APPLICATION FILED AUG. 27, 1914.

1,180,306. Patented Apr. 25, 1916.

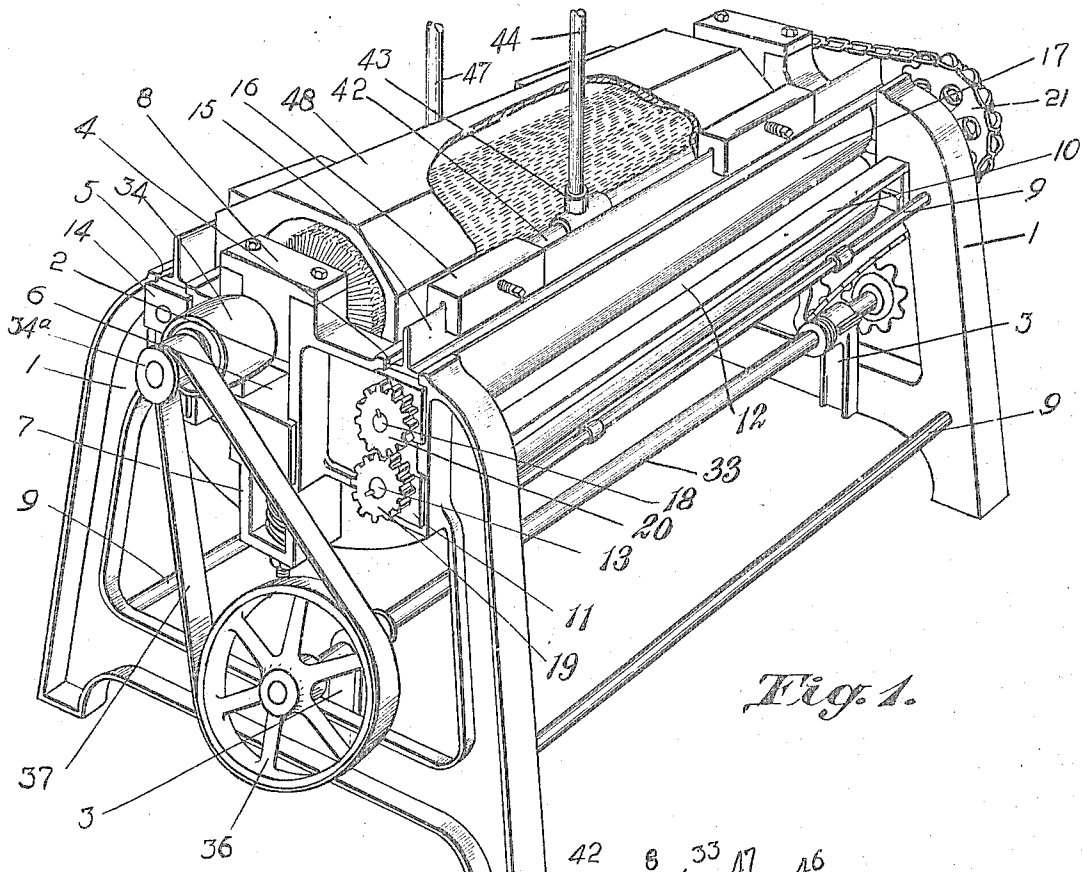


Fig. 1.

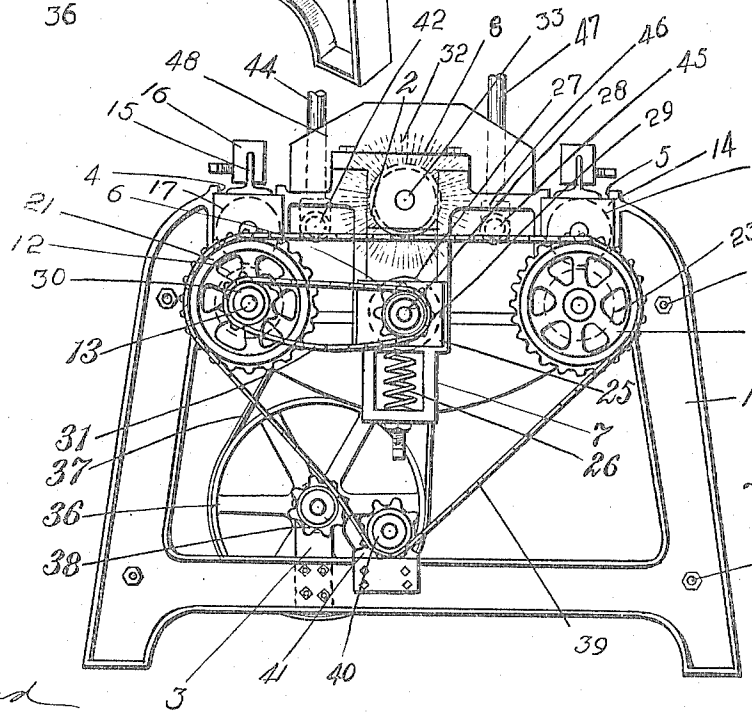


Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

EDGAR WALKER McQUAY, OF OWEN SOUND, ONTARIO, CANADA.

LEATHER-CLEANING MACHINE.

1,180,306. Specification of Letters Patent. Patented Apr. 25, 1916.

Application filed August 27, 1914. Serial No. 858,975.

To all whom it may concern:

Be it known that I, EDGAR WALKER McQUAY, a subject of the King of Great Britain, and resident of the town of Owen Sound, county of Grey, Province of Ontario, in the Dominion of Canada, have invented certain new and useful Improvements in Leather-Cleaning Machines, of which the following is a specification.

The invention relates to improvements in leather cleaning machines as described in the present specification and shown in the accompanying drawings that form part of the same.

The invention consists essentially in the novel means employed whereby the leather is treated and brushed in passage through a set of carrying rollers.

The objects of the invention are to effectually remove the surplus of lubricating substance that remains on the leather after being oiled or greased, to devise a simple and cheap machine for the said purpose and generally to provide means for turning out the leather in a fit condition to work.

In the drawings, Figure 1 is a perspective view of the machine showing the parts broken away to disclose the interior mechanism. Fig. 2 is an end view of the machine. Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 1 are the ends of the frame in skeleton form each end having a central shaft bearing 2 at the upper end thereof, a shaft bearing 3 toward the lower end thereof, a bearing slot 4 at the upper end in advance of the central bearing 2 and a bearing slot 5 at the upper end to the rear of said central bearing 2, a central bearing slot 6 below the central shaft 2 having an opening in the lower wall thereof, a bracket 7 below said central bearing slot 6 and a block 8 closing the central bearing 2.

9 are tie rods joining the ends 1 together.

10 is a shelf on which the leather is fed into the machine, said shelf being rigidly secured to the ends 1 toward the upper ends thereof.

11 are a set of bearing blocks resting in the bottoms of the slots 4.

12 is a feed roller journaled in the blocks 11 and having its shaft 13 extending out beyond said bearing blocks.

14 are a set of bearing blocks joined by the bar 15 and slidably arranged in the slots 4 above the blocks 11, said bar having the adjusting weights 16 slidable thereon.

17 is the upper feed roller journaled on the blocks 14 having its shaft 18 projecting out beyond said bearing blocks.

19 and 20 are gear wheels fixedly mounted on the shafts 13 and 18 respectively and operatively connecting said shafts.

21 is a sprocket wheel fixedly mounted on the other end of the shaft 13 and constituting the drive for said shaft and consequently the shaft 18.

22 and 23 are the upper and lower delivery rollers journaled in bearing blocks in the slots 5 and arranged in exactly the same way as the bearing blocks 11 and 14, the shaft 23 being driven by the sprocket wheel 24.

25 are bearing blocks slidably arranged in the slot 6 and adjustably cushioned by the springs 26 in the bracket 7.

27 is a roller journaled in the blocks 25 and having its shaft 28 projecting beyond one of said blocks.

29 is a sprocket wheel mounted on the projecting end of the shaft 28.

30 is a sprocket wheel mounted on the projecting end of the shaft 13.

31 is a driving chain connecting the sprockets 29 and 30.

32 is a rotary brush mounted on the shaft 33, the said shaft being journaled in the bearings 2 and having the projecting pulley end 34ª, said brush turning directly over the central roller 27.

34 is a pulley mounted on a shaft 33 suitably driven by a belt from any convenient source.

35 is a shaft journaled in the bearings 3, carrying at one end the pulley 36 connected by the belt 37 to the pulley end 34ª and at the other end carrying the sprocket 38 connected to the sprockets 21 and 24 by the chain 39.

40 is a sprocket wheel journaled with bearing 41, the purpose of this sprocket is to take up the slack in said chain.

It will now be seen that all the rollers and the brush are operatively connected with the main driving shaft so that when a piece of leather is fed over the shelf 10 and gripped by the feed rollers it must pass through to the delivery roller and therebeyond so long as the machine is running.

42 is a sprinkler in the form of a long

perforated pipe extending completely across and immediately behind the feed roller, said sprinkler having a central inlet 43 to which is connected a feed pipe 44, the said sprinkler being suitably supported at either end in advance of the rotary brush.

45 is a sprinkler in the form of a perforated pipe extending across the machine and supported by the ends having a central inlet 46 to which is connected the feed pipe 47, said sprinkler being to the rear of the rotary brush and in advance of the delivery rollers.

48 is a hood secured over the rotary brush.

In the operation of this machine the leather is fed in over the rollers 10 and passed on between the brush and the central roller but before it reaches said brush warm water or acid is sprinkled over the surface of the leather so that when it reaches the brush in the case of warm water it is thoroughly cleaned or in the case of acid the acid is brushed well into it. After passing the brush the surface of the leather is again sprinkled, this time with cold water so that it is chilled and closes up the surfaces and prevents the grease from rising due to the warm water treatment. The leather then passes on out through the delivery rollers between which the excess moisture is squeezed out and it is then ready for the manufacture of the harness or the leather goods.

What I claim is:

1. In a leather cleaning machine, a frame, feed rollers journaled in said frame, delivery rollers journaled in said frame and a rotary brush intermediately arranged therein, a sprinkler between said feed rollers and said brush, and a sprinkler between said brush and said delivery rollers.

2. In a leather cleaning machine, a frame, feed rollers journaled in said frame, delivery rollers journaled in said frame and a rotary brush intermediately arranged therein, a sprinkler in the form of a perforated pipe parallel with said rollers and in advance of said brush, a sprinkler in the form of a perforated pipe parallel to and in advance of said delivery rollers.

Signed at Owen Sound, Ont., this fourteenth day of July 1914.

EDGAR WALKER McQUAY.

Witnesses:

GEO. McQUAY,

ALFRED PREST.