

(No Model.)

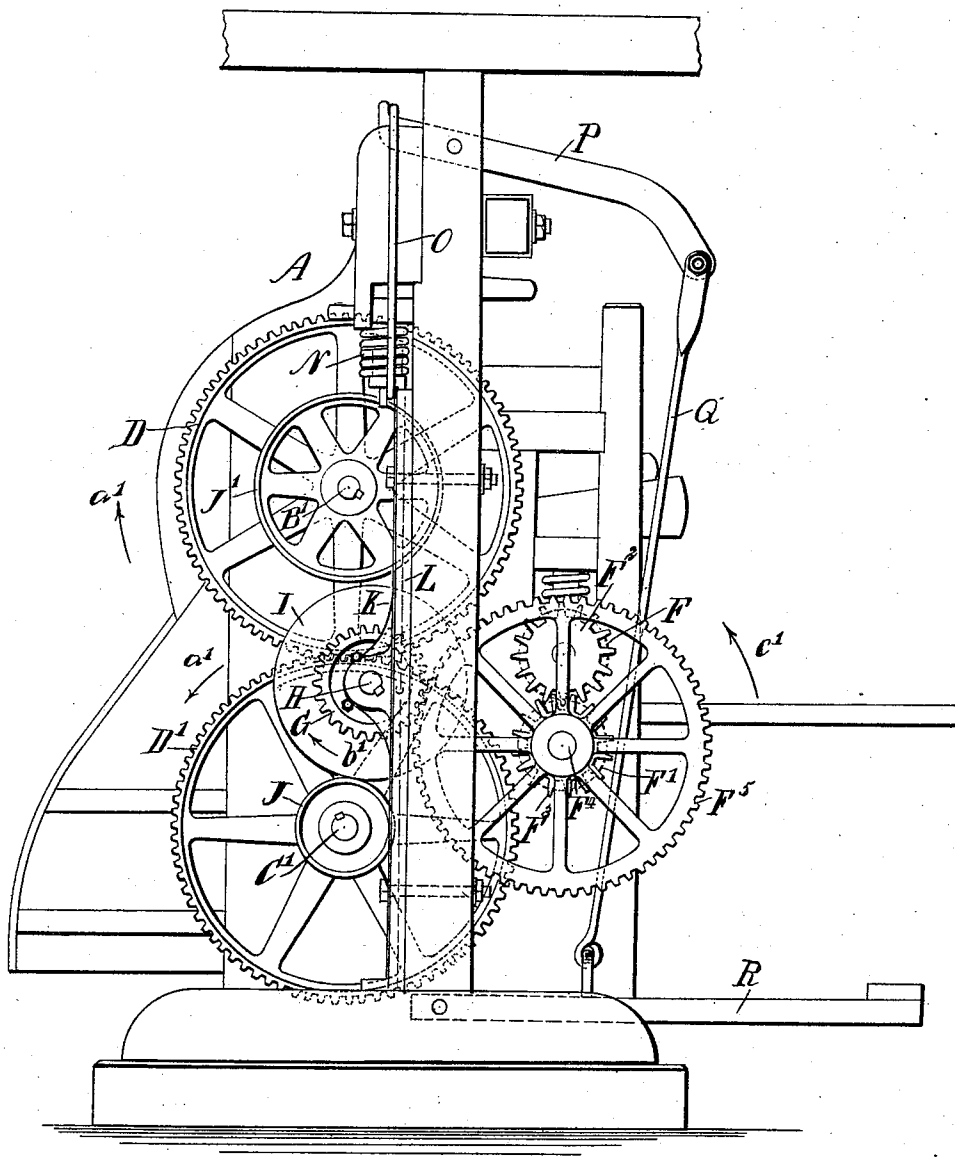
2 Sheets—Sheet 1.

J. McKENZIE & C. O. SHAW.
LEATHER WASHING MACHINE.

No. 578,257.

Patented Mar. 2, 1897.

Fig. 1.



WITNESSES:

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(No Model.)

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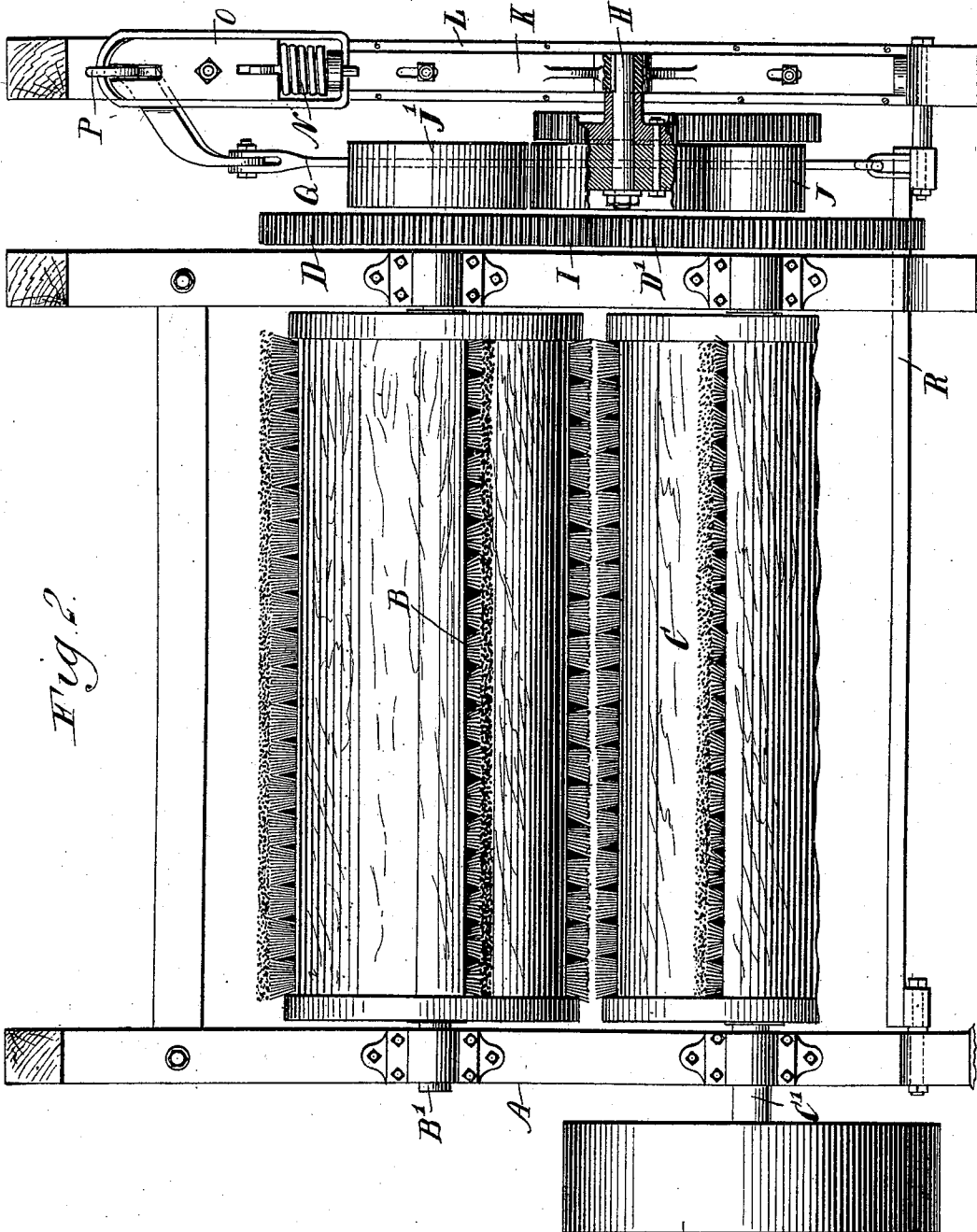


Fig. 2.

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UNITED STATES PATENT OFFICE.

JAMES MCKENZIE AND CHARLES ORLANDO SHAW, OF CHEBOYGAN,
MICHIGAN.

LEATHER-WASHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 578,257, dated March 2, 1897.

Application filed March 31, 1896. Serial No. 585,586. (No model.)

To all whom it may concern:

Be it known that we, JAMES MCKENZIE and CHARLES ORLANDO SHAW, of Cheboygan, in the county of Cheboygan and State of Michigan, have invented a new and Improved Leather-Washing Machine, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved leather-washing machine which is simple and durable in construction, arranged to insure a proper and economical washing of the leather and to permit the operator to readily and conveniently reverse the feed-rolls and move the latter forward or backward without much strain on the working parts.

The invention consists principally of two revoluble brushes geared together and carrying driving friction-pulleys on their shafts and a driven friction-pulley intermediate of said driving friction-pulleys and adapted to be moved in frictional contact with either driving-pulley, said friction-pulley being geared with the feed-rolls.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in the figures.

Figure 1 is a side elevation of the improvement, and Fig. 2 is a rear end elevation of the same with part in section.

The improved leather-washing machine is provided with a suitably-constructed frame A, in which are journaled the revoluble brushes B and C, located one above the other and carrying on their shafts B' C' the gear-wheels D D', in mesh with each other, so that the brushes revolve in unison. On the shaft C' is secured a driving-pulley E, connected by belt with suitable machinery for imparting a rotary motion to the brush C, and by the gear-wheels D' and D a like motion to the brush B.

The leather to be washed between the brushes B and C is fed to the latter by the usual feed-rolls F F', rotating in unison by being geared together by gear-wheels F² and F³, respectively, secured on the shafts of said

feed-rolls. On the shaft F⁴ of the lower feed-roll F' is secured a large gear-wheel F⁵ in mesh with a pinion G, mounted to rotate loosely on a stud H, said pinion G being fastened to one face of a driven friction-pulley I, normally held in contact with a friction-pulley J, secured on the shaft C' of the lower brush C. The friction-pulley I is also adapted to be moved out of frictional contact with the pulley J and in frictional contact with a driven pulley J', secured on the shaft B' of the upper revoluble brush B. The stud H is held in a bearing K, fitted to slide vertically in a suitable guideway L, attached to one of the standards of the frame A, and the upper end of the bearing K is pressed on by a spring N, so as to hold the said bearing normally in a lowermost position and the friction-pulley I in contact with the friction-pulley J.

The upper end of the bearing K is connected by a link O with a lever P, fulcrumed on the frame A and connected by a link Q with a treadle R under the control of the operator feeding the leather to the feed-rolls F F'. It will be seen that when the operator presses the treadle R a swinging motion is given to the lever P, so that the link O pulls the bearing K upward against the tension of the spring N. This movement of the bearing K moves the friction-pulley I out of frictional contact with the pulley J and in frictional contact with the pulley J', but the pinion G remains in gear with the gear-wheel F⁵.

The operation is as follows: When the several parts are in the position illustrated in Fig. 1 and a rotary motion is given to the brushes B and C in the direction of the arrow a', then the friction-pulley J imparts a rotary motion to the friction-pulley I in the direction of the arrow b', and the pinion G on said friction-pulley I imparts a rotary motion to the gear-wheel F⁵ and feed-roll F' in the direction of the arrow c'. Thus when the operator moves the leather to the two feed-rolls F F' the leather is drawn in between the said feed-rolls and to the brushes B C to be acted on by the latter to clean the leather. When the end of the leather is near the feed-rolls F' and F, then the operator presses the treadle R, so that the friction-pulley I moves out of frictional contact with the pulley J and into fric-

tional contact with the pulley J', whereby the motion of the friction-pulley I, the pinion G, and gear-wheel F⁵ is reversed and the feed-rolls F' and F are likewise turned backward to draw the leather back out of the machine. As soon as the operator releases the pressure on the treadle R the spring N again moves the friction-pulley I out of engagement with the pulley J' and in frictional contact with the pulley J. The motion of the feed-rolls F' and F is then again reversed and another forward feeding of the leather can be had. Now it will be seen that by the arrangement described an almost instant reversion of the feed-rolls F F' is obtained without much strain on the working parts of the machine and without much exertion on the part of the operator. The friction-pulley J' is preferably somewhat larger in diameter than the friction-pulley J, so as to insure a more rapid return motion of the leather when being drawn backward from the brush-rolls B and C for the purpose of changing the feeding of the leather to the machine.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. A leather-washing machine, comprising two revoluble brushes geared together, feed-rolls adapted to be driven forward and backward to feed the leather to and from the said revoluble brushes, driving friction-pulleys held on the shafts of said revoluble brushes, and a driven friction-pulley intermediate of said friction-pulleys and adapted to be moved in frictional contact with either driving friction-pulley, said driven friction-pulley being

geared with one of the feed-rolls, substantially as shown and described.

2. A leather-washing machine, comprising two revoluble brushes geared together, feed-rolls adapted to be driven forward and backward to feed the leather to and from said revoluble brushes, driving friction-pulleys held on the shafts of said revoluble brushes, a driven friction-pulley intermediate of said friction-pulleys and adapted to be moved in frictional contact with either driving friction-pulley, said driven friction-pulley being geared with one of the feed-rolls, a spring for holding said driven friction-pulley normally in contact with one of the driving-pulleys, and a treadle-and-lever mechanism under the control of the operator for moving said driven friction-pulley out of contact with one driving-pulley and in contact with the other driving-pulley, substantially as shown and described.

3. A leather-washing machine provided with feed-rolls geared together and rotating in unison, an independent gear-wheel secured on the shaft of one of the feed-rolls, a friction-pulley mounted to rotate loosely a pinion secured to the face of said pulley and in mesh with said independent gear-wheel and means whereby said friction-pulley may be driven in opposite directions to reverse the movement of the feed-rolls, substantially as shown and described.

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CHARLES ORLANDO SHAW.

Witnesses:

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