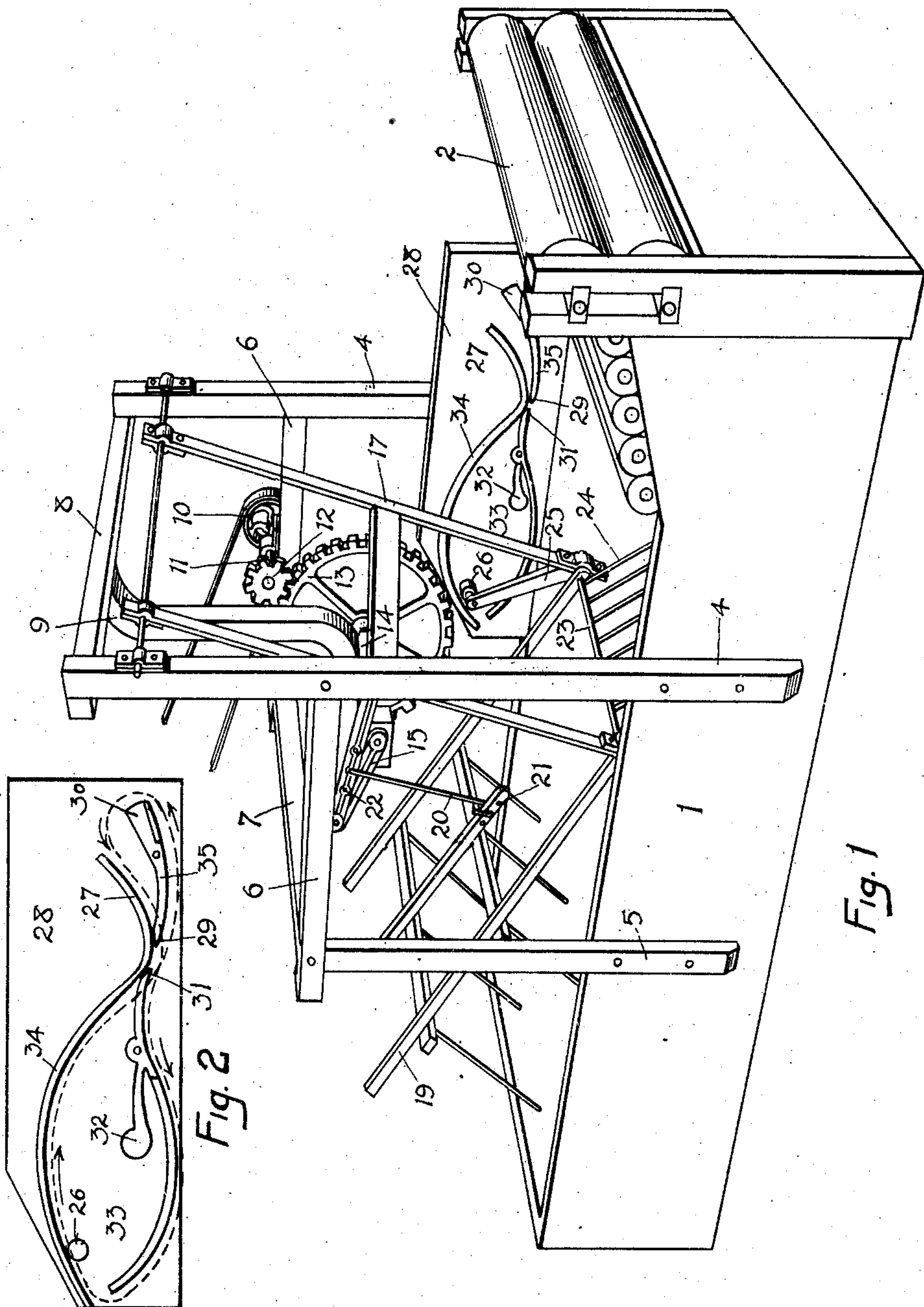


No. 854,372.

PATENTED MAY 21, 1907.

W. O. MILNE.
WOOL SCOURING MACHINE.
APPLICATION FILED NOV. 12, 1906.



WITNESSES:

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WALTER OSCAR MILNE, OF STOCKTON, CALIFORNIA.

WOOL-SCOURING MACHINE.

No. 854,372.

Specification of Letters Patent.

Patented May 21, 1907.

Application filed November 12, 1906. Serial No. 342,952.

To all whom it may concern:

Be it known that I, WALTER OSCAR MILNE, a citizen of the United States, residing at Stockton, in the county of San Joaquin and State of California, have invented new and useful Improvements in Wool-Scouring Machines, of which the following is a specification.

This invention relates to improvements in wool washing and scouring machines, the object of the invention being to provide a machine simple and inexpensive in construction and effective in operation.

In the accompanying drawing, Figure 1 is a perspective view of a scouring vat equipped with my improvement; Fig. 2 is a detail side elevation of a portion of the apparatus.

Referring to the drawing, 1 indicates a vat or scouring tub, in which the wool to be scoured, together with the scouring fluid, is placed. In practice there are employed a series of these vats placed end to end, each furnished with the proper mechanism for washing the wool and delivering it to the next vat. For the latter purpose there are provided, in each vat, feed rollers 2 which feed the wool between a pair of squeezing rollers 3 at the end of the vat, the wool passing from said squeezing rollers to the next vat containing clearer liquid.

Upon the vat is secured a frame consisting of side posts 4, 5, longitudinal beams 6, a transverse beam 7 connecting the rear ends of said longitudinal beam and the tops of the rear side posts 5, a transverse beam 8 connecting the tops of the front side posts 4, which are higher than the posts 5, and a curved brace 9 connecting the two transverse beams 7, 8.

10 indicates a driving pulley, driven from any suitable source of power, and mounted upon a shaft 11, having suitable bearings on one of the longitudinal beams 6, carrying at its other end a pinion 12, meshing with a gear wheel 13 upon a shaft 14, the other end of which shaft carries a crank 15 connected by a pitman with a carrier 17, said carrier being suspended from a transverse shaft 18 having its bearings on the front side posts 4 near their top. Pivotaly attached to the lower ends of said carrier is the end of a rake frame 19, suspended by means of a link 20 adjustably attached at one end to said frame by one of a series of holes 21, and at the other

end adjustably attached to said pitman 16 by one of a series of holes 22.

In the lower end of the carrier is a rocking fork shaft 23, having rigidly secured thereto fork tines 24, and having at one end a crank 25 upon which is a roller 26. This roller, when the fork is advancing, rides against the concave or under side of a cam rail 27 supported upon a suitable plate 28, and then escapes past the pointed end of a pivoted tongue 29, normally raised by a counterbalance 30. It then passes under a pivoted tongue 31 normally raised by a counterbalance 32, and rides against the convex under side of said tongue, being thereby depressed, and raising the tines 24 as they pass forward above the feed rollers. It then passes along the under or convex side of a cam rail 33. When said tines have advanced sufficiently far over said rollers, the roller 26 escapes past the end of said rail 33, whereupon it rises by reason of the weight of the tines and the wool thereon, said tines with the wool then dropping on to said rollers. The cam roller then begins to move backward, and travels against the under side of a cam rail 34, escaping between said cam rail and said swinging tongue 31, and passing under the pivoted tongue 29, and along the under side of a fixed cam rail 35 to its point of starting. While passing backward the tines are pointed substantially horizontal so that they can freely move backward, but when moving forward they drop into a substantially vertical position to engage the wool and move it forward, and then scoop it upward.

The rake frame reciprocates in a suitable manner to advance the wool, but this portion of the apparatus may be changed or modified, as it forms no part of the present invention.

I claim:—

In a wool scouring machine, the combination of a vat, a fork comprising a shaft and tines, a carrier therefor, means for reciprocating said carrier horizontally, and means for rocking the fork shaft in the carrier, comprising an arm extending from said fork shaft, a roller carried by said arm, a cam rail in contact with which roller travels on the forward movement of the carrier, a vibratable tongue in contact with which on leaving the cam rail the said roller travels in the forward movement of the carrier, a second cam rail in contact with which the roller travels in the

rearward movement of the carrier, a vibratable tongue in contact with which on leaving said second cam rail said roller travels in the rearward movement of the carrier, and
5 means for suitably supporting said cam rails and vibratable tongues, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WALTER OSCAR MILNE.

Witnesses:

FRANCIS M. WRIGHT,
HATTIE LEVY.