

P. L. BROCKARDT.
MANGLE.
APPLICATION FILED AUG. 12, 1908.

948,587.

Patented Feb. 8, 1910.

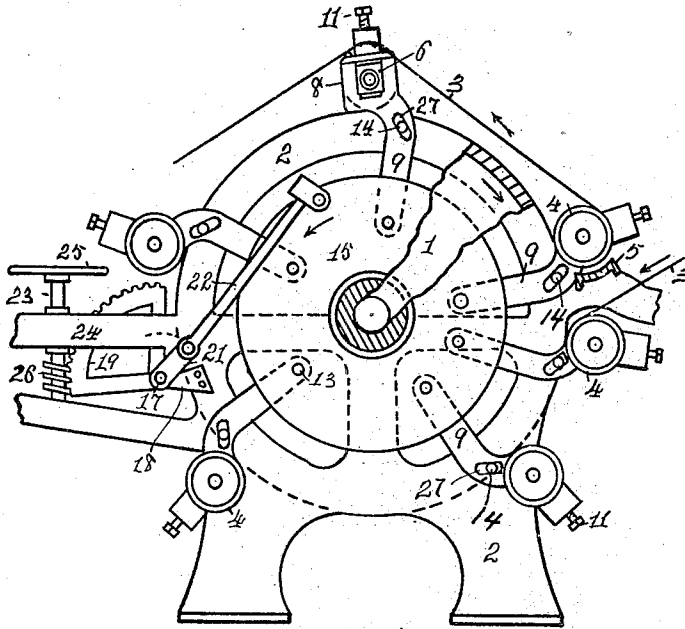


Fig. 1.

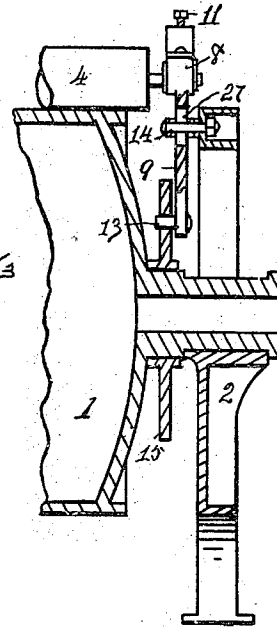


Fig. 2.

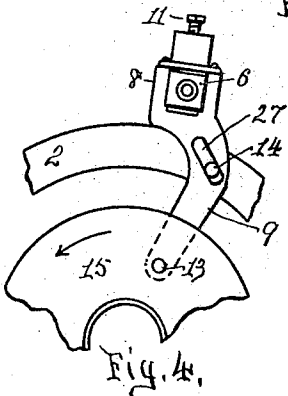


Fig. 4.

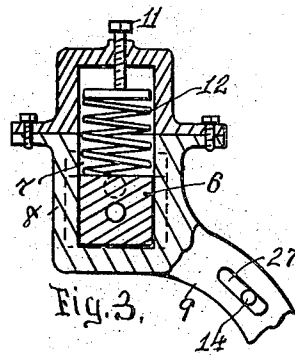


Fig. 3.

witnesses.

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UNITED STATES PATENT OFFICE.

PAUL L. BROCKARDT, OF HAMILTON, OHIO, ASSIGNOR TO THE EMPIRE MACHINE COMPANY, OF HAMILTON, OHIO, A CORPORATION OF OHIO.

MANGLE.

948,587.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed August 12, 1908. Serial No. 448,115.

To all whom it may concern:

Be it known that I, PAUL L. BROCKARDT, a citizen of the United States, residing at Hamilton, Ohio, have invented a new and useful Improvement in Mangles, of which the following is a specification.

My invention relates to improvements in mangles of the class wherein the linen is carried under pressure between the face of a rotative cylindrical drier and an endless apron, and the objects of my improvements are to provide hand actuated mechanism for simultaneously moving a series of pressure rolls away from the drying cylinder, for moving them simultaneously toward said cylinder and maintaining them with a predetermined pressure against the cylinder, the apron intervening to provide the levers with fulcrum slots for supplementing the action of the pressure springs, and to provide simple and durable construction and assemblage of parts for securing the greatest facility of operation and efficiency of action. These objects are attained in the following described manner as illustrated in the accompanying drawings, in which:

Figure 1 is a transverse section with parts broken away of a mangle embodying my improvements; Fig. 2, a longitudinal section with parts broken away; Fig. 3, a side elevation with parts in section and parts broken away of a housing formed on a lever and provided with a movable roll bearing, and Fig. 4 a detail view of one of the levers.

In the drawings, 1 represents the hollow cylindrical drier of a mangle journaled at its respective ends on supporting frames 2, 3 portions of the endless apron partially encircling the drier under the pressure rolls 4 and driven in the direction shown by the arrows, and 5 the doctor bar, all being constructed and arranged in the ordinary manner. The pressure rolls 4 are journaled at their respective ends in bearings 6 which are slidingly mounted in slots 7 formed in housings 8. Said housings are each provided with a curved lever 9 and with an adjusting screw 11 for regulating the pressure of the coiled springs 12 whereby the roll bearings 6 are maintained under a yielding pressure against the bottom of the slots 7, as shown in Fig. 3. The curved levers 9 are fulcrumed at an intermediate point by oblique slots 27 on the respective bolts 14 which are secured at intervals on the end

frames and equidistant from the axis of the drier. Disks 15 mounted on the respective journals of the drier have pivoted thereto by pins 13 the inner ends of levers 9.

A shaft 17 journaled at its ends in bearings 18 secured to the supporting frames is provided with a segmental rack 19 and with crank arms 21 which are connected with the respective disks near one edge by means of connecting rods 22.

A shaft 23 journaled in bearings on a bracket 24 which projects from one of the end supporting frames is provided with a hand wheel 25 and with a worm pinion 26 in engagement with the segmental rack 19.

In operation, the disks may be rotatively adjusted in either of opposite directions by means of the hand actuated rack and pinion and crank arm connections therewith. These movements of the disks actuate the curved levers bearing the pressure rolls and either carry said rolls simultaneously away from the drying cylinder or carry them simultaneously toward said cylinder and press them against it and the intervening apron. The contact of the rolls with the apron on the drier permits the housing to be moved with the bottom of the slots therein out of contact with the roll bearings to obviate any interference with the action of the springs in maintaining the rolls with the apron in contact with the drier under a yielding pressure.

Having fully described my improvements, what I claim as my invention and desire to secure by Letters Patent of the United States is:—

1. In a mangle, the combination with a cylindrical drier, of end frames in which the drier is journaled, a series of levers each having oblique pivotal slots, fulcrum pins fixed in said end frames and passing respectively through said slots, a disk at each end of the drier and journaled concentrically therewith, pivots by which the levers at each end frame are joined to their respective disks, pressure rolls journaled in the free ends of said levers and adapted to be pressed against the drier, a rock shaft parallel to the axis of the drier, cranks and arms connecting the rock shaft to said disks, a toothed sector on said shaft, and a worm meshing with said sector, substantially as and for the purpose set forth.

2. In a mangle, the combination with a cylindrical drier, of end frames in which the

drier is journaled, a series of levers each having oblique pivotal slots, fulcrum pins fixed in said end frames and passing respectively through said slots, a disk at each
5 end of the drier and journaled concentrically therewith, pivots by which the levers at each end frame are joined to their respective disks, pressure rolls journaled in the free ends of said levers and adapted to be
10 pressed against the drier, and means for oscillating said disks for varying the pressure of said rolls.

3. A mangle comprising end frames, a drier journaled thereon, fulcrum pins on the

end frames, a series of levers each formed 15 with an oblique slot adapted to movably engage with the respective pins, spring-actuated bearings mounted to slide in one end of the levers, pressure rolls journaled therein, and hand actuated mechanism connected 20 with the opposite ends of said levers for moving them simultaneously on the said pins to carry the rolls toward or from the drier.

PAUL L. BROCKARDT.

Witnesses:

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