C. B. GARTRELL.

IRONING MACHINE.

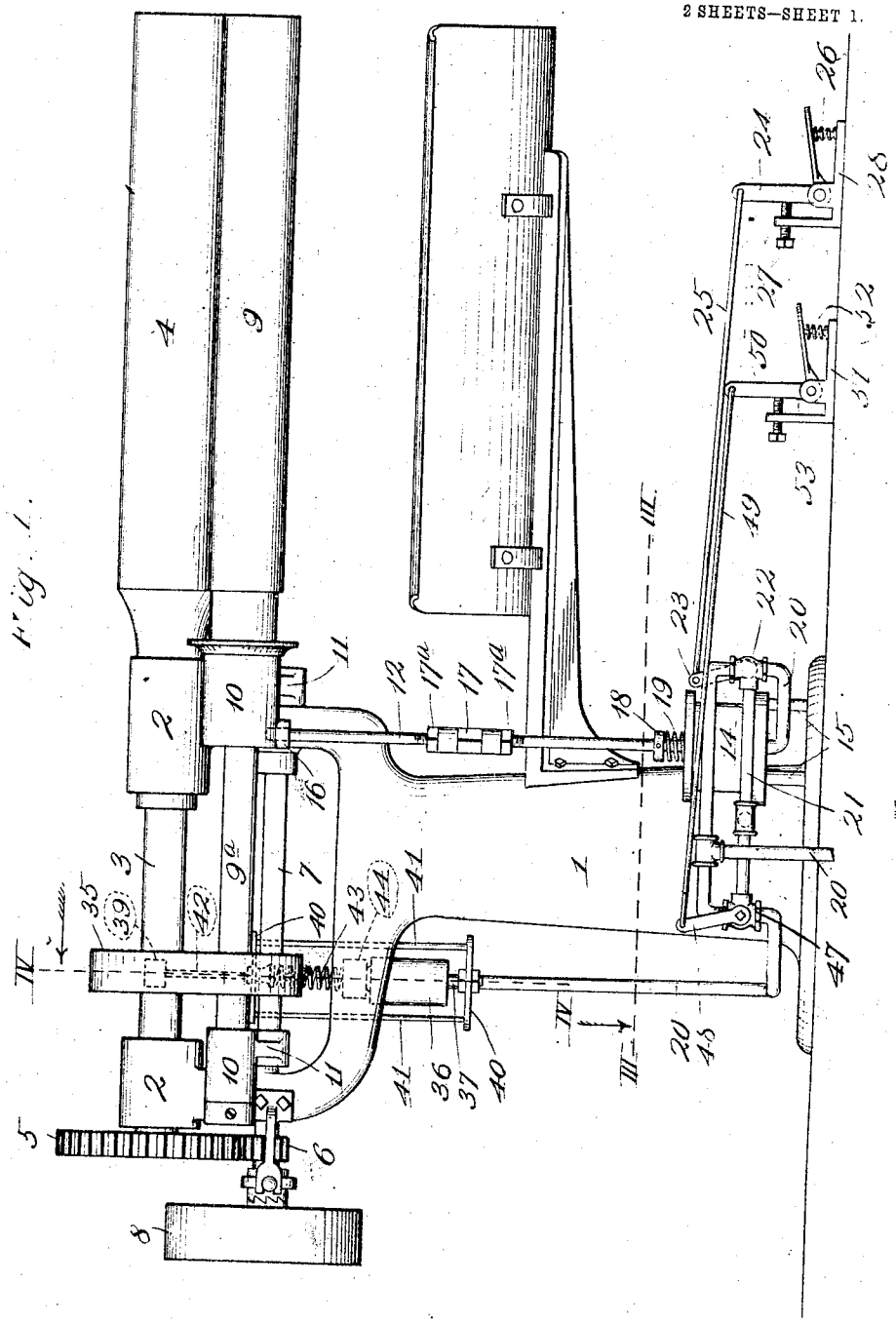
APPLICATION FILED SEPT. 28, 1908.

959,335.

Patented May 24, 1910.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 2.

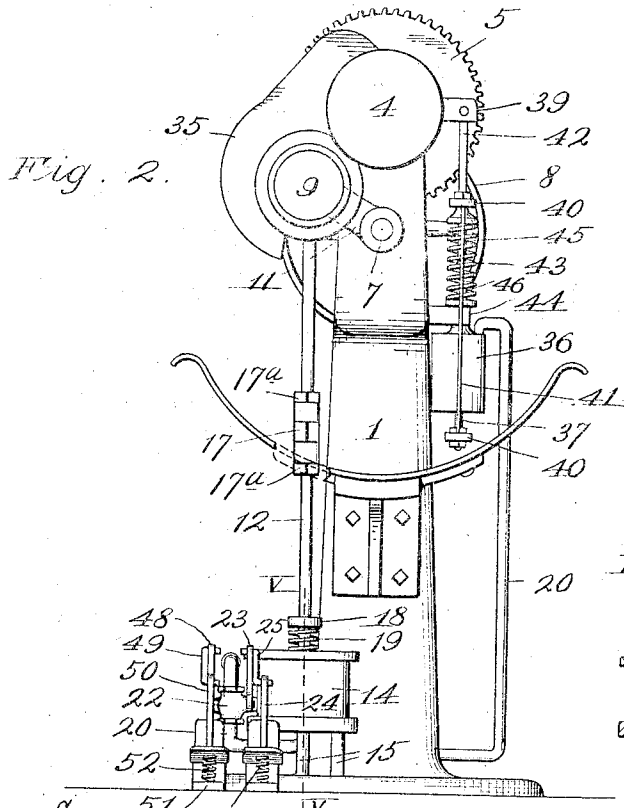


Fig. 5.

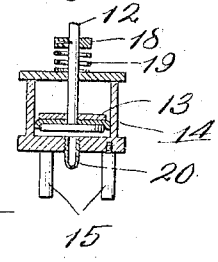
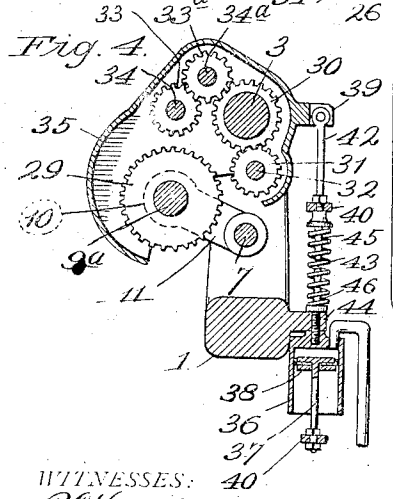


Fig. 4.



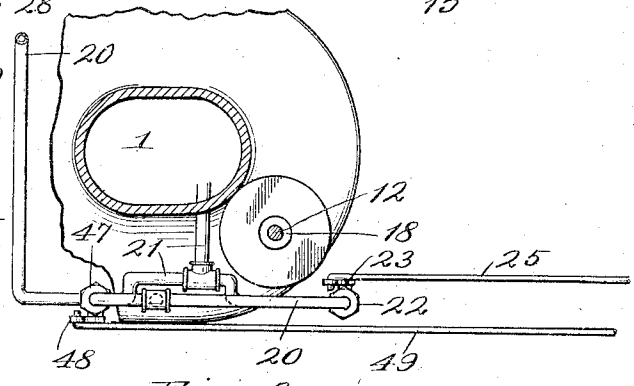


Fig. 3.

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UNITED STATES PATENT OFFICE.

CHARLES B. GARTRELL, OF KANSAS CITY, MISSOURI.

IRONING-MACHINE.

959,335. Specification of Letters Patent. **Patented May 24, 1910.**

Application filed September 28, 1908. Serial No. 455,072.

To all whom it may concern:

Be it known that I, CHARLES B. GARTRELL, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Ironing-Machines, of which the following is a specification.

My invention relates to improvements in laundry machines, and it pertains more particularly to that class embodying a stationary roll and a laterally movable roll, which latter is mounted to move into and out of contact with the former.

One of my objects is to provide novel means whereby the machine-operator may readily control the pressure with which the laterally movable roll bears against the stationary roll.

A further object is to provide novel means for controlling the gearing whereby the laterally movable roll is driven in reverse directions, and in order that the invention may be fully understood, reference will now be made to the accompanying drawings, in which:

Figure 1 represents a side elevation of an ironing machine provided with my improvements. Fig. 2 is an end view of the same. Fig. 3 is a broken horizontal section on line III—III of Fig. 1. Fig. 4 is a broken vertical section on line IV—IV of Fig. 1. Fig. 5 is a broken vertical section on line V—V of Fig. 2.

The ironing machine proper is of the ordinary type, and has a hollow pedestal 1, provided with stationary bearings 2 at its upper end, in which a shaft 3 carrying the heated roll 4 is journaled, said shaft being provided at one end with a fixed cog-wheel 5, which is driven by a pinion 6 mounted on shaft 7, journaled in the upper portion of the pedestal and constantly driven in one direction by a pulley 8.

9 designates the padded roll, which is adapted to rotate in reverse directions and move laterally into and out of contact with roll 4, which is stationary so far as lateral movement is concerned. Roll 9 is mounted on a shaft 9^a, journaled in a pair of bearings 10, carried by a pair of rocker-arms 11, mounted upon shaft 7. Roll 9 is moved laterally into and out of contact with roll 4 by a fluid-actuated piston, consisting of a rod 12 and a head 13, which latter operates in a cylinder 14, supported upon legs 15, resting upon the base of the pedestal 1. The upper end of rod 12 is seated in a socket 16 at the underside of one of the bearings 10, and said rod may be lengthened or shortened to bring roll 9 in proper relation to roll 4, by means of a threaded sleeve 17, normally held from rotation by lock-nuts 17^a.

When the supply of motive fluid is cut off from cylinder 14, the piston is forced downward by the weight of roll 9 as the same moves out of contact with roll 4, and in order to prevent the piston from contacting with and jarring the lower head of cylinder 14, in its downward movement, I provide a cushion in the form of a collar 18, secured to rod 12, and a coil-spring 19, which is interposed between said collar and the upper cylinder-head.

Motive fluid is admitted from a suitable source of supply (not shown) to cylinder 14 through a supply-pipe 20, and after pushing the piston upward and retaining it in a raised position the desired length of time, is permitted to escape through an exhaust-pipe 21 leading into the hollow pedestal 1, which acts as a muffler in deadening the sound created by the exhausting fluid. The flow of fluid through the exhaust and supply-pipes is controlled by a three-way valve 22, communicating therewith and provided with a lever 23 connected to a treadle 24 by a rod 25. Treadle 24 is returned to its normal position after each operation, by a coil-spring 26 bearing against the underside thereof, and it thereby closes valve 22 to the supply-pipe 20 and opens said valve to the exhaust-pipe 21, so that the charge of fluid in cylinder 14 may escape therefrom. The movement of treadle 24 is limited by a set-screw 27 adjustably engaging a shoe 28 on which the treadle is pivotally mounted.

The padded roll 9 is driven in the same direction as roll 4 by a cog-wheel 29 fixed to shaft 9^a, a cog-wheel 30 fixed to shaft 3, and an idler 31 interposed between cog-wheels 29 and 30 and mounted upon a stub-shaft 32. Padded roll 9 is driven in a reverse direction to roll 4 by cog-wheels 29 and 30 and two idlers 33 33^a interposed between the same and mounted upon two stub-shafts 34 34^a. Stub-shafts 32, 34, and 34^a are carried by a casing 35 rockingly-mounted upon shaft 3, so that when the padded roll 9 is raised into contact with roll 4, said casing may be rocked to throw idler 31 into engagement with cog-wheel 29 when it is de-

sired to rotate the padded roll in the same direction as roll 4. When it is desired to rotate the padded roll in an opposite direction to roll 4, casing 35 is permitted to occupy its normal position, Fig. 4, so that cog-wheel 29 will engage idler 33 when the padded roll is raised into contact with roll 4. The rocking movement of casing 35 is controlled by motive fluid acting in a cylinder 36 upon a piston consisting of a rod 37 and a head 38, which latter is reciprocally mounted in said cylinder. Rod 37 is connected to an arm 39 projecting rearwardly from the casing, by two cross-heads 40, rods 41, and a rod 42. Idler 31 is prevented from being thrown violently into engagement with cog-wheel 29, by means of a cushion consisting of a spring 43, interposed between the uppermost cross-head 40, and an arm 44 projecting rearwardly from the upper portion of the pedestal 1. Idler 31 is prevented from being thrown too deeply into mesh with cog-wheel 29 by pins 45 and 46 contacting with each other. Pin 45 is secured to the uppermost cross-head 40 and pin 46 is secured to arm 44.

Motive fluid is conducted into the upper end of cylinder 36 by supply-pipe 20, the flow of motive fluid to said cylinder being controlled by a three-way valve 47, which also controls the exhaust which passes back through a portion of supply-pipe 20 in its passage through valve 47 to the exhaust-pipe 21.

Valve 47 is provided with a lever 48 secured to the stem thereof, a rod 49 connected to said lever, and a treadle 50 to which rod 49 is also connected. Treadle 50 is pivotally mounted upon a shoe 51 located adjacent to shoe 28, so that both treadles may be actuated without the operator changing his position. Treadle 50 is returned to its normal position after each operation by a coil-spring 52, and it thereby closes communication between valve 47 and supply-pipe 20, and opens communication between said valve and the exhaust-pipe 21. The movement of treadle 50 is limited by a set-screw 53 adjustably engaging shoe 51.

Having thus described my invention, what I claim is:—

1. In combination, a laundry machine consisting of a stationary roll, a laterally movable roll, a pedestal for supporting said rolls, a casing rockingly-mounted upon the stationary roll, a piston for actuating said casing, a cylinder in which said piston operates, a cross-head secured to said piston, rods secured to said cross-head, a second cross-head secured to said rods, a rod connecting the second cross-head to the casing, a cushion interposed between the second cross-head and the pedestal, cog-wheels fixed to the rolls, and an idler carried by the casing, engaging the cog-wheel on the stationary roll and adapted to engage the cog-wheel on the movable roll when the casing is rocked.

2. In combination, a laundry machine consisting of a stationary roll, a laterally movable roll, means supporting said rolls, a casing rockingly-mounted upon the stationary roll, gear wheels fixed to the rolls, an idler carried by the casing, engaging the cog-wheel on the stationary roll and adapted to engage the cog-wheel on the movable roll when the casing is rocked, fluid-controlled means for actuating the movable roll, fluid-controlled means for actuating the casing, and treadles arranged adjacent each other for controlling the fluid-controlling means.

In testimony whereof I affix my signature, in the presence of two witnesses.

CHARLES B. GARTRELL.

Witnesses:

F. G. FISCHER,

M. COX.