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APRON CONTROLLING MECHANISM.

APPLICATION FILED APR. 19, 1913.

1,100,801. Patented June 23, 1914.

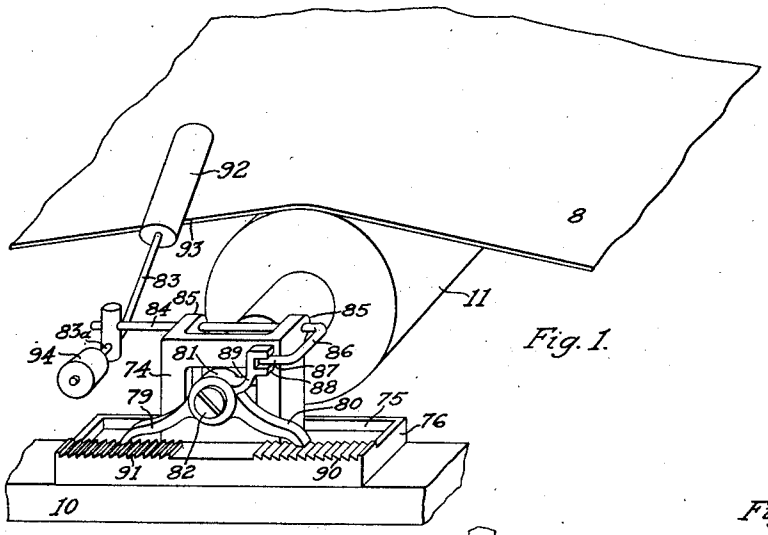


Fig. 1.

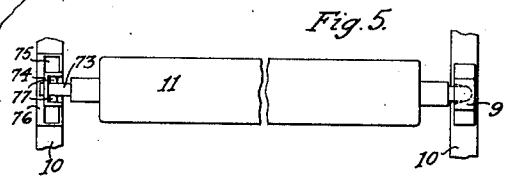


Fig. 5.

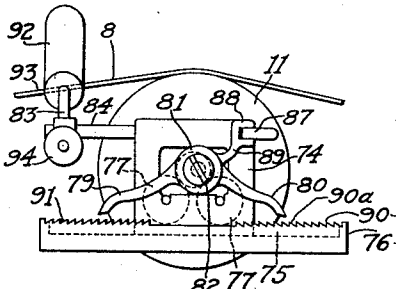


Fig. 2

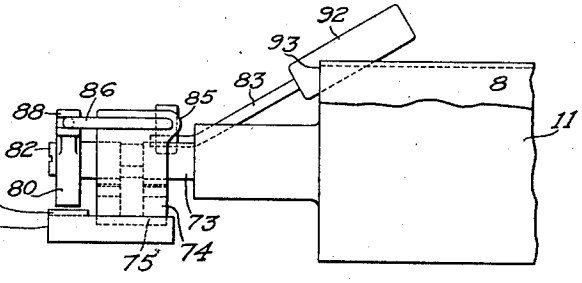


Fig. 3.

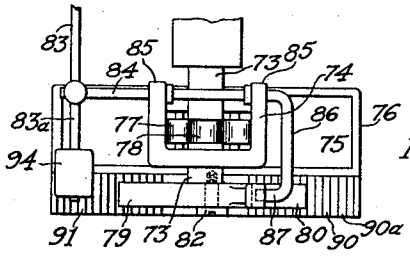


Fig. 4.

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UNITED STATES PATENT OFFICE.

FRED C. WENDELL, DECEASED, LATE OF NEW YORK, N. Y., BY THERESA S. WENDELL, ADMINISTRATRIX, OF NEW YORK, N. Y.

APRON-CONTROLLING MECHANISM.

1,100,801. Specification of Letters Patent. **Patented June 23, 1914.**

Original application filed February 1, 1913, Serial No. 745,701. Divided and this application filed April 19, 1913. Serial No. 762,388.

To all whom it may concern:

Be it known that FRED C. WENDELL, late a citizen of the United States, deceased, has invented certain new and useful Improvements in Apron-Controlling Mechanism, of which the following is a specification.

This is a divisional application of the pending patent application filed February 1, 1913, Serial No. 745,701.

This invention relates to devices for preventing excessive lateral apron shifting in ironing machines, or similar machinery.

The aprons passing over drums and rollers of an ironing machine, or similar machinery, are usually quite wide and have a tendency to shift off laterally to the right or to the left. This shifting tendency, characteristic in machines of this kind, occurs to such an extent as to interfere seriously with the working of the machine and sometimes causes destruction of the apron.

The principal object of the invention is to provide simplified, inexpensive, and improved automatic mechanism, readily applicable to existing machines, for preventing such excessive apron shifting.

Other objects and advantages will hereinafter appear.

In the accompanying drawings, Figure 1 is a general perspective view of the apron controlling mechanism. Fig. 2 is a front elevation of the apron controlling mechanism. Fig. 3 is a side elevation of Fig. 2. Fig. 4 is a plan view of Fig. 2. Fig. 5 is a view showing the mounting of the apron guide-roll.

The apron 8 runs upon and drives an apron-control guide roll 11, one end of which is pivoted in a bearing 9 fixed to the machine frame 10 and its opposite journal 73 is held in a bearing box 74, of the mechanism, slidable parallelly to the direction of movement of the apron in a channeled portion 75 of a base-plate 76 fixed to the machine frame 10, so that by sliding said box the roll 11 may be swung angularly to the apron about said pivoted bearing. Within the box 74 are rotatably-mounted rollers 77, and the journal 73 having a grooved portion 78 is seated and runs upon said rollers, which constitute a bearing for said roll.

Dogs 79, 80 depend from a hub 81 which is pivoted eccentrically to the extremity of journal 73 by means of the stud 82. A lever 83 has a rock-shaft 84 forming part thereof fulcrumed at 85 on the box 74, and its opposite arm 86 extending from said shaft loops around so that its extremity 87 engages the forked end 88 of an arm 89 extending from the hub 81, whereby the rising of said lever will cause the dog 80 to engage a coöperating toothed portion 90 provided on the base-plate 76, while the falling of the lever will cause the dog 79 to engage a similar co-operating portion 91 thereof. The lever 83 is provided with a thickened cylindrical end 92, made preferably of wood and of a required weight, which continually rests upon the edge 93 of the apron; a weight 94 adjustable along an extension 83^a of the lever serving to counterweigh the end 92 to an extent, if found necessary. Assuming that the apron in its shifting tendency shifts in the direction of the mechanism, the lever 83 will rise thereby and the dog 80 will be caused to engage its toothed portion 90, so that for every revolution made by the roll its eccentricity with the hub 81 will cause the box 74 to slide and said roll to swing angularly for a distance of one tooth 90^a to the left of a perpendicular to the apron, as viewed in the drawing. This angular swinging will continue until a maximum point is reached when said angularity will cause a recession of the apron and it will shift oppositely and cause a gradual falling down of the lever-arm 83. For an interval, therefore, the apron runs true, during which time the dogs 79, 80 are disposed in the inactive position shown in Fig. 1. As the apron-shifting in the opposite direction however continues, the lever 83 falls further, and the dog 79 is

thereby caused to engage the portion 91, whereby the opposite effect takes place and the roll is swung to the right of a perpendicular to the apron, which again restores the true running of the apron. Such deliberate predetermined shifting of the apron in both directions is in this way continually affected by the said controlling mechanism, which is automatically operated continually by the apron itself in its shifting tendency, and the excessive lateral shifting of the apron is thereby prevented.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others.

Having thus described the invention, I claim:—

1. An apron controlling mechanism having the combination of an apron guide-roll pivoted at one end and adaptable to swing angularly to the apron, a pair of dogs rigid with each other mounted eccentrically on said roll, fixed toothed portions adaptable to coöperate with said dogs, a lever resting upon the apron being actuated to rise and fall by the shifting of the apron, and said lever engaging said dogs to cause one or the other thereof to engage with its coöperating fixed toothed portion to cause said roll to swing angularly to the apron for preventing excessive apron shifting.

2. An apron controlling mechanism having the combination of a guide-roll pivoted at one end thereof and being adaptable to swing angularly to the apron, a pair of dogs rigid with each other mounted eccentrically on said roll, fixed toothed portions adaptable to coöperate with said dogs, and a lever actuated by the shifting of said apron engaging said dogs to cause one or the other thereof to engage its coöperating fixed toothed portion to swing said roll angularly for preventing excessive apron shifting.

3. An apron controlling mechanism having the combination of a guide roll adaptable to swing angularly to the apron, a pair of dogs rigid with each other actuated by the rotation of said roll, fixed portions adaptable to coöperate with said dogs, and means operated by the shifting of the apron engaging said dogs to cause one or the other thereof to engage its coöperating fixed portion to swing said roll angularly for preventing excessive apron shifting.

4. An apron control having the combination of a guide-roll adaptable to swing angularly to the apron, mechanism for swinging said roll in either direction, and a lever resting upon the apron being actuated to rise and fall by the shifting of the apron to operate said mechanism to swing said roll for preventing excessive apron shifting.

5. An apron controlling mechanism having the combination of a guide roll adaptable to swing angularly to the apron, a pair of dogs rigid with each other actuated by the rotation of said roll, fixed portions adaptable to coöperate with said dogs, a lever resting upon the apron being actuated to rise and fall by the shifting of the apron, and said lever engaging said dogs to cause one or the other thereof to engage its cooperating fixed portion to swing said roll angularly for preventing excessive apron shifting.

6. An apron control having the combination of a guide-roll adaptable to swing angularly to the apron, mechanism at the end of said roll, a lever resting upon the apron being actuated to rise and fall by the shifting of the apron to operate said mechanism to swing said roll angularly for preventing excessive apron shifting, and an adjustable counterweight for said lever.

7. An apron controlling mechanism having the combination of a guide-roll adaptable to swing angularly to the apron, an eccentric on said roll, a pair of dogs rigid with said eccentric, fixed toothed portions adaptable to coöperate with said dogs, and a lever actuated by the shifting of the apron engaging said dogs to cause one or the other thereof to engage its coöperating fixed toothed portion to swing said roll for preventing excessive apron shifting.

8. An apron controlling mechanism having the combination of an apron guide-roll pivoted at one end, a bearing for the opposite end of said roll slidable horizontally and adaptable to swing said roll angularly to the apron, a pair of dogs rigid with each other mounted eccentrically on said roll, fixed toothed portions adaptable to coöperate with said dogs, a lever fulcrumed upon said slidable bearing and resting upon the apron being actuated to rise and fall by the shifting of the apron, and said lever engaging said dogs to cause one or the other thereof to engage with its coöperating fixed toothed portion to cause said roll to swing angularly for preventing excessive apron shifting.

9. An apron control having the combination of a guide-roll pivoted at one end, the opposite end of said roll having a slidable bearing for swinging the roll angularly to the apron, mechanism for swinging said bearing and roll in either direction, and a lever fulcrumed upon said slidable bearing and resting upon the apron being actuated to rise and fall by the shifting of the apron to operate said mechanism to swing said bearing and roll for preventing excessive apron shifting.

10. An apron control having the combination of a guide-roll adaptable to swing an-

gularly to the apron, mechanism at the end of said roll, a lever resting upon the apron being actuated to rise and fall by the shifting of said apron to operate said mechanism to swing said roll angularly for preventing excessive apron shifting, and means for adjusting the weight of said lever against said apron.

Signed at the city of New York, in the county of New York, and State of New York, this 17th day of April A. D. 1913.

THERESA S. WENDELL,
Administratrix of the estate of Fred C. Wendell.

Witnesses:
CHAS. W. LA RUE,
B. ROMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."