

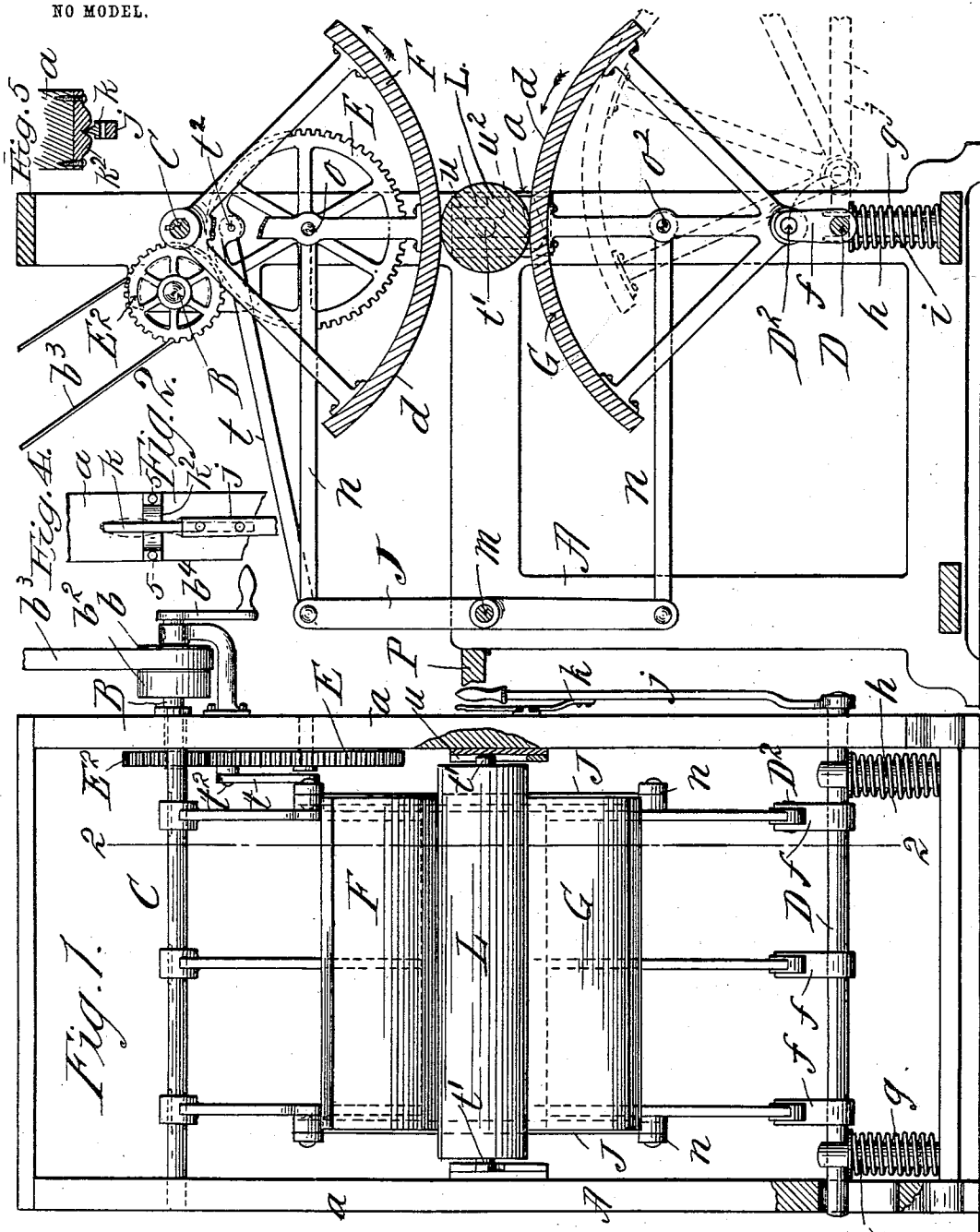
No. 733,645.

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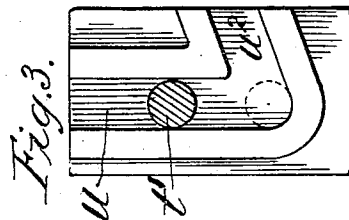
K. HENRIKSON.
MANGLE.

APPLICATION FILED MAR. 5, 1903.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

KRISTOFER HENRIKSON, OF SPRINGFIELD, MASSACHUSETTS.

MANGLE.

SPECIFICATION forming part of Letters Patent No. 733,645, dated July 14, 1903.

Application filed March 5, 1903. Serial No. 146,315. (No model.)

To all whom it may concern:

Be it known that I, KRISTOFER HENRIKSON, a subject of the Czar of Russia, and a resident of Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Mangles, of which the following is a full, clear, and exact description.

This invention relates to improvements in mangles or machines for pressing and smoothing cloth by a rolling action.

The object of the invention is to provide a machine for performing the cloth smoothing or ironing action in an entirely satisfactory manner and one which may be used for such purpose conveniently and rapidly.

The invention consists in a machine having the parts thereof constructed and organized as rendered manifest in the accompanying drawings in conjunction with the description hereinafter given.

In the drawings, Figure 1 is a front view of the machine; and Fig. 2 is a vertical sectional view thereof as taken from front to rear on about the plane indicated by the line 2 2, Fig. 1. Fig. 3 is an inner face view in detail of a restraining journal-bearing hereinafter referred to. Fig. 4 is a side view, and Fig. 5 a horizontal cross-section on line 5 5, Fig. 4, illustrating the detent device for a shiftable lever hereinafter referred to.

Similar characters of reference indicate corresponding parts in all of the views.

In the drawings, A represents the frame of the machine, comprising opposite standards *aa*, united by upper and lower cross-beams or girders, the frame being of any form and design having fitness to its purpose.

B represents the transversely-mounted horizontal driving-shaft having its location at an upper part of the machine and provided with fixed and loose pulleys *b b*², for which a driving-belt *b*³ is provided, the latter to be shipped alternately from the one to the other of the pulleys for driving and stopping the machine. The driving-shaft is also shown as equipped with a crank-handle *b*⁴, whereby at pleasure and as will be on many occasions the case a machine may be run by hand.

At a suitably-located upper portion of the machine is a rock-shaft C, which has affixed thereto a segment F, its curved working face

d having, as shown, a considerable circumferential extent and also a length ranging from near the inner side of one to near the inner side of the other of the uprights *a* of the machine-frame.

In addition to the aforementioned segment F, which has a depending arrangement, there is another segment G, having its similar working face suitably below and convex to the face of the upper segment, this segment G being mounted on pluralized crank-arms *f*, which are rigidly affixed to a rock-shaft D, which is spring-supported by having spiral springs *g* surrounding posts *h h*, which posts have upwardly-opening slots *i*, one of which is indicated in Fig. 2.

The rock-shaft G has at its one end a lever-handle *j* affixed thereto, for which a spring stop or detent is provided for holding the lever in its upright position and for maintaining the lower segment in its working position, (represented by the full lines in Fig. 2,) as well as in the position corresponding thereto, also seen in the front view. The detent device in the present instance is constituted by a spring *k*, one end of which is riveted to the inner side of the lever *j* toward the vertical member *a* of the frame, said spring having a free portion which is capable of deflection toward and away from the adjacent face of the lever and arranged for coaction with a notched plate *k*², provided on the side of said frame member *a*.

J represents a duplicated intermediately-pivoted double-armed rocking lever, the pivot therefor being represented at *m*, and links or connecting-rods *n n* are pivotally connected both to the ends of the rocking lever J and to the segments F and G at points *o o*², suitably distant from the centers of oscillation C and D² of the segments, and a pitman-rod *t* has a connection with a crank-pin *p* of the gear-wheel E and with a suitable portion of the rocking lever J. The gear-wheel E is in mesh with the gear-wheel E² on the driving-shaft B, so that the continuous rotary motion imparted to the driving-shaft either by power or through the crank-handle *b*⁴ will impart back and forth swinging motions to the lever J and rotary reciprocatory motions to the segments in relatively reversed directions.

L represents an intermediate roll between

the segments and having when the machine is in operation on the fabric being pressed and smoothed peripheral proximity to the working faces of the segments.

5 As represented by the detail view, Fig. 3, and dotted lines in Fig. 2, the end gudgeons t' of the intermediate roll L are removably engaged in the journal-grooves, shown as having vertical portions u and portions u^2 arranged at a slightly-acute angle to the vertical portions, whereby they incline from their outer open ends downwardly.

10 In using the mangle the goods are, while the intermediate roll is removed from the machine, rolled around the roll, the roll having been removed by swinging down the lever, which so far lowers the nether segment as to permit the gudgeons of the roll to gravitate to the bottom of the straight portions u of the journal-grooves, whereby they may be slipped forwardly through and out from the endwise-open portions u^2 , and the roll, with the goods wrapped around it, is then slipped by its gudgeons into the portions u^2 of the journal-grooves and brought to line with the vertical grooved portions and the lever j swung up to its vertical position, to be there restrained by the detent. This action of the lever in restoring the lower segment to its working position brings its upper working face forcibly against the intermediate roll and the goods thereabout, crowding the roll-journals more or less upwardly until the roll has been brought to a firm bearing against the working face of the dependent upper segment, and conjoint with this action there is relatively a depression of the rock-shaft D , it in its lowering bodily movement against the springs g descending as far as the conditions will regulate in the slots i in the spring-encircled posts. The back-and-forth motion of the segments will impart a rolling motion to the intermediate roll, and the fabric thereon may while being pressed or ironed be more or less unrolled and rerolled therefrom and thereon; but this action is merely incidental.

Another manner of use of the machine would be to insert the edge of the fabric to the nipping action between the roll and either the upper or lower segment or between such roll and both segments, permitting the fabric to be rolled through and between the peripheral working faces and back again.

At the back of the machine a table extension (partially represented at P , Fig. 2) may be provided as a convenience for piling thereon work to be done or work which has been done in the machine.

60 I may vary this machine in respect of details of construction more or less and in a manifest way without departing from the gist of my invention.

The working faces of the segments may be

constituted by the smoothed surfaces of oak, maple, or other hard wood, or they may be 65 metal.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with a pair of segments 70 having their working faces convex to, and separated from, each other, and the intermediate roll, an intermediately-pivoted swinging lever and connecting-rods pivoted to the ends of the lever and respectively to the segments.

2. The combination with the upper and lower segments, one thereof being mounted for rocking motion on a fixed axis, a rock-shaft supporting the other segment, and having 80 as the supporting connections therefor, crank-arms to which such segment is pivotally connected, and means for imparting a rocking motion to said crank-provided segment-supporting shaft.

3. In a machine of the character described, the combination of a first segment mounted to oscillate on a fixed axis, the second segment, a crank-provided rock-shaft on the cranks of which the second segment is pivotally 90 mounted, elongated journal-bearings for said cranked shaft, and spring-supports on which the shaft, in said elongated bearings, is yieldingly supported, a lever affixed to the cranked rock-shaft, the intermediate roll, 95 and means for imparting reversed oscillatory movements to the segments.

4. In a machine of the character described, in combination, the frame having within inner opposite sides thereof the journal-grooves 100 endwise open and angular as described, the intermediate roll having gudgeons removably journal-engaged in said grooves, the upper segment mounted to oscillate on a fixed axis, the lower segment, the crank-provided rock-shaft, to the cranks of which the lower segment is pivotally connected, the posts having vertical journal-slots therein, in which said rock-shaft is constrained for bodily vertical 105 movements, spiral springs encircling said slotted posts, and yieldingly supporting said rock-shaft, a lever attached to and for rocking said rock-shaft, an intermediately - fulcrumed double-armed swinging lever and means for swinging same, and connecting-rods pivoted 115 to the opposite ends of said swinging lever and respectively connected with the upper and lower segments, for the purposes set forth.

Signed by me, at Springfield, Massachusetts, 120 in presence of two subscribing witnesses.

KRISTOFER HENRIKSON.

Witnesses:

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