

March 23, 1943.

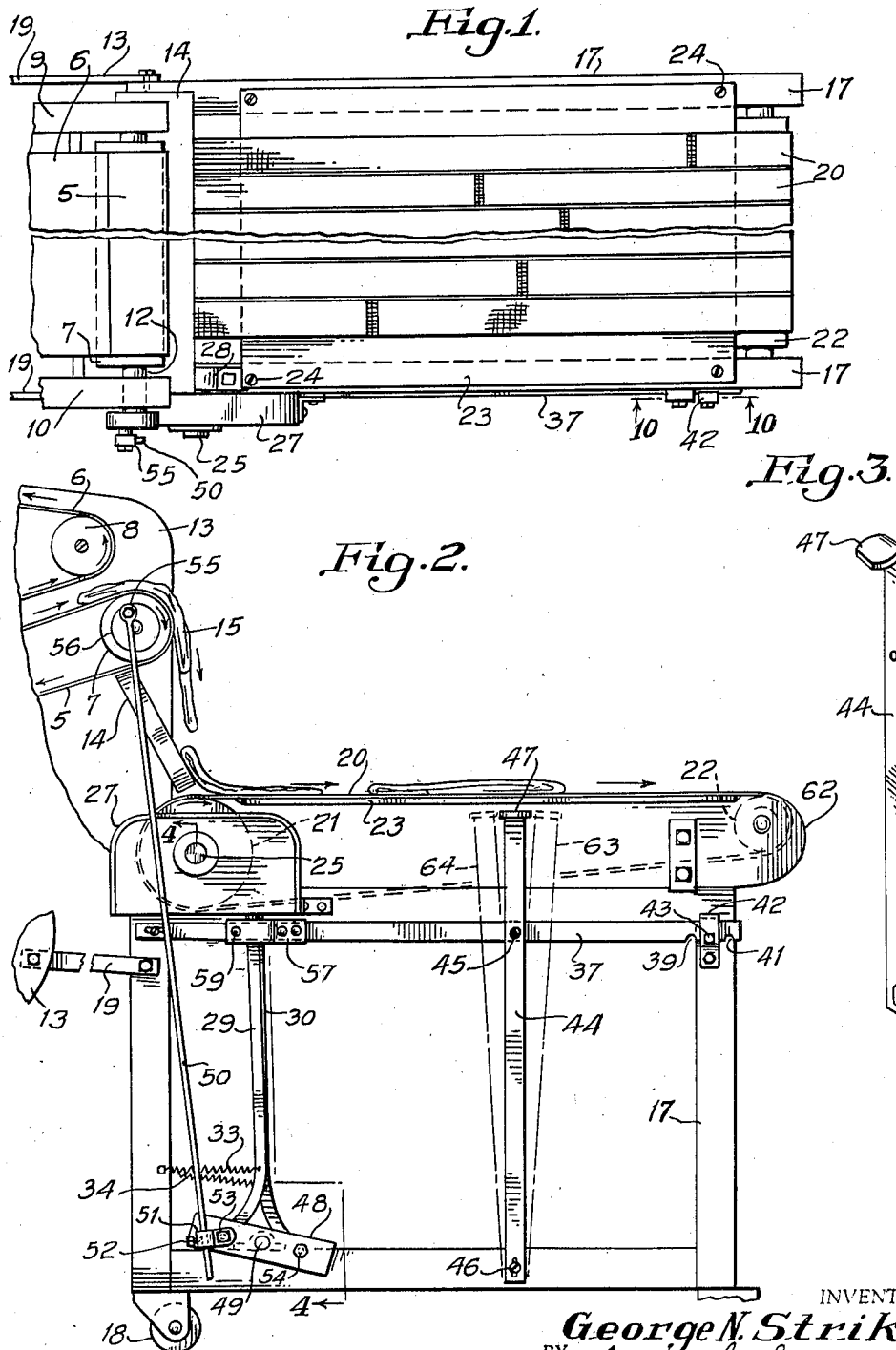
G. N. STRIKE

2,314,431

COOLING DELIVERY MACHINE

Filed June 21, 1940

2 Sheets-Sheet 1



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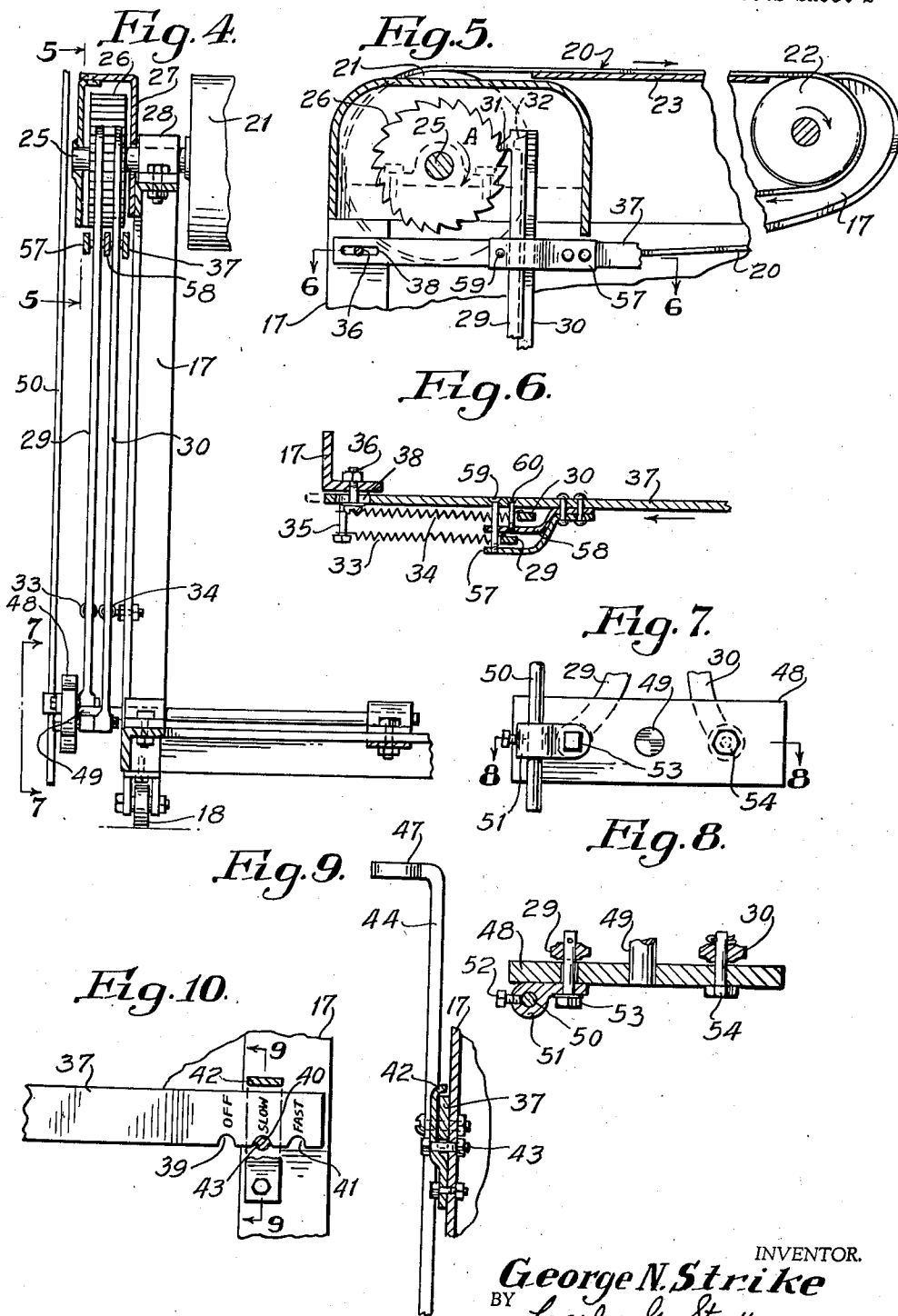
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2 Sheets-Sheet 2



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2,314,431

COOLING DELIVERY MACHINE

George N. Strike, Los Angeles, Calif.

Application June 21, 1940, Serial No. 341,693

9 Claims. (Cl. 38—8)

My invention relates to a machine for delivering hot, ironed material in a laundry to a position in which the material may be neatly folded.

An important object of the invention is to provide means in such a machine whereby the hot, ironed material may be cooled prior to the time that it is folded by the operator. Heretofore operators have frequently burned their fingers when attempting to fold hot, ironed material as soon as it comes out of the ironing means.

Another object of the invention is to provide improvements with relation to such a machine that will be superior in point of positiveness in operation and convenience in use, together with relative simplicity in construction, and general efficiency.

The invention also comprises novel details of construction and novel combinations and arrangements of parts, which will more fully appear in the course of the following description. However, the drawings merely show and the following description merely describes an embodiment of the present invention, which is given by way of illustration or example only.

In the drawings, like reference characters designate similar parts in the several views.

Figure 1 is a broken plan view of an embodiment of the invention.

Figure 2 is a broken side elevation of said embodiment.

Figure 3 is a perspective view of a control lever comprised in a machine.

Figure 4 is an enlarged section taken on the offset line 4—4 of Figure 2, looking in the direction of the arrows.

Figure 5 is a section taken on the line 5—5 of Figure 4.

Figure 6 is a horizontal section taken on the line 6—6 of Figure 5.

Figure 7 is a broken elevation looking in the direction of the arrow 7—7 of Figure 4.

Figure 8 is a section taken on the line 8—8 of Figure 7.

Figure 9 is a section taken on the line 9—9 of Figure 10, looking in the direction of the arrows.

Figure 10 is an enlarged broken section taken on the line 10—10 of Figure 1.

Referring more in detail to the drawings, a reference numeral 5 designates an endless belt of an ironing means. Washed laundry is ironed between oppositely disposed endless belts 5 and 6. A roller 7 is shown for driving the belt 5, while the belt 6 operates on an idler roller 8. The belts 5 and 6 are driven in the directions of the arrows in Figure 2. Suitable bearings 9 and 10 support

shaft 12, upon which the roller 7 is mounted. Part of the frame of the ironer is shown at 13. A guide 14 directs ironed material 15 that is discharged from the ironer. Thus far is conventional construction, so further detailed drawings and description of same are deemed unnecessary for those skilled in the art.

The present delivery machine is mounted on a frame 17 supported by wheels 18, so that it may be moved from place to place. In the drawings, the present machine is shown fastened to the frame 13 of the ironer by means of straps 19.

An endless belt 20 extends around driven roller 21 and idler 22. The belt 20 may be a series of belts or webbing placed side by side, as shown in Figure 1. A plate 23 is bolted on the frame 17 by means of screws 24 and supports the upper stretch of the belt or webbing.

The driven roller 21 has a shaft 25 upon which is mounted a ratchet gear 26. The ratchet gear 26 and its actuating means, hereinafter to be described, are enclosed in a safety housing 27. A bearing 28 is provided on the frame 17 for the shaft 25.

Two pawls 29 and 30 are arranged for their respective teeth 31 and 32 to engage the teeth of the ratchet gear 26. Springs 33 and 34 respectively tend to draw the pawls 29 and 30 into engagement with the ratchet gear 26. The outer ends of the springs 33 and 34 are relatively fixed upon the frame 17 by means of bolts 35 and 36.

Control means for the pawls comprises a sliding bar 37 that has at one end an elongated eye 38 slidably on the bolt 36. The opposite end of the bar 37 has a series of sockets 39, 40 and 41 to provide different adjustments for the bar 37. A bracket 42 carries a pin 43 with which the sockets 39, 40 or 41 may selectively engage.

An adjusting lever 44 is pivotally connected with the sliding bar 37 at 45 and provided with a relatively fixed pivot 46 upon the frame of the machine. The upper end of the control lever 44 has a handle 47 for manipulation of the lever.

Operating means for the pawls 29 and 30 includes a rocker plate 48 that oscillates about the spindle 49. Rocking motion is imparted to the plate 48 by means of a connecting rod 50 that is adjustably fastened to the plate 48 by means of an eye 51. A set screw 52 fastens the rod 50 in the desired position in the eye 51. A single bolt 53 fastens the eye 51 to the plate 48 and pivotally fastens the lower end of the pawl 29 to the plate 48. A bolt 54 pivotally fastens the lower end of the pawl 30 to the plate 48.

The upper end of the connecting rod 50 is

eccentrically connected with the drive roller 7, as shown at 55. A wheel 56 on the shaft of the roller 7 is the means that is directly eccentrically connected with the connecting rod 50.

Offset brackets 57 and 58 are mounted on the sliding bar 37. A bolt 59 spans the space between the bracket 57 and the bar 37, while a bolt 60 spans the space between the bracket 58 and the bar 37. The bolts 59 and 60 are laterally spaced in order that the bolt 60 may keep the pawl 30 out of engagement with the ratchet wheel 26 in two positions of the bar 37.

In the operation of the machine, hot, ironed material is fed from the belt 5 of the ironer, down the guide 14 and on to the belt means 20. The belt 20 travels a sufficiently long distance and sufficiently slow to cool the material enough in order that it may be folded by an operator as the material comes off of the belt 20 at the end 62, without burning the operator's fingers.

The actuating means for the belt 20 may be disconnected from the driving means by moving the hand lever 44 to the broken line position 63. When the lever is in the latter position, the socket 39 is in engagement with the bolt 43 and the pins 59 and 60 withdraw the pawls 29 and 30 from engagement with the ratchet wheel 26.

When it is desired to operate the belt or webbing 20 at a slow rate of speed, the lever 44 is moved to the full line position of Figure 2. In this position the single pawl 29 is permitted to engage and actuate the ratchet wheel 26, in the direction of the arrow A in Figure 5. When the lever 44 is in the full line position, the socket 40 is engaged by the pin 43.

When it is desired to operate the delivery machine at its fastest speed, the hand lever 44 is moved to the broken line position 64. This permits the pawls 29 and 30 to alternately engage the ratchet wheel 26, since the springs 33 and 34 tend at all times to draw the pawls into engagement with the ratchet wheel. The action of these springs is only restrained by the pins 59 and 60. However, in the high speed position, neither of these pins maintains its respective pawl away from the ratchet wheel.

The actuating means for the pawls comprises the rocker plate 48 which is rocked by means of the connecting rod 54, which in turn is driven by the eccentric 55 connected with the roller 7.

The plate 48 is rocked at a uniform speed with respect to the speed of operation of the roller 7, but the present delivery machine is operable at different speeds relative to the speed of operation of the roller 7. However, the speed of operation of the delivery machine is necessarily at a determinable ratio with respect to the speed of operation of roller 7 of the ironing machine driving the ironer belt 5, since the connecting rod 50 operatively connects the ironer with the delivery machine and since the delivery machine is dependent upon the operation of the ironing machine. However, this ratio is subject to change, of course, so that the highest speed of the delivery belt 20 may be equal to, or below, that of the ironer belt 5. It is important that the slow speed of the delivery belt 20 be substantially below that of the ironer belt 5.

While I have illustrated and described what I now regard as the preferred embodiment of my invention, the construction is, of course, subject to modifications without departing from the spirit and scope of my invention. I, therefore, do not wish to restrict myself to the particular form of construction illustrated and described, 75

but desire to avail myself of all modifications which may fall within the scope of the appended claims.

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

1. In cooling, delivery-means for an ironer, a substantially flat, relatively stationary, supporting plate, an endless delivering means arranged to travel across the plate and be supported thereby, and in turn thereby support cooling material, connecting means driven by the ironer, manually controllable speed reduction mechanism driven by said connecting means and in turn driving the endless delivering means, and manual means adjacent to the delivery means for controlling said speed of the delivery means.

2. In cooling, delivery-means for an ironer, an endless delivering means exposed to the atmosphere to cool hot, ironed material thereon, connecting means driven by the ironer, serially operating means engaged with said connecting means to drive the endless delivering means at a speed constituting the sum of their operations, and manual control means adjacent to the delivery means for disengaging one or more of said serially operating means to desirably control the speed of movement of the delivery means.

3. In cooling, delivery-means for an ironer, an endless delivering means exposed to the atmosphere to cool hot, ironed material thereon, operating means connected to drive the endless delivering means, comprising a ratchet, a plurality of pawls driven by the ironer and connected to serially operate the ratchet, and manual control means adjacent to the delivery means and operatively connected with the pawls to selectively disengage one or more of the pawls from the ratchet, to desirably control the speed of the delivering means.

4. In cooling, delivery-means for an ironer, an endless delivering means exposed to the atmosphere to cool hot, ironed material thereon, operating means connected to drive the endless delivering means, comprising a ratchet, a plurality of pawls connected to alternately engage the ratchet, one of the pawls being removable from operative engagement with the ratchet, spring means tending to effect such operative engagement, and control means arranged to disengage said pawl from the ratchet against the action of the spring means, to reduce the speed of the ratchet, but permitting the remaining pawl means to operate the ratchet.

5. In cooling, delivery-means for an ironer, an endless delivering means exposed to the atmosphere to cool hot, ironed material thereon, operating means connected to drive the endless delivering means, comprising a ratchet, a plurality of pawls connected to alternately engage the ratchet, a pivotally mounted rocker connected with the pawls to effect said alternate engagement, one of the pawls being connected to advance the ratchet by movement of the rocker in one direction and the other pawl being connected to advance the ratchet by movement of the rocker in the opposite direction, and connecting means actuated by the ironer and in turn operating the rocker about its pivot.

6. In cooling, delivery-means for an ironer, an endless delivering means exposed to the atmosphere to cool hot, ironed material thereon, operating means connected to drive the endless delivering means, comprising a ratchet, a plurality of pawls connected to alternately engage the

ratchet, a pivotally mounted rocker connected with the pawls to effect said alternate engagement, spring means tending to cause engagement of the pawls with the ratchet and tensioning movements of the rocker, one of the pawls being removable from operative engagement with the ratchet, and control means arranged to disengage said pawl from the ratchet against the action of the spring means, to reduce the speed of the ratchet, but permitting the remaining pawl means to operate the ratchet.

7. In cooling, delivery-means for an ironer, an endless delivering means exposed to the atmosphere to cool hot, ironed material thereon, operating means connected to drive the endless delivering means, comprising a ratchet, a plurality of pawls arranged to selectively engage the ratchet, a rocker pivotally supporting the pawls, spring means tending to swing the pawls about their pivoted supports into engagement with the ratchet, and a control bar disposed to successively swing the pawls about their pivots against the action of the spring means, to selectively disengage the pawls from the ratchet.

8. In cooling, delivery-means for an ironer, an endless delivering means exposed to the atmosphere to cool hot, ironed material thereon, operating means connected to drive the endless de-

livering means, comprising a ratchet, a plurality of pawls arranged to selectively engage the ratchet, a rocker pivotally supporting the pawls, spring means tending to swing the pawls about their pivoted supports into engagement with the ratchet, a control bar disposed to successively swing the pawls about their pivots against the action of the spring means, to selectively disengage the pawls from the ratchet, and means to maintain the bar in the selected position.

9. In cooling, delivery-means for an ironer, an endless delivering means exposed to the atmosphere to cool hot, ironed material thereon, operating means connected to drive the endless delivering means, comprising a ratchet, a plurality of pawls connected to operate the ratchet at different speeds, a rocker pivotally supporting the pawls, spring means tending to swing the pawls about their pivoted supports into engagement with the ratchet, driving means eccentrically connected with the ironer and eccentrically connected with the rocker, to rock the latter, and means to selectively swing the pawls about their pivots against the action of the spring means and from engagement with the ratchet, to eliminate the disengaged pawl means from the operation.

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