M. L. & C. M. SHAPERA.

CLOTH PILING MACHINE.

APPLICATION FILED JAN. 12, 1914.

1,131,647.

Patented Mar. 9, 1915.

5 SHEETS—SHEET 1.

Fig. 1.

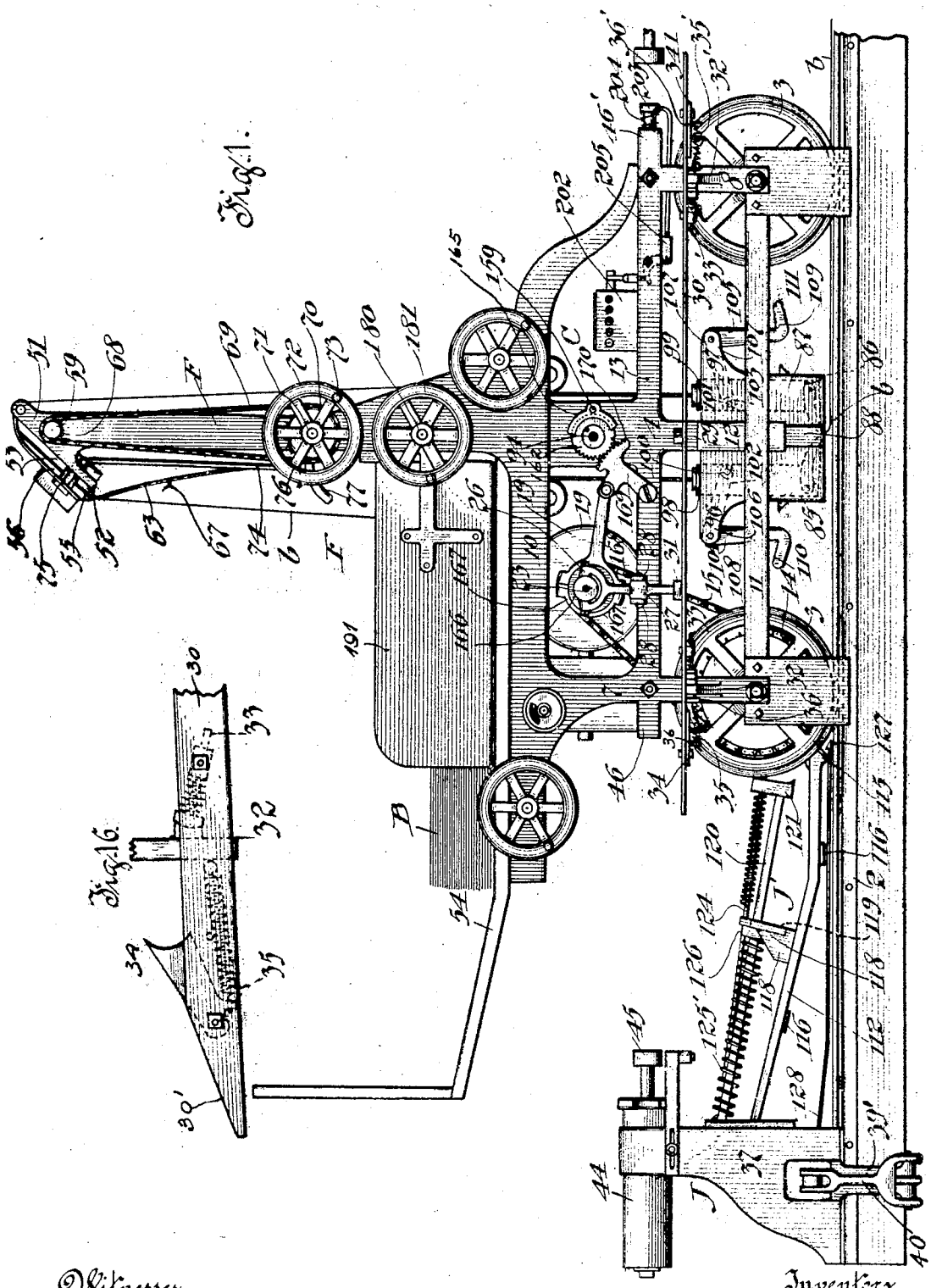


Fig. 16.

Witnesses

Robert F. Weir

Arthur W. Cashow

Inventors

Morris L. Shapera

Charles M. Shapera

By Geo. S. Ames

Atty.

M. L. & C. M. SHAPERA.

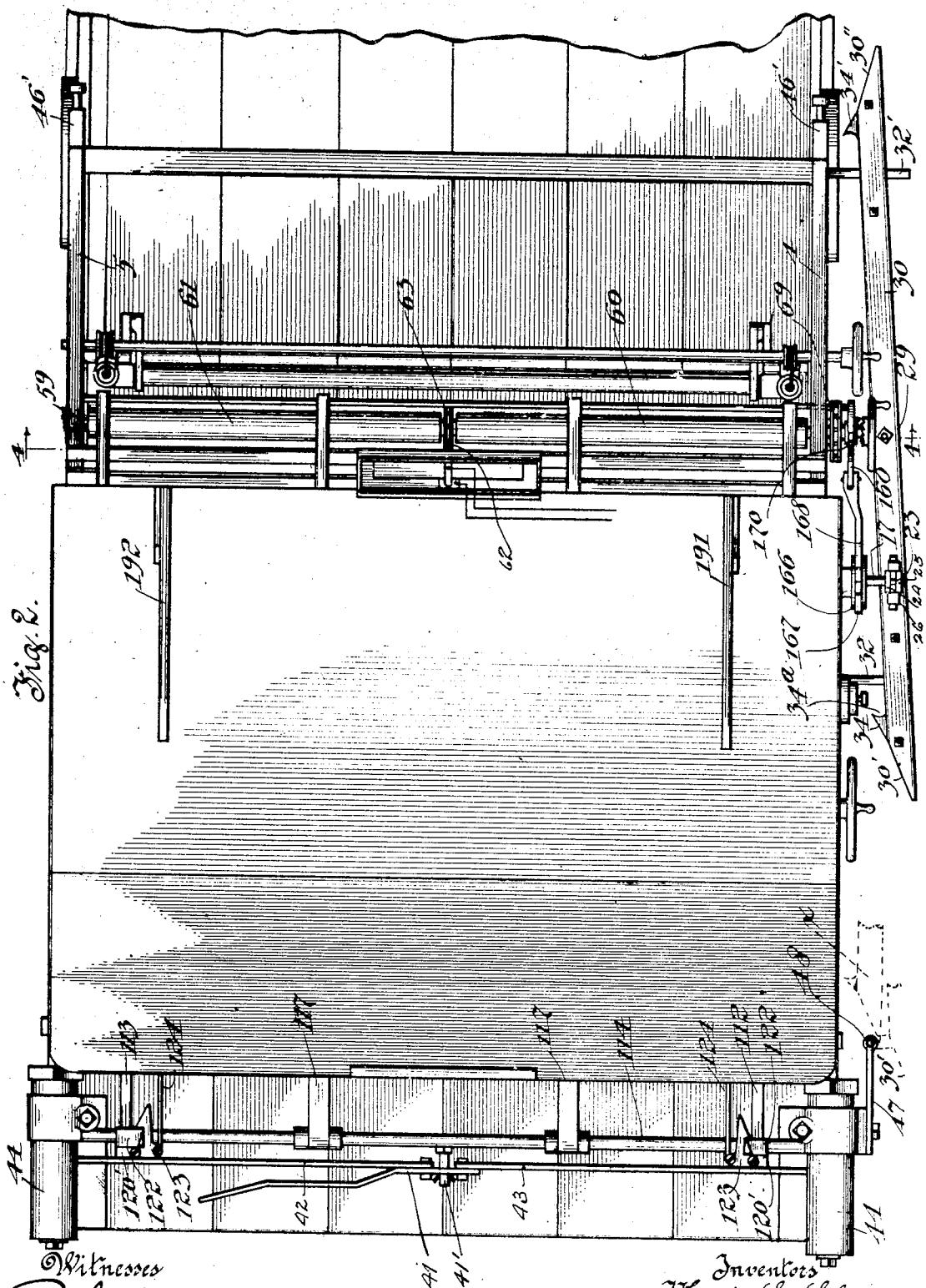
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Witnesses

Robert F. Weir

Arthur W. Paulson

Inventors

Morris L. Shapera

Charles M. Shapera

By Geo. S. Innes

Atty

M. L. & C. M. SHAPERA.

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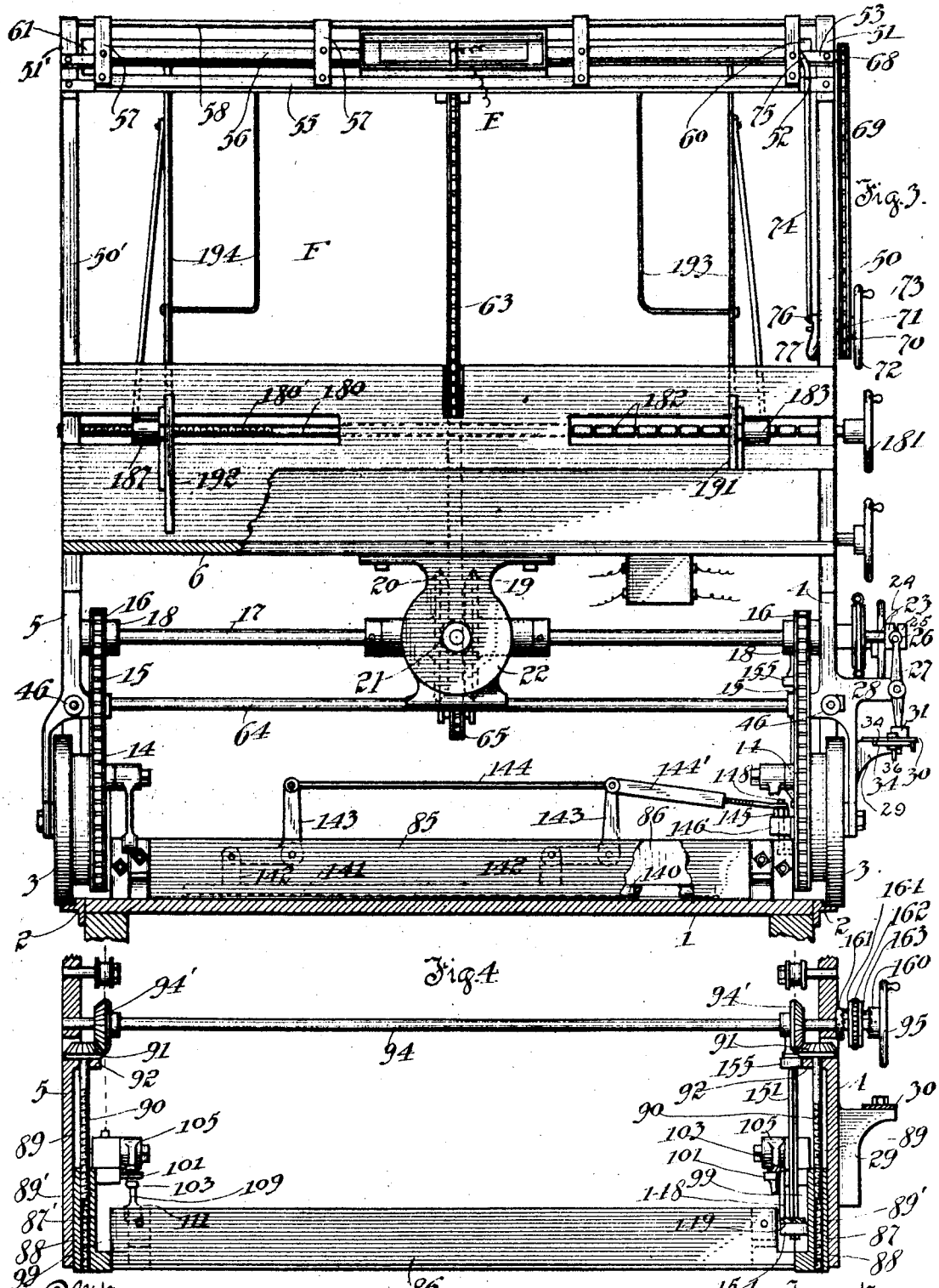


Fig. 3.

Fig. 4.

Witnesses

Robert F. Weir

Arthur M. Cashow

Inventors

Morris L. Shapera

Charles M. Shapera

By Geo. S. Innes

Atty.

M. L. & C. M. SHAPERA.

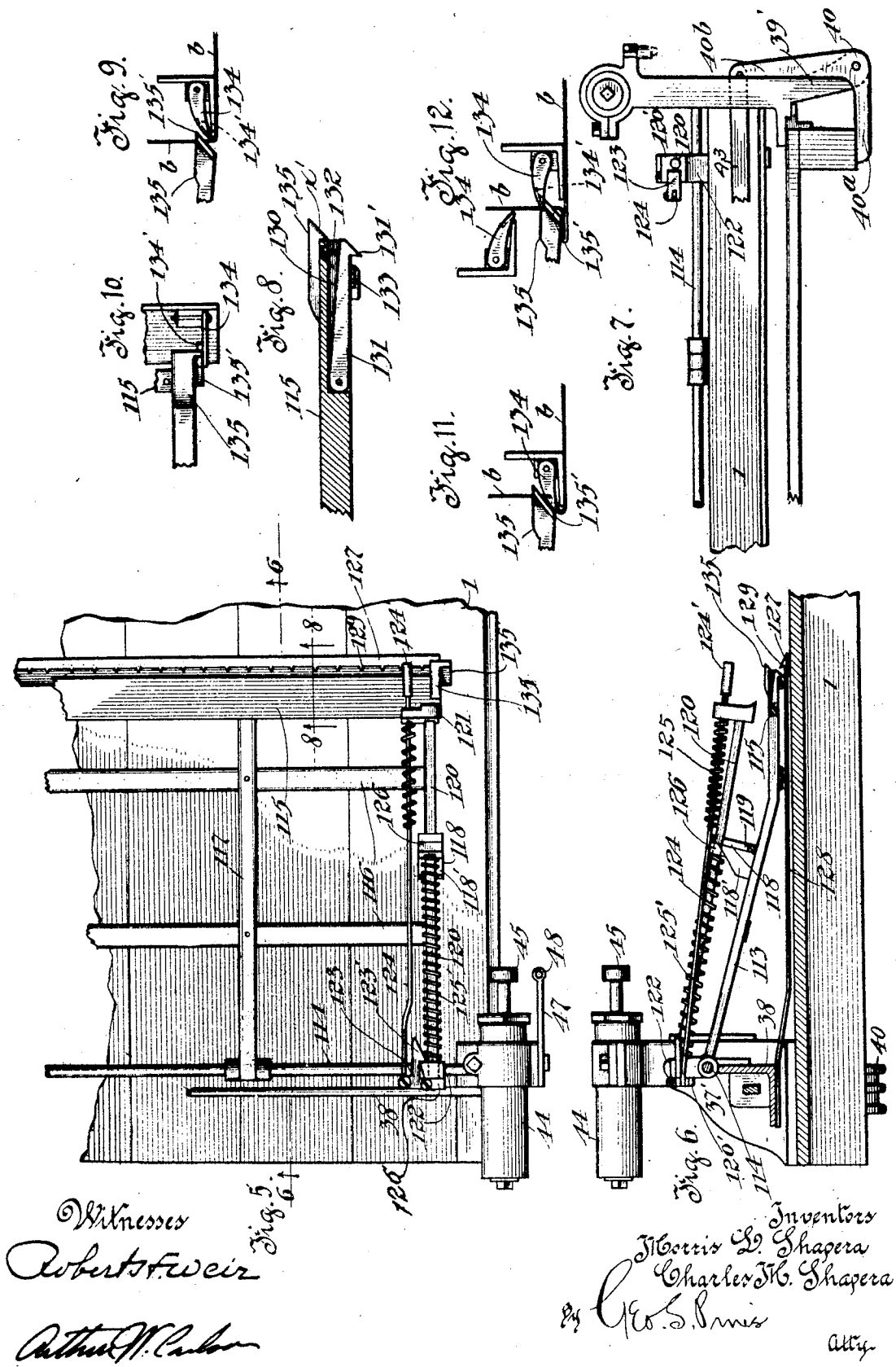
CLOTH-PILING MACHINE.

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1,131,647.

Patented Mar. 9, 1915.

5 SHEETS—SHEET 4.



Witnesses

Robert F. Weir

Arthur W. Carlson

Inventors

Morris L. Shapera

Charles M. Shapera

By Geo. S. Prout

Atty.

M. L. & C. M. SHAPERA.

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5 SHEETS—SHEET 5.

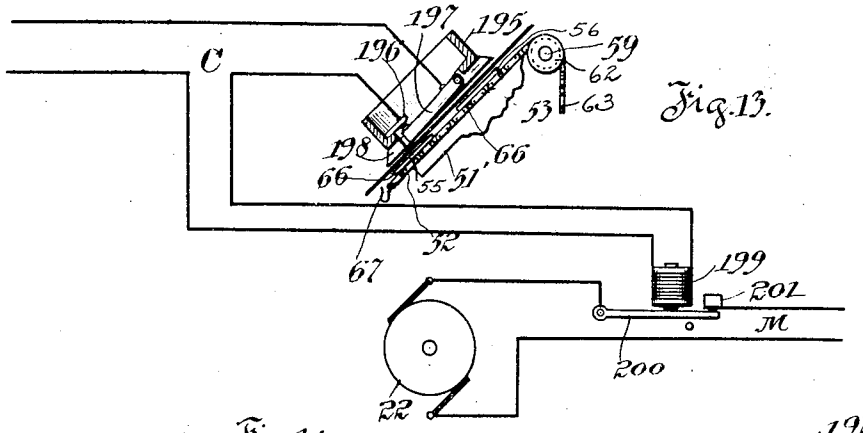


Fig. 13.

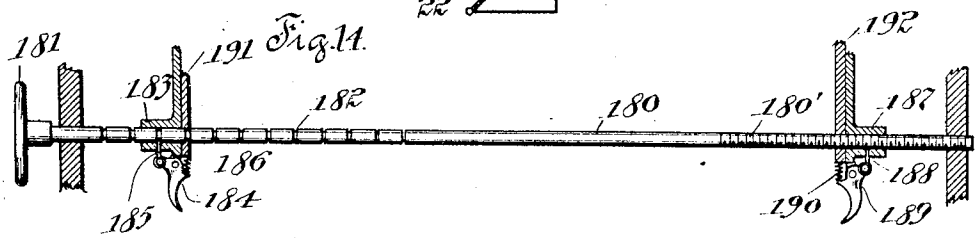
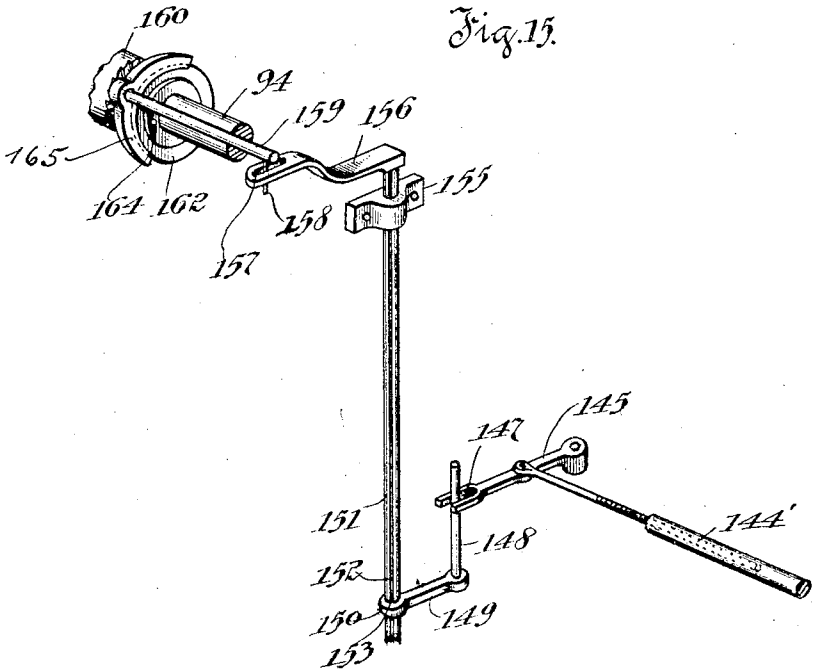


Fig. 14.

Fig. 15.



Witnesses

Robert F. Weir

Arthur W. Carlson

Inventors

Morris L. Shapera

Charles M. Shapera

By Geo. S. Innis

Atty

UNITED STATES PATENT OFFICE.

MORRIS L. SHAPERA AND CHARLES M. SHAPERA, OF CHICAGO, ILLINOIS.

CLOTH-PILING MACHINE.

1,131,647. Specification of Letters Patent. Patented Mar. 9, 1915.

Application filed January 12, 1914. Serial No. 811,641.

To all whom it may concern:

Be it known that we, MORRIS L. SHAPERA and CHARLES M. SHAPERA, citizens of the United States, and residing at Chicago, county of Cook, and State of Illinois, have invented new and useful Improvements in Cloth-Piling Machines, of which the following is a specification.

Our invention relates to cloth piling machines and involves various features of improvement over the machine disclosed in our Patent No. 1,067,379 dated July 15, 1913.

Among the important features of the invention are to provide improved and simplified mechanism for feeding and guiding cloth from the bolt to the guide bar mechanism; to provide improved electrical controlling mechanism for automatically stopping the carriage propulsion motor when a bolt is all unwound; to provide improved cloth clamping mechanism for clamping the cloth layers to the table at their ends; to provide improved means for locking the clamping frames against raising until automatically unlocked by coöperation therewith of the carriage; to provide improved means for automatically raising the guide bars in accordance with the varying heighth of the pile on the table; to provide improved means for adjusting the reception of cloth of different widths; and in general to provide improved construction, arrangement and operation in a machine of the character referred to.

In the accompanying drawings, Figure 1 is a front elevational view of the table, carriage and one of the abutment and clamping structures, Fig. 2 is a plan view thereof, Fig. 3 is an elevational view of the left end of the carriage, Fig. 4 is a sectional view on plane 4—4 Fig. 2, Fig. 5 is a plan view of the front half of the left end abutment frame and clamping frame, Fig. 6 is a sectional view on plane 6—6 Fig. 5, Fig. 7 is a left end view of the abutment frame, Fig. 8 is an enlarged sectional view on plane 8—8 Fig. 5, Fig. 9 is a front elevational view showing a clamping frame and guide bar just about to engage, Fig. 10 is a plan view of the parts shown in Fig. 9, Fig. 11 is a view like Fig. 9 showing the clamping frame raised and showing how the cloth is tucked under, Fig. 12 is a similar view showing the trip latches gliding back over the clamping frame, Fig. 13 is an enlarged sectional view of the cloth guiding jaw frames and the electrical control of the carriage propelling motor, Fig. 14 is an isolated view of the cloth guide boards adjusting mechanism, Fig. 15 is a perspective view of the lever mechanism intervening between the pilot bar and gear shifting mechanism controlling the guide bar adjusting mechanism, and Fig. 16 is an enlarged plan view of one end of the clutch lever.

The operative parts are mounted on a table 1 and comprise the carriage C, and an abutment J and clamping frame J′ at each end of the table; the tracks 2, 2 being provided on the table for accommodating wheels 3, 3 of the carriage. The carriage comprises front and rear frames 4 and 5 connected together by suitable beams or bars 6, the frames comprising each vertical ends bars 7 and 8, top and bottom horizontal bars 10 and 11, and an intermediate vertical bar 12 and horizontal bar 13. A wheel is provided at each lower corner of the frames, those at the left being provided each with a sprocket wheel 14, the sprocket wheels being connected by chain belts 15 with sprocket pinions 16 on the propelling shaft 17 extending transversely through the carriage and journaled in bearings 18 extending from the frames 4 and 5. Pivoted to rotate loosely on shaft 17 are forward and reverse bevel gears 19 and 20 both permanently in mesh with a drive pinion 21 on the shaft of the electric motor 22. Slidable in shaft 17 is the clutch rod 23 which at its inner end carries a clutch bar (not shown) this bar coöperating with the shaft 17 and the gears 19 and 20 in the same manner as clearly shown and described in our Patent No. 1,067,379 dated July 15, 1913, namely to connect either gear in driving relation with the shaft 17 in order that the carriage may be propelled either to the left or to the right.

The clutch rod 23 terminates at its front end in collars 24 and 25 between which engages a fork 26 whose arm 27 is pivoted at an intermediate point on bearing bracket 28 extending forwardly from carriage frame 4. A bracket 29 extending forwardly from frame bar 12 pivots a longitudinal clutch lever 30 at its center to be swung in a horizontal plane. This lever, between its pivot and its left end carries a socket block 31 for pivoting the lower end of fork lever 27, so that as lever 30 is swung back and forth

the fork 26 will be moved back and forth to shift the clutch rod 23 to effect corresponding driving connection of the motor with the carriage drive wheels. When the lever is in neutral position the motor although running continuously will be entirely disconnected from the carriage, as is clearly explained in our patent referred to.

The clutch 30 is a flat bar having its ends tapered as shown to provide cam surfaces 30′ and 30″, the lever slidably resting adjacent its ends on brackets 32, 32′ extending forwardly from carriage frame 4. The lever is yieldingly locked in neutral position by spring pressed detent plungers 33, 33′ which coöperate with notches in the brackets 32, 32′. Near the ends of the clutch lever and on the lower side thereof are pivoted pawls 34, 34′, springs 35, 35′ connecting with the pawls, and pins 36, 36′ on the lever tending to hold the pawls in normal position with their inner edges forming continuation of the lever cam surfaces 30′ and 30″ as clearly indicated in Fig. 2. These pawls coöperate with the abutment frames J as will be explained later.

Each abutment frame J comprises side standards 37 and 37′ connected by a cross board 38. The standards have brackets 39, 39′ respectively, extending downwardly adjacent the sides of the table 1, and the brackets pivot the bell crank clamping levers 40 and 40′. The lower ends 40^a of these clamping levers extend inwardly below the sides of the table to firmly clamp against the table bottom when the upper ends 40^b are swung outwardly. To control the rotation of the levers we provide a main lever 41 pivoted on a pin 41′ extending from the board 38, and connected above and below its pivot with links 42, 43 respectively, which links connect at their outer ends with the ends 40^b of levers 40 and 40′. When the main lever is vertical the clamping levers release the table 1 and when the main lever is down the table is clamped and the frame J securely anchored to the table.

Each of the standards 37, 37′ carries at its upper end a barrel 44 having a plunger rod 45 extending toward the carriage C to be struck by the abutment lugs 46 and 46′ extending from the opposite ends of the carriage. Although not shown here, the interior of each barrel is arranged as described in our patent referred to, the plunger having a piston head and its inward movement being resisted by a spring. Each front standard 37 carries on its front side an arm 47 extending inwardly parallel with the corresponding barrel and pivoting at its inner end a cam roller 48 for coöperating with the surfaces 30′ and 30″ of the clutch lever 30 and with the inner edges of pawls 34, 34′ and the end notches 34^a of said pawls.

The control of the bodily movement of the carriage can now be readily understood. Suppose that the carriage is traveling toward the left with the lever 30 swung clockwise from neutral position with its left end in as indicated at x, the surface 30′ will encounter the cam roller 48 and the lever will be swung back to neutral position and the clutch mechanism set to disconnect the motor. Immediately after such disconnection the carriage abutments 46 will strike the barrel plungers 45 and the carriage will first be retarded and then stopped. However, after striking the plungers the carriage, owing to its momentum, will continue toward the left sufficiently before stopping, to allow the pawl 34 to swing forwardly, and then back to normal after passing the cam roller 48. The power acquired by the springs within the barrels will now start the carriage on its movement toward the right. After a short distance of travel the cam roller 48 will receive the end notch 34^a of the pawl 34 and this pawl will be swung inwardly at right angles to the clutch lever to thus cause the lever to swing in counter clockwise direction from its normal position thereby to effect adjustment of the clutch mechanism to connect the motor to take up the propulsion of the carriage toward the right. When the carriage approaches the right end of the table the clutch lever encounters the cam roller at that end and is shifted to neutral position, the carriage then coöperating with the abutment barrels to be started on its movement toward the left, the lever pawl and cam roller then coöperating to swing the lever in clockwise direction to adjust the motor clutch mechanism for propulsion of the carriage back to the left end of the table. Thus the motor is relieved of the heavy burden of reversing the travel of the carriage, the abutment plungers serving to retard and stop the carriage and to start it on its travels in order that the motor may then take up the propulsion without shock or jar.

A cloth feeding or guide frame F mounted on the carriage C comprises side standards 50 and 50′ rising from the centers of carriage frames 4 and 5, the standards having at their tops inclined cross supports 51 and 51′ across whose lower ends extend the bars 52 and 53 forming the lower guide jaw for the cloth b coming from the bolt B resting on the carriage on platform 54. Bars 55 and 56 secured to arms 57 extending from shaft 58 form the upper guide jaw, the shaft being journaled in the upper ends of the cross supports 51, 51′. In the tops of the standards 50 and 50′ is journaled the shaft 59 on which rotate guide roller sections 60 and 61 over which the cloth passes after passing between the guide jaws. Between the roller sections the shaft 59 carries a sprocket pinion 62 over which passes the

endless threader chain 63, the chain also passing about the sprocket pinion 65 on shaft 64 near the bottom of the carriage (Fig. 3). The chain also passes through the groove 66 in the lower jaw bars 55, 56 (Fig. 13) and carries hooks 67. The front end of shaft 59 carries a sprocket wheel 68 receiving the propelling chain 69 which passes about the sprocket wheel 70 on stub shaft 71 provided with a hand wheel 72 from which extends the handle 73.

In order to hold the guide jaws apart to allow feeding in of cloth, a bar 74 is provided which at its upper end pivots to the arm 75 extending from the upper jaw frame, the lower end of the bar being pivoted at 76 to the locking lever 77 pivoted to the carriage frame 4. When a fresh bolt of cloth is to be started the jaws are held apart by swinging lever 77 until the bar 74 and its pivot point 76 are in line with the pivot of the lever. The end of the cloth is then secured to one of the hooks 67 and the chain 63 is propelled by turning wheels 72. The cloth is then carried between the jaw frames and over the roller sections 60 and 61 and then down to shaft 64. The cloth end is then readily accessible and after unhooking from the chain 63 is fed between the guide bars 85 and 86 of the guide bar supporting mechanism and thence to one of the clamping frames J'. After the cloth is smoothed and straightened the upper guide jaw frame is released and the weight of this jaw frame on the lower jaw frame will produce sufficient tension to keep the cloth taut during operation of the carriage.

The guide bar supporting mechanism is best shown in Figs. 1, 3, 4, 9, 10, 11 and 12. Blocks 87 and 87' are provided for the front and rear frames 4 and 5, each block having a vertical guide rib 88 engaging in a guide slot 89 formed in the vertical bar 12 of the respective frame so that the block may slide up and down. Each rib has a threaded opening 89' for receiving a screw 90 terminating at its top in a bevel gear 91 and journaled in a bearing bracket 92. The shaft 94 is journaled in the frames 4 and 5 and carries bevel gears 94', 94' meshing with the gears 92, 92. The front end of shaft 94 terminates in a hand wheel 95 turning of which causes simultaneous raising or lowering of the blocks 87, 87'. This shaft is also controlled automatically as will be described later. Each block 87, 87' has at its sides vertical grooves 96 and 97 for receiving the slide bars 98 and 99, the bars 98 in the opposite blocks 87, 87' supporting at their lower ends the guide bar 85, while the opposite bars 99 support the guide bar 86. The guide bars are in the form of angle bars and are arranged side by side with their vertical flanges at the outside and with their horizontal flanges normally in a common plane and separated by a narrow gap to allow passage of the cloth between them. The bars 98 and 99 have respectively at their upper ends the inwardly extending pins 100 and 101 engaged respectively by the forked ends 102 and 103 of bell crank levers 104 and 105 pivoted at their elbows to the brackets 106 and 107 extending from the corresponding block 87 or 87'. The downwardly extending arms 108 and 109 of the levers terminate in shoes 110 and 111 respectively. Pressure on these shoes toward the blocks will cause bars 98 and 99 and the guide bars supported thereby to be raised. Such pressure on the shoes is controlled automatically during engagement of the carriage with the clamping frames J' at the ends of the table.

Referring to Figs. 1, 5 and 7 each of the clamping frames J' comprises front and rear bars 112 and 113 pivoted at their outer ends to the shaft 114 extending between the abutment standards 37 and 37' of the corresponding abutment frame J. The inner ends of the bars 112 and 113 of each frame J' are connected by a clamping bar or jaw 115, and intermediate cross bars 116 connect the main bars 112 and 113 and intermediate longitudinal bars 117 pivot to shaft 114 and connect with the intermediate bars 116 and with the jaw bar 115. On each of the bars 112 and 113 a bracket 118 extends upwardly about midway thereof, and has the vertical slot 119 through which extends a plunger rod 120 having the abutment block 121 at its inner end, these abutment blocks being in the paths of the shoes 110 of the guide bar raising levers 104. The outer end of each plunger rod 120 passes through the upper end of a bracket 122 secured to the cross board 38 and journaling the shaft 114, each rod terminating in a head 120'. A T-shaped detent pawl 123 is pivoted at one end of its base to the head 120' of each plunger rod and a trip rod 124 is pivoted at its outer end to the other end of the base of the pawl, each trip rod extending inwardly parallelly with the corresponding plunger rod and passing through the abutment block 121, being provided at its inner end with an abutment head 124'. A spring 125 encircles each trip rod and is secured to the rod and to the abutment block and tends to hold the rod inwardly to swing the detent hook 123' of the pawl toward the corresponding bracket 122 so that normally the pawl will hook on to the bracket to prevent outward movement of the plunger rod. However if the trip rod is first pushed outwardly the pawl will be swung away from the bracket to allow outward movement of the plunger rod. Each plunger rod is encircled by a spring 125' which abuts against the bracket 122 and the block 126 on the rod and tends to hold the plunger rod inwardly. Fur-

thermore the lower faces of the blocks 126 are inclined and engage the inclined upper edges of the webs 118′ extending from the brackets 118 through which the plunger rods pass. The springs 125′ therefore also tend to slide the blocks to the upper ends of the inclined edges to thus hold the abutment blocks 121 in position to be struck by the guide bar raising levers.

Below each jaw bar 115 extends a lower jaw plate 127 held in place by bars 128 secured at their outer ends to the cross board 38 of the abutment frame J. The plate 127 has outwardly extending detent prongs or points 129. Referring particularly to Figs. 6 and 8 each jaw bar 115 has transverse grooves 130 cut at intervals in its lower face, a detent finger 131 being pivoted at its outer end in each groove, points 131′ at the ends of the fingers being pressed beyond the lower face of the bar by a spring 132, a plate 133 secured to the bar across the grooves, limiting the swing of the fingers. The points of the fingers rest over the lower jaw plate between the points 129 thereon and these upper and lower points coöperate to hold the ends of the cloth lengths applied to the table 1 by the guide bars 85 and 86 of carriage C.

As before described, the cloth coming from the feed frame F passes down through the gap between the guide bars 85 and 86. As the carriage now travels to one end of the table, say to the left, the abutment shoes 110 of levers 108 first engage with the heads 124′ of trip rods 124 to release the pawls 123 and thus to release the entire clamping frame J′ for upward swing. After such release the levers 108 encounter the abutment blocks 121 and the levers are swung to effect raising of the advance guide bar 85 (Fig. 12), above the jaw bar 115 to allow the other guide bar 86 to coöperate with the clamping frame to tuck the cloth between the jaw bar 115 and jaw plate 127. To enable the bar 115 to be readily lifted to allow insertion of the cloth, a trip latch 134 is provided at each end of each guide bar. These latches are clearly shown in Figs. 9 to 12, each being in the form of a plate pivoted at its rear end in the bend of the guide bar and extending outwardly to the outer edge of the bar against which it normally rests. Each latch has at its outer end a laterally extending diagonal projection 134′ for coöperating with a diagonal lateral projection 135′ on the lug 135 at the corresponding end of the jaw bar 115 of the clamping frame, each of these lugs having its inner lower edge beveled as indicated at x'. When the guide bar 87 reaches the jaw bar 115 the diagonal projection 134′ of latches 134 engage the beveled surfaces x' below the projections 135′ and raise the jaw bar in order that the cloth carried in front of the guide bar may be passed between the clamping jaws. Just before the carriage is stopped by the abutment mechanism the latch projections 134′ will have passed beyond the jaw bar projections 135′ and the jaw 115 is allowed to drop to clamp the cloth to the jaw plate 127, the cloth being then securely held by the points 129 and 131′. As the carriage now begins travel in the opposite direction the diagonal projections 134′ of the latches glide over the diagonal projections 135′, the latches merely swinging idly upwardly and then falling back to normal position. As the carriage recedes the levers 110 and guide bar 85 gradually return to normal position and the trip rods 124 are released to allow the pawls 123 to relock the clamping frame J′ in order that the springs 125 may exert pressure on the jaw bar 115 by the coöperation of the blocks 126 and bracket webs 118′. When the carriage reaches the other end of the table it cooperates with the frames J and J′ at that end and the same operations are performed, the guide bar 87 being raised and the bar 85 coöperating with the clamping frame to insert the end of the cloth between the jaws, a new layer of cloth being added to the pile on the table during each travel of the carriage from one end to the other. The entire guide bar mechanism must of course be raised gradually as the pile on the table increases in height, and the guide bars should at all times glide smoothly over the cloth. To accomplish this we provide improved mechanism which automatically controls the raising and lowering of the guide bar supporting blocks 87 and 87′ to keep the bars at all times and at all points intimately against the cloth as it is piled on the table. As best shown in Figs. 3, 4 and 15 a floating pilot bar 140 is mounted on the guide bar 85 and is adapted to move vertically through the slot 141 in the base of the bar. Lugs 142 extend up from the bar and each lug is pivoted to the end of the horizontal arm of a bell crank lever 143 which levers are pivoted at their elbows to the vertical flange of the guide bar. A link 144 connects the ends of the vertical arms of the levers and an adjustable connecting rod 144′ extends from the link and pivots at its outer end to the lever 145 at an intermediate point thereof. One end of this lever 145 is pivoted to a lug 146 on the guide bar structure 85 while its other end has the slot 147 receiving the crank pin 148 on crank arm 149. The hub 150 of this crank arm receives the vertical shaft 151 having the longitudinal channel 152, a tongue 153 in hub 150 engaging in this channel so that the shaft will turn upon swing of arm 149, the arm being free, however, to slide vertically along the shaft as the guide bar mechanism supporting blocks are raised and lowered. The lower

end of the shaft journals in a bearing lug 154 extending inwardly from block 87, the upper end of the shaft journaling in bearing block 155 secured to the bearing bracket 92 which journals the screw shaft 90. Another crank arm 156 is secured to the upper end of shaft 151 above the bearing block 155. The end of this crank arm has the slot 157 receiving pin 158 extending down from the rod 159 which is slidable through the side frame 4 of the carriage (Fig. 1). With this arrangement of transmission mechanism between the pilot bar 140 and rod 159, raising of the bar causes rotation of shaft 151 to effect forward shift of the rod 159, while dropping of the pilot bar will result in rearward shift of the rod. Vertical movement of the pilot bar will result in corresponding movement of the guide bars by mechanism which will now be described. On the shaft 94 which carries the bevel gears 94′ which operate the screw shafts 90, a ratchet collar 160 is secured adjacent the hand wheel 95, and on the same shaft, adjacent the carriage frame is a ratchet collar 161, the collars having teeth on their opposed faces. Slidable on shaft 94 between the collars is a gear wheel 162 having the ratchet teeth 163 and 164 on its opposite faces. Secured to the outer end of rod 159 is an arcuate fork 165 which receives the periphery of gear 162 whereby forward and back movement of rod 159 will cause the gear teeth 163 and 164 to coöperate with the ratchet collars 160 and 161, respectively, to turn the shaft 94 one way or the other, the gear when in neutral position being disengaged from both collars (Fig. 4).

As best shown in Figs. 1, 2 and 3 the front end of propelling shaft 17 carries a circular disk 166 eccentrically mounted thereon. This disk receives the eccentric strap 167 at the left end of link 168 whose right end pivots to the rock lever 169 at an intermediate point of the lever, the lever being pivoted at its lower end to the carriage side frame 4. The upper end of the lever terminates in the gear segment 170 which meshes with the gear wheel 162 controlled by shift rod 159 already described. As the propelling shaft 17 rotates the lever 169 rocks and as the pilot bar 140 rises and falls the rod 159 moves forward and back and the wheel 162 carries its front and rear teeth respectively into engagement with the ratchet collars 160 and 161, and the shaft 94 will be rotated one way or the other to raise or lower the guide bar structures accordingly. The guide bars thus move synchronously with the pilot bar as the pilot bar shifts vertically to follow the gradually increasing height of the pile on the table as layer after layer is added. The height of the pile also varies due to uneven thickness of the cloth at different points, but the pilot bar can readily follow the varying level and the guide bars will automatically follow and will always remain intimately against the cloth to smooth it out and to prevent it from wrinkling.

In order to provide for different widths of cloth we provide improved guide mechanism clearly shown in Figs. 1, 2, 3 and 14. Journaled in standards 50 and 50′ near the cloth bolt supporting platform is a shaft 180 controlled by hand wheel 181, the rear end of the shaft being threaded as indicated at 180′, and the front end of the shaft having circumferential notches 182. The notched end of the shaft receives a sleeve 183 to which is pivoted a latch plate 184 carrying a latch pin 185 extending through the sleeve to coöperate with the notches 182, a spring 186 tending to swing the plate to hold the pin in the notch. The threaded end of the shaft receives the unthreaded sleeve 187 through which passes the pin 188 extending from the plate 189 pivoted to the sleeve, a spring 190 tending to hold the pin in threading engagement with the shaft. Secured to the sleeves 183 and 187 are guide boards 191 and 192 respectively which rest on the carriage platform and between which the cloth bolt is applied. To adjust the boards for a bolt of certain width the latch plates 184 and 189 are swung to withdraw their respective pins whereupon the sleeves 183 and 187 together with their respective boards may readily be adjusted. To then obtain more accurate adjustment the hand wheel 181 is turned and the sleeve 187 shifted along the threaded end of the shaft until the desired distance between the boards is obtained. To guide and support the cloth between the platform and the guide jaws, skeleton frames 193 and 194 extend upwardly from the sleeves 183 and 187 respectively.

In Fig. 13 is shown the electrical control for automatically stopping the motor 22 when a cloth bolt has been entirely unwound and laid. A suitable base 195 secured to the top guide jaw frame carries a stationary contact 196 and a pivoted contact lever 197, this lever being adapted to engage through opening 198 in the jaw frame with the cloth passing between the jaw frames when the frames are closed. When thus engaging with the cloth the lever is swung against contact 196 to close the electrical circuit C connecting with the contact and lever and including a relay 199 whose armature 200 and contact 201 are switch terminals for the electrical circuit M containing the propelling motor 22 for the carriage C. So long as cloth passes between the guide jaws the relay circuit will be closed and the motor circuit will likewise be closed and the carriage propelled. When, however, the bolt is exhausted and the cloth leaves the jaw frames, the contact lever will drop away

from its contact to open the relay circuit, whereupon the motor circuit is opened and the motor and carriage stopped. Register mechanism 202 is also provided for counting the number of layers of cloth piled on the table. In the front abutment lug 46' of the carriage is a plunger 203 whose inward movement is resisted by a spring 204, lever mechanism 205, connecting the plunger with the register. Every time the carriage cooperates with the abutment frame J at the right end of the table the register is actuated and the number of cloth layers on the table may thus be ascertained.

We thus provide a machine which is more simple and more efficient than the machine in our patent referred to. We do not of course desire to be limited to the exact structure, arrangement and operation shown and described as modifications are no doubt possible which would come within the scope of the claims which are as follows:

We claim—

1. In a cloth piling machine carriage, the combination of supporting standards, a lower guide jaw member secured to said standards, an upper jaw member hinged to said lower jaw member, said lower jaw member having a guide groove, a cloth threading chain adapted to travel through said groove, and cloth receiving hooks on said chain.

2. In a cloth piling machine carriage, the combination of a cloth supporting platform and bearing standards rising therefrom, a rotatable shaft journaled in said standards having threads at one end and notches at the other end, a sleeve received by the notched end of the shaft and having a latch for coöperating with the notches to lock the sleeve in adjusted position, a sleeve received by the threaded end of the shaft and having a latch for coöperating with the threads, and guide boards secured to said sleeves and resting on said platform to guide the cloth thereon.

3. In a cloth piling machine carriage, the combination of a cloth supporting platform and bearing standards rising therefrom, a shaft extending between said standards and having latch notches, sleeves on said shaft, latch mechanism on said sleeves for cooperating with said notches to lock the sleeves in adjusted position, and guide boards extending from said sleeves over said platform to serve as guides for the cloth.

4. In a cloth piling machine the combination of a track, a carriage propelled back and forth on said track, cloth guide bars on said carriage, levers on said carriage for raising said bars, a clamping frame at each end of the track having upper and lower jaw members, each upper jaw member having a cam incline, dogs on the guide bars for engaging said cam inclines to effect raising of the upper jaw member to receive between the members the cloth from the respective guide bar, an abutment plunger on each clamping frame for coöperating with said levers to raise said guide bars, means connecting with each upper jaw member and the associated plunger for preventing raising of said member when the plunger is in normal position, locking means tending to hold the plungers in normal position, and releasing mechanism for each locking mechanism controlled by coöperation therewith of the carriage.

5. In a cloth piling machine the combination of a track, a carriage reciprocable on said track, cloth guide bars on said carriage, levers on said carriage for raising said bars, a clamping frame at each end of the said track having upper and lower jaw members, said guide bars having dogs for coöperating with the upper jaw members to effect raising thereof to receive the cloth from the guide bars, abutment plungers at the opposite sides of each clamping frame for engaging with said levers to effect raising of the guide bars, means connecting between said plungers and upper jaw frame for preventing raising of said frame when the plungers are in normal position, pawls for locking said plungers in normal position, and releasing rods extending from said pawls and into the path of said carriage to be engaged and actuated thereby to release said plungers and thereby said jaw frames.

In witness whereof, we have signed our names to this specification in the presence of two subscribing witnesses.

MORRIS L. SHAPERA.
CHAS. M. SHAPERA.

Witnesses:
JULIUS M. KAHN,
E. BLUM.