Aug. 11, 1931. M. J. MILMOE 1,818,496

PACKAGING MACHINE

Filed March 13, 1926 12 Sheets-Sheet 1

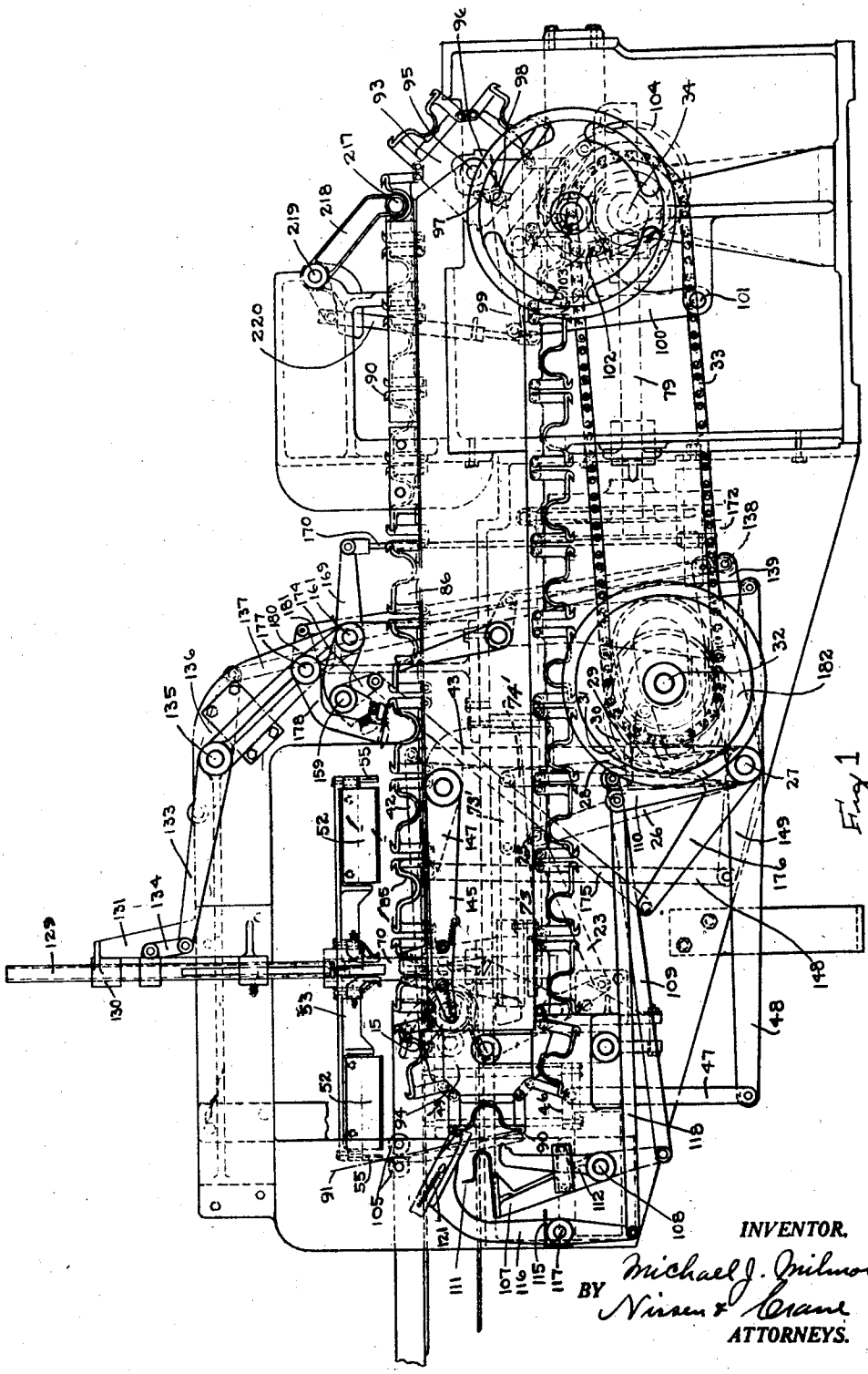


Fig 1

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PACKAGING MACHINE

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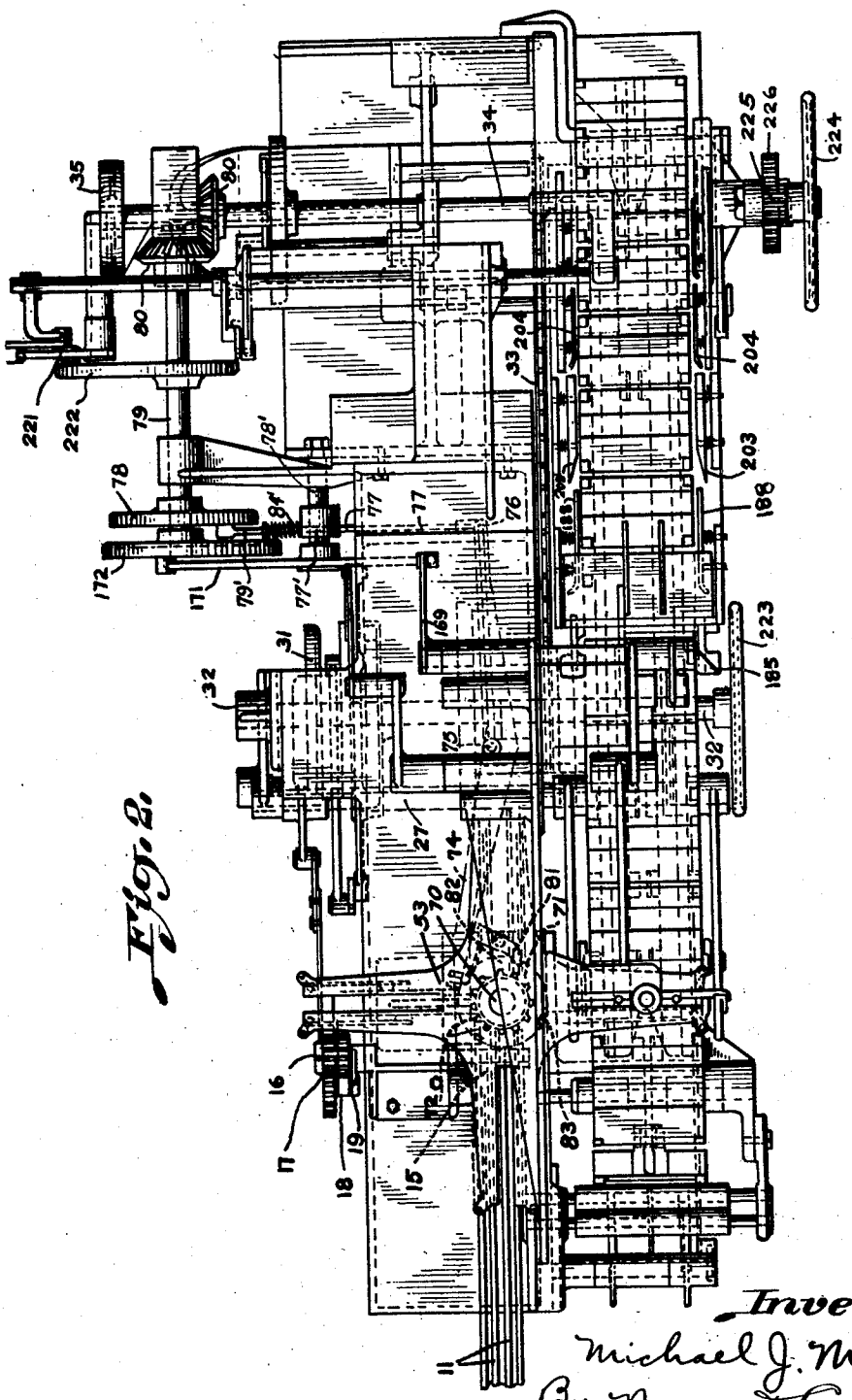


Fig. 2.

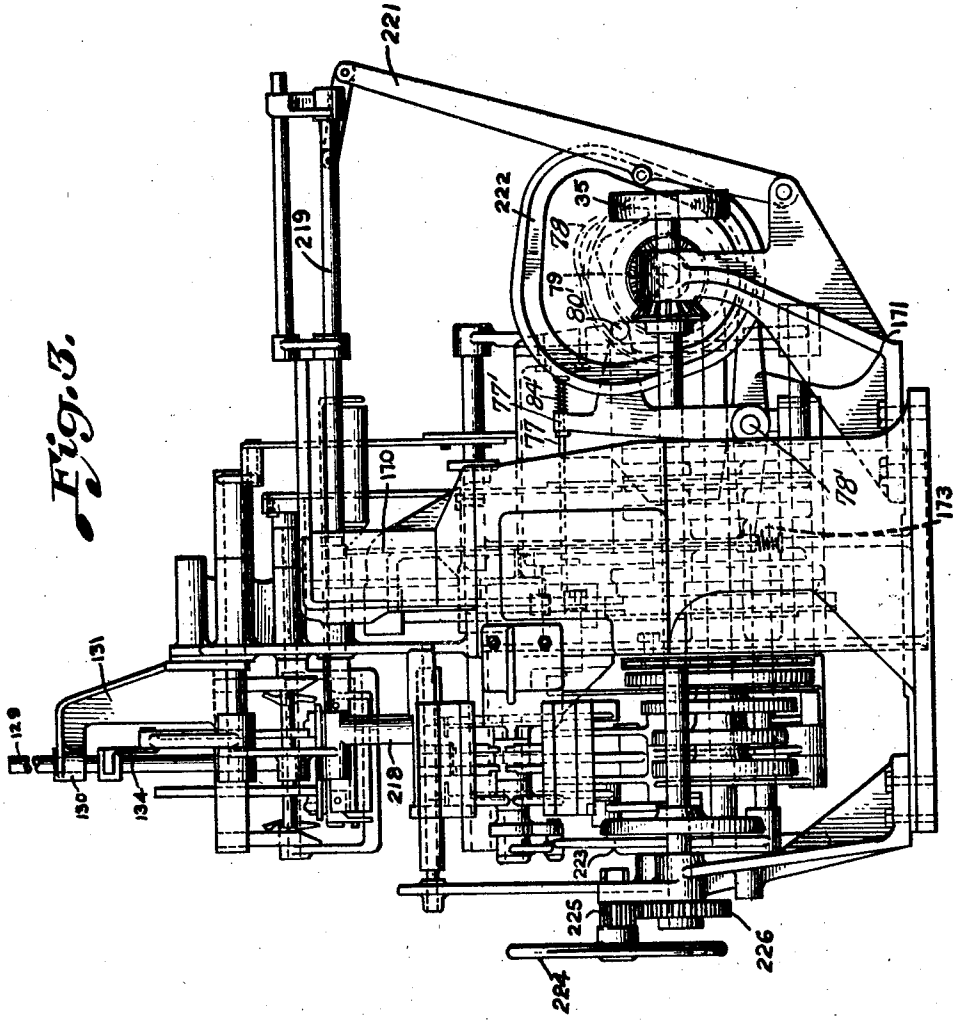
Inventor:
Michael J. Milmoe,
By Nissen & Cane,
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Aug. 11, 1931. M. J. MILMOE 1,818,496

PACKAGING MACHINE

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Fig. 3.



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PACKAGING MACHINE

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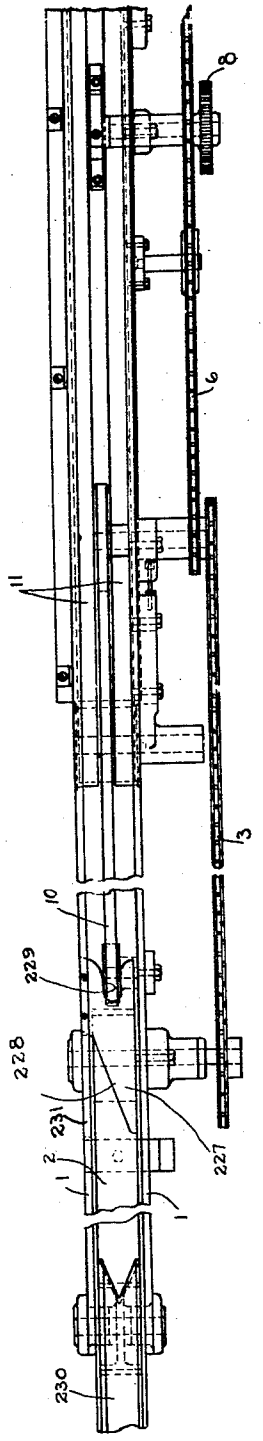


Fig 4

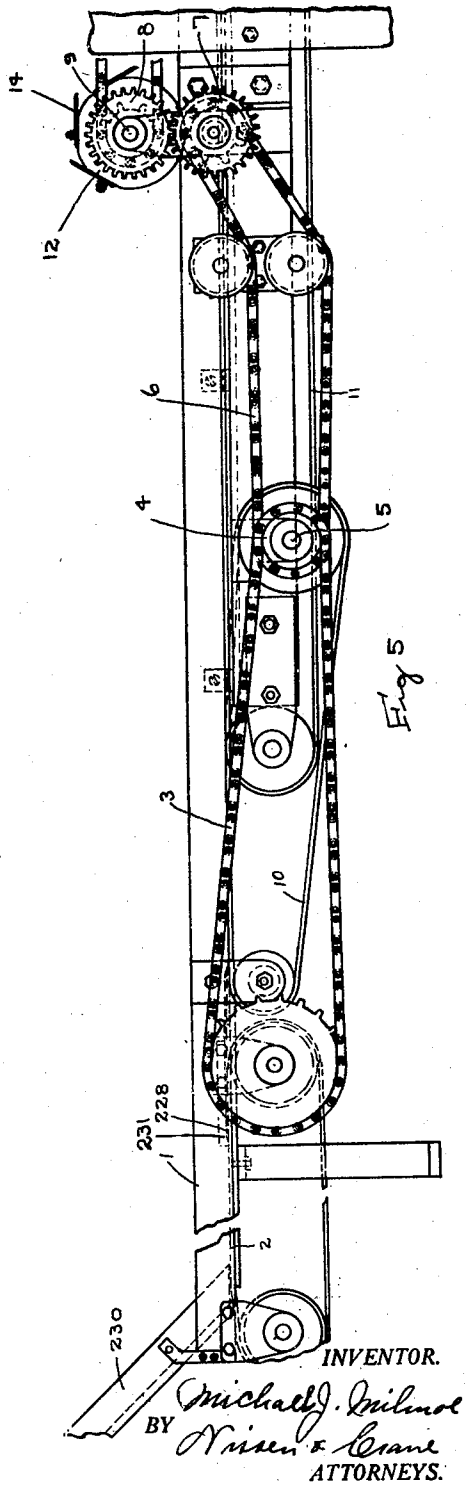


Fig 5

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PACKAGING MACHINE

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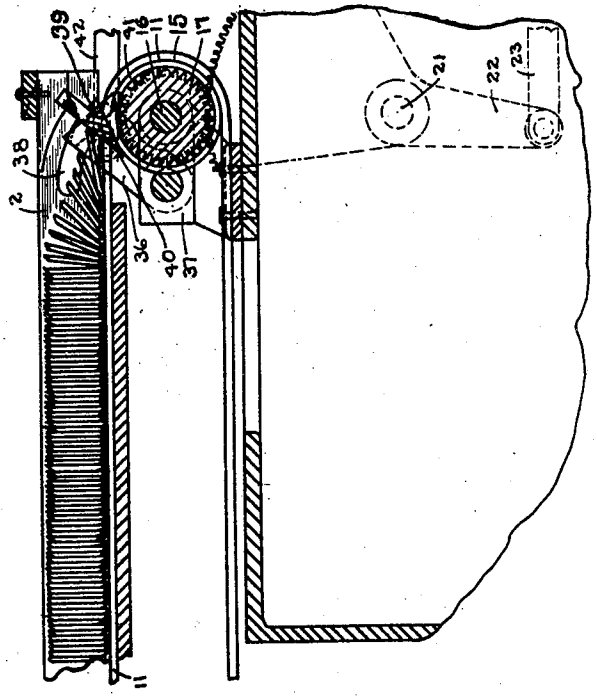


Fig. 7

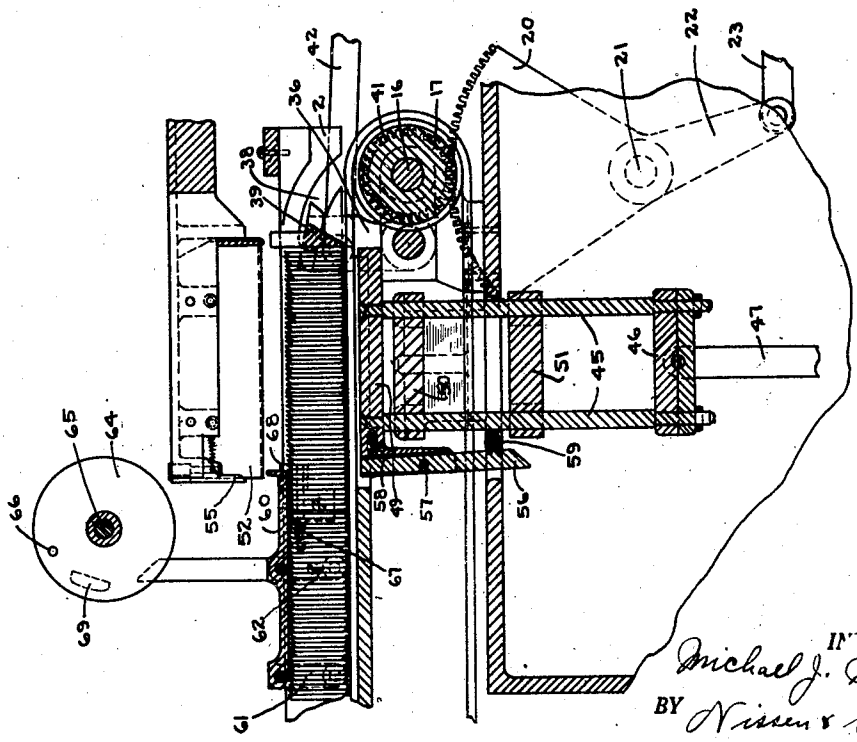


Fig. 9

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PACKAGING MACHINE

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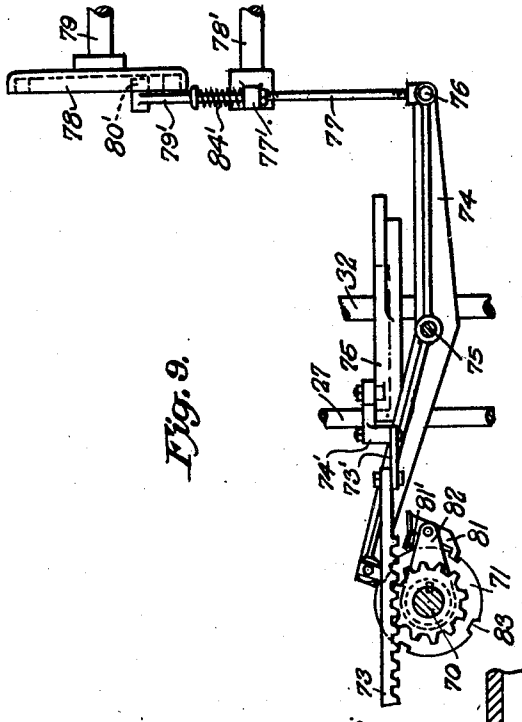


Fig. 9.

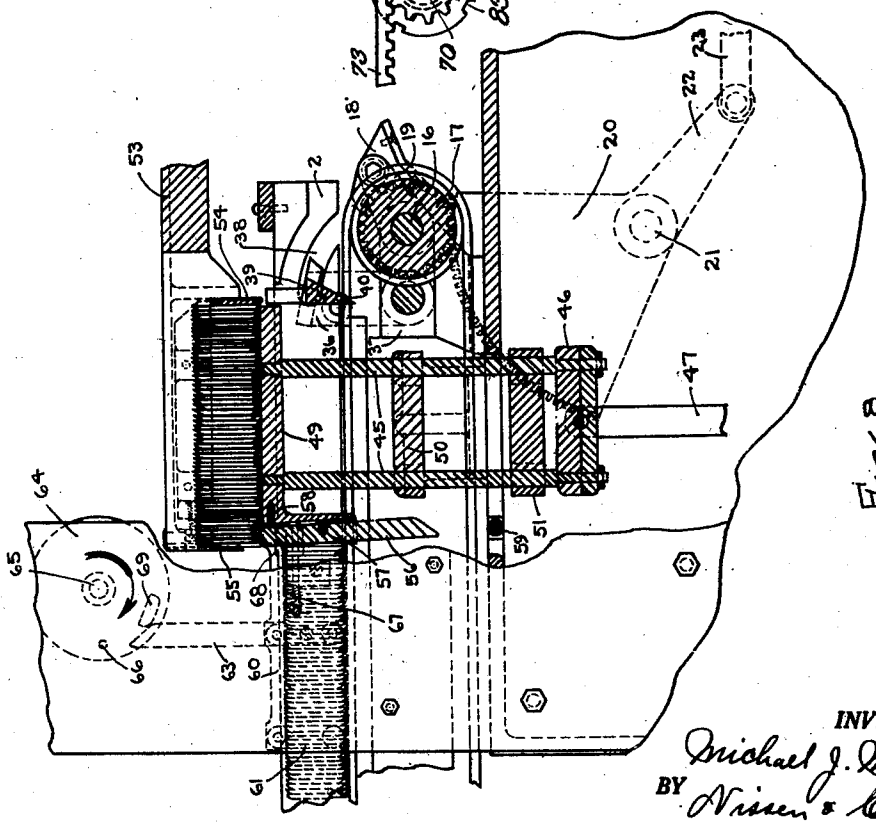


Fig 8

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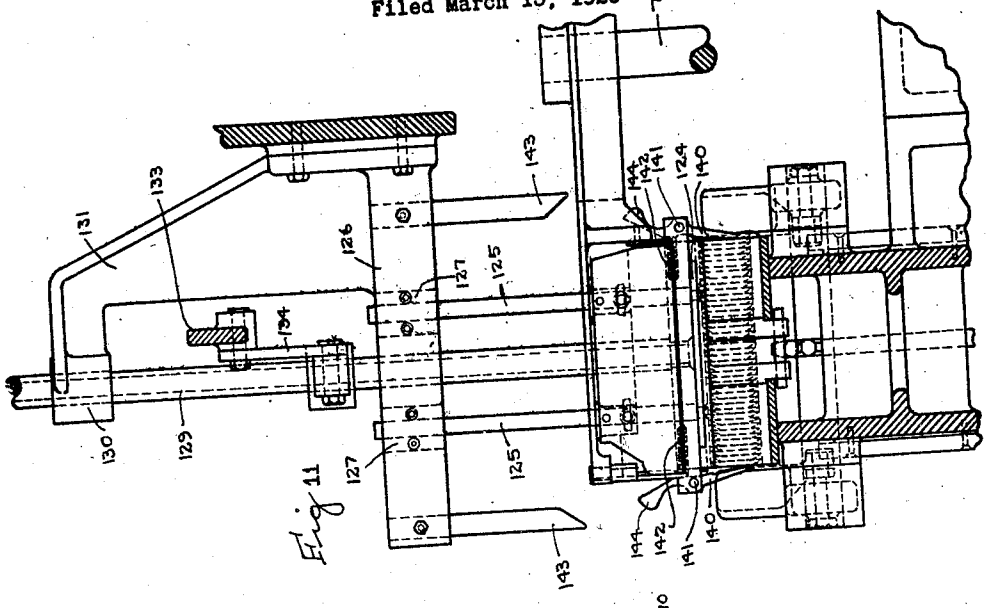


Fig. 11

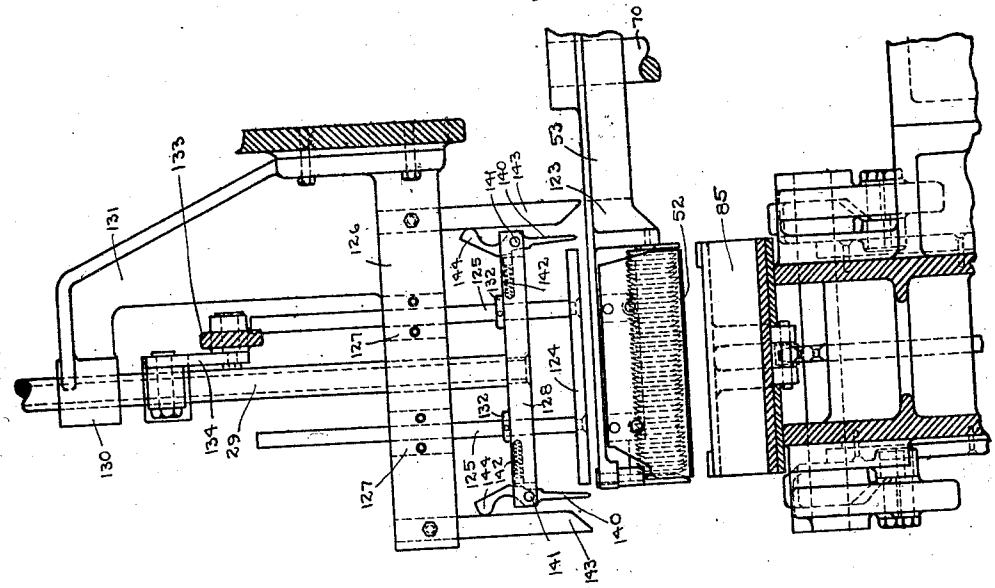


Fig. 10

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PACKAGING MACHINE

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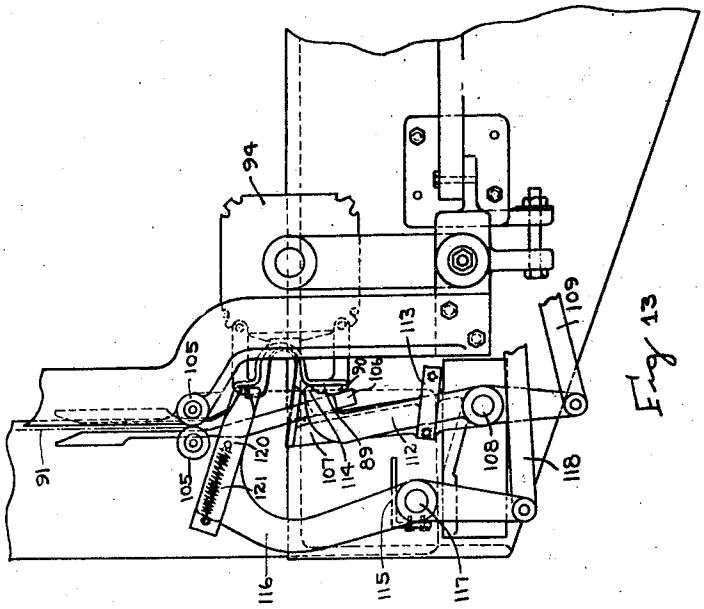


Fig. 13

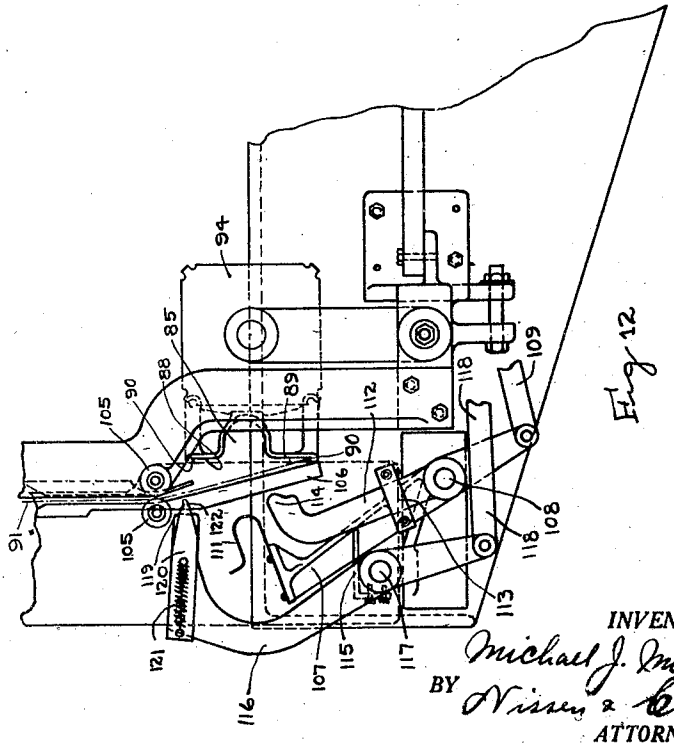


Fig. 12

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PACKAGING MACHINE

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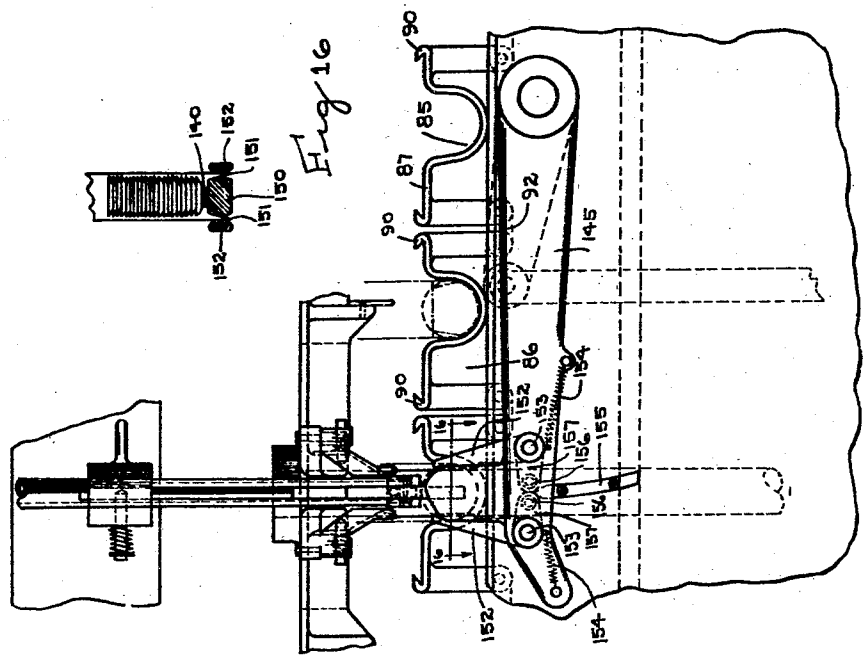


Fig 16

Fig 15

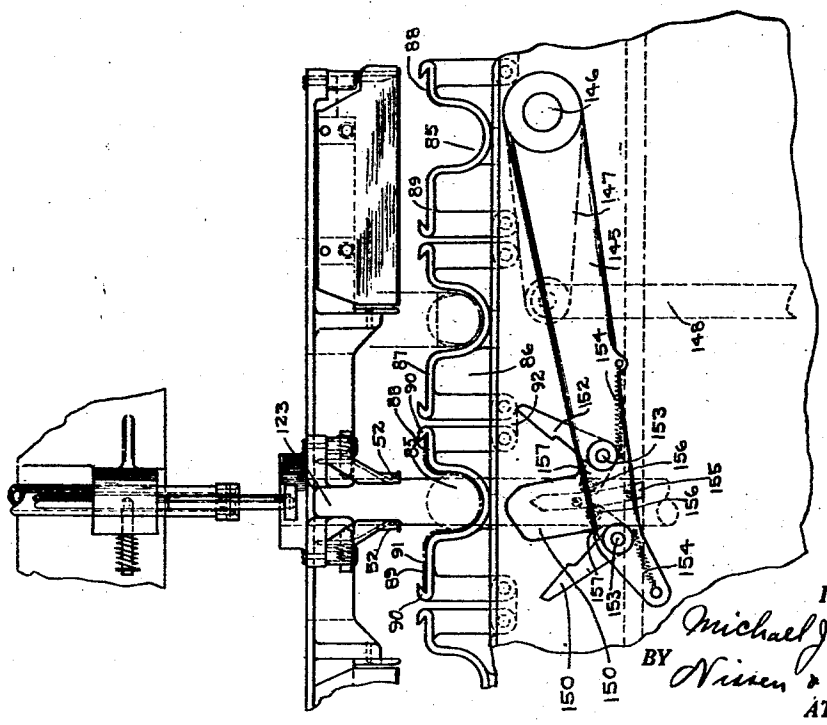


Fig 14

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Aug. 11, 1931. M. J. MILMOE 1,818,496

PACKAGING MACHINE

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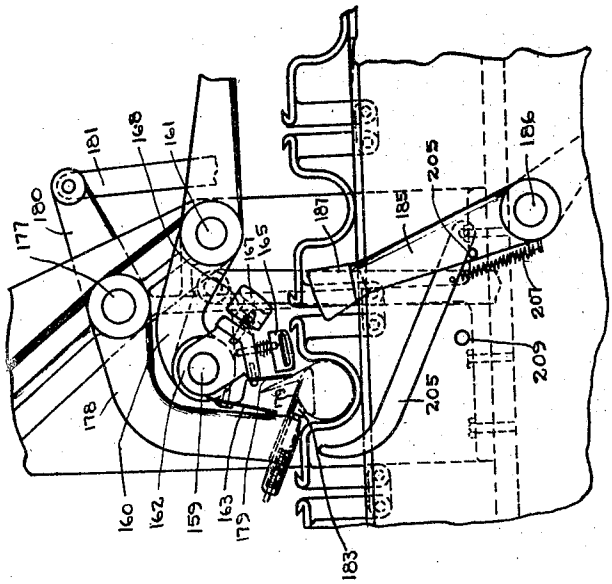


Fig 18

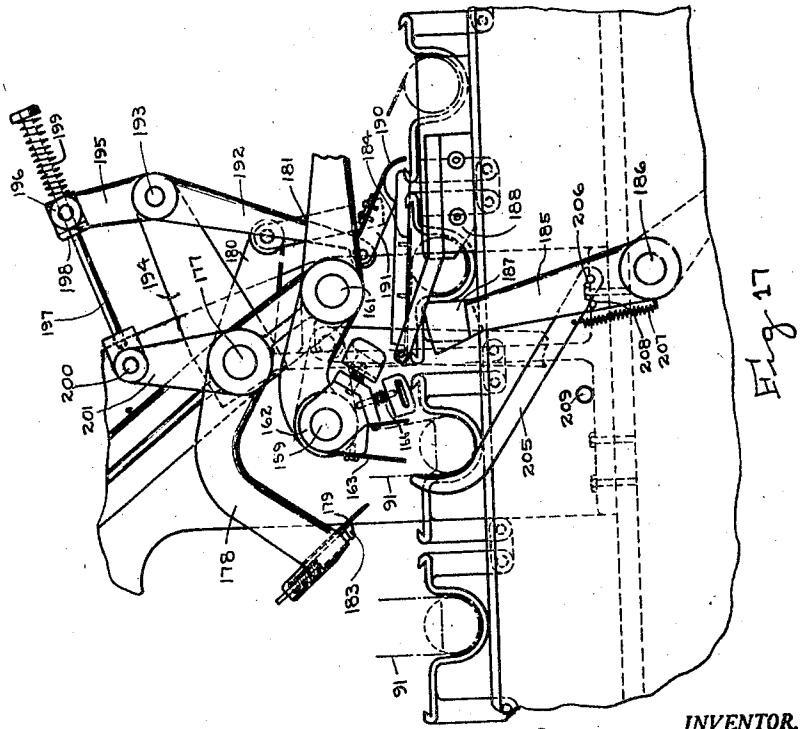


Fig 17

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PACKAGING MACHINE

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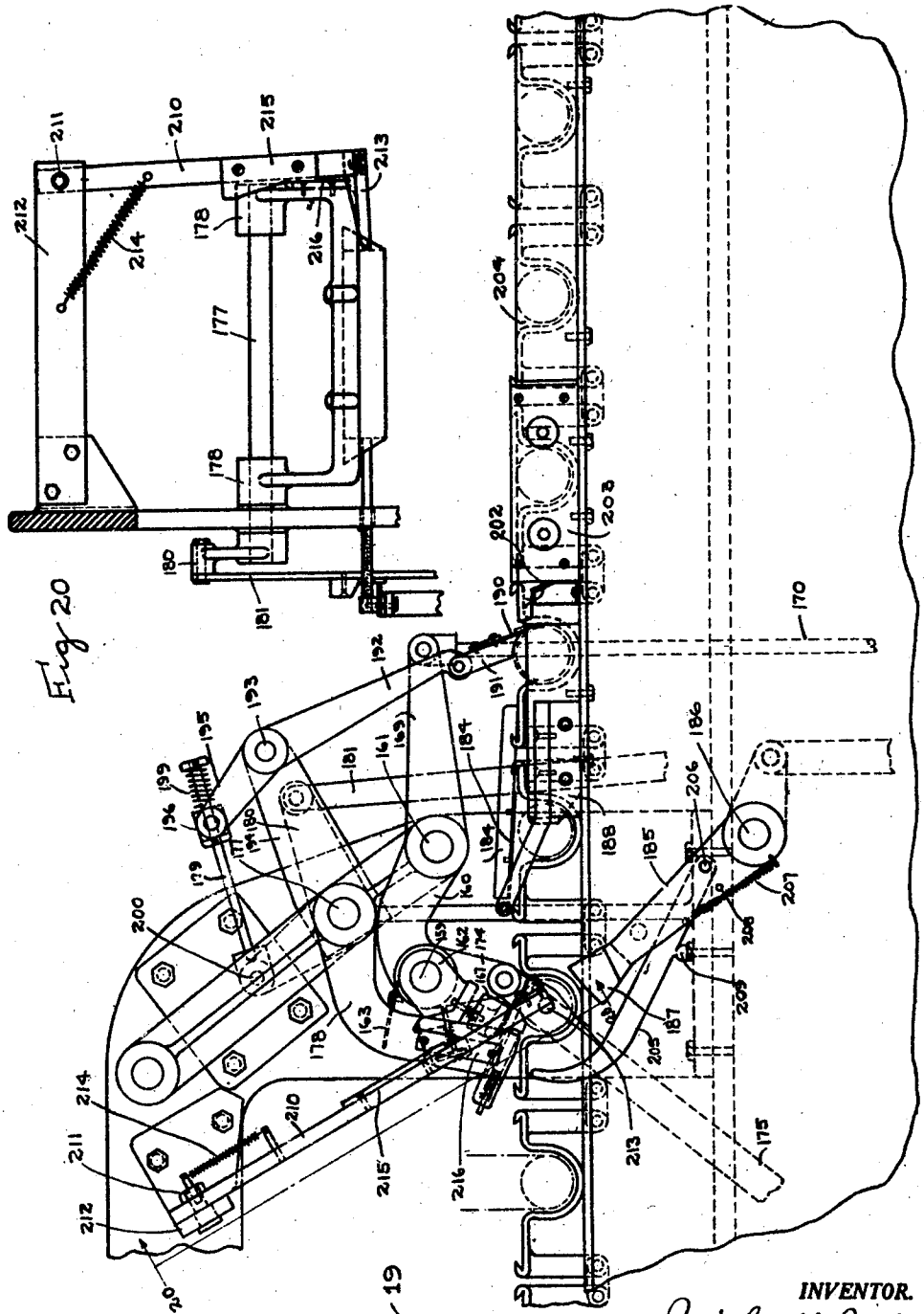


Fig 20

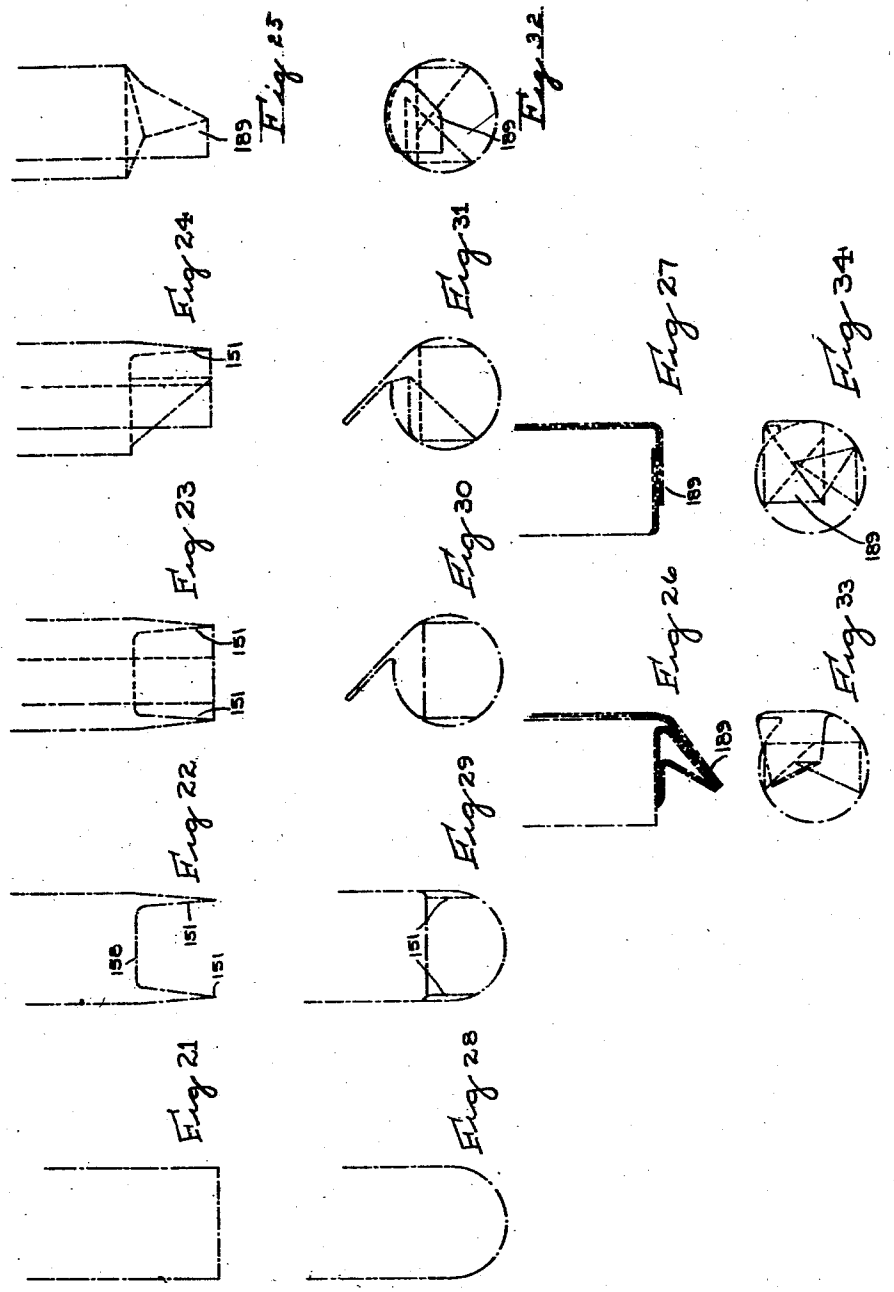
Fig 19

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PACKAGING MACHINE

Filed March 13, 1926 12 Sheets-Sheet 12



INVENTOR
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Patented Aug. 11, 1931

1,818,496

UNITED STATES PATENT OFFICE

MICHAEL J. MILMOE, OF CHICAGO, ILLINOIS, ASSIGNOR TO F. B. REDINGTON COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS

PACKAGING MACHINE

Application filed March 13, 1926. Serial No. 94,438.

This invention relates to mechanism for wrapping and sealing articles to be packed, and has for its object the provision of a machine which will automatically wrap and tightly seal the articles in a closed package, and which shall be of improved construction and operation.

The invention is exemplified in the combination and arrangement of parts shown in the accompanying drawings and described in the following specification, and it is more particularly pointed out in the appended claims.

In the drawings—

Fig. 1 is a side elevation of a packaging machine showing one embodiment of the present invention;

Fig. 2 is a top plan view of the machine shown in Fig. 1;

Fig. 3 is an end elevation looking from the right in Fig. 1;

Fig. 4 is a top plan view of the conveyer mechanism for feeding articles to the wrapping mechanism;

Fig. 5 is a side elevation of the conveyer shown in Fig. 4;

Fig. 6 is a vertical sectional view showing mechanism for transferring the articles from the feeding conveyer to a rotary turret;

Fig. 7 shows a portion of the mechanism of Fig. 6 in a different position;

Fig. 8 shows the mechanism of Fig. 6 in still another position;

Fig. 9 is a horizontal sectional view showing the drive for the turret;

Fig. 10 is a fragmentary elevation, with parts in section, showing the mechanism for transferring the articles from the turret to the wrapping mechanism;

Fig. 11 is a view similar to Fig. 10 showing the parts in a different position;

Fig. 12 is a fragmentary elevation showing the mechanism for transferring the wrappers to the wrapping mechanism;

Fig. 13 is a view similar to Fig. 12 showing the parts in a different position;

Fig. 14 is an elevation of the wrapping mechanism for performing one step of the wrapping operation;

Fig. 15 is a view similar to Fig. 14 showing the parts in a different position;

Fig. 16 is a section on line 16—16 of Fig. 15;

Fig. 17 is an elevation showing the mechanism for performing a further step in the wrapping operation;

Fig. 18 is a view similar to Fig. 17 showing the parts in a different position;

Fig. 19 is an elevation showing the mechanism for performing the final steps in the wrapping operation;

Fig. 20 is a section on line 20—20 of Fig. 19; and

Figs. 21 to 27, inclusive, are top plan views, and Figs 28 to 34, inclusive, are end elevations of the wrapper showing the various steps in the wrapping operation.

Many articles are of such nature that they are kept in better conidtion if enclosed in an air-tight or substantially air-tight package. Articles of this nature have heretofore been wrapped in paper treated with paraffine or similar material, but even when so wrapped the overlapping edges of the paraffine paper permit the entrance of air to the package or the escape of the contents of the package in case it partially melts or exudes liquid. There are many reasons why articles of different character require a package which is completely sealed. It has been found that by heating the overlapping portions of a wrapper treated with paraffine or similar material that they may be caused to adhere, forming a sealed container. Great difficulty, however, has been experienced in devising mechanism by which the overlapping parts of the wrapper may be completely sealed by heat without injury to the contents of the package. The present invention not only provides means for automatically wrapping articles in a wrapping material suitable for heat sealing, but also provides mechanism by which the wrappers may be sealed without injury to the contents.

In the embodiment of the invention shown in the drawings, the machine is shown as adapted for wrapping wafers, such as cakes or cookies, but it will be understood that the principle of the invention may be applied to machines for wrapping a large variety of

articles. The wafers to be wrapped are arranged on edge in a conveyer trough shown in Figs. 4 and 5 having sides 1 and an endless belt conveyer 2 forming the bottom thereof. The conveyer 2 is driven by a chain 3 which passes over a sprocket 4 on the shaft 5. A second chain 6 is also connected with the shaft 5 and is driven by a gear 7 meshing with a gear 8 operated by a shaft 9 connected with any continuously rotating portion of the wrapping machine. The end of the conveyer 2 is disposed adjacent the conveyer belt 10 which is of less width than the conveyer trough and extends at its forward end between two conveyer belts 11. The conveyer belts 11 are operated intermittently by mechanism to be described while the conveyer 2 travels continuously but at a slower rate of speed than the movement of the belts 11. The belt 10 forms a connecting carrier between the belts 2 and 11 and travels at a speed somewhat greater than the speed of the belt 2, but less than the speed of the belts 11. The purpose of the belt 10 is to prevent too wide a separation of the articles on the conveyer belts due to the intermittent movement of the belts 11. If the belt 2 fed the articles directly to the belts 11 the difference in speed would cause sufficient separation to permit a portion of the articles to fall down and lie flat on the bottom of the conveyer. The interposition of the belt 10 having an intermediate rate of speed permits slight separation of the articles so that they become inclined, but will not permit them to be separated sufficiently to fall flat. When the intermittent carrier comes to rest the overlapping position of the articles will cause them to slide upon one another under the pressure exerted by the articles being fed from the rear by the belt 2 so that they will again assume an upright position in the conveyer trough. The conveyer 2 travels at a sufficient speed to advance the cakes slightly more rapidly than is required for supplying the wrapping mechanism. This insures a continuous supply of cakes to the wrapping mechanism. The cakes are removed by the wrapping mechanism in groups, as will be explained later. This makes it desirable to feed the cakes to the wrapping mechanism by the intermittently operating feed belts 11 which necessarily travel at a high rate of speed when advancing the cakes and thereafter remain stationary during the period of removal of the cakes. If the belt 2 were arranged to feed the cakes directly to the intermittently moving belts the rapid movement of these intermittently moving belts would draw the cakes away from the supply belt leaving a considerable gap. The intermediate belt 10 running at an intermediate speed spreads or separates the cakes as they are fed thereto by amounts which permits them to lie in overlapped relation, but does not spread them enough to permit them to fall flat upon the floor of the conveyer. This spreading is taken up during the stationary part of the intermittently moving belt by the forward movement of the cakes in the rear of the spread group. As the cakes advance to the wrapping machine it is desirable that any inclination from a vertical position shall be forward and not backward. To insure this position a disc 12 is mounted on the shaft 9 which carries the gear 8, the disc being disposed over the conveyer trough and having spring-held wipers 14 extending tangentially from the disc 12 and arranged to engage the tops of the cakes in the conveyer and incline them forwardly.

The conveyer belts 11 pass about a pulley 15 secured to a shaft 16 journaled in the frame of the wrapping machine, as shown in Figs. 2 and 7. A pinion 17 is loosely mounted on the shaft 16 and a pawl 18 is carried on an arm 19 fixed to the shaft 16. Rotation of the pinion 17 in one direction imparts rotation to the shaft 16 through the pawl 18 and arm 19, but the pawl 18 permits reverse rotation of the pinion 17 without rotating the shaft 16. A gear segment 20 is journaled at 21 on the supporting frame and meshes with the pinion 17. An arm 22 extends downwardly from the gear segment and is connected to a link 23. The link 23 may be adjustable in length by suitable means and the end of the link opposite the arm 22 is pivoted at 25 to an upright arm 26 pivotally supported by a cross-shaft 27. The arm 26 has a projection 28 thereon which carries a cam roller 29 engaging a groove 30 in a cam 31 secured to a cam shaft 32. The cam shaft 32 is driven by a sprocket chain 33 mounted on a drive shaft 34. The drive shaft 34 may be operated by any suitable power connection, as by a belt pulley 35. This mechanism produces the intermittent feed of the conveyer belts 11, as will be readily understood. An arm 36 is pivotally mounted on a bracket 37 at one side of the feed conveyer and is provided with a laterally projecting finger extending through a slot 38 in the side wall 2 of the conveyer, as shown in Figs. 7 and 8. An abutment plate 39 is mounted on the laterally projecting finger of the arm 36 and is provided with a tongue 40 extending between the conveyer belts 11 and into a slot 41 in the pulley 15. A link 42 is pivoted to the arm 36 and is oscillated by an arm 43 driven by the cam shaft 32. The abutment 39 is disposed in the position shown in Fig. 7 during the feeding movement of the conveyers 11. The tongue 40 which projects between the conveyers scoops up the forward edge of the foremost cake and the forward movement of the cakes causes the front cake to rest against the flat face of the abutment 39. After the conveyers 11 have come to rest the arm 36 will swing

the abutment 39 into the upright position shown in Fig. 6. This will straighten the cakes at the end of the conveyer into upright position and will move the row of cakes backwardly a slight amount so as to take up any looseness between the cakes caused by the forward tipping of the endmost cakes.

A pair of plunger rods 45 are supported on a head 46 connected with a link 47. The lower end of the link 47, as shown in Fig. 1, is carried on an arm 48 pivoted on the shaft 27 and reciprocated by a cam on the shaft 32. The upper ends of the rods 45 carry a head 49 in position to pass upwardly between the conveyer belts 11. Guides 50 and 51 direct the rods 45 in their reciprocating movement. The upward movement of the head 49 carries a number of cakes upwardly from the conveyer belts 11 into position between a pair of spring-held clamping plates 52 supported on a rotating turret 53. A fixed plate 54 is arranged at one end of the recess between the clamping plates 52 and spring-held plates 55 are arranged to close the opposite end of the recess. The cakes discharged by the head 49 into the recess between the clamping plates 52 are held in the turret by the spring pressure of the plates 52 and the end plates 55. At one end of the head 49 there is pivoted a lever 56 on a pivot pin 57. A spring 58 tends to press the upper end of the lever outwardly. The lower end of the lever engages a roller 59 on the machine frame. The roller 59 holds the top end of the lever 56 inwardly until after the head 49 has begun to lift the section of cakes from the conveyer belts 11. Before the lifted section is moved away from the other cakes in the series the lever 56 passes out of engagement with the roller 59 so that the top end of the lever is moved outwardly. This movement separates the cakes in the series from those in the separated group and at the same time extends the supporting surface of the head 49 so that there is no danger that the endmost cake will slide off the end of the head. A stripper plate 60 is supported above the cakes adjacent the series to be moved upwardly and is carried on pivoted links 61 and 62. The link 62 has an extension 63 disposed adjacent a rotary disc 64 mounted on a shaft 65. A pin 66 is carried by the disc 64 in position to engage the extension 63 and carry the stripper plate 60 slightly to the left, as viewed in Fig. 6, at the time that the head 49 begins to raise the section of cakes to be removed. A spring 67 normally draws the plate 60 to the right, as viewed in Fig. 6, the movement being limited by a stop 68. As soon as the upper surface of the head 49 has passed the lower edges of the cakes the stripper 60 will be temporarily released to exert pressure on the endmost cake of the separated series to hold the endmost cake while the upper end of the lever 56 moves outwardly. After the uper end of the lever 56 has assumed its outward position the extension 63 will engage a second lug 69 on the disc 64 which will retract the plate 60 and permit the uper end of the lever 56 to pass the end of the plate, as shown in Fig. 8. By this arrangement any danger of jamming the endmost cake is avoided and when a cake is once started upwardly, although it may at first rest only on the very edge of the plunger, it is prevented from being dislodged by the movement of the lever 56 which extends the length of the plunger after the initial movement thereof. After the cakes have been carried upwardly and deposited in the recess in the turret 53, the plunger head 49 is retracted to permit a new charge of cakes to be fed in position beneath the turret.

The turret 53 in the embodiment shown in the drawings is provided with four arms, as shown in Fig. 2. The turret is supported on a shaft 70 provided with a suitable footstep bearing and having a ratchet disc 71 attached thereto. A gear 72 is loosely journaled on the shaft 70 and is reciprocated by a rack 73 connected by means of a link 73′ to an arm 74′ pivotally mounted on the shaft 27. The arm 74′ has a roller thereon engaging within a suitable cam 75′ on the cam shaft 32 so that rotation of the cam 75′ oscillates the arm 74′ and reciprocates the rack 73 through the intermediary of the link 73′. An arm 82 is secured to the gear 72 so as to rotate therewith and a pawl 81 pivotally mounted on the end of the arm 82 engages the notches 83 in the disk 71 whenever the arm 82 is moved in a clockwise direction as viewed in Fig. 9. A spring 81′ is adapted to yieldingly urge the pawl in engagement with the periphery of the disk 71, and whenever the arm 82 is rotated in a clockwise direction, the spring 81′ forces the pawl 81 into the notches 83. Counter-clockwise movement of the arm 82 however, will be ineffective to rotate the disk as the spring will yield and permit the pawl to be retracted from the notch 83.

It is desired, of course, to prevent reverse rotation of the disk 71, and for this purpose I provide a detent 82′ on one end of a lever 74 pivoted at 75, the other end of the arm 74 being pivoted at 76 to a link 77. The other end of the link 77 passes through a recess on the upper end of the arm 77′ which is pivoted as best illustrated in Fig. 3, to a shaft 78′. The arm 77′ has a lateral projection 79′ carrying a roller 80′ which engages within a suitable cam groove in the cam 78 which is secured to the shaft 79. At the beginning of the movement of the rack 73 to the right as viewed in Fig. 9, the cam 78 tends to rotate the arm 74 in a clockwise direction to raise the detent 82′ out of the notch 83 so as to permit the pawl 81 to rotate the disk 71. As soon as the rack 73 has ro-

tated the pawl a slight amount so as to bring the detent 82′ out of registration with the recess 83, the arm 74 rotates in a counter-clockwise direction so as to permit the detent 82′ to ride on the outer periphery of the disk 71. When the disk 71 has been rotated a quarter turn by the pawl 81, the detent 72′ drops into the next recess 83, which at this time is presented at a position adjacent the detent 82′. A spring 84′ surrounding the free end of the link 77 and interposed between an abutment on the end of the link and the arm 77′, is adapted to permit the detent 82′ to yieldingly engage the outer periphery of the disk 71 so that the detent will be projected into the recess 83 when the recess occupies a position adjacent the detent. By the rotation of the turret 53 the cakes are carried through three-quarters of a revolution into position to be discharged into pockets 85 in a conveyer 86 forming a portion of the wrapping mechanism. The conveyer 86 comprises carrier links having plates 87 bent inwardly to form pockets 85 and having ledges 88 and 89 at opposite sides of the pockets, as shown in Fig. 14. Flanges 90 are provided at the extremities of the ledges 88 and 89 to receive the edges of wrappers 91 to retain the wrappers in position on the surfaces of the plates 87. The carrier links 86 are connected by links 92 and the conveyer thus formed travels over rectangular sprocket wheels 93 and 94. The sprocket wheel 93 is secured to a shaft 95 having a ratchet wheel 96 thereon engaged by a pawl 97 for imparting intermittent rotation to the sprocket 93. The pawl 97 is carried on an arm 98 pivoted on the shaft 95 and connected by a link 99 with an arm 100 pivoted at 101 on the machine frame. The arm 100 is provided with a cam roller 102 which engages a cam groove 103 in a cam 104 secured to the shaft 34. The parts are so proportioned that the conveyer is brought to rest intermittently with the endmost link on the sprocket 94 in upright position, as shown in Figs. 1, 12 and 13. While the link is in this position a wrapper 91 is fed into position and formed in the pocket 85 in shape to receive a series of cakes from the turret 53. The wrappers 91 are fed downwardly from any suitable source of supply, not shown, between rollers 105 and the lower edge of the wrapper is directed by guides 106 into the notch formed by the flange 90 at the lower end of the plate 89, as shown in Figs. 1 and 12. A lever 107 is pivotally mounted at 108 and is connected at its lower end to a link 109 carried by a rocker arm 110 oscillated by a cam on the shaft 32. A spring 111 is mounted on the upper end of the lever 107 and is curved upwardly upon itself to permit the curved portion to enter the pocket 85. After the wrapper has been deposited in the position shown in Fig. 12 the lever 107 is moved to the position shown in Fig. 13. This causes the central portion of the wrapper to be forced into the pocket 85, the inwardly bent portion of the wrapper being curved to fit the inner wall of the pocket. To prevent the lower end of the wrapper from being withdrawn from beneath the flange 90 a contact arm 112 is pivotally mounted concentric with the arm 107 and is yieldingly held to the arm 107 by a spring-pressed friction plate 113 mounted on the arm 107. As the arm 107 moves forwardly the contact portion 114 of the arm 112 will be moved against the ledge 89 and clamps the wrapper to hold it from sliding when the spring 111 curves the wrapper into the pocket 85. Upon the return movement of the lever 107 the arm 112 will strike a stop 115 to restore it to its advanced position relative to the lever 107. After the spring 111 has moved into the pocket 85 the upper end of the wrapper 91 will be tucked beneath the upper flange 90 to retain the wrapper in its position in the conveyer pocket. The tucking operation is performed by a lever 116 pivotally mounted at 117 and oscillated by a link 118 from the cam shaft 32. The lever 116 has a nose piece 119 movable into contact with the ledge 88. A bar 120 is slidably mounted on the nosepiece 119 and is urged forwardly by a spring 121. The bar 120 is arranged to register with the upper flange 90 of the conveyer link and is provided with a lug 122 which extends below the flange 90. The lower edge of the bar 120 passes over the top end of the wrapper 91 and the forward end of the nosepiece engages the end of the wrapper. After the bar 120 has contacted with the ledge 90 it will remain stationary while the nosepiece 119 continues to move toward the conveyer link and the spring 121 will yield to permit relative movement of the nosepiece 119 and the bar 120. This movement will force the top edge of the wrapper 91 from the lug 122 and cause it to snap into the notch beneath the ledge 90. The wrapper will thus be retained in position with its ends held by the ledges 90 and with its central portion formed into the pocket 85 in position to receive the cakes from the turret.

The mechanism for discharging the cakes from the turret to the conveyer pockets is best shown in Figs. 1, 10 and 11. As shown in Fig. 2, the turret arms are divided longitudinally to provide a central slot 123 above the series of cakes held by the clamping jaws 52. For discharging the cakes from the clamping jaws a discharge plate 124 is supported in position to register with the slot 123 when the clamping jaws are in position over a conveyer pocket 85. The plate 124 is carried by rods 125 slidably mounted in a bracket 126 supported on the machine frame. Spring-pressed friction plates 127 resist movement of the rods 125 in the bracket 126.

The rods 125 pass through openings in a head 128 which is mounted on a plunger 129 guided in a sleeve 130 on a bracket 131. Collars 132 are fastened to the rods 125 to limit the downward movement of the plate 124 relative to the head 128. Vertical reciprocatory movement is imparted to the plunger 129 by a lever 133 which is connected to the plunger 129 by a link 134. The arm 133 is attached to a rock shaft 135 which also carries at the opposite end an arm 136 having a link 137 pivoted thereto. The lower end of the link 137 is pivoted at 138 to an arm 139 mounted on the shaft 27 and operated by a cam on the shaft 32. As the plunger 129 is moved downwardly through the slot 123 the plate 124 will engage the cakes and force them downwardly from between the spring clamps 52 into the conveyer pocket 85, the cakes entering the depression formed in the wrapper 91. Spring clamping fingers 140 are provided for engaging the ends of the cakes as they are moved out of the turret to hold the cakes in assembled relation. These clamps are pivoted at 141 to the cross-head 128 and are provided with springs 142 to press the clamping fingers inwardly into contact with the ends of the series of cakes. As the fingers move into registration with the cakes they are held open by guides 143 which engage upwardly extending contact arms 144. When the clamping fingers have reached a position opposite the end of the series of cakes they will be released from the guides 143 and will spring inwardly to clamp the cakes, as shown in Fig. 11. When the cross-head 128 starts on its downward movement the plate 124 will remain stationary, held by the friction plates 127 until the cross-head 128 engages the top face of the plate 124. The cross-head and plate 124 will remain in contact during the downward movement of the cakes into the conveyer pocket. On reverse movement of the cross-head, however, the friction plates 127 will resist upward movement of the plate 124 so that the cakes will be held in the pocket while the cross-head is raised to withdraw the clamping fingers 140. Before the cross-head is raised, however, the ends of the wrapper 91 will be folded inwardly to prevent the cakes from falling over at the ends of the stack. The folding mechanism for the ends of the wrapper is duplicated at each side of the conveyer 86 so that it will only be necessary to describe the apparatus for folding the wrapper at one end of the package.

An arm 145 is secured to a rock shaft 146 which is operated by a lever arm 147 and a link 148 which extends downwardly to a lever 149 carried on the shaft 27 and oscillated by a cam on the shaft 32. The end of the arm 145 carries a folder 150 having the top end thereof beveled outwardly so that as the folder moves upwardly against the wrapper 91 the end of the wrapper will be folded in against the end of the stacked cakes forming flaps 151 at each side of the folded in portion. The wrapper will be held down and the cakes will be held in the recess formed in the wrapper by the plate 124 during the upward movement of the folder 150. The folder will pass outside of the clamping finger 140 so that the wrapper will be folded against the outer side of the finger. Creasing clamps 152 are pivoted at 153 on the arm 145 and springs 154 tend to move the creasing clamps inwardly against the lateral faces of the folder 150. The clamps are held in their open position, as shown in Fig. 14, by a cam rib 155 secured to the frame of the machine and engaging rollers 156 secured to arms 157 connected to the clamps 152. When the folder 150 has moved into registration with the cakes the rollers 156 will have passed out of engagement with the cam rib 155 so that the clamps 152 will move inwardly against the sides of the folder 150. This will clamp the flaps 151 between the folder 150 and the clamps 152, as shown in Fig. 16, thus forming a permanent crease in the flaps so that the inwardly bent fold will be held in position by the creased flaps. This action of the creasing clamps pulls the ends of the wrapper from the flanges 90 permitting the end portions of the wrapper to assume the upstanding vertical position shown in Figs. 14, 15, 17 and 19. The flaps will be held between the clamps 152 and the folder 150 while the head 128 and the fingers 140 are raised. During the first part of the upward movement of the head 128 the plate 124 will be held down against the top of the series of cakes by the friction plates 127. In this way the cakes and the wrapper are held in place during the withdrawal of the clamping fingers 140. When the head 128 engages the collars 132 the plate 124 will be raised in unison with the head to the original position shown in Fig. 10. Prior to the upward movement of the folder 150 the end of the wrapper will have the form shown in Figs. 21 and 28. After the upward movement of the folder and after the head 128 has been raised and the folder 150 has been again lowered the wrapper will be in the form shown in Figs. 22 and 29. The creased flaps 151 will retain the end fold 158 in position against the endmost cake and retain the cake in position at the end of the series during further movement of the conveyer. The wrapper will remain in this condition with the cakes held in the pocket therein until the conveyer link containing the wrapper and cakes reaches the third position from that in which the wrapper is charged with the cakes. This position is illustrated in Figs. 17, 18 and 19.

In the third position the wrapper with the cakes therein is brought below a transverse rock shaft 159. The rock shaft 159 is jour-

naled at the end of an arm 160 which is secured to a second rock shaft 161. A head 162 is fastened to the rock shaft 159 and carries a pair of wiper plates 163 and 164. The head 162 also carries a heater 165, the lower surface of which is heated by an electrical resistance element disposed within the heater. The heater 165 is resiliently held downwardly by a series of springs 166. Also carried by the head 162 is a chiller 167 which has a lower metal chilling surface and radiating fins 168 connected therewith. The shaft 161 is provided with an arm 169 connected to a link 170, the lower end of the link being connected to a pivoted lever 171 which is operated by a cam 172 on the shaft 79. A spring 173 is interposed between the link 170 and the lever 171 to provide a yielding action to the link 170 and the shaft 161. An arm 174 is secured to the shaft 159 and is connected to a link 175, the lower end of which is pivoted to a bell crank lever 176 mounted on the shaft 27 and oscillated by a cam on the shaft 32. A shaft 177 is provided with a pair of arms 178 connected by a wiper plate 179 which extends across the conveyer and joins the opposite arms 178. The shaft 177 is oscillated by an arm 180 connected by a link 181 to an arm 182 mounted on the shaft 27 and oscillated by a cam on the shaft 32. A spring-held contact member 183 is disposed adjacent each end of the plate 179 in position to engage the roll of cakes when the arm 178 is swung downwardly, as shown in Fig. 18. When the wrapper reaches the position shown in Fig. 17 the arm 178 is moved inwardly to the position shown in Fig. 18. This will cause the plate 179 to engage the rear upstanding flap of the wrapper 91 and move it to the position shown in Fig. 18. This will bring the inner faces of the two ends of the wrapper into contact, as shown in that figure. The plate 163 bends the end of the wrapper backwardly over the edge of the plate 179 and the plate 164 holds the front end of the wrapper in position to engage the bent back portion of the rear end. After the parts have assumed the position shown in Fig. 18 the shafts 159 and 161 will be oscillated to move the heater 165 against the contacting ends of the wrapper and press these ends against the plate 179 in the manner illustrated in Fig. 20. This will sufficiently melt the paraffine on the parts so that when the chiller 167 follows over the wrapper the melted paraffine will be caused to congeal and seal the two ends of the wrapper tightly together. It should be noted that the overlapping portions of the wrapper are not sealed against the package, but are sealed while held away from the package and that the plate 179 is interposed between the wrapper and the package during the sealing operation. This provides a smooth surface for backing the wrapper during the sealing operation and also prevents any possibility of injury to the contents of the wrapper by the heat of the sealing iron. After the overlapping portions have been sealed the package will be in the form shown in Figs. 23 and 30.

As the package is carried forward from the position beneath the shaft 159 it will pass beneath a plate 184 which will bend the sealed flap backwardly against the package and further chill the paraffine of the wrapper. An arm 185 is secured to a shaft 186 and is provided with a folder 187 which is moved forwardly into contact with the projecting end of the wrapper as the package is carried forwardly. This folds the rear portion of the projecting end against the end of the package, as illustrated in Figs. 24 and 31. A spring-held folding plate 188 is disposed adjacent the path of the end of the package and folds the forward portion of the projecting end of the wrapper over the portion folded in by the arm 185. This will leave the wrapper in the condition illustrated in Figs. 25 and 32 with a flap 189 projecting horizontally from the top of the package, but with the overlapping sealed ends of the wrapper still projecting outwardly and rearwardly from the package. This sealed portion of the wrapper will be held down by the plate 184 until it passes from beneath the plate and from beneath the forward edge of the curved turning blade 190. This turning blade 190 is carried on a bar 191 pivoted to an arm 192. The arm 192 is pivoted at 193 on a bracket 194 secured to the frame of the machine. The arm 192 has an upstanding arm 195 rigid therewith and having a block 196 through which a rod 197 passes. A collar 198 limits the movement of the block in one direction on the rod 197 while a spring 199 resiliently holds the block against the collar. The rod 197 is pivoted at 200 to an arm 201 secured to the shaft 177. When the shaft 177 is oscillated to move the plate 179 against the wrapper 91 the holding blade 190 will be resiliently moved forwardly into the position shown in Fig. 20. During the forward movement of the blade it will pass beneath the sealed flaps of the wrapper and rotate the package about the horizontal axis to bring the sealed edges against the forward wall of the pocket in the conveyer and to bring the flap 189 into edgewise position projecting from the front edge of the end of the package and is shown in Figs. 26 and 33. A stationary folder 202 is provided for folding the flap 189 against the end of the package as the package is carried forwardly by the conveyer. This will leave the package in its final form, as shown in Figs. 27 and 34. Heating elements 203 are arranged at the sides of the conveyer in position to engage the end flaps 189 to partially melt the wax on these flaps. Cooling plates 204 are disposed in the path of the conveyer to engage the flaps immediately after they leave the heating plates 203 to chill the wax and

seal the end flaps 189 in their folded position. In this way the package is completely sealed and constitutes an air-tight closure for the articles within the package.

The arm 185 is provided with a curved contact finger 205 pivoted to the arm at 206 and provided with a spring 207 tending to hold the finger 205 against a stop pin 208 on the arm 185. When the arm 185 is rocked forwardly to fold the end of the wrapper, the finger 205 will be moved upwardly to the position shown in Fig. 17. This causes the upper end of the finger to engage the rear flap 91 of the wrapper to insure that the flap projects upwardly into the path of the plate 179. When the arm 185 is returned to its retracted position the finger 205 will rest upon a stop 209. An arm 210 is pivoted at 211 on a bracket 212 and is provided with an inwardly projecting finger 213 for engaging the end of the package to hold the wrapper against the endmost cake while the overlapping ends are sealed, as shown in Fig. 20. A spring 214 normally draws the arm 210 inwardly and the movement of the arm is controlled by a cam 215 which bears against a plate 216 on the arm 178. As the arm 178 moves downwardly the pressure of the face of the cam 215 will permit the finger 213 to move inwardly under the pressure of the spring 214. When the arm 178 is again raised the face of the cam 215 will again force the finger outwardly to permit the next wrapper to move into position without interference of the finger with the projecting flap 151. The package may be discharged from the conveyer pockets by a plunger 217 carried on an arm 218 supported by a sliding rod 219. The arm 218 is raised and lowered into and out of registration with the pocket by means of a link 220 operated by a cam on the shaft 34. The rod 219 is slid longitudinally by a lever 221 operated by a cam 222 on the shaft 79. The mechanism for feeding the cartons into position to receive the sealed packages is not shown. A hand wheel 223 may be attached to the shaft 32 in order to turn the mechanism by hand for inspection or other purposes and a similar wheel 224 is provided with a pinion 225 meshing with a gear 226 on the shaft 34. At the point in the conveyer for feeding the cakes to the wrapping mechanism where the conveyer belt 2 discharges to the conveyer belt 10, a plate 227 is arranged in the bottom of the conveyer having a beveled edge 228 extending diagonally across the belt 2. Since the cakes are circular they will rest on the belt 2 along the central line of the belt so that the point of the plate 227 will enter beneath the cakes while they still rest upon the belt 2. In this way the cakes will be fed onto the plate 227 by the forwardly moving belt and will be carried across the space between the belts 2 and 10. The forward end of the plate 227 is provided with a notch 229 into which the belt 10 extends so that the cakes will be received on the belt 10 while they are still supported by the projecting ledges of the plate 227 at the side of the opening 229. An inclined chute 230 or other suitable mechanism may be provided for supplying cakes to the conveyer belt or the cakes may be placed on the belt 2 by hand. The side 1 of the conveyer trough is provided with an opening 231 registering with the inclined edge 228 of plate 227. If a cake lies flatwise on the belt 2 it will be discharged through the opening 231 by the inclined edge 228.

After the marginal edges of the wrapper have been heat-sealed by the passage of the heater 165 and the chiller 167 over the edges while the edges are held against the plate 179, the arm 178 is moved backwardly to withdraw the plate 179 from contact with the sealed edges. During the initial reverse movement of the arm 178 the stripper finger 183 will continue to press against the package due to the spring pressure against the finger. This will hold the package from being displaced in the conveyer pocket in case the sealed flaps should tend to adhere to the plate 179.

I claim:—

1. In a wrapping machine, a conveyer for delivering a line of articles to said machine, means for supporting wrappers for receiving a plurality of said articles, and means for delivering sections of said line of articles including a plurality thereof from said conveyer to a position adjacent said wrappers.

2. In a wrapping machine, an intermittently operating conveyer for delivering articles in alinement to said machine, means for moving wrappers to a position for receiving a plurality of articles from said conveyer, and means for transferring a plurality of articles from said conveyer to a position above said wrappers.

3. In a wrapping machine, an intermittently operating conveyer for delivering articles in alinement to said machine, means for transferring a section from said line including a plurality of said articles and for delivering said section of articles in assembled relation, and means for moving wrappers into position to receive the articles from said delivering means.

4. In a wrapping machine, a form for receiving a wrapper, said form having a depression therein, means for forcing a wrapper into said depression with portions of said wrapper projecting from said depression, and means for engaging the projecting portions of said wrapper to retain said wrapper in said form.

5. In a wrapping machine, a form having a depression in one face thereof and having surfaces extending from opposite sides of said depression, means for inserting the central portion of a wrapper in said depression

with the edges of said wrapper extending over said extending surfaces, and means for engaging said projecting edges to retain said wrapper in said form.

6. In a wrapping machine, a form having one face thereof provided with a depression, means at opposite sides of said depression for engaging the edges of a wrapper, means for inserting the central portion of a wrapper in said depression, and means for positioning the edges of said wrapper in contact with said engaging means.

7. In a wrapping machine, a form for receiving a wrapper having one face provided with spaced notches for receiving the opposite edges of a wrapper, said face having a depression therein between said notches, means for feeding one edge of a wrapper into the notch at one side of said face, means for pressing the central portion of said wrapper into said depression, and means for inserting the opposite edge of said wrapper in the other of said notches.

8. In a wrapping machine, a form for receiving a wrapper having one face thereof provided with spaced engaging means and having a depression in said face between said engaging means, means for engaging one edge of a wrapper with one of said engaging means, means for pressing the central portion of said wrapper into said depression, and means for engaging the opposite edge of said wrapper with the other of said engaging means.

9. In a wrapping machine, a form having a wrapper receiving face provided with an arcuate depression therein, means for depressing the central portion of a wrapper into said arcuate depression, and means on said form for engaging projecting portions of said wrapper to retain said wrapper in said arcuate depression.

10. In a wrapping machine, a form having an arcuate depression in one face thereof and having notches at opposite sides of said arcuate depression and spaced therefrom, means for feeding one edge of a wrapper into one of said notches, means for temporarily engaging said wrapper to retain said edge in said notch, and means for pressing the central portion of said wrapper into said depression while the edge of said wrapper is retained in said notch.

11. In a wrapping machine, a form for receiving a wrapper having one face thereof provided with a depression and having notches disposed at opposite sides of said depression and spaced therefrom, means for feeding one edge of a wrapper into one of said notches, means for temporarily engaging said wrapper to retain said edge in said notch, means for pressing the central portion of said wrapper into said depression while said edge is retained in said notch, and means for inserting the opposite edge of said wrapper into the other of said notches to retain said wrapper in position with the central portion disposed within said depression.

12. In a wrapping machine, a form for receiving a wrapper having a backwardly projecting ledge at one edge thereof for engaging the edge of a wrapper, and means for inserting the edge of said wrapper beneath said ledge, said inserting means comprising a movable member having a spring-held projection thereon for engaging said ledge to direct the edge of said wrapper beneath said ledge, said member being movable to move the edge of said wrapper beneath said ledge while guided by said spring-held projection.

13. In a wrapping machine, a form having a depression therein, a member for pressing a wrapper into said depression, and a holding device for engaging said wrapper while pressed into said depression.

14. In a wrapping machine, a form having a depression therein for receiving a wrapper, a movable member for pressing a wrapper into said depression, and a holding device connected with said movable member and movable relative thereto, said movable member being arranged to engage said wrapper to retain it in place while said wrapper is pressed into said depression.

15. In a wrapping machine, a form having a depression therein for receiving a wrapper, an arm having a contact member thereon for pressing said wrapper into said depression, a holding member pivoted to said arm and movable thereby into engagement with said wrapper to hold said wrapper while pressed into said depression, and yielding means for retaining said holding device against movement relative to said arm.

16. A wrapping machine comprising a form having a depression in one face thereof and overhanging ledges at opposite sides of said depression and spaced therefrom, means for feeding the edge of a wrapper beneath one of said ledges, means for engaging said wrapper to retain said edge beneath said ledge, means for pressing said wrapper into said depression while so retained, a guide for engaging the other ledge of said form, and means for moving the opposite edge of said wrapper relative to said guide into position beneath said ledge.

17. In a wrapping machine, a conveyer having links provided with forms for receiving wrappers, a guide for said conveyer arranged to retain the links in upright position at one end of the travel of said conveyer, and means for inserting wrappers in said links while retained in upright position by said guide.

18. A wrapping machine comprising a conveyer having links provided with wrapper engaging faces, a ledge at one end of said links for receiving a wrapper, a guide at one end of the travel of said conveyer for holding

said links in upright position, and means for feeding a wrapper downwardly into contact with said ledges while said links are held by said guides.

19. A wrapping machine comprising a conveyer having links provided with depressions in the outer faces thereof, ledges on said links at opposite sides of said depressions for retaining wrappers in position on said links, a guide at one end of the travel of said conveyer for supporting said links with the outer faces thereof in upright position, means for feeding wrappers downwardly into engagement with one of the ledges on said links while said links are held by said guides, means for forming said wrappers into the depressions of said links while said links are held by said guides, and means for inserting the upper edges of said wrappers beneath the other of said ledges on said links.

20. A wrapping machine comprising a conveyer for feeding articles to be wrapped, a transfer device for receiving articles from said conveyer, said transfer device having yielding jaws for retaining said articles means for moving said transfer device from receiving to discharging position, a support for a wrapper, and means engaging said articles for forcing said articles from said clamping jaws onto said wrapper.

21. A wrapping machine comprising a conveyer for feeding a line of relatively thin flat articles, a transfer device for receiving articles from said conveyer, a plunger for moving a section comprising a plurality of articles from the line on said conveyer to said transfer device, means on said transfer device for receiving said articles and for retaining said articles in assembled relation, a support for a wrapper for said articles, means for moving said transfer device into position above said support, a plunger for moving the articles from said transfer device to a wrapper on said support, and means for retaining said articles in assembled relation while moved by said plunger.

22. In a wrapping machine, a conveyer for feeding articles in alinement to said machine, a turret having yielding clamps for holding a section comprising a plurality of articles from said line in assembled relation, means for moving sections of articles from said conveyer into said clamps, a conveyer for moving wrappers into position for receiving articles from said turret, means for rotating said turret to bring said clamps into position to discharge articles to the wrappers on said conveyer, a plunger for forcing the articles from said clamps onto wrappers on said conveyer, and means for holding said articles in assembled relation while they are moved from said clamps to said wrappers.

23. In a wrapping machine, a yielding clamp for supporting a plurality of articles in assembled relation, a plunger for discharging the articles from said clamp, means for holding the articles in assembled relation while being discharged from said clamp, means for withdrawing said holding means, and means for stripping said articles from said holding means when said holding means is withdrawn.

24. In a wrapping machine, a clamp for engaging the sides of a series of articles, a plunger for forcing said articles from said clamp, means for engaging the ends of said series of articles to hold said articles in assembled relation while being discharged from said clamp, and means for stripping said articles from said holding means.

25. In a wrapping machine, means for supplying articles in alinement with one another, a turret having clamps thereon for engaging the sides of a series of articles from said supplying means, means for transferring sets of articles in series from said supplying means to said clamps, means for supporting wrappers for said sets of articles, means for rotating said turret to move the articles in said clamps from said supplying means to said wrapper supporting means, and a discharge plunger disposed adjacent said article supporting means for discharging the articles from said claps to wrappers on said wrapper supporting means.

26. In a wrapping machine, a turret having arms thereon, a pair of spring-held clamps supported on each of said arms, said arms having slots in registration with the space between said clamps, a plunger for discharging articles from said clamps, said plunger having a reciprocating head, a contact member movable relative to said head and aranged to pass through said slot, means on said head for engaging articles in said clamp to hold said articles in assembled relation during the action of said plunger, means for retracting said head after the discharge of articles from said clamp, and yielding means for retaining said contact member in engagement with the discharged articles during the initial return movement of said head.

27. Means for wrapping a heat-sealing wrapper about an article with the inner faces of projecting margins in contact with each other, means for holding said projecting margins away from the wrapped article, means for applying heat to said margins while so held to seal said margins together, and means for thereafter cooling said heated margins.

28. In a wrapping machine, a backing member, means for holding overlapping portions of a wrapper against said backing member and applying heat thereto to cause said overlapping portions to adhere together, and means for stripping said overlapping portions from said backing member.

29. In a wrapping machine, a backing

member, means for positioning said backing member between overlapping portions of a wrapper and a package about which said wrapper is placed, and means for applying heat to said overlapping portions while they are held against said backing member.

30. In a wrapping machine, a backing member, and means for successively heating and cooling overlapping portions of a wrapper while held against said backing member.

31. In a wrapping machine, a backing member, means for successively heating and cooling overlapping portions of a wrapper while held against said backing member, and means for stripping said wrapper from said backing member.

32. In a wrapping machine, a folding blade arranged to engage a wrapper and fold a portion of said wrapper against an article while a projecting portion of said wrapper is permitted to fold back against said folding device, and means for folding a second portion of said wrapper against said backwardly projecting portion and to heat-seal said contacting portion.

33. In a wrapping machine, a folding blade, means for moving said folding blade to contact a wrapper and fold a portion of said wrapper against an article while a projecting portion of said wrapper is permitted to fold back against said folding device, means for folding another portion of said wrapper against said backwardly bent projecting portion, and means for pressing said overlapping portions of said wrapper against said folding device and applying heat thereto to cause said overlapping portions to adhere.

34. In a wrapping machine, means for placing a wrapper about an article with the opposite margins thereof projecting, means for engaging the outer face of one margin of said wrapper to fold the projecting portion of said wrapper against said article and bend the margin thereof backwardly to expose the inner face of said margin, means for folding the inner face of the opposite margin of said wrapper against said exposed face, and means for heat-sealing the contacting faces of said margins.

35. In a wrapping machine, means for supporting an article with a wrapper partially folded thereabout and with the opposite margins of said wrapper projecting from said article, a blade for engaging the outer face of one of said margins and moving said margins to bring the inner faces of said margins together, and means for pressing said contacting inner faces against said blade and for applying heat to said margins to seal said margins together.

36. In a wrapping machine, a support for an article having a wrapper partially folded thereabout with the marginal edge of said wrapper projecting therefrom, means for engaging the outer face of said projecting margin along a line spaced inwardly from the edge of said margin, means for moving said engaging means toward said article, and means for engaging said margin at a point beyond the line of contact of said first-named engaging means to bend the outer portion of said margin backwardly as said margin is folded about said article.

37. In a wrapping machine, a support for an article having a wrapper partially folded thereabout and having the marginal edges of said wrapper projecting from said article, a folding plate for engaging one projecting margin of said wrapper at a position spaced inwardly from the edge thereof and for folding said margin against said article, a stop positioned in the path of the projecting edge of said margin to fold said projecting edge backwardly against said engaging means, means for moving the opposite marginal edge of said wrapper against said backwardly bent portion, means for pressing the contacting faces of said margins together while said margins are held against said engaging means, means for heating said margins while so held, means for chilling said margins after the heating thereof, and means for stripping said margins from said engaging means.

38. A wrapping machine comprising a support having a recess therein for receiving on article with a wrapper disposed between said article and said support in position to permit the marginal edges of said wrapper to project from said support, means for holding one of said margins in projecting position, a blade for folding said margin against said article, means for moving said blade to engage the outer face of said margin along the line spaced inwardly from the edge of said blade, a stop plate disposed in the path of the outer portion of said margin to bend said outer portion backwardly, and a rotary head having means thereon for folding the opposite marginal edge of said wrapper against said backwardly bent portion and for heat-sealing the marginal edges of said wrapper together.

39. In a wrapping machine, a support for an article having a recess therein, means for partially folding a wrapper about an article in said recess, and means for rotating the partially wrapped article to change the position thereof in said recess.

40. In a wrapping machine, a support having a recess therein, means for partially wrapping an article in said recess, means for rotating the partially wrapped article in said recess to change the position thereof in said recess, and means for completing the wrapping of said article after the rotation thereof.

41. In a wrapping machine, a support for an article to be wrapped, means for folding a wrapper about the article in said support and for forming a flap at one side of said ar-

ticle, and means for engaging said flap to shift said article in its support.

42. In a wrapping machine, a support for an article having a recess provided with an arcuate bottom, means for folding a wrapper about an article in said recess and for sealing together projecting margins of said wrapper to form a flap, and means for engaging said flap to rotate said article in said recess.

43. In a wrapping machine, a conveyer having a recess therein for receiving an article to be wrapped, means for folding a wrapper about an article in said recess and for forming a flap at one side of said article, means for folding projecting portions of said wrapper against the end of said article while leaving a flap projecting from the end of said article at one side thereof, and means for rotating said article in said recess to move the flaps on said article to the forward side thereof in said conveyer.

44. In a wrapping machine, a conveyer having a recess open at one end, means for positioning a wrapper in said recess with a portion thereof projecting from said open end, means for folding said wrapper about said article to leave an end flap at the top of said article, means for rotating said article in said recess to move said end flap to the front side of said article, and means for folding said flap backwardly against the end of said article as said conveyer is advanced.

45. In a wrapping machine, a receptacle having an open-ended recess therein, means for positioning a wrapper in said recess with a portion thereof extending from the open end of said recess, means for engaging the end-most articles of a series and for depositing said articles within the wraper in said recess, means for folding the projecting portion of said wrapper inwardly to support the endmost article of said series, and means for withdrawing said engaging means after said wrapper has been folded into supporting position.

46. In a wrapping machine, a conveyer having a transverse recess for receiving articles, the opposite ends of said recess being open, means for depositing a wrapper in said recess with the margins thereof projecting from said open ends, means for depositing a plurality of articles within the wraper in said recess, means for folding the projecting portions of said wrapper against the endmost articles of said series to retain said articles in said recess, means for moving said conveyer to transport said articles, and means for further folding said wrapper about said articles.

47. In a wrapping machine, a conveyer having links thereon provided with recesses, means for imparting a step-by-step movement to said conveyer, wrapping mechanism disposed at different positions adjacent the path of movement of said conveyer, means for positioning a wrapper in the recesses in said conveyer with portions of said wrappers projecting from said recesses, means for depositing articles upon the wrappers in said recesses, and means for folding the projecting portions of said wrappers to partially close said recesses to retain the articles therein during the movement of said conveyer to bring the articles and their wrapper from one station to the other along the path of movement of said conveyer.

48. Means for placing a wrapper having sealing material thereon about an article with the inner faces of projecting portions of said wrapper in contact, a heater movable over the outer face of one of said portions to seal said portions together, and a member movable into position at the side of said portions opposite said heater to serve as a backing member for said heater.

49. A wrapping machine comprising a support for an article to be wrapped, means for folding a wrapper about said article with the edges of said wrapper projecting away from said article, means for bringing the inner faces of the projecting portions of said wrapper into contact while said portions extend away from said article, means for heat-sealing said projecting portions together, and a support arranged to be interposed between said projecting portions and said article to separate said portions from said article during the heat sealing operation.

50. In a wrapping machine, means for folding a wrapper about an article to bring opposite portions of said wrapper into contact and for bending said portions outwardly to form sealing flaps, a supporting member, means for positioning said supporting member between said sealing flaps and said article, and means for pressing said flaps together and applying heat thereto while said supporting member is interposed between said flaps and said article.

51. A wrapping machine comprising a support for an article, means for folding a wrapper about said article to bring opposite edge portions of said wrapper into engagement with each other at one side of said article and for bending said edge portions outwardly to cause the inner faces of said portions to contact and form sealing flaps, a sealing support for said flaps, means for positioning said support adjacent the base of said flaps, a heat sealer, and means for moving said heat sealer past the side of said article from which said flaps project to fold said flaps against said support and apply heat thereto while said support is interposed between said flaps and said article.

52. In a wrapping machine, a support for an article to be wrapped. means for folding a wrapper about said article to bring opposite edge portions of said wrapper together

at one side of said article and to permit said edge portions to project away from said article in contact with each other, to form sealing flaps, a flap support, means for positioning said flap support adjacent said article at one side of said projecting flaps, a heat sealer, and means for moving said heat sealer past said flaps from the side thereof opposite said support to press said flaps against said support and seal said flaps together.

53. In a wrapping machine, a support for an article, means for folding a wrapper about said article to cause opposite edge portions thereof to project from one side of said article to form sealing flaps, a heat sealer, a chiller, means for moving said heat sealer and chiller into contact with said sealing flaps successively, and means for holding said flaps away from said article during contact of said heat sealer therewith.

54. In a wrapping machine, a conveyer for delivering a line of articles to said machine, means for supporting wrappers for receiving said articles, and means for delivering sections of said line of articles from said conveyer to a position adjacent said wrappers.

In testimony whereof I have signed my name to this specification on this 10th day of March, A. D. 1926.

MICHAEL J. MILMOE.