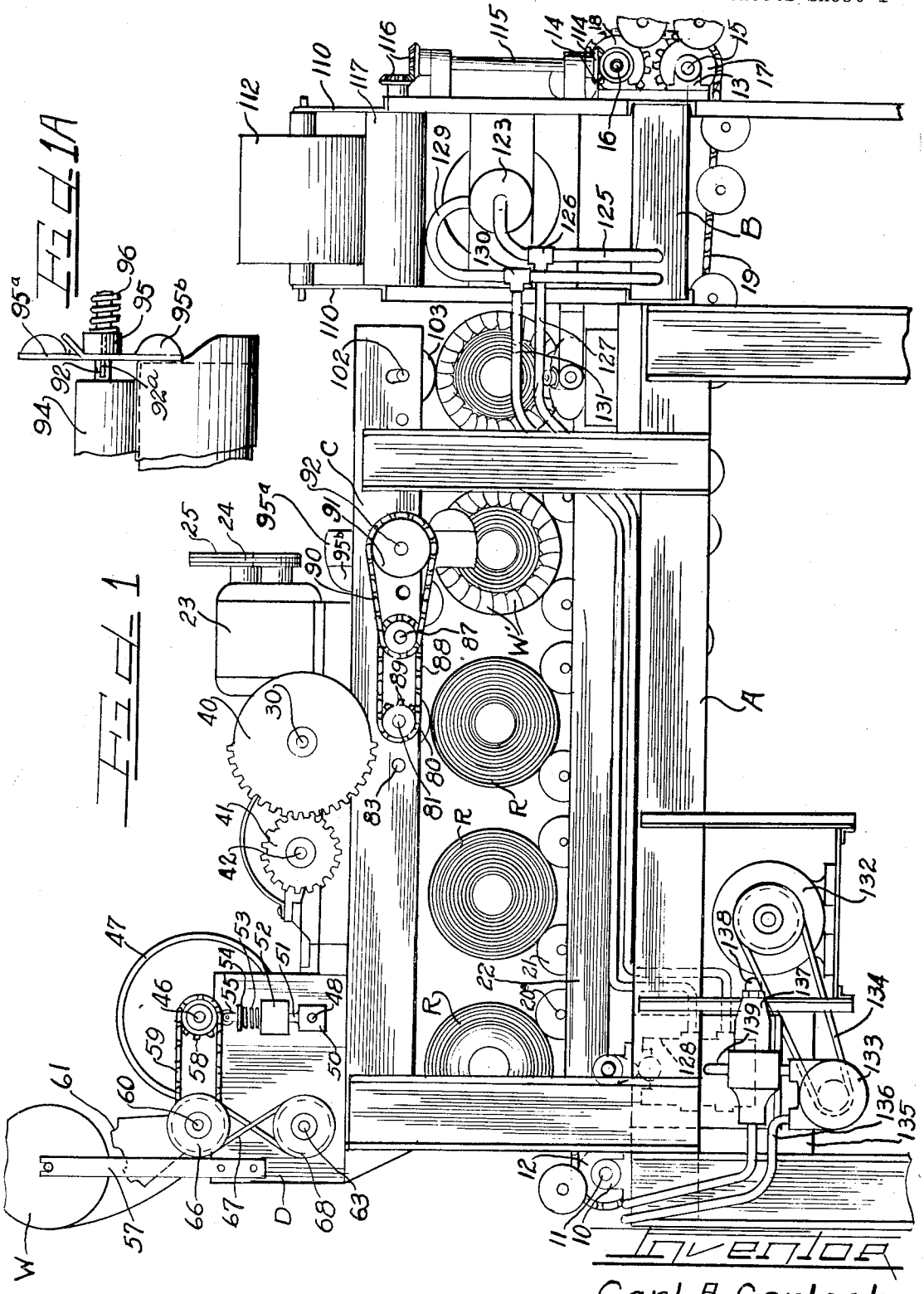
Jan. 30, 1945. C. A. GERLACH 2,368,213

WRAPPING MACHINE

Filed Feb. 7, 1941 6 Sheets-Sheet 1



Jan. 30, 1945. C. A. GERLACH 2,368,213

WRAPPING MACHINE

Filed Feb. 7, 1941 6 Sheets-Sheet 2

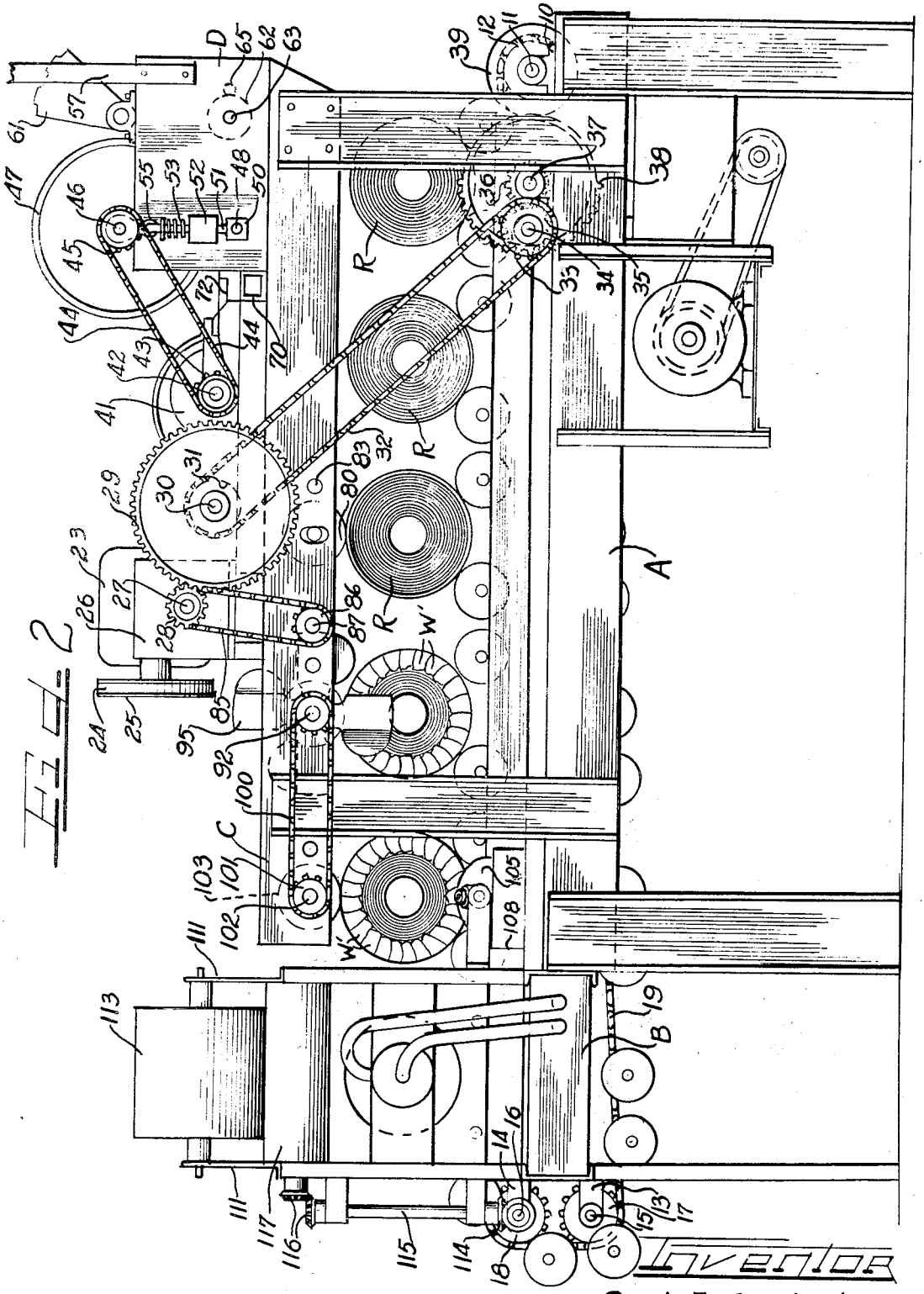


Fig. 2

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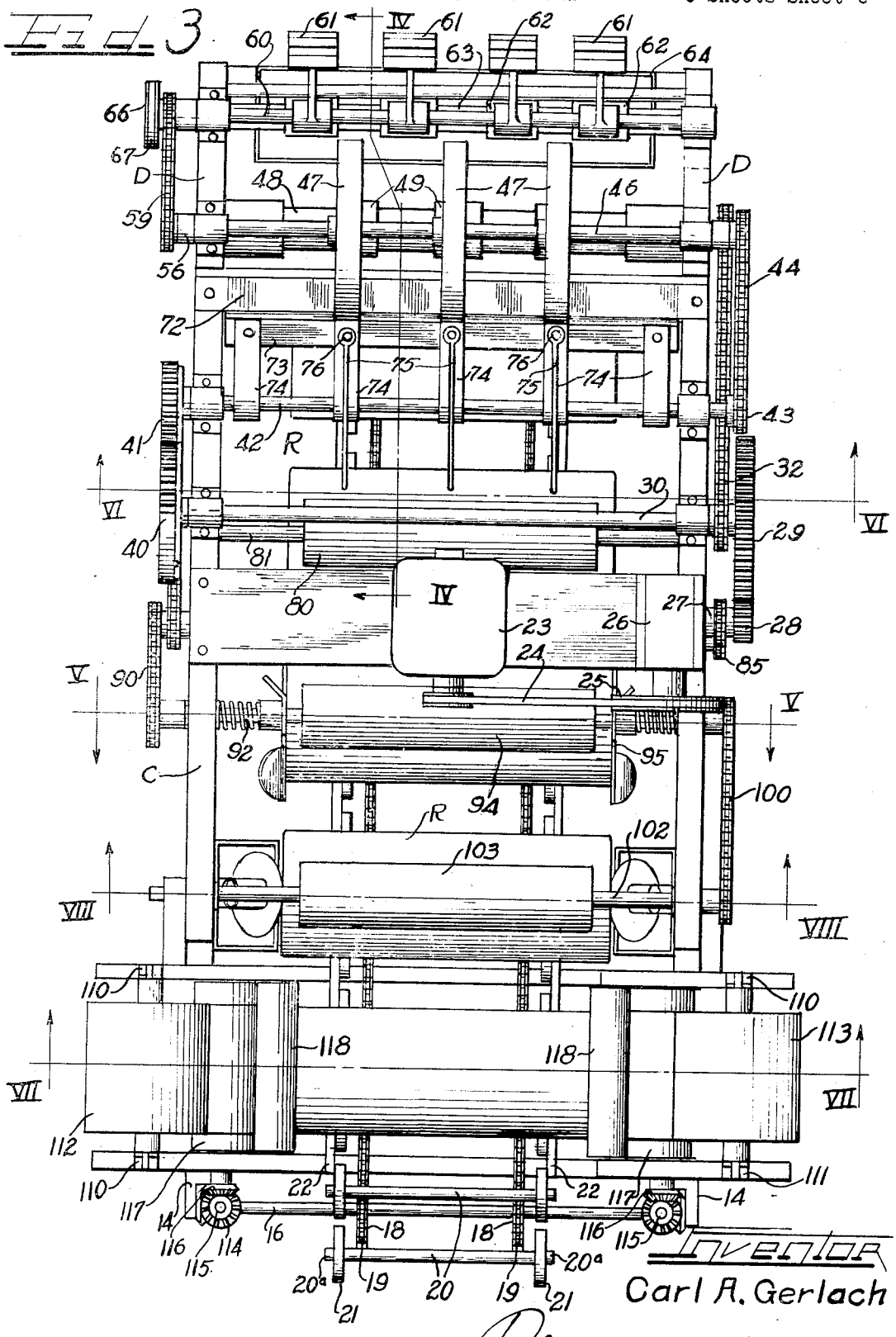
Fig. 3



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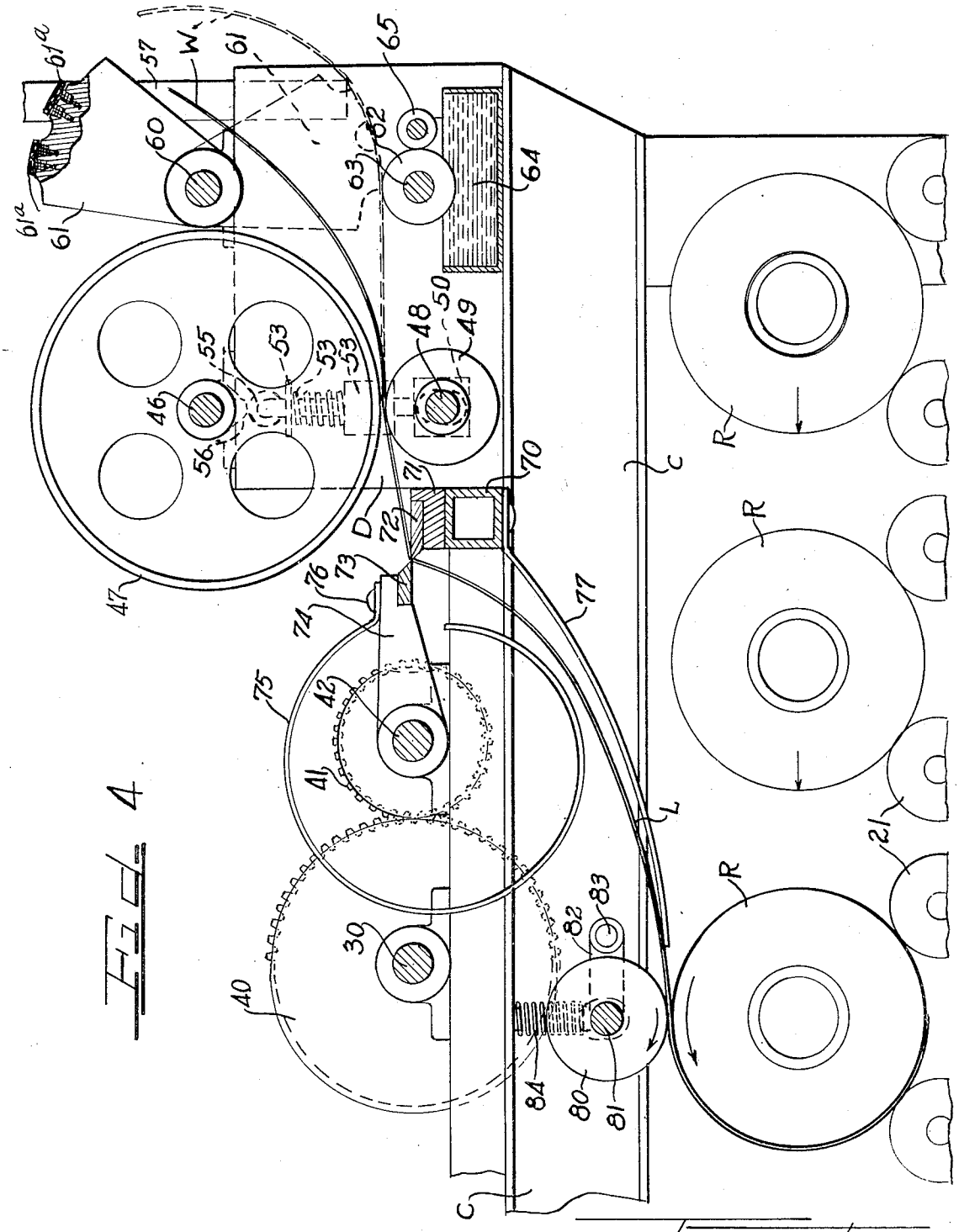

Fig. 4

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Fig. 5

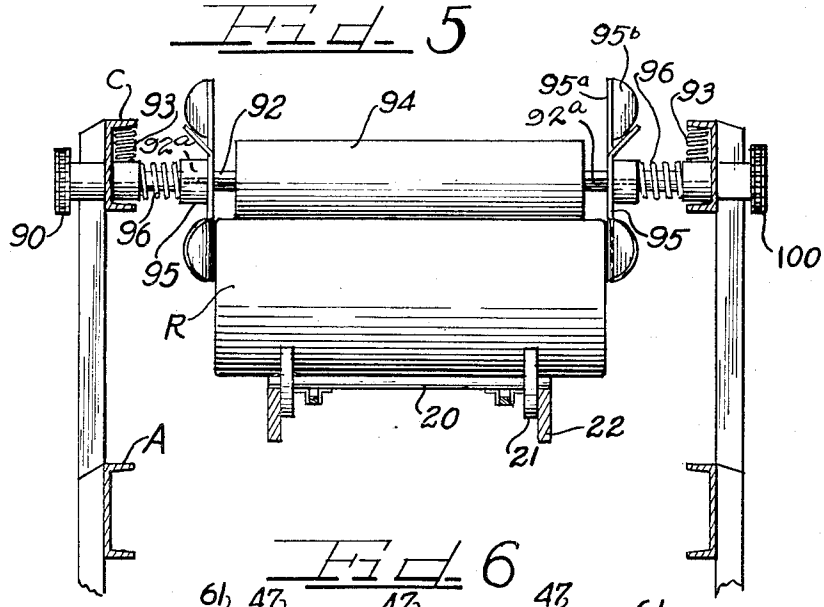

Fig. 6

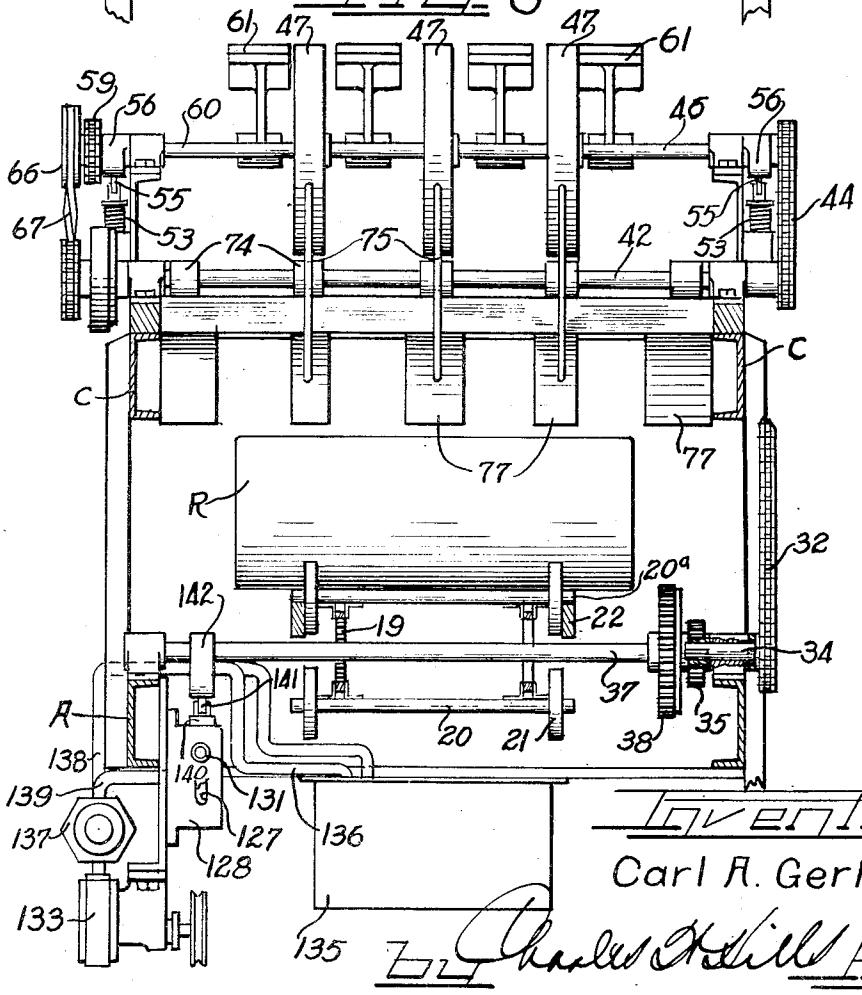

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Fig. 7

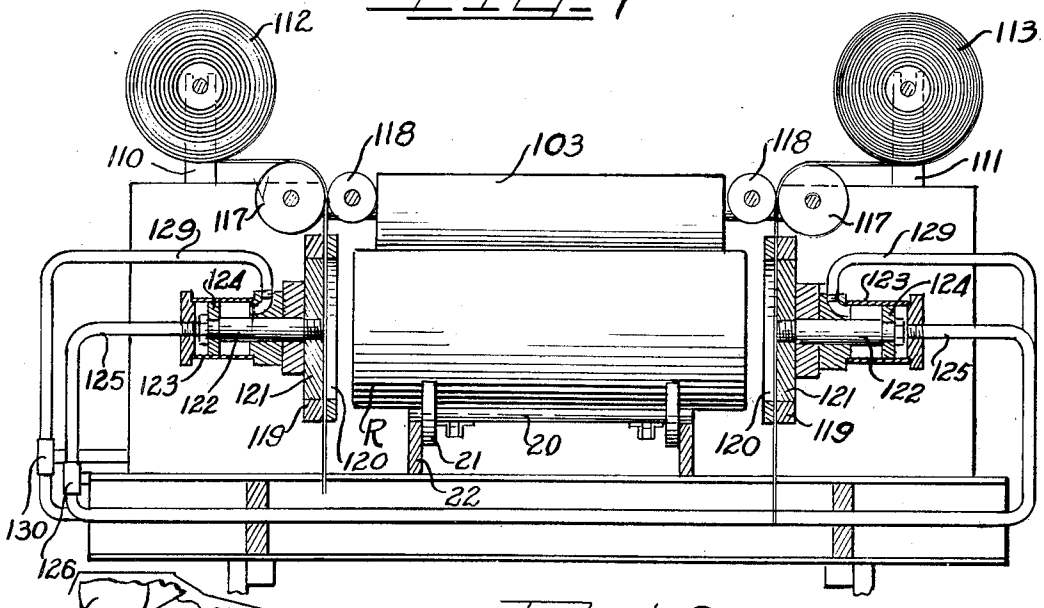


Fig. 9

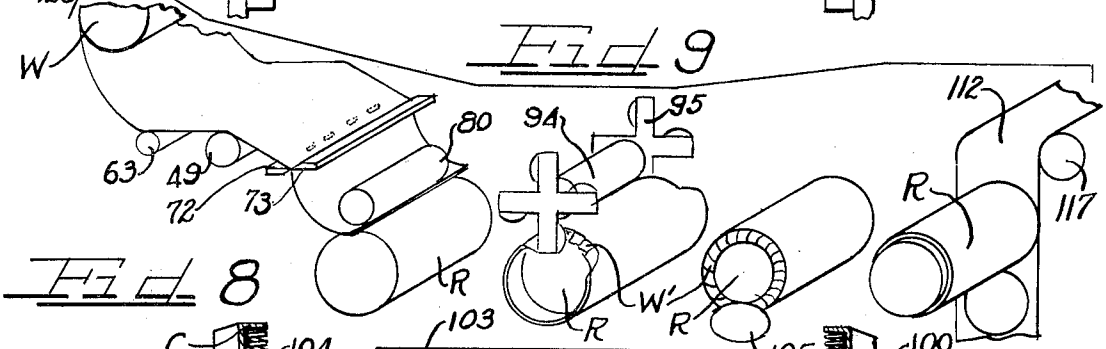
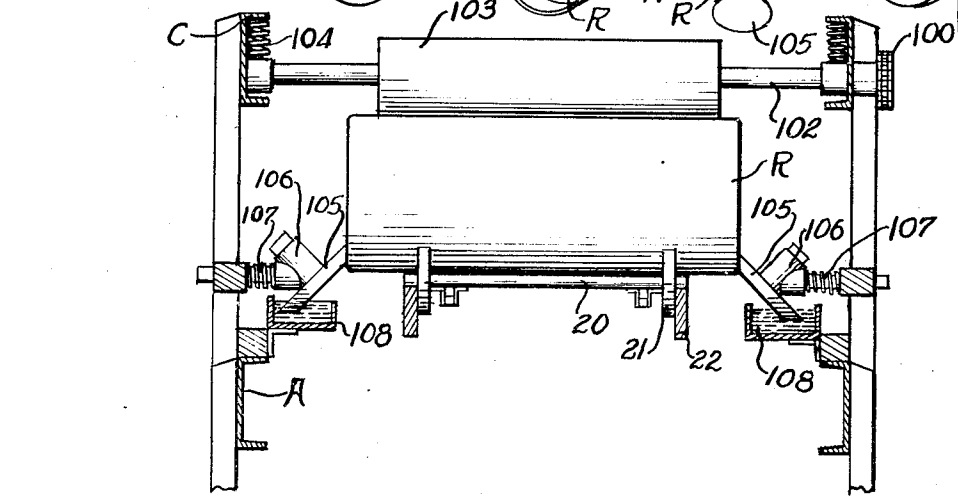


Fig. 8



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Patented Jan. 30, 1945 2,368,213

UNITED STATES PATENT OFFICE

2,368,213

WRAPPING MACHINE

Carl A. Gerlach, La Grange, Ill.

Application February 7, 1941, Serial No. 377,827

11 Claims. (Cl. 93—2)

This invention relates to wrapping machines and more specifically to machines for wrapping rolls of paper to cover the ends as well as the sides or peripheries of the rolls.

While the invention will be hereinafter specifically described as embodied in a machine for wrapping rolls of paper such as butchers' wrapping paper, it should be understood that the invention includes machines for wrapping articles in general such as, for example, cylindrically shaped articles.

According to the invention, wound rolls of paper are fed through the machine on a conveyor with rotatable supports for the rolls. The machine includes a station for rolling a sheet of wrapping paper around the periphery of the roll to cover the full length of the roll and to project beyond the ends of the roll. This sheet of wrapping paper is supplied from a roll mounted on the machine and is automatically fed to the wrapping mechanism through a cutting device which severs the sheet into a length somewhat greater than the circumference of the roll being wrapped in order that the ends of the sheet may be overlapped and glued together. The feeding mechanism includes glue spotting devices for applying spots of glue to the portions of the sheet that are overlapped in order that the wrapped sheet will be secured around the roll.

The roll with the wrapper thereon then advances to another station of the machine for pleating or tucking of the projecting ends of the wrapper against the ends of the roll. The tucking mechanism covers the marginal portions of the roll ends with the wrapper.

The tucked wrapper and roll then advance to another station where glue is applied to the tucked portions of the wrapper. The glued roll and wrapper next pass to another station of the machine at which end covers or disks of sheet material are pasted onto the tucked ends of the wrapper for producing a completely wrapped roll.

An important feature of the invention includes the formation of end disks of wrapping material from continuous sheets of wrapping paper and the automatic securing of these disks onto the tucked ends of the wrapper which covers the full length of the roll or article being wrapped.

It is, then, an object of this invention to provide a machine for completely covering articles with wrapping material.

A further object of the invention is to provide a machine for automatically wrapping cylindrically shaped articles to cover the periphery and ends of the article.

A further object of the invention is to provide a machine for automatically wrapping wound rolls of sheet material to cover the ends as well as the lengths of the rolls.

A specific object of the invention is to automatically apply end covers to the ends of wrappers on cylindrically shaped objects for sealing the ends of said objects.

A further specific object of the invention is to automatically cut end wrapping disks from continuous sheets and apply said disks to the ends of cylindrically shaped objects.

Another specific object of the invention is to provide mechanism for feeding sheet material to a cylindrically shaped object for wrapping around said object while applying glue to predetermined portions of the sheet material for subsequent uniting together of the ends of the sheet material around the object.

A still further specific object of the invention is to provide mechanism for pleating or tucking the projecting ends of a wrapper against the end of the object covered by the wrapper.

Other and further objects of the invention will become apparent to those skilled in the art from the following detailed description of the annexed sheets of drawings which, by way of example, illustrate a preferred embodiment of the invention.

On the drawings:

Figure 1 is a front side fragmentary elevational view of a wrapping machine according to this invention.

Figure 1—A is a fragmentary detail view of the tucker mechanism shown on the machine in Figure 1.

Figure 2 is a fragmentary rear side elevational view of the machine shown in Figure 1.

Figure 3 is a top plan view of the machine shown in Figures 1 and 2.

Figure 4 is a fragmentary longitudinal vertical cross-sectional view taken substantially along the line IV—IV of Figure 3.

Figure 5 is a fragmentary transverse vertical cross-sectional view taken substantially along the line V—V of Figure 3 with parts in elevation.

Figure 6 is a transverse vertical cross-sectional view taken substantially along the line VI—VI of Figure 3 with parts in elevation.

Figure 7 is a transverse vertical cross-sectional view, with parts in elevation, taken along the line VII—VII of Figure 3.

Figure 8 is a transverse vertical cross-sectional view, with parts in elevation, taken substantially along the line VIII—VIII of Figure 3.

Figure 9 is a somewhat diagrammatic isometric view illustrating the operation of the machine.

As shown on the drawings:

In Figures 1 and 2, the reference character A designates the main frame for the machine. A secondary frame B is secured to the discharge end of the main frame A, and a top frame C is mounted above the main frame A.

As shown in Figures 1 and 2, the main frame A carries bearing supports 10 at the inlet end thereof rotatably supporting a cross-shaft 11. A pair of spaced sprockets 12 are secured on this shaft 11.

The frame B carries, at the discharge end of the machine, pairs of superimposed bearing brackets 13 and 14 rotatably supporting cross-shafts 15 and 16 respectively. Each of the cross-shafts 15 and 16 has affixed thereon pairs of spaced sprockets 17 and 18 respectively.

As shown in Figures 1, 2 and 3, a pair of conveyor chains 19 are trained through the machine around the sprockets 12 at the inlet end of the machine and around the superimposed sprockets 17 and 18 at the discharge end of the machine. The chains carry a plurality of cross-shafts 20 which rotatably support wheels or disks 21 near the ends thereof. Portions 20*a* of the shafts 20 project beyond the outer faces of the wheels 21 and ride on tracks 22 extending throughout the length of the machine.

As shown in Figures 1 and 2, the shafts 20 and wheels 21 are arranged on the chains 19 in spaced pairs to receive rolls of paper R thereon along their upper runs over the tracks 22. The wheels of adjacent pairs are spaced close together while the wheels of each pair are spaced apart for a sufficient distance to support the rolls R.

As best shown in Figures 2 and 3, a motor 23 is mounted on top of the frame C and drives a belt 24 which in turn rotates the pulley 25 of a gear box 26. A driven shaft 27 projects from the gear box at the rear side of the machine and carries a gear 28 meshing with a large gear 29 secured on a cross-shaft 30. A sprocket 31 on this cross-shaft 30 drives a chain 32 extending downwardly along the rear face of the machine to a sprocket 33 on a stub-shaft 34 carried by the main frame A (Figs. 2 and 6). This stub-shaft drives a gear 35 meshing with a small gear 36 on another cross-shaft 37. A half-gear 38 is driven by the shaft 37 and meshes, during about one-half of a full turn, with a driving gear 39 on the shaft 11 carrying the sprockets 12. In this manner the conveyor chains are intermittently driven to advance rolls of paper R through the machine.

As shown in Figures 1 and 3, a half-gear 40 is affixed to the shaft 30 at the front side of the machine, and this gear meshes, during one-half of a turn, with a gear 41 on another cross-shaft 42 driving a sprocket 43, as shown in Figures 2 and 3 at the rear side of the machine. The sprocket 43, in turn, drives a chain 44 meshing with a sprocket 45 on a cross-shaft 46 carried by vertical plates D mounted on the frame C at the inlet end of the machine. The shaft 46 has three web-driving wheels 47 affixed thereon in spaced relation.

An idler shaft 48 is rotatably mounted for vertical movement in said plates D under the shaft 46. The idler shaft 48 carries rollers 49 under each wheel 47 to cooperate therewith.

The ends of the shaft 48 are fitted in heads 50 of rods 51 which are slidably mounted through bosses 52 formed on the plates D. Coiled springs 53 are disposed around the rods 51 above the bosses 52 and are held between the tops of the bosses and collars 54 affixed to the upper ends of the rods. The upper ends of the rods carry cam rollers 55 in the path of cams 56 carried by the ends of the shaft 46. The springs 53 will urge the shaft 48 upwardly toward the shaft 46 to bring the rollers 49 in nip engagement with the wheels 47. However, when the shaft 46 is rotated to bring the high spots of the cams 56 against the rollers 55, the rods 51 will be forced downwardly against spring pressure to space the rollers 49 away from the wheels 47 as shown in Figure 4.

A roll of wrapping paper W is rotatably mounted on standards 57 projecting above the plates D. The wrapping paper W is threaded downwardly from the roll through the nip between the feed wheels 47 and their cooperating rollers 49 as best shown in Figure 4.

As shown in Figures 1 and 3, the shaft 46 has a sprocket 58 secured on an end thereof at the front side of the machine for driving a chain 59 to rotate another cross-shaft 60 rotatably mounted on top of the plates D. This cross-shaft 60 carries four paper directing shoes 61 adapted to fit between the feed wheels 47. As shown in Figures 3 and 4, the shoes 61 are moved by the shaft 60 into the path of the wrapping paper W between the roll and the feed wheels 47 for deflecting the wrapping paper against four fountain rolls 62 carried on a shaft 63 which is rotatably mounted in the plates D beneath the shaft 60.

The fountain rolls 62 are partially immersed in a bath of adhesive material carried in a trough or pan 64 mounted across the frame C. A doctor roll 65 cooperates with each fountain roll 62 to provide an even uniform film of adhesive material to the wrapping paper W whenever the shoes 61 move downwardly as shown in dotted lines in Figure 4 to direct the paper against the fountain rolls. The shoes 61 each have a pair of spaced spring urged pads 61*a* for resiliently but firmly engaging the paper to press the same against the fountain rolls and effect application of two spaced spots of glue to the paper by each fountain roll. The spots are positioned so that when the paper is severed as hereinafter described one spot is on the leading end of the length while the other is on the trailing end.

Alternatively, the four fountain rolls 62 can be replaced with a single roller and paper supporting fingers can rest on top of the roller to hold the paper web away from the roller except when the shoes deflect localized portions of the web against the roller to apply the glue spots.

The rolls or roller are replaceable in the machine to vary the length of the glue spots.

The fountain rolls 62 are driven from a pulley 66 on the shaft 60 through a belt 67, and a pulley 68 on the shaft 63, as best shown in Figure 1.

It will be noted from Figure 3 that the shoes 61 and fountain rollers 62 alternate with the feed wheels 47 and rollers 49 so that the wrapping paper W has spots of adhesive applied to the under face thereof at points not contacted by the rollers 49 during the feeding operation at the glue spotted areas thereof.

As best shown in Figures 2, 3 and 4, a cross-beam 70 is mounted on the frame C in front of the nip between the wheels 47 and rollers 49 and carries a knife support 71 for the fixed mounting of a cutter knife 72. The cutter knife extends across the full width of the machine as shown Figure 3 and receives the wrapping paper W thereover as shown in Figure 4 but, since the

paper W is directed over the rollers 49, its underside only contacts the cutter 72 at the cutting edge thereof.

A rotary cutter knife 73 cooperates with the fixed knife 72 and is carried by a plurality of arms 74 fixedly mounted on the shaft 42. The intermediate arms 74 have looped guides 75 secured to the free ends thereof by means of bolts or rivets 76 above the cutter knife 73. The guides 75 are looped around the shaft 42 and serve to direct the wrapping paper W downwardly onto guide plates or fingers 77 carried by the cross-beam 70 as best shown in Figures 4 and 6. These guide plates 77 are spaced so as to contact the underside of the wrapping paper W only at the unglued areas thereof.

The looped guides 75 also serve to feed a severed length of the wrapping paper W to the nip between a roll R and a wrapping roll 80 as best shown in Figure 4. This roll 80 is mounted on a shaft 81 carried by arms 82 which are pivoted at 83 to the frame C. Springs 84 urge the shaft downwardly to move the winding roll 80 into pressure engagement with the roll R therebeneath. As shown in Figure 2, another sprocket on the shaft 27 projecting from the gear box 26 drives a chain 85 for driving a sprocket 86 on a cross-shaft 87 rotatably mounted in the frame C. As shown in Figure 1, the front end of the shaft 87 carries a sprocket driving a chain 88 trained around a sprocket 89 on the shaft 81 for the winding roller 80. The winding roller 80 is thus driven to rotate the roll R and wrap a severed length L of the wrapping paper W around the roll R. Both the trailing and the leading ends of this severed length will carry glue spots imparted thereon by the fountain rollers 62 when the shoes press the wrapping paper against the fountain roll since the spaced pads on the shoes form two glue spots on the paper and the knives sever the paper between these two spots. The glued leading end is affixed to the roll R while the glued trailing end of the length L overlaps the leading end wrapped on the roll R so that the ends of the lengths will be glued together in overlapping relation. The pressure between the winding roll 80 and the roll R being wound is sufficient to effect a sealing of the ends of the length L and for initially affixing the leading end to the roll R.

The chain 88 may be relatively loose so as to allow the springs 84 to urge the roll 80 tightly against the roll R. The mounting wheels 21 are freely rotatable on their shafts 20 so that the roll R can be readily rotated by the winding roller 80.

The wrapping paper W is wider than the length of the roll R so as to project beyond the ends of the roll. The roll with the wrapping paper wound therearound by the winder roll 80 is then advanced to the next station of the machine by movement of the conveyor. At this next station of the machine the projecting ends of the wrapping paper are tucked or pleated to lie flat against the ends of the roll.

As shown in Figure 1 the shaft 87 carries another sprocket which drives another chain 90 for rotating a sprocket 91 on a tucker shaft 92. As shown in Figure 5, the shaft 92 is urged downwardly toward the roll R by means of springs 93. A roll rotating drum 94 is affixed to the intermediate portion of the shaft and is driven thereby to rotate the roll R with the wrapper therearound. Tucker plates 95 are slidably keyed on the shaft 92 beyond the ends of the drum 94 by means of keys 92a and are spring-urged by means of springs 96 toward the ends of the roll R. These tucker plates have a plurality of flat fingers 95a each provided with an outturned leading edge 95b.

As illustrated in Figure 1—A the leading beveled ends of the fingers will guide the projecting end of the wrapping paper toward the end of the roll R thereby effecting a fold or pleat in the paper. The flat portion of the finger 95a irons out this fold tightly against the end of the roll to provide a pleated end for the wrapping paper as illustrated in Figures 1 and 2 at W'.

The drum 94 rotates the roll R at least through one complete revolution so that the tucker plate will tuck the entire periphery of the wrapping paper and form a pleated marginal cover for the ends of the roll.

As shown in Figures 2 and 3 the shaft 92 carries another sprocket at the rear side of the machine driving a chain 100. The chain, in turn, drives a sprocket 101 on the shaft 102 carrying a winder drum 103 at the next station of the machine.

The roll with the tucked or pleated wrapping paper thereon is advanced from the tucker station by the conveyor to the gluing station including the winder drum 103.

The shaft 102 is mounted for vertical movement like the shaft 92 and is urged downwardly toward the roll R by means of springs 104.

As best shown in Figure 8, glue or adhesive-applying disks 105 are rotatably mounted in housings 106 carried from the main frame A and spring-urged by means of springs 107 toward the ends of the roll R. These disks 105 are inclined at an angle of about 45° and have beveled glue-applying peripheries dipping into baths of glue in tanks or pans 108. These disks 105 apply glue to the tucked portion W' of the wrapping paper for preparing this tucked portion to receive paper end cover or disks.

The drum 103 rotates the roll R at least through one complete revolution so that glue will be applied around the entire portion W' of the wrapping paper.

The conveyor is then advanced to move the roll to the next station of the machine mounted on the frame B.

The frame B carries a pair of standards 110 at the front side of the machine and a second pair of standards 111 at the rear side of the machine. The standards 110 and 111 rotatably support separate rolls of paper 112 and 113.

As shown in Figures 1 and 2 the ends of the cross-shaft 16 have beveled gears thereon meshing with gears 114 at the lower ends of vertical shafts 115. These vertical shafts 115 are connected at their top ends through gears 116 with the shafts of rollers 117 for feeding paper from the rolls 112 and 113. Each feed roll 117 has a cooperating idler roll 118 holding the paper against the feed roll (Fig. 3).

As best shown in Figure 7, the feed rollers 117 feed the respective webs from the rolls 112 and 113 through cutter blocks 119 having circular central apertures 120 sized for cutting disks from the webs to fit the ends of the roll R.

Cutter heads 121 are slidably mounted in the apertures 120 of the cutter blocks and are carried on rods 122 extending into cylinders 123. Pistons 124 are slidably mounted in the cylinders 123 and are affixed to the rods 122.

The back ends of the cylinders 123 receive pipes 125 for injecting operating fluid behind the

pistons 124 to force the cutter disks 121 through the blocks 119 and against the ends of the roll. The pipes 125 are joined through a T coupling 126 with a pipe 127 leading to the lower port of a valve 128 at the other end of the machine. The front ends of the cylinders communicate with pipes 129 joined through a T coupling 130 with a pipe line 131 connected to the upper port of the valve 128 as shown in Figures 1, 6 and 7. As best shown in Figure 1, a motor 132 is suspended beneath the main frame A and drives a pump 133 through a belt 134. This pump draws oil or other hydraulic fluid from a tank 135 through a pipe 136 indicated in Figures 1 and 6 and supplies the oil under compression to a relief valve 137 having a relief port connected to a pipe 138 back to the tank 135 together with a feed port 139 connected with the control valve 128. In this manner the pump 133 can be continuously driven by the motor 132 and will circulate oil to and from the tank whenever the oil pressure builds up beyond a desired maximum.

The control valve 128 has a control plunger 140 equipped with a roller 141 adapted to ride against cam 142 on the cross-shaft 37, as shown in Figure 6. The cross-shaft 37 is driven through the half-gear 38 from stub-shaft 34 which, as explained above, is driven through the chain 32 and is connected with the shaft 37 through gears 35 and 36 (Figure 2).

The cam 142 will operate the control valve 128 in timed relation to the feeding of partially wrapped rolls R between the cutter blocks 119 so that the cutter heads 121 will be operated by the pistons 124 to cut out disks from the web supplied by the rolls 112 and 113 to press these disks against the ends of the roll R and affix the same to the marginal portion W' of the wrapping. After the disks are affixed in place the valve 128 will be operated to retract the cutter heads 121 back into the blocks 119 as shown in Figure 7.

Operation of the machine

Wound rolls of paper are sequentially deposited on the wheels 21 of the conveyor in the machine to feed the rolls in spaced relation through the machine. When a roll R reaches the first station of the machine it is rotated by the winder drum 80. A roll of wrapping paper W is rotatably mounted above the machine and is unwound by the feeding wheels and rollers 47 and 48 to supply a length of wrapping paper past the cutter bar 72. The leading and trailing ends of this length have previously been glue-spotted by moving the shoes 61 to deflect the paper against the fountain rollers 62 which apply films of adhesive or glue from the bath in the pan 64 to localized areas on the under face of the wrapping paper.

When the proper length of wrapping paper has cleared the cutter bar 72, the cutter 73 will sever this length while the rolls 49 are moved momentarily into spaced relation from the wheels 47 to stop forward motion of the paper. The guides 75 will cooperate with the guide plates 77 to move the leading end of the severed length into the nip between the winding roller 80 and the roll of paper R. This severed length has glue spots on the leading end thereof which are glued to the roll R and the length is then wrapped around the roll of paper R due to the rotation of the roll by the winding roller. The length of paper is longer than the circumference of the roll R so that the trailing end thereof with the glue spots on its under face will overlap the leading end of the length and be affixed to this leading end.

The conveyor is then operated to move the roll of paper to the next station of the machine. During this movement, however, a new length of wrapping paper W is glue spotted and fed past the cutter bar 72 for application to the next roll.

At the second station of the machine, the roll R is again rotated and the projecting ends of the wrapping paper are acted on by the tucker plates 95 to pleat the paper against the ends of the roll as illustrated at W'. When the pleating operation is completed, the roll is then advanced to the third station of the machine by the conveyor where it is again rotated and glue is applied to the portion W' of the wrapping by the glue applicators 105.

The roll is next advanced by the conveyor to the fourth and last station of the machine for the affixing of the end disks to the portion W' of the wrapping. During the advancing of the rolls of paper between stations by the conveyor, portions of the machine are operative for preparing each station for action. Thus the feed wheels 47 and rollers 48 are operated together with the paper-deflecting shoes to supply the glue-spotted wrapping lengths for use at the first station. Likewise the feed rolls 117 are operated to supply paper from the rolls 112 and 113 to the cutter blocks 119. The second and third stations of the machine need not be active except when the conveyor is at rest.

From the above descriptions it should be understood that machines of this invention successively act on rolls of paper or other cylindrical objects to apply a wrapping around the full lengths of the objects, to tuck the projecting ends of the wrapping against the ends of the objects, to apply glue to the tucked portions of the wrapping, and to affix end disks to the tucked portions of the wrapping for sealing the ends of the objects.

I claim as my invention:

1. A wrapping machine comprising an endless conveyor having spaced pairs of rotatable supports for a plurality of cylindrical objects, mechanism for intermittently advancing said conveyor to move the cylindrical objects completely through said machine, a first station in said machine, mechanism at said first station for rolling a length of sheet material around a cylindrical object on said conveyor, a second station in said machine, mechanism at said second station for tucking the ends of the sheet material against the ends of said cylindrical object, a third station in said machine, mechanism at said third station for applying adhesive to the tucked portions of the sheet material on said object, a fourth station in said machine, and mechanism at said fourth station for affixing disks of sheet material to said tucked portions for sealing the ends of the cylindrical object.

2. In a wrapping machine including conveying mechanism for intermittently advancing spaced cylindrical objects through the machine, end seal forming and securing mechanism in said machine, and fluid pressure means for operating said forming and securing mechanism controlled by said conveying mechanism.

3. In a roll wrapping machine having a plurality of stations, the improvements of conveyor mechanism for advancing rolls through the machine to said stations, end seal forming and securing mechanism at one of said stations of said machine including paper feeding and paper cutting devices, and means for operating said paper

feeding and paper cutting devices controlled by said conveying mechanism.

4. In a wrapping machine having a plurality of stations, conveying mechanism for intermittently advancing spaced cylindrical objects to the stations of the machine, wrapping sheet feeding mechanism operative while said conveying mechanism is moving, means at the first station of said machine for rolling a length of wrapping sheet around an object when said conveying mechanism is at rest, and means at the second station of the machine for tucking the ends of the wrapping sheet against the end of the cylindrical object when said conveying mechanism is at rest.

5. In a roll wrapping machine including wrapping material feeding and gluing mechanism, the improvement which comprises a conveyor having a run through said machine, pairs of rotatable supports on said conveyor defining roll-receiving nips to continuously support rolls for movement through the machine, a plurality of stations in said machine along the length of said conveyor run, a roller at the first station adapted to cooperate with a roll on a pair of supports for defining a nip therewith to receive glued wrapping material from said mechanism, means for rotating the roller to rotate the roll on the support for wrapping the wrapping material around the roll, means at a second station to tuck the ends of the wrapping material against the ends of a roll, means at a third station for applying glue to the tucked ends of the wrapping on the rolls, means at a fourth station to secure end seals to the glued tucked ends of the wrapping material on the roll, means for intermittently advancing said conveyor to successively move rolls to said stations, means for simultaneously operating the mechanisms at each of said stations when the conveyor is stopped, and means for operating said wrapping material feeding and gluing mechanism when said conveyor is moving.

6. In a roll wrapping machine, a conveyor having a run through said machine, pairs of rotatable supports on said conveyor defining roll-receiving nips to continuously support rolls for movement through the machine, means for intermittently advancing said conveyor to move the rolls completely through the machine, and a plurality of stations in said machine along the length of said conveyor run having mechanisms for simultaneous operation on successive rolls to wrap material around the rolls, to tuck the ends of the wrapping material against the ends of the rolls, and to fix end seals to the tucked ends of the wrapping material.

7. In a roll wrapping machine, a conveyor having a run through said machine, rotatable supports on said conveyor defining roll-receiving nips to continuously support rolls for movement through the entire machine, and mechanisms along the length of said run of the conveyor for simultaneously wrapping, tucking, and end sealing wrapping material around successive rolls.

8. In a machine for wrapping cylindrical objects, the improvements which comprise a conveyor having a run through said machine for continuously supporting said cylindrical objects as long as they are being acted upon by the machine, and mechanisms along the length of said conveyor adapted to simultaneously wrap, tuck and end seal wrapping material on successive objects in the machine.

9. In a roll wrapping machine including wrapping material feeding and gluing mechanism, a single conveyor having a run through said machine, pairs of rotatable supports on said conveyor defining roll-receiving nips to continuously support rolls for movement throughout the entire machine, a first station in said machine, a roller at said first station adapted to cooperate with a roll on a pair of said supports for defining a nip to receive glued wrapping material from said feeding and gluing mechanism, means for rotating the roller to rotate the roll on the supports for wrapping said wrapping material around the roll, a second station in said machine, a tucking mechanism at said second station for folding the ends of the wrapping material against the ends of the roll, a third station in said machine, mechanism at said third station for applying glue to the folded ends of the wrapping material, a fourth station in said machine, mechanism at said fourth station for affixing end seals to the glued folded ends of the wrapping material, means for intermittently moving said conveyor to advance rolls through the machine, means for simultaneously operating the mechanisms at each of said stations when the conveyor is at rest, and means for operating the wrapping material feeding and gluing mechanism when the conveyor is moving, to feed glued wrapping sheets to said roller.

10. The method of wrapping objects which comprises advancing a plurality of objects to be wrapped along a path, wrapping a sheet of wrapping material around an object, tucking the ends of the wrapping sheet against the ends of the wrapped object, securing end seals to the tucked ends of the wrapping material, effecting said wrapping, tucking and securing steps simultaneously on successive objects, and stopping the advancing movement of the objects during said simultaneous operations.

11. A wrapping machine comprising a support for a roll of wrapping material, superimposed pairs of laterally spaced feed rollers for receiving material from said roll through the nips therebetween, means for separating the rolls of each pair for stopping movement of said material, adhesive-applying fountain rollers in the path of said material, material-deflecting shoes operating in planes between said laterally spaced feed rollers for deflecting the material into contact with said fountain rollers for application of adhesive spots on the material, a cutter device for severing adhesive-spotted lengths of said material, a conveyor having rotatable supports thereon for cylindrical objects, mechanism for rotating a cylindrical object on said supports to wrap an adhesive-spotted length of wrapping material around the object, means for rotating said mechanism when said conveyor is at rest and said feed rollers are separated, and means for actuating said feed rollers to advance the material when said conveyor is moving.

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