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CARDBOARD BOTTOM FEED FOR FOOD WRAPPING MACHINES

Filed Feb. 17, 1947

4 Sheets-Sheet 1

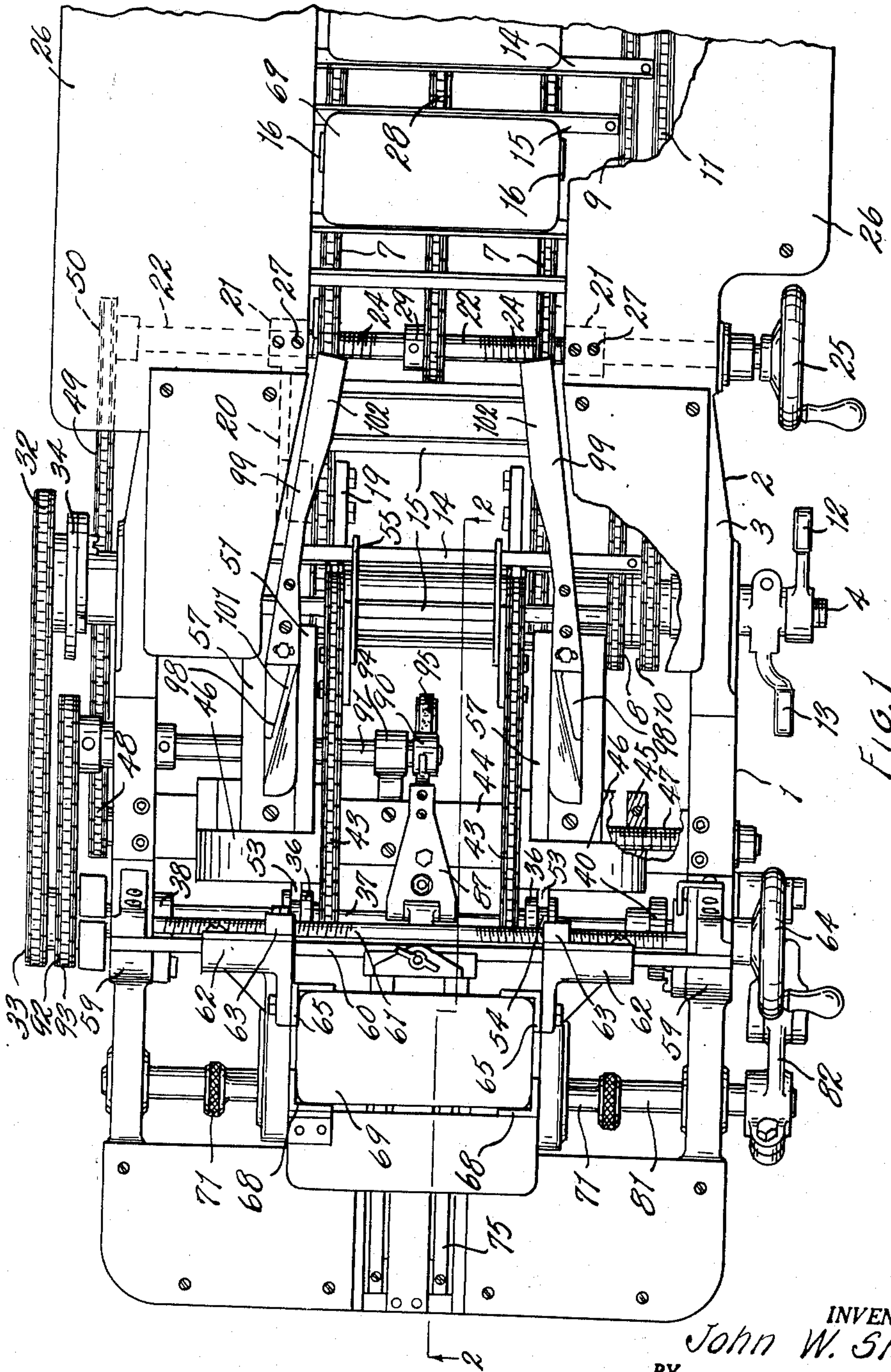


FIG. 1

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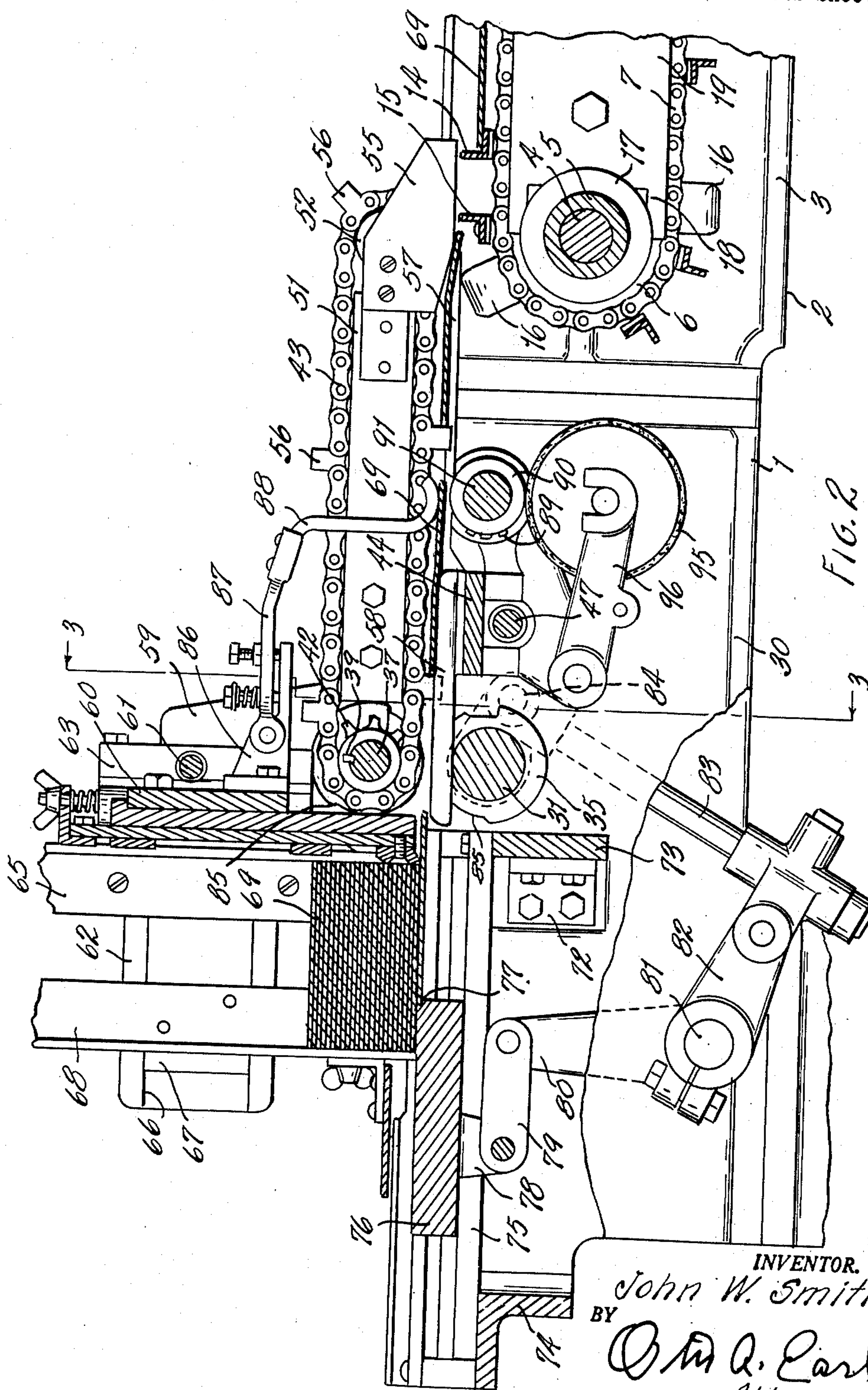
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4 Sheets-Sheet 2



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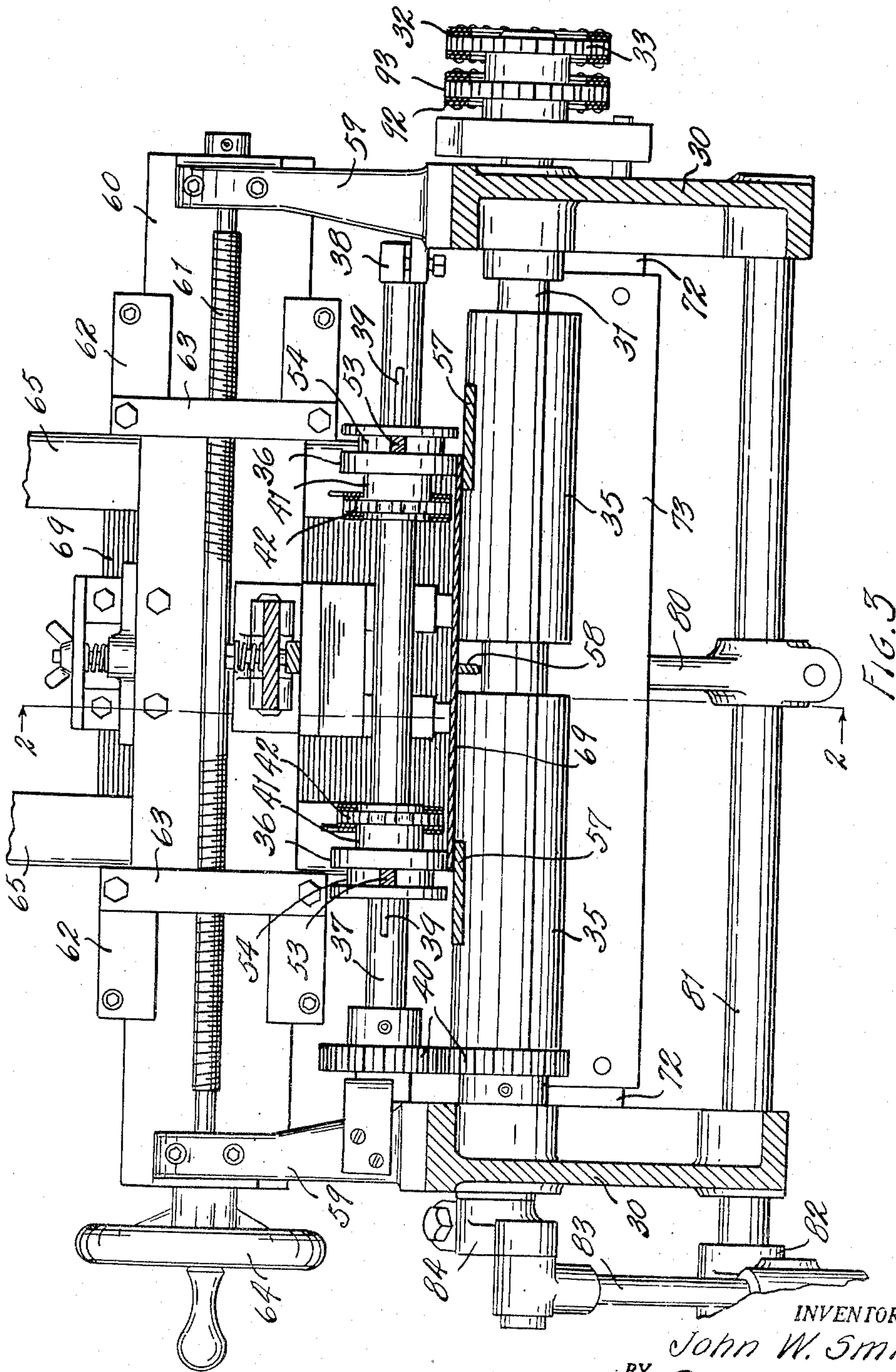
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CARDBOARD BOTTOM FEED FOR FOOD WRAPPING MACHINES

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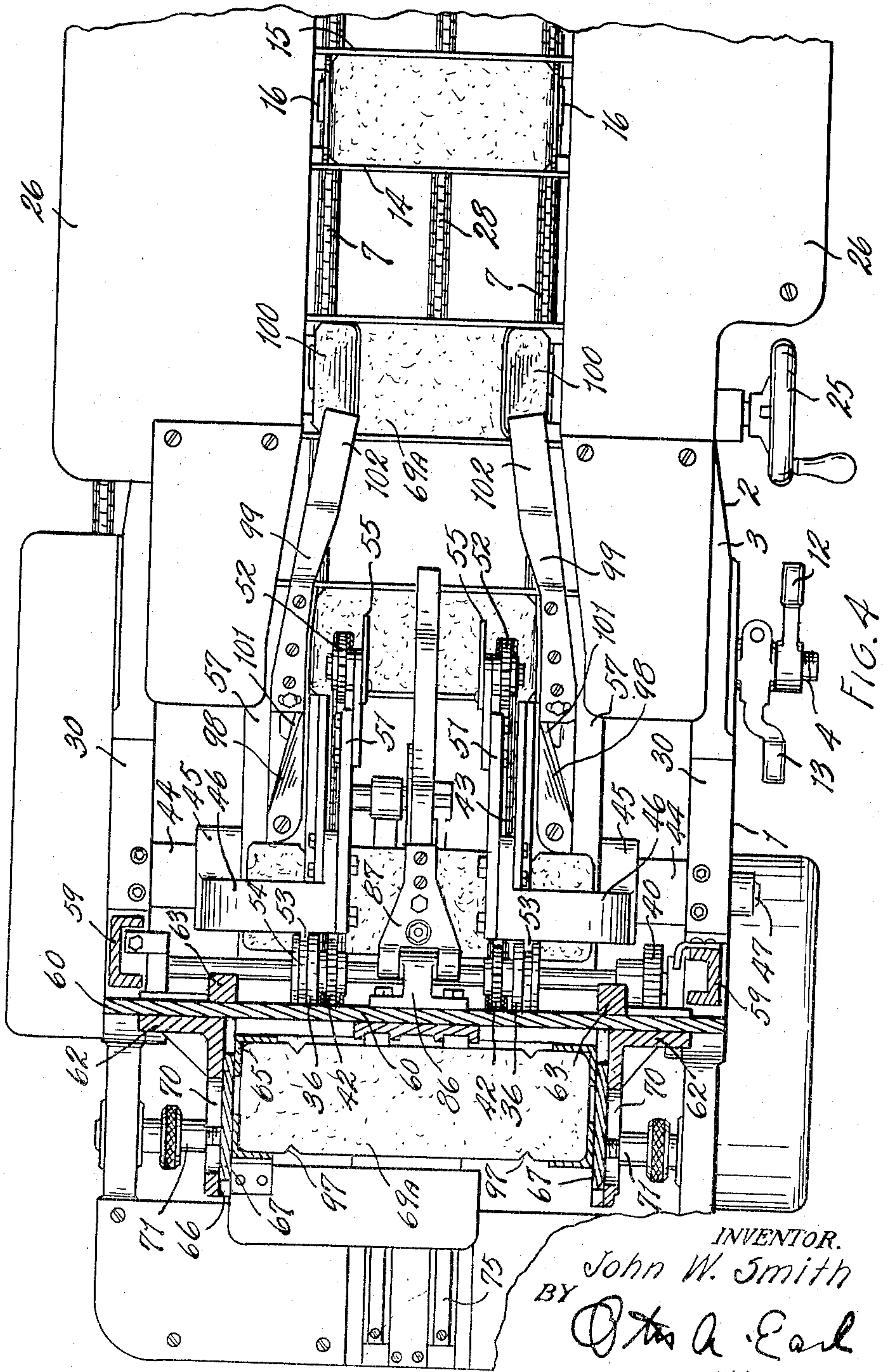
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CARDBOARD BOTTOM FEED FOR FOOD WRAPPING MACHINES

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4 Sheets-Sheet 4



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# UNITED STATES PATENT OFFICE

2,540,762

## CARDBOARD BOTTOM FEED FOR FOOD WRAPPING MACHINES

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9 Claims. (Cl. 271-6)

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This invention relates to improvements in a cardboard bottom feed for food wrapping machines.

The principal objects of this invention are:

First, to provide card feeding mechanism for delivering cardboard bottom panels to the loading conveyor of a food wrapping machine in timed relationship with the pockets of the conveyor.

Second, to provide mechanism for delivering cardboard bottom panels to the conveyor of a food wrapping machine, said mechanism being adjustable laterally along with the laterally adjustable mechanism of the conveyor to accommodate bottom panels of different lengths.

Third, to provide means for advancing the lowermost of a stack of cardboard bottom panels successively through a dating mechanism to the pockets of the conveyor of a food wrapping machine.

Fourth, to provide a magazine for holding a stack of cardboard bottom panels for a food wrapping machine which is adjustable in two directions to accommodate bottom panels of varying size.

Fifth, to provide card feeding mechanism of the type described which is readily adjustable to feed plain cards or cards with end flaps which are arranged to be turned up to form U-shaped bottom panels.

Other objects and advantages pertaining to the details and economies of the invention will be apparent from the following description and claims.

The drawings, of which there are four sheets, illustrate a preferred form of my bottom panel feeding mechanism.

Fig. 1 is a plan view of the mechanism as connected on the end of the loading conveyor of a food wrapping machine.

Fig. 2 is a fragmentary vertical cross sectional view along the line 2-2 in Fig. 1.

Fig. 3 is a fragmentary transverse vertical cross sectional view along the line 3-3 in Fig. 2.

Fig. 4 is a plan view similar to Fig. 1 but illustrating the machine adjusted to accommodate elongated bottom panels which are folded into U-shape by the machine.

As illustrated in the drawings, my machine consists of a bottom feed section generally indicated at 1 connected to the end of a loading conveyor section generally indicated at 2. The loading conveyor section includes side frame members 3, the ends of which are journaled to support an adjusting shaft 4. The shaft 4 is sur-

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rounded by a sleeve 5 on which are mounted a pair of inner sprockets 6 rotatably supporting continuous chains 7 and a pair of intermediate sprockets 8 rotatably supporting continuous chains 9. The chains 9 are arranged to be driven from a drive shaft at the opposite end of the table (not illustrated). The sprockets 6 and 8 are keyed to the sleeve for rotation therewith. An outer pair of sprockets 10 are keyed to the shaft 4 and support outer chains 11. The sprockets 10 and shaft 4 are arranged to be driven with the sleeve when the outer sprockets 10 are clamped axially against the end of the sleeve by means of a clamping nut and lever 12 threaded on the end of the shaft 4 (see Fig. 1). An adjusting lever 13 is secured to the shaft by means of which the shaft may be rotated independently of the sleeve when the clamping lever 12 is loosening to vary the relative angular displacement of the shaft and sleeve. The outer chains 10 are provided with forwardly opening angle-shaped members 14 which form the rear edges of a series of flights of loading pockets and the intermediate chains 9 are provided with a corresponding number of rearwardly opening angle-shaped cross members 15 which form the forward edges of the loading pockets. By advancing the shaft 4 and outer chains 11 relative to the sleeve and the intermediate chains 9, the rear cross members 14 may be moved toward the front cross members 15 to form narrower pockets on the loading conveyor.

The inner chains 7 carry a series of plates or fingers 16 which form the ends of the loading pockets and the sprockets 6 on which the chains 7 are carried are provided with annular collars 17 (see Fig. 2) which are engaged by the bifurcated ends 18 of lateral adjusting plates 19. The adjusting plates 19 are carried on brackets 20 (see Fig. 1), the forward ends of which carry blocks 21 supported on a transverse adjusting screw 22. The screw 22 is supported between the side members 3 and is oppositely threaded as at 24 on each end so that as the screw is rotated by means of the hand wheel 25, the block 21 will be moved inwardly or outwardly of the frame carrying the brackets 20, plates 19 and sprockets 6 with them for laterally adjusting the inner chains 7 and the pocket end members 16. The blocks 21 also support side table panels 26 and are connected thereto as by the screws 27 (see Fig. 1) so that the table panels are adjusted laterally along with the ends of the loading pockets. A center chain 28 is rotated by a center sprocket 29 fixed to the adjusting screw 22 to



simultaneously turn a similar adjusting screw (not shown) at the far end of the loading conveyor.

The mechanism thus far described is of more or less standard construction in food wrapping machines and forms no part of this invention except as it relates to and cooperates with the bottom panel feeding mechanism to be described presently.

The side frame members 30 of the bottom panel feed mechanism are connected to the ends of the side frame members 3 of the conveyor and rotatably support a transversely extending lower feed shaft 31 (see Fig. 3). The lower feed shaft is driven from the conveyor chain drive shaft 4 by the chain 32 and sprocket 33, the end of the driving shaft 4 being provided with a suitable sprocket for that purpose. A clutch mechanism generally indicated at 34 in Fig. 1 is provided for disengaging the bottom panel feed mechanism from the convey shaft 4. The feed shaft 31 is provided with a pair of bottom feed rolls 35 which are cooperative with a pair of upper feed rolls 36 slidably mounted on an upper feed shaft 37 extending between suitable bearing brackets 38 on the side frame members 30 (see Fig. 3). The upper feed shaft 37 and feed rollers 36 are provided with a splined connection as at 39 so that the rollers 36 will rotate with the countershaft which is in turn driven from the lower shaft 31 by means of the mating gears 40 on the ends of the two shafts.

The feed rollers 36 are provided with inwardly extending hubs 41 (see Fig. 3) on which are mounted sprockets 42 for rotatably supporting a pair of bottom panel feed chains 43. The chains 43 extend forwardly to over the rear or starting end of the loading conveyor.

The side frame members 30 of the bottom feed mechanism are further connected by a transversely extending support plate 44 which is positioned just forwardly of the lower feed shaft 31 and forms a sliding support for a pair of oppositely formed guide brackets 45. The brackets 45 are provided with upwardly and inwardly turned arm portions 46. The bases of the brackets are slidably supported with the cross plate 44 and extend therebelow to engage a transversely extending lateral adjusting screw 47 as is most clearly illustrated in Figs. 1 and 2. The guide brackets 45 are thus laterally adjustable toward and away from each other by engagement of their lower portions with the oppositely formed threads on the screw 47. The screw 47 is journaled in the side frame members 30 and provided on its far end with a sprocket 48. The sprocket 48 is engaged with a chain 49 extending forwardly to a sprocket 50 secured to the far end of the adjusting screw 22 in the conveyor section of the wrapping machine. It will thus be seen that lateral adjustment of the loading conveyor chains and loading table panels by rotation of the screw 22 will concurrently rotate the adjusting screw 47 and correspondingly adjust the spacing between the guide brackets 45.

The inner ends of the arms 46 on the brackets 45 are provided with forwardly extending vertical plates 51 which rotatably support idler sprockets 52 carrying the forward ends of the feed chains 43. The arms 46 are further provided with fingers 53 on the rear sides thereof which engage the collars 54 formed on the outer ends of the upper feed rollers 36 as is most clearly illustrated in Figs. 1 and 3. Thus lateral adjust-

ment of the guide brackets 45 will also laterally adjust the rear sprockets 42 and idler sprockets 52 carrying the feed chains 43. The forwardly extending plates 51 on the guide brackets 45 are provided with end depressor plates 55 which are arranged to force down the forward ends of bottom panels into the pockets of the loading conveyor as the panels are carried forwardly by the card advancing flights or fingers 56 carried at intervals along the feed chains 43. Horizontal support plates 57 also secured to the guide brackets just forwardly of the upper edge of the lower feed roll 35 are arranged to support the bottom panels as they are fed out of the feed rolls. A center support rib 58 is secured to the cross plate 44 and extends between the feed rolls to further support the bottom panels.

The side frame members 30 are provided with a pair of upstanding brackets or arms 59 between which is secured a vertical cross plate 60. A transverse adjusting screw 61 has its ends journaled in the brackets 59 forwardly of the cross plate. The plate 60 forms a guide and support for a pair of end brackets 62 which are provided with vertical holding straps 63 on the forward side of the guide plate 60. The holding straps 63 define threaded apertures engaging the adjusting screw 61 so that the brackets are laterally adjustable on the supporting plate by turning the hand wheel 64 on the end of the adjusting screw. The rear arms of the brackets 62 are secured to the vertically extending angle-shaped front magazine members 65 and define rearwardly extending opposed grooves 66 within which the plates 67 are slidably mounted. The plates 67 are secured to the vertically extending angle-shaped members 68 forming the rear corners of the magazine and are cooperative with the forward magazine members 65 to receive a stack of blank bottom panel cards 69. The rearwardly extending arms of the brackets 62 are slotted as at 70 to pass the inner ends of adjusting screws 71 by means of which the guide plates 67 are clamped to the brackets so that the rear members of the magazine may be adjusted with respect to the front members 65 to accommodate bottom panels of varying width.

The side frame members 30 of the feeding mechanism are provided with brackets 72 (see Fig. 2) which support a transversely extending plate 73 positioned below the forward edge of the magazine and just to the rear of the lower feed roll 35. The plate 73 and the rear cross member 74 of the frame support longitudinally extending parallel guide bars 75 within which a feed block 76 is slidably positioned. The feed block 76 is notched as at 77 along its forward edge to engage and strip off the first panel 69 on the bottom of the stack of panels in the magazine. The feed block is provided with a depending ear 78 pivotally connected to a link 79 and the link 79 is connected to one arm of a crank 80 carried on a rockshaft 81. The rockshaft 81 extends transversely of and is journaled in the side frame members 30 of the feeding mechanism and its forward end as viewed in the drawings is provided with a crank arm 82. The arm 82 is connected by a connecting rod 83 to a crank arm 84 on the forward end of the feed roll drive shaft 31. It will thus be seen that with each revolution of the feed roll shaft 31 the cranks 80, 82 and 84 will be actuated to reciprocate the feed block 76 between a retracted position and an ad-



vanced feeding position and back to the starting position.

Attention is called to the fact that the feed rolls 35 and 36 are cut away or relieved as at 85 over a portion of their surface so that as the feed block 76 is advanced to feed a bottom panel 69 between the feed rolls, the panel will not engage the feed rolls but will advance freely therebetween until the raised portions of the feed rolls are rotated into opposed gripping relation to pick up the panel and advance it along the support bars 57 underneath the bottom reach of the feed chain 43. After any one bottom panel 69 has been advanced along the support bars 57 by the feed rolls, its rear edge will be engaged and pushed forward by the pins 56 on the feed chain in the proper timed relationship with the pockets of the conveyor section of the machine.

The upper cross plate 60 is provided in its center with a forwardly extending bracket 86 pivotally supporting a spring pressed backing arm 87. The arm 87 is provided with a depending finger 88 which extends downwardly against the top of the advancing bottom panels and serves as a backing for type 89 set in the face of a type roll 90. The type roll 90 is mounted on a shaft 91 driven in timed relationship with the feed shaft 31 by means of a chain 92 driven from a sprocket 93 on the end of the feed roll shaft. The inner end of the printing roll shaft 92 is supported in a bracket 94 secured to the middle of the guide plate 44.

An inking roll 95 is rotatably supported in one end of a pivotal mounted bracket 96 underneath the type roll 90 and arranged to ink the type 89 with each revolution of the type roll. It will thus be seen that the type roll is driven in timed relationship with the feed shaft and feed chain so that the type 89 will register with the same space on each succeeding bottom panel 69 as the panels are advanced over the type roll.

Fig. 4 illustrates the same structure as Figs. 1, 2 and 3 but shows the magazine brackets 62 disposed in widely spaced relationship to accommodate bottom panels 69A longer than the bottom panels 69 shown in the other figures. The bottom panels 69A are notched as at 97 near their ends and arranged to have the ends folded upwardly by the fold plates 98 and crimped over by the fold plates 99 as illustrated at 100 in Fig. 4 to form U-shaped bottom panels in the pockets of the conveyor section of the wrapping machine. The fold plates 98 and 99 are secured to the horizontal support plates 57 secured to the guide brackets 45 below the inwardly extending arms 46 so that the bottom panels 69A are fed by the feed rolls between the arms 46 and the horizontal plates. The fold plates 98 have their outer edges bent upwardly as at 101 to gradually raise and fold the ends of the bottom panels to a vertical position and the fold plates 99 have overhanging flanges 102 which bend over the ends of the panels to form a permanent fold between the notches 97. Fig. 4 shows the guide brackets 45 are in closely spaced relationship as in Fig. 1 since the bottom panels 69A after folding are approximately the same length as the panels shown in Fig. 1. However, it will be appreciated that if it were not desired to fold the panels 69A, spacing of the guide brackets 45 and feed chains 43 could be widened along with the pockets of the conveyor section by rotating the hand wheel 25 and adjusting screws 24 and 47 as was previously described. It is thus apparent that my machine is

readily adjustable to accommodate bottom panels of varying width and length either as flat panels or as U-shaped panels and further, that the panels will be advanced in properly timed relationship with the pockets of the loading conveyor and in timed relationship with the printing roll 91 so that a date or other coded indicia may be applied to each panel.

The advancing block 76 which feeds the bottom panel from the stack in the magazine travels the same distance regardless of the length or width of the panels being fed into the machine, the proper interval between the succeeding panels being obtained by coordination of the relieved portions 85 of the feed rolls with the fingers 57 on the feed chain. Thus a wide panel will be engaged and moved sooner by the feed block than will a narrow panel. However, each size of panel will be initially moved between the relieved portion of the feed rolls by the feed block without engagement with or interference from the feed rolls or the feed chain. The raised portions of the feed rolls will then come into opposed gripping relation with the bottom panel in approximately the same relationship with the rear edge of the bottom panel regardless of its width and continue to feed the panel forward in proper timed relationship with the fingers 56 on the feed chain so that there is no danger of the fingers coming down on top of a panel and failing to carry it forward.

I have described a highly practical commercial embodiment of my bottom panel feeding mechanism as applied to the loading conveyor of an adjustable wrapping machine. I have not attempted to show other modifications or applications of the feeding mechanism as it is felt that the mechanism may be applied or modified as desired by persons skilled in the art without further disclosure.

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

1. Bottom panel feed mechanism for the loading conveyor of a food wrapping machine comprising side frame members arranged to be connected to the frame of the conveyor, a shaft journaled in said side frame members and having feed rollers thereon, said rollers being reduced in thickness along part of their circumference, a chain arranged to drive said shaft from the shaft supporting said loading conveyor, a countershaft gear driven from said first shaft and having other feed rollers thereon cooperative with said first feed rollers, said other feed rollers being reduced in thickness for part of their circumference and angularly disposed with respect to said first feed rollers whereby said reduced portions are opposed, feed sprockets secured to said other feed rollers and having a splined connection to said countershaft for rotation therewith, a cross plate supported between said frame members, guide brackets slidable on said cross plate, said brackets having upwardly and inwardly extending arms, fingers on said arms engageable with grooves in said feed sprockets for moving said sprockets along said countershaft with said guide brackets, forwardly extending support members on the inner ends of said arms, idler sprockets carried on the ends of said forwardly extending support members and positioned over the end of said loading conveyor, feed chains looped around said feed sprockets and idler sprockets, bottom panel advancing fingers carried by said feed chains whereby the fingers



on the lower reaches of said chains pass between said feed rollers, an adjusting screw journaled in said frame members and extending underneath said cross plate, said adjusting screw having oppositely pitched threads on the ends thereof and engaging said guide brackets, a chain connected between said adjusting screw and the lateral adjusting mechanism of said loading conveyor whereby the lateral spacing of said loading conveyor, guide brackets, feed chains and other feed rollers are concurrently adjustable, a vertically disposed magazine positioned adjacent to said feed rolls on the opposite side thereof from said feed chain, a longitudinally reciprocable feed block arranged to strip off the lowest panel of a stack of bottom panels positioned in said magazine and feed said panel between said feed rollers, a crank having one arm arranged to reciprocate said feed block, another crank connected to the end of said first shaft, and a connecting rod connected between said cranks for driving said feed block and feed roller in timed relationship whereby said bottom panel is fed between said feed rollers while the reduced portions thereof are opposed.

2. Bottom panel feed mechanism for the loading conveyor of a food wrapping machine comprising side frame members arranged to be connected to the frame of the conveyor, a drive shaft journaled in said side frame members and having feed rollers thereon, said rollers being reduced in thickness along part of their circumference, a countershaft gear driven from said drive shaft and having other feed rollers thereon cooperative with said first feed rollers, said other feed rollers being reduced in thickness for part of their circumference and angularly disposed with respect to said first feed rollers whereby said reduced portions are opposed, feed sprockets secured to said other feed rollers and having a splined connection to said countershaft for rotation therewith, a cross plate supported between said frame members, guide brackets slidable on said cross plate, said brackets having upwardly and inwardly extending arms, fingers on said arms engageable with grooves in said feed sprockets for moving said sprockets along said countershaft with said guide brackets, idler sprockets carried on the ends of said arms and positioned forwardly of said feed sprockets, feed chains looped around said feed sprockets and idler sprockets, bottom panel advancing fingers carried by said feed chains whereby the fingers on the lower reaches of said chains pass between said feed rollers, an adjusting screw journaled in said frame members, said adjusting screw having oppositely pitched threads on the ends thereof and engaging said guide brackets, a chain connected between said adjusting screw and the lateral adjusting mechanism of said loading conveyor whereby the lateral spacing of said loading conveyor, guide brackets, feed chains and other feed rollers are concurrently adjustable, a vertically disposed magazine positioned adjacent to said feed rollers on the opposite side thereof from said feed chain, a longitudinally reciprocable feed block arranged to strip off the lowest panel of a stack of bottom panels positioned in said magazine and feed said panel between said feed rollers, a crank having one arm arranged to reciprocate said feed block, another crank connected to the end of said first shaft, and a connecting rod connected between said cranks for driving said feed block and feed roller in timed relationship whereby said bottom panel is fed between said feed

rollers while the reduced portions thereof are opposed.

3. Bottom panel feed mechanism for the loading conveyor of a food wrapping machine comprising side frame members arranged to be connected to the frame of the conveyor, a shaft journaled in said side frame members and having feed rollers thereon, said rollers being reduced in thickness along part of their circumference, a second shaft gear driven from said drive shaft and having other feed rollers thereon cooperative with said first feed rollers, said other feed rollers being reduced in thickness for part of their circumference and angularly disposed with respect to said first feed rollers whereby said reduced portions are opposed, feed sprockets secured to said other feed rollers and having a splined connection to said second shaft for rotation therewith, a cross plate supported between said frame members, guide brackets slidable on said cross plate, said brackets having upwardly and inwardly extending arms, rearwardly extending fingers on said arms having lateral driving connections with said feed sprockets for moving said sprockets along said second shaft with said guide brackets, idler sprockets carried on the ends of said arms and positioned forwardly of said feed sprockets, feed chains looped around said feed sprockets and idler sprockets, bottom panel advancing fingers carried by said feed chains whereby the fingers on the lower reaches of said chains pass between said feed rollers, an adjusting screw journaled in said frame members, said adjusting screw having oppositely pitched threads on the ends thereof and engaging said guide brackets, a vertically disposed magazine positioned adjacent to said feed rollers on the opposite side thereof from said feed chain, a longitudinally reciprocable feed block arranged to strip off the lowest panel of a stack of bottom panels positioned in said magazine and feed said panel between said feed rollers, a crank having one arm arranged to reciprocate said feed block, another crank connected to the end of said first shaft, and a connecting rod connected between said cranks for driving said feed block and feed roller in timed relationship whereby said bottom panel is fed between said feed rollers while the reduced portions thereof are opposed.

4. Bottom panel feed mechanism for the conveyor of a wrapping machine, said conveyor having laterally and longitudinally adjustable pockets thereon, comprising frame members arranged to be connected to the frame of said conveyor, a pair of shafts journaled in said frame members and having cooperative feed rolls thereon, said feed rolls having opposed portions of reduced diameter, said shafts being gear connected to rotate at equal speeds, a chain for driving one of said shafts from the end shaft of said conveyor, feed sprockets mounted on the upper of said shafts and laterally adjustable therealong, a cross plate supported between said frame members and forwardly of said shafts, guide brackets slidably mounted on said cross plate and having lateral shifting engagement with said feed sprockets, a screw member extending transversely of said frame members and underneath said cross plate, said screw member having oppositely pitched threads on each end thereof and engageable with said guide brackets to effect lateral adjustment thereof, a driving member for driving said screw member from the lateral adjusting mechanism of said conveyor, forwardly extending arms on said guide brackets having idler sprockets



mounted on the front ends thereof and over the end of said conveyor, continuous feed chains mounted on said feed sprockets and idler sprockets, fingers on said feed chains arranged to advance bottom panels from between said feed rolls to the pockets of said conveyor, depressing plates on the ends of said arms arranged to guide said bottom panels into said pockets, folding plates carried on said guide brackets arranged to fold up the ends of said bottom panels, a second cross plate carried by said side frame members and above said shafts, rearwardly extending brackets slidably mounted on said second cross plate, vertically extending magazine forming members carried by said last brackets on the opposite side thereof from said feed rolls, a second screw member carried by said side frame members and having oppositely pitched threads on the ends thereof engageable with said last brackets for lateral adjustment thereof, and a longitudinally reciprocable stripping block arranged to feed the lowest of a series of bottom panels in said magazine members to between said feed rolls, said feed block being driven from one of said shafts in timed relationship thereto.

5. Bottom panel feed mechanism for the conveyor of a wrapping machine, said conveyor having laterally and longitudinally adjustable pockets thereon, comprising frame members arranged to be connected to the frame of said conveyor, a pair of shafts journaled in said frame members and having cooperative feed rolls thereon, said feed rolls having opposed portions of reduced diameter, said shafts being gear connected to rotate at equal speeds, a chain for driving one of said shafts from said conveyor, feed sprockets mounted on the upper of said shafts and laterally adjustable therealong, a cross plate supported between said frame members and forwardly of said shafts, guide brackets slidably mounted on said cross plate and having lateral shifting engagement with said feed sprockets, a screw member extending transversely of said frame members, said screw member having oppositely pitched threads on each end thereof and engageable with said guide brackets to effect lateral adjustment thereof, a driving member for driving said screw member from the later adjusting mechanism of said conveyor, forwardly extending arms on said guide brackets having idler sprockets mounted on the ends thereof, continuous feed chains mounted on said feed sprockets and idler sprockets, fingers on said feed chains arranged to advance bottom panels from between said feed rolls to the pockets of said conveyor, folding plates carried on said guide brackets arranged to fold up the ends of said bottom panels, a second cross plate carried by said side frame members and above said shafts, rearwardly extending brackets slidably mounted on said second cross plate, vertically extending magazine forming members carried by said last brackets on the opposite side thereof from said feed rolls, said magazine forming members being relatively adjustable longitudinally of said mechanism to accommodate panels of different width, a second screw member carried by said side frame members and having oppositely pitched threads on the ends thereof engageable with said rearwardly extending brackets for lateral adjustment thereof, and a longitudinally reciprocable stripping block arranged to feed the lowest of a series of bottom panels in said magazine members to between said feed rolls, said feed block being

driven from one of said shafts in timed relationship thereto.

6. Bottom panel feed mechanism for attachment to the frame of a wrapping machine having a wrapping conveyor comprising, side frame members adapted to be attached to said frame, cross shafts journaled in said frame members and arranged to be driven at equal speeds from said conveyor, an elongated roll on one of said shafts, a pair of relatively narrow rolls rotatable with and slideable along the other of said shafts, said narrow rolls being cooperative with said elongated roll to feed a bottom panel therebetween, said narrow rolls having a portion of their periphery cut away and non-cooperative with said elongated roll, a support extending between said side frame members, a pair of brackets slideably mounted on said support and having upwardly and inwardly extending arms secured thereto, an adjusting shaft extending between said side frame members and having oppositely pitched threads thereon engageable with said brackets for lateral adjustment thereof, means on said arms engageable with said narrow rolls for laterally adjusting said rolls with said arms and brackets, support members carried by said arms and extending forwardly therefrom to over the end of said conveyor, driving sprockets secured to said narrow rolls, idler sprockets mounted on the ends of said support members, feed chains looped about said sprockets and having bottom panel advancing flights thereon, and bottom panel guiding and folding plates secured to said support members.

7. Bottom panel feed mechanism for attachment to the frame of a wrapping machine having wrapping conveyor comprising, side frame members adapted to be attached to said frame, cross shafts journaled in said side frame members and arranged to be driven at equal speeds from said conveyor, an elongated roll on one of said shafts, a pair of relatively narrow rolls rotatable with and slideable along the other of said shafts, said narrow rolls being cooperative with said elongated roll to feed a bottom panel therebetween, said elongated roll having a portion of its periphery cut away and non-cooperative with said narrow rolls, a support extending between said side frame members, a pair of brackets slideably mounted on said support and having upwardly and inwardly extending arms secured thereto, an adjusting shaft extending between said side frame members and having oppositely pitched threads thereon engageable with said brackets for lateral adjustment thereof, means on said arms engageable with said narrow rolls for laterally adjusting said rolls with said arms and brackets, support members carried by said arms and extending forwardly therefrom to over the end of said conveyor, driving sprockets secured to said narrow rolls, idler sprockets mounted on the ends of said support members, feed chains looped about said sprockets and having bottom panel advancing flights thereon, and bottom panel guiding and folding plates secured to said support members.

8. Bottom panel feed mechanism for attachment to the frame of a wrapping machine having a wrapping conveyor comprising, side frame members adapted to be attached to said frame, cross shafts journaled in said side frame members and arranged to be driven from said conveyor, an elongated roll on one of said shafts, a pair of relatively narrow rolls rotatable with and slideable along the other of said shafts, said nar-



row rolls being cooperative with said elongated roll to feed bottom panels therebetween, said rolls having periphery cut away and non-cooperative to feed said panels, a support extending between said side frame members, a pair of brackets slideably mounted on said support and having upwardly and inwardly extending arms secured thereto, an adjusting shaft extending between said side frame members and having oppositely pitched threads thereon engageable with said brackets for lateral adjustment thereof, means on said arms engageable with said narrow rolls for laterally adjusting said rolls with said arms and brackets, support members carried by said arms and extending forwardly therefrom to over the end of said conveyor, driving sprockets secured to said narrow rolls, idler sprockets mounted on the ends of said support members, feed chains looped about said sprockets and having bottom panel advancing flights thereon, and means including a magazine and slide member for successively feeding individual bottom panels to said rolls.

9. Bottom panel feed mechanism for attachment to the frame of a wrapping machine having a wrapping conveyor comprising, side frame members adapted to be attached to said frame, cross shafts journaled in said side frame members and arranged to be driven from said conveyor, an elongated roll on one of said shafts, a pair of relatively narrow rolls rotatable with and slideable along the other of said shafts, said narrow rolls being cooperative with said elongated roll to feed bottom panels therebetween, a support extending between said side frame members, a pair of brackets slideably mounted on said support and having upwardly extending arms secured

thereto, an adjusting shaft extending between said side frame members and having oppositely pitched threads thereon engageable with said brackets for lateral adjustment thereof, means on said arms engageable with said narrow rolls for laterally adjusting said rolls with said arms and brackets, support members carried by said arms and extending forwardly therefrom to over the end of said conveyor, driving sprockets secured to said narrow rolls, idler sprockets mounted on the ends of said support members, and feed chains looped about said sprockets and having bottom panel advancing flights thereon.

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