





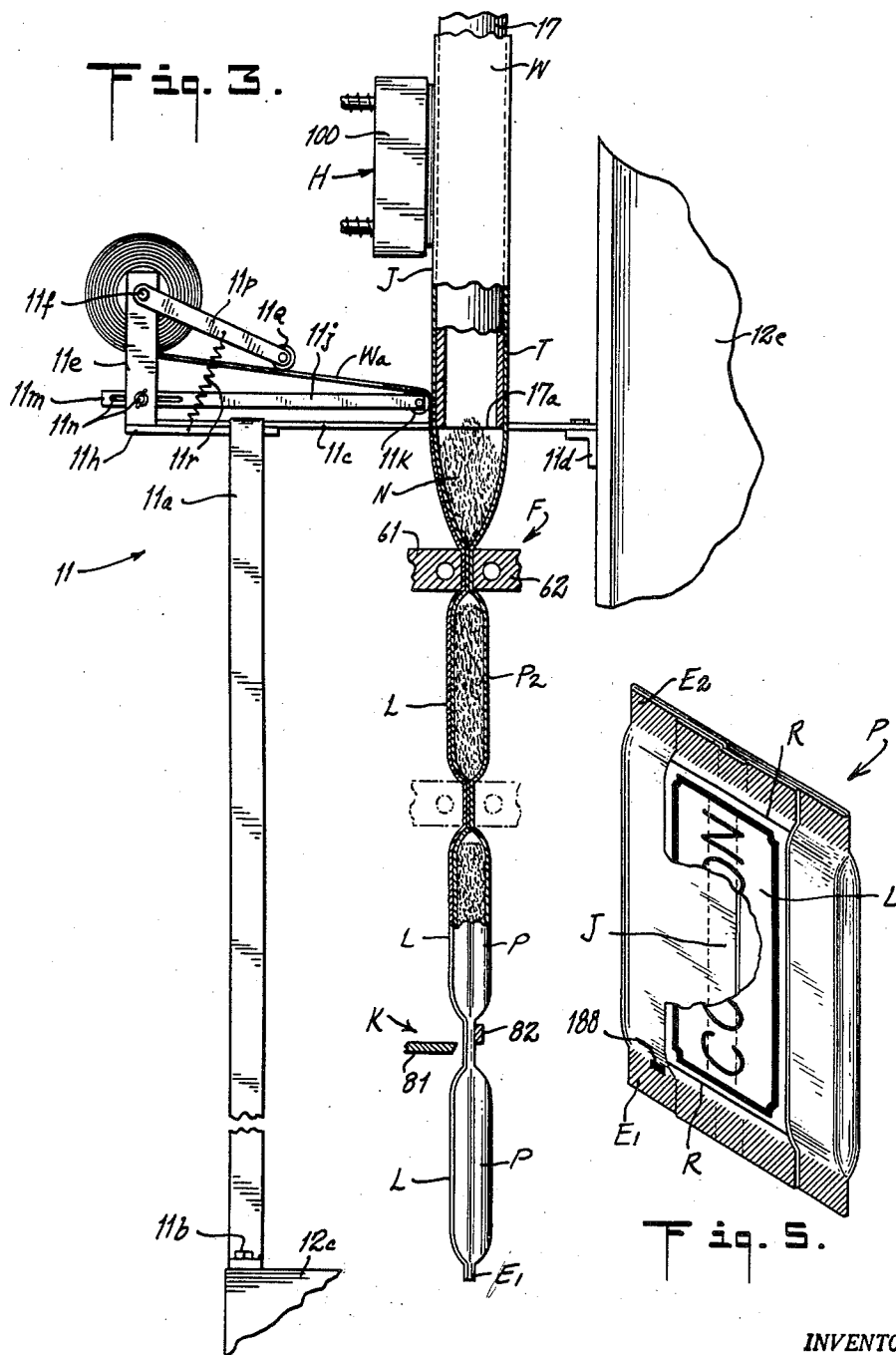
Dec. 10, 1957

E. F. PRODIGO  
MANUFACTURE OF PACKAGES WITH DETACHABLE  
REGISTERED PRINTED APPENDAGES

2,815,620

Original Filed May 21, 1953

5 Sheets-Sheet 3



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5 Sheets-Sheet 4

Fig. 1a.

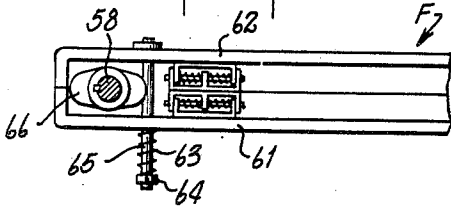


Fig. 1b.

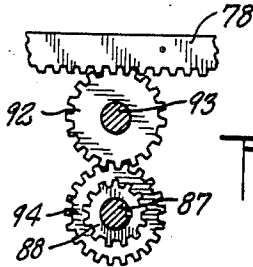
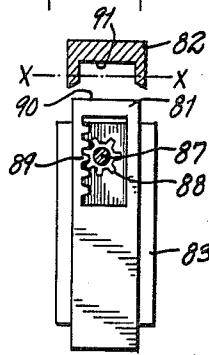


Fig. 1c.

Fig. 1d.

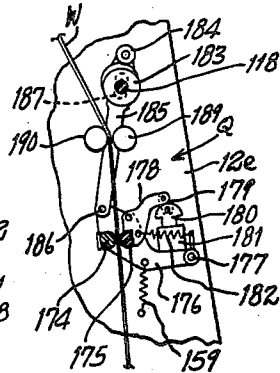


Fig. 4.

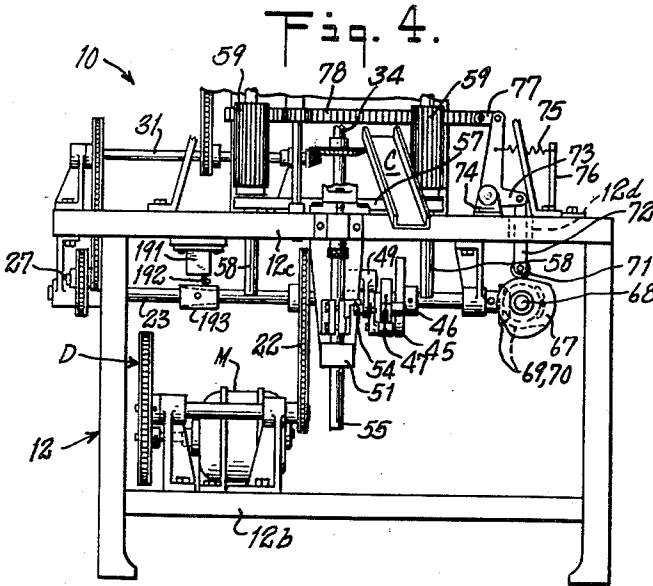
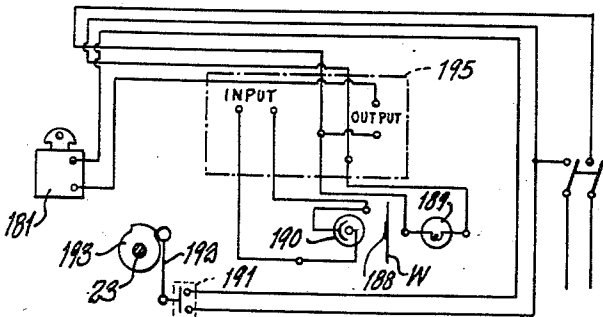


Fig. 7.



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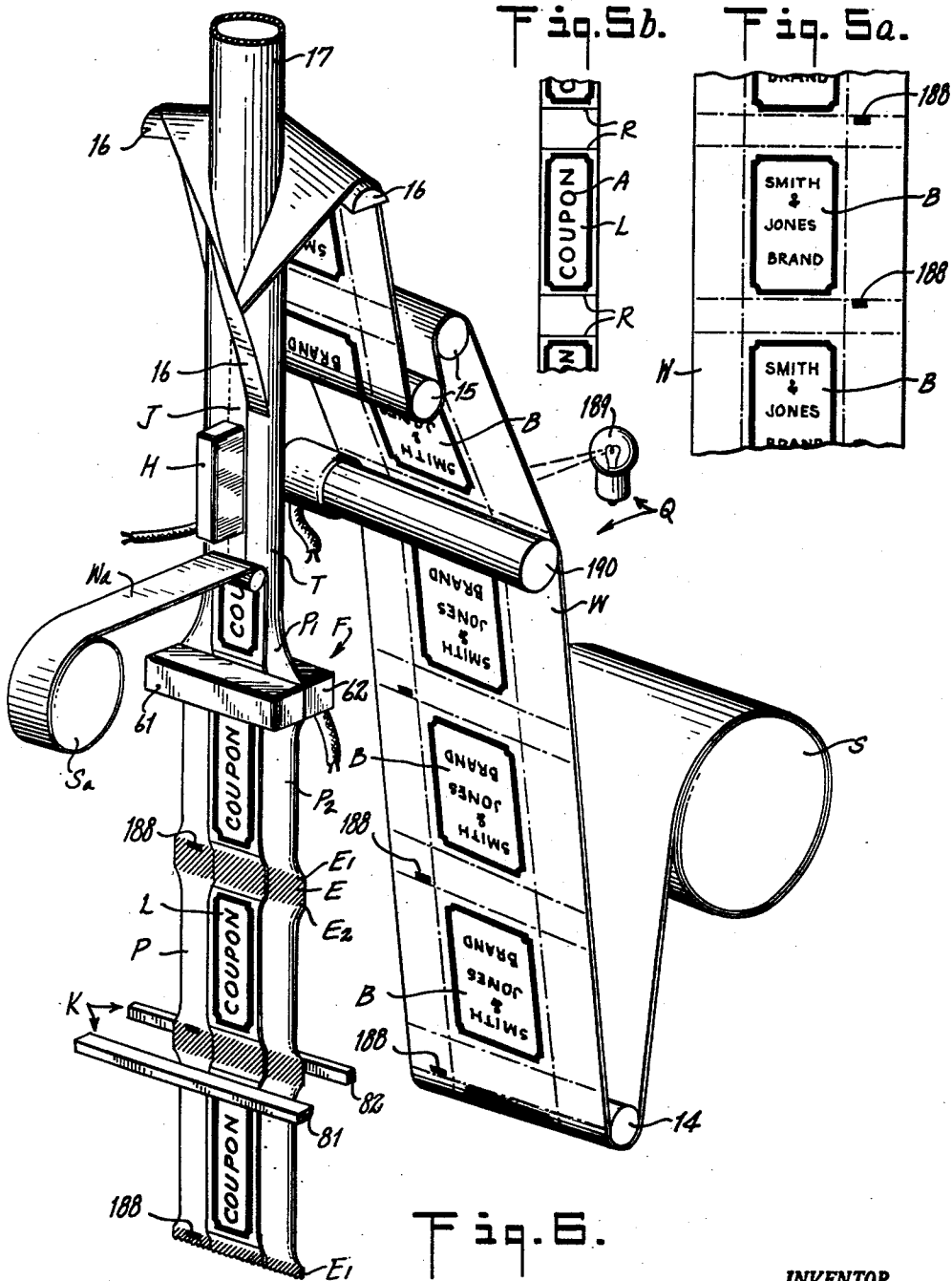
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2,815,620

**MANUFACTURE OF PACKAGES WITH DETACHABLE REGISTERED PRINTED APPENDAGES**

Edward F. Prodigio, Dumont, N. J.

Original application May 21, 1953, Serial No. 356,463.  
Divided and this application May 3, 1954, Serial No. 427,207

1 Claim. (Cl. 53—14)

This invention relates to automatically making, filling and heat-sealing packages, and more particularly is directed to improve additional equipment or mechanisms, that is, auxiliary portion or attachment devices, and to incorporate such devices in new or existing packaging machines for providing detachable labels, coupons or the like appendages on filled heat-sealed packages during the automatic manufacture thereof in quantity production, and embodies improved method and package.

Among the objects of the invention is to generally improve devices of the character described, complete machines incorporating such devices, the method of embodied manufacture and improved package, which machine equipment shall comprise few and simple parts that are readily assembled and installed or incorporated in new and operating packaging machines, which shall be relatively cheap to build and easily installed without requiring highly skilled mechanical labor, which shall be reliable in operation with a minimum of maintenance or attention, which shall provide filled packages with said appendages of uniformly attractive appearance having printed matter on the packages and appendages in desired registered alignment entirely eliminating irregularity or defective output, which shall provide for securing printed detachable spanning labels or coupons in a simple and expeditious manner and method of manufacture, which shall provide for quantity manufacture of an improved package and which shall be practical and efficient to a high degree in use.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

This is a division of an application filed May 21, 1953, Serial No. 356,463, now abandoned.

This invention, accordingly, consists of features of construction, combinations of elements and arrangements of parts which will be exemplified in the construction hereinafter described, the steps of an improved method of manufacture and package construction, the scope of the application of which will be indicated in the claim following.

A feature of the invention is shown and described herein as an auxiliary mechanism portion for providing printed labels, coupons or the like appendages to heat-sealed filled packages, incorporated to operate with a packaging machine construction, for example, such as fully disclosed in United States Letters Patent No. 2,200,971, granted May 14, 1940 to John R. Sonneborn, et al., for a System of Making, Filling and Sealing Containers which embodies certain features of expired United States Letters Patent No. 1,986,422, granted January 1, 1935 to W. R. Zwoyer for an Automatic Packaging Machine.

In the accompanying drawings in which an illustrative embodiment of the invention is shown,

Fig. 1 is a side elevational view partly broken away of a packaging machine embodying features of the invention for automatically manufacturing improved filled

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heat-sealed packages and incorporating as a portion thereof a device or mechanism constructed and arranged for concurrent operation to provide printed detachable labels, coupons or the like appendages to the packages being manufactured in cooperative relation with and as a progressive step in the manufacturing operation of filling and heat-sealing said packages and with controlled registered alignment of printed matter on the packages and labels.

Fig. 1a is a fragmentary cross-sectional view taken on line 1a—1a in Fig. 1 showing detailed portions of the tube formation gripping and releasing mechanism.

Fig. 1b is a top plan view, as seen along line 1b—1b in Fig. 1 of the seam joint severing mechanism.

Fig. 1c is a fragmentary sectional view showing details of the driving means of the severing mechanism shown in Fig. 1b.

Fig. 1d is an enlarged view showing operational details of the web sheet material registering mechanism corresponding to that shown in Fig. 1.

Figs. 2 and 3 are enlarged fragmentary front and side elevational views, respectively, as seen from line 2—2 in Fig. 1 and line 3—3 in Fig. 2, respectively, showing the cooperative working relation of the said portion device or mechanism in the process of providing a spanningly secured label to filled packages during the manufacture thereof and the label anchorages secured to the heat-sealed end closures of each package, said packages and labels being partly broken away to show the seam joints and the contents.

Fig. 4 is a lower portion of a front elevational view of the improved packaging machine shown in Fig. 1, partly broken away to expose certain working operational features of the machine.

Fig. 5 is a perspective view of one of the completely finished filled packages provided with a spanning label embodying the improved manufacture, partly broken away to expose the underlying seam joint.

Fig. 5a is the imprinted side of the web sheet material showing a series of recurring indicia in the form of a brand name and registering control elements for forming the contents wrapper or tube formation portion of the printed package shown in Fig. 5.

Fig. 5b is an improved side of the appendage web material strip showing a series of recurring indicia in the form of coupon labels with tear-lines.

Fig. 6 is a view in perspective, partly diagrammatic, illustrating the progressive steps in the manufacture of filled heat-sealed printed packages, for example, as shown in Fig. 5, provided with spanningly secured printed labels in a desired controlled registered alignment and produced in quantity production, and

Fig. 7 is a diagrammatic view of the electrical circuit control for registering the printing on the web sheet material shown in Fig. 5a in centralized relation to the predetermined length of the packages.

Referring in detail to the drawing, 10 denotes a machine of improved construction for automatically manufacturing, filling and heat-sealing complete pillow-shaped improved printed packages P in quantity production, said machine 10 being equipped or incorporating a mechanism portion denoted generally as 11 to secure in spanning relation a desired detachable appendage, such as, a printed coupon or label L, in a single continuous complete manufacturing operation with the printed matter on the package and label in controlled registered alignment, all constructed and arranged to embody the invention.

Making, filling and heat-sealing portion, denoted generally as 12, of machine 10 may be constructed like that disclosed in said Patents Nos. 1,986,422 and 2,200,971 which are of a dual unit or double capacity operating type, that is, capable of manufacturing two identical packages

P simultaneously. As here shown, said machine portion 12 utilizes a suitable heat-sealing web material W from a suitable source, such as, from each roll S. Webs W each first pass from the latter down and about an idle roller 14, then pass up and about a spaced apart pair of idle rollers 15 carried to swing on support arms 15a for individually tensioning each web W in any well understood manner, as by springs (not shown).

Tensioned web W passes from each pair of rollers 15 to a directional former 16 and down over hollow tube-shaping former 17 constructed and arranged as shown and described in detail in said Patent No. 1,986,422 to wrap therearound, said former 17 being supported by a suitable bracket 18 adjustably mounted to extend down from an upper frame member 12a of machine portion 12.

Each of said webs W may have outer surfaces thereof provided with a desired series of recurring consecutively arranged content describing legends, instructions, data, trade-marks or the like, herein referred to as "designs B," attractively laid out to correspond to the dimensions of the completely manufactured packages P.

Overlapping border edges provided by portions of each web W wrapped around former member 17 passing down below bracket 18 may be seamed to provide a continuous joint J by a pressure electrically heated sealer, denoted generally as H, for forming a tubular formation or structure T of said web W with said seamed joint J extending longitudinally thereof.

At a spaced distance below the bottom or lower open end 17a of former member 17, tubular formation T is flattened between a pair of electrically heated vise-like clamping jaws 61, 62 of a vertically reciprocating tube closing or package forming and web-feeding mechanism denoted generally as F.

As shown in Figs. 1, 3 and 5, clamping jaws 61 and 62 of mechanism F completely heat-seal closures E transversely tubular formation T, that is, concurrently forming a bottom closure E1 for a partially formed package P1 of a portion of tubular formation T which is filled through hollow former member 17 with an adjoining top closure E2 for upper end of a previously filled package P2, as is clear from Fig. 3.

Downward movement or stroke of said clamping jaws 61 and 62 of said mechanism F from the full line position shown in Fig. 3 pulls under tension further web material W over the former member 17 to produce a further section or increment of tubing T, that is, another partially formed package P1, by bringing the longitudinal margins of further web material W to underlie the heat-sealer H. At the end of the downward movement or stroke of the clamping jaws 61 and 62, the transverse seal E, that is, bottom and top adjoining closures E1 and E2, previously formed between two filled packages P2 is brought into the path of movement of the blades of a web-severing device K whose operation is hereinafter more fully described. The latter is actuated in timed relation with the release of the web material W by clamping jaws 61 and 62 of the mechanism F to cut through the seal E between adjoining packages P2 and so detach filled sealed packages P from the latter. The detached packages P may be conveyed from the machine 10 in any convenient manner, as for example, by a chute C, as is clear from Fig. 4.

Since machine 10 shown is of the dual unit type, the cycle of operations above described are being performed upon the web material W supplied by both rolls S in the same sequence of operations performed by similar mechanisms for each, and are identified in the drawing and in the description by the same reference characters or numerals.

The web-feeding and web-severing mechanisms are driven by motor M supported by cross frame member 12b of the machine portion 12. Through suitable speed-reducing power transmission, denoted generally as D, such as, sprockets and chains, motor M drives a sprocket 22

a main horizontally extending power shaft 23 of the machine 10, as is clear from Figs. 1 and 4. A feeding head or turret G, which segregates measured amounts of filling material forming the contents N of each package P for delivery into the tubular formers 17, may be driven from shaft 23 through a chain and sprocket power transmission D1 connecting shaft 23 with jack shaft 27, a chain sprocket drive connecting shaft 27 with a shaft 31, a bevel gear drive connecting shaft 31 with a vertically extending shaft 34, and a chain 35 connecting a sprocket 36 mounted to turn with the upper end of shaft 34 below the feeding head G which is connected to drive a sprocket 37 mounted on another vertically extending shaft 38 of feeding head G.

Feeding head G may be of any suitable construction and, as here shown, comprises a stationary plate 39 suitably held as by the brackets 40 to the frame member 12a of the machine portion 12 and is provided with openings in registry with or receiving the upper ends of the web-shaping tubes 17.

Plate 42 of the head G, which is attached to shaft 38, serves as a support for the open-ended measuring tubes 43 received by or in registry with openings through the plate 42, and also serves to prevent escape of material from the hopper 44 except as provided by the openings through the plate 42 into the measuring tubes 43. The movement of the turret or feeding head G is timed so that the filling material is discharged through the former members 17 into the tubes T substantially at the end of each feeding stroke of the package-forming and web-feeding mechanism F.

To reciprocate the web-feeding mechanism F, a cam 45 mounted to turn with main drive shaft 23 is provided which actuates a cam follower or roller 46 extending from a fork-shaped member 47 which embraces the shaft 23 and pivotally connects at 48 to one arm of the bell-crank lever 49 pivotally mounted at 50 upon a mid-portion of a bracket arm 51 which may be bolted to depend from an underside of frame member 12c of the machine portion 12. The other arm of bell-crank lever 49 may be slotted for adjustment of the supporting pin 52 of the roller 53 which engages the under surface of the shackled ledge member 54 adjustably secured to a vertically extending tail rod 55. The latter is guided at its lower end by said bracket arm 51, said rod 55 passing up through horizontally extending frame member 12c for connecting to a cross head 57 through which passes shafts 58, each of which carries an elongated vertically disposed gear 59 which is constructed and arranged to transmit push and pull thrusts from cross head 57 to shafts 58. Spaced apart bearing collars 60 and 60a on each shaft 58 serve to support the opposite ends of the package-forming mechanism F, but permit rotation of the shafts 58 for the purpose hereinafter described.

As the cam 45 is caused to rotate, once for each operating cycle of the machine 10, bell-crank lever 49 is oscillated to effect reciprocation of the cross head 57 vertically to and from its lowermost position, shown in full lines in Fig. 1, and consequently package-forming mechanism F supported on the cross head 57 through intermediary of shafts 58 and gears 59 secured thereto moves between stroke limits indicated by the full and broken line positions in Fig. 3.

The length of the stroke or extent of vertical reciprocation of the package-forming mechanism F may be varied to obtain packages of different lengths by adjustment of supporting pin 52 of the roller 53 in the slotted end of the bell-crank lever 49.

Clamping jaws 61 and 62 and package-forming structure F are biased toward or into engagement with each other by the springs 63 which are compressed between one of said jaws 62 and collars 64 mounted on studs 65 which pass freely through the jaw 61 and are attached to the jaw 62, and is clearly shown in Fig. 3.

The cams 66, keyed, or otherwise suitably attached, to

shafts 58 between the jaws 61 and 62 are adapted upon rocking of shafts 58 to separate the ends of jaws 61 and 62 to an extent sufficient to permit the web-engaging elements hereinafter described to clear the package when the package-forming structure F is moved upwardly to the full line position in Fig. 3.

The movements of the jaws 61 and 62 toward and away from each other by rocking of the shafts 58 are controlled by a cam 67 mounted to turn with shaft 68 driven from the main shaft 23 through the gears 69 and 70. A roller cam follower 71, which continuously engages the periphery of the cam 67, is supported at the lower end of a bar 72 which is guided in a through-slot 12d provided in the frame member 12c, said bar 72 being pivotally connected at its upper end to one arm of a bell-crank lever 73. The latter is pivotally mounted upon bracket 74 and biased to the position shown in Fig. 4 by the spring 75 extending from bracket 76 upstanding on frame member 12c. The other arm of bell-crank lever 73 may connect through a link 77 to a rack 78 which moves in slide guides 79 provided in the vertical frame members 12e of the machine portion 12, said rack 78 being retained continuously in mesh with the gears 59 throughout reciprocation of the latter with the cross head 57.

The cam 67 is preferably made adjustable, as is clear from Fig. 4, to permit variation in the timing of the opening and closing movements of the jaws 61 and 62.

Cam 67 may also be utilized to control operation of the web-severing mechanisms K, as for example, as is fully disclosed in said Patent No. 1,986,422.

Briefly, the web-severing device K, as here shown, may comprise two blades 81 and 82 guided during concurrent movements thereof in opposite directions by frame casing 83 attached to or forming an integral part of support 84, the latter being adjustably clamped to bracket 85 by bolt 86 which extends through a slot 84a provided in the support 84. Each of the blades 81 and 82 is provided with a rack for operation by a gear on shaft 87. Specifically, as shown in Fig. 1b, the gear 88 on shaft 87 is in mesh with rack 89 of blade 81 so that oscillation of shaft 87 causes the cutting edge 90 of the blade 81 to move toward and away from a desired cutting line  $x-x$ . Similarly, a rack (not shown) on the other side of the center of shaft 87 provides for movement of the cutting edge 91 of blade 82 toward and away from said cutting line  $x-x$ . Consequently, for rotation of shaft 87 in one direction, cutting edges 90 and 91 of blades 81 and 82, respectively, move toward each other to detach a filled completed package P for passing down chute C and on rotation of shaft 87 in opposite direction, said blades moving away from each other to clear the filled package P next to be detached.

Movement of the shafts 87 of the cutting mechanism K is produced by reciprocation of the rack 78. As is clear from Fig. 1c, rack 78 is in mesh with gear 92 on shaft 93 supported between bracket 85 and frame member 12e and, as seen in Fig. 1, gear 92 in turn is in mesh with gear 94 on shaft 87. The gear 88 within the frame casing 83 is slidably keyed to the shaft 87 to maintain continuous driving connections between the shafts and the knives as said mechanism K is adjusted to the desired vertical position and, as seen in Fig. 1, support 84 for the mechanism K threadably engages a screw 95 which passes through a bracket 96 secured to the front of the machine portion 12 and is provided with a suitable hand adjusting knob 97.

The heat-sealers H which engage the overlapping web margins of the web material W to form tube T may be made like that shown and described in Patent No. 2,200,971 which has an elongated platen or strip of metal or other good conductor of heat, whose web-engaging surface is, at least longitudinal with respect to the seal joint J, uniform or smooth so as to effect uniform application of heat and pressure to said web margins to form seal joint J continuous and uniform throughout. Said

heat conducting strip may be made to snugly receive a suitable electrical temperature controlled heater element 190 of any well understood construction.

Preferably, heat-sealers H each are yieldingly mounted upon a supporting frame 106 pivotally mounted to extend vertically and downwardly from the machine frame 12a.

Packages P are frequently made from web material W printed with design layouts "B" or otherwise marked with recurrent decorations as exemplified by the medallion shown in Fig. 5a. For various reasons, including the effect of ambient atmosphere upon said web material W, irregularities in printing, or for other reasons, the lengths of said web pulled by the successive reciprocations of the clamping jaws 61 and 62 may not exactly correspond with the original uniform spacings between the recurrent design layouts which have been found to result in a cumulative error sufficient to ultimately cause noticeable, that is, objectional and undesirable, dissimilarity in appearance of the design layouts on the finished packages. To prevent such unwanted results, a reverse feed or automatic alignment registering mechanism Q operative upon the web material W while it is free of engagement by the clamping jaws 61 and 62 of the package-forming mechanism F and also while free of engagement by the heat-sealers H.

Referring to Figs. 1 and 1d, the web W passes between the gripper elements 174 and 175. Said gripper element 174 may be carried by arm 176 pivotally mounted at 177 to the frame member 12e of the machine portion 12 and gripper element 175 carried by the member 178 pivotally mounted upon the arm 176 and connected by link 179 to the armature 180 of a solenoid 181 mounted upon the arm 176. A spring 182 biases the gripper member 175 away from engagement with the web W.

Oscillations of said arm 176 are effected by cam 183 on shaft 118. A cam follower roller 184, which continuously engages the periphery of cam 183, is carried by link 185 pivotally connected at 186 to the rocker arm 176 and having intermediate its end a slot 187 through which shaft 118 passes. For each rotation of shaft 118, the arm 176 moves toward and from the position shown in Fig. 1 to which it is biased by spring 159.

At the beginning of the downward stroke of the arm 176, each solenoid 181 may be energized, as is clear from Figs. 1, 1d and 7, to move the gripper member 175 to clamp the web W against the cooperating gripper member 174 so that by the continued downward movement of member 176 the web W is pulled or fed in a reverse direction until a control element 188 on the web W which may be an opaque spot interrupts the path of light from the lamp 189 to the photo-electric cell or equivalent light-sensitive device 190. The interruption of the light causes de-energization of the solenoids, whereupon each spring 182 is effective to move the gripper element 175 away from the web W for the remainder of the downward or counterclockwise movement of the arm 176.

Energization of solenoid 181 while web W is being advanced by the package-forming mechanism F or while its margins are being joined by the heat-sealer H is prevented by the switch 191 whose operating lever 192 is controlled by a cam 193 on the main shaft 23. As appears in Fig. 7, the contacts of switch 191 are in series with the solenoid 181 to prevent energization of the solenoid so long as switch 191 is open, regardless of interruption of the path of light from lamp 189 to the photo-cell 190. The amplifier 195 in whose input and output circuits are respectively included the photo-cell 190 and solenoid 181 may be of conventional type employing one or more thermionic amplifier tubes.

Thus, in each cycle of operation of the machine portion 12, the web material W is re-registered at an aligning station exemplified by the photo-cell 190 and lamp 189. Although such alignment may not act to precisely determine the position of the decorative matter or design layouts upon the formed packages P, nevertheless said ob-

jectionable and undesirable accumulation of errors is practically prevented.

Because of the hereinbefore described elimination of stretching error of the web material W during its forward feeding movements, registration of the web W afforded by mechanism Q when the web W is free of tension, i. e., free of engagement by either or both of the longitudinal and transverse seal-forming means, are effective, regardless of whether the web material W is Pliofilm, Cellophane, or any other thermoplastic material, to obtain the desired positioning of the printed design layouts on the filled packages P.

As thus far described, the operation of the machine portion 12 is similar to those shown in said patents, Nos. 1,986,422 and 2,200,971 to which reference is made for further details of description if required.

In providing filled packages by said making, filling and sealing machine portion 12, like those produced in said patents, Nos. 1,986,422 and 2,200,971, certain detachable labels, coupons or other like appendages are frequently required as part of the complete package P and for economy and convenience of manufacture, mechanism or device 11 may be incorporated to cooperate with machine portion 12 to provide improved single complete machine 10.

To that end, as seen from Fig. 3, a platform frame 11a firmly secured to upstand from an upfacing side of machine frame member 12c by bolts 11b and having a horizontal cross brace 11c connected to vertically extending machine frame side 12e by angle bracket 11d. For each of the filled packages in production by said machine portion 12, there is mounted to turn between the upper or free ends of a pair of vertically extending spaced apart uprights 11e on horizontally disposed shaft 11f a roll Sa of web material strip Wa made of sheet material like web W, but imprinted in recurring designs "A" to serve as a label, coupon or other desired appendage L in consecutive series of identical sections of a length equal to the package seam joint J of packages P.

Lower portion 11g of uprights 11e may be mounted on horizontally extending plate 11h in an outwardly overhanging relation with respect to platform frame 11a and has a horizontally inwardly extending arm 11j terminated by guide roller 11k toward the tube formation T on former 17 below the level of longitudinally extending seam joint heater H, as is clear from Figs. 1 and 3.

Said arm 11j may have end 11m thereof opposite roller 11k supported from upright lower portion 11g in any suitable manner as by slot and wing nut screw 11n for adjustably setting roller 11k to guide press unwinding portions of web material strip Wa passing from roll Sa to an aligning desired position with the downwardly advancing movement of the tube formation T in the manufacture of packages P. A slack take-up means which, as here shown, comprises a swinging member 11p pivoted by one end thereof on shaft 11f and having an idle roller 11q terminating the other or free end thereof, may be provided to bear against portion of web strip Wa passing from roller Sa and about guide roller 11k. A biasing tension spring 11r having one end thereof secured to a mid-portion length of member 11p and the other end anchored to plate 11h may also be provided to equalize variations of tension requirements for unwinding web strip Wa from roll Sa for uniformly feeding said strip Wa to the tube formation T, as is clear from Fig. 3.

Heat-sealer H may be of any well understood construction and specific arrangement which shall permit timing and adjustment of the temperature and pressure applied to the overlapping margins forming seam joint J as required by the properties, character and thickness of heat-sealing web materials W and Wa being used for providing complete printed filled packages P with imprinted appendage L herein described.

Since it has been found that certain heat-sealing web sheet materials which readily stretch or deform when

heated but which otherwise may serve for all practical purposes in the use of packages P often are so weakened in having the tube formation transverse or end sealed that accidental breakage at or adjacent the seal often occurs while stretching without rupture of the imprinted web material effects the feeding thereof to cause undesirable dissimilarity of appearance of the recurrent web designs on the completed packages P. To practically eliminate such breakage and said undesirable effects, clamp jaws 61 and 62 may be constructed and arranged in any well understood manner, as for example, as more fully described and shown in said Patent No. 2,200,971, to include suitable means to relieve the web material being sealed from tension due to the weight of a filled tube formation T otherwise suspended directly therefrom. As seen from Figs. 2, 4 and 5, transverse seals E1 and E2 which are initially formed as E may be cross-corrugated instead of straight corrugated to provide a better bonding structure.

From the above description and drawing, it is seen that mechanism portion 11 is incorporated into said machine 10 for construction and operation in manufacturing complete packages P. With the making, filling and sealing portion 12 of machine 10 set up for manufacturing imprinted packages, a leading end of imprinted web strip Wa is first inserted between clamp jaws 61 and 62 of mechanism F and initially adjusted so that the indicia, that is, label coupon L, is properly positioned to be extended wholly between end seals E1 and E2 of each completed package P to be transversely sealed with each effective operation of said mechanism F.

Thus, as the imprinted web sheet material W of the tubular formation T is drawn down by reciprocating movement of mechanism F, web strip Wa is drawn down around roller 11k concurrently therewith under tension and when the tension is relieved by clamp jaws 61 and 62, the tension is simultaneously relieved on both the web sheet material W and web strip Wa. The latter will have the imprinted indicia thereon also simultaneously controlled and regulated to register the alignment of the label coupon L to be fully positioned between the bonded area portion of web strip Wa during each stroke of the web-feeding mechanism F of machine portion 12. Thereafter, knife K acts in the manner described above to sever the bonded sealed portion E to provide complete packages P each with an appendage L in quantity production.

It is contemplated in practicing the invention to provide when desired one or more tear-lines R extending transversely across web strip Wa. As is clear from Figs. 5 and 5b, each tear-line R may be positioned to extend adjacent the bonded portion of web strip Wa and when two spaced apart tear-lines R are so positioned on opposite sides of label coupon L, the latter may be readily wholly detached without damage or injury to the bonded end sealed structure of packages P.

In order to assure alignment of design "A" of appendage L with respect to design "B" of package P, rolls S and Sa of webs W and Wa may be printed simultaneously with designs "A" and "B" in sequence series in side by side relation on a single integral web of material and then cut apart into said separate rolls S and Sa so that any stretching or distortion of the web during the printing operation will correspond uniformly with respect to opaque spot control element 188.

It is thus seen that there is provided a package construction with detachable registered printed appendages and an apparatus and method for manufacturing such packages in which the several objects of this invention are achieved and which are well adapted to meet conditions of practical use.

As various possible embodiments might be made in the above invention, and as various changes might be made in the device and method above set forth, it is to be understood that all the matters herein set forth or

shown in the accompanying drawings are to be interpreted as illustrative and not in a limiting sense.

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

In a method of manufacturing packages from web material having a series of recurring imprints on a surface thereof with a heat-sealed attached appendage forming strip having another series of recurring imprints on a surface of said strip, printing said package imprints in prespaced recurring series side by side with said second strip imprints on a web of package forming sheet material, dividing by severing said printed webs into two separate webs, one for forming packages and the second for forming appendage strips, applying tension to said first web to draw the sheet material over a former for producing a tube formation and in unison drawing the second web to extend along said tube formation, cen-

tralizing an imprint of each of the webs with respect to a predetermined length of a finished package being manufactured by transversely heat-sealing the tube between successive imprints concurrently with attaching the appendage forming strip to simultaneously locate a complete imprint of each of the webs in registered alignment.

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