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S. J. RIVMAN ETAL

3,067,553

PACKAGING METHOD AND MACHINE

Filed July 25, 1956

3 Sheets-Sheet 1

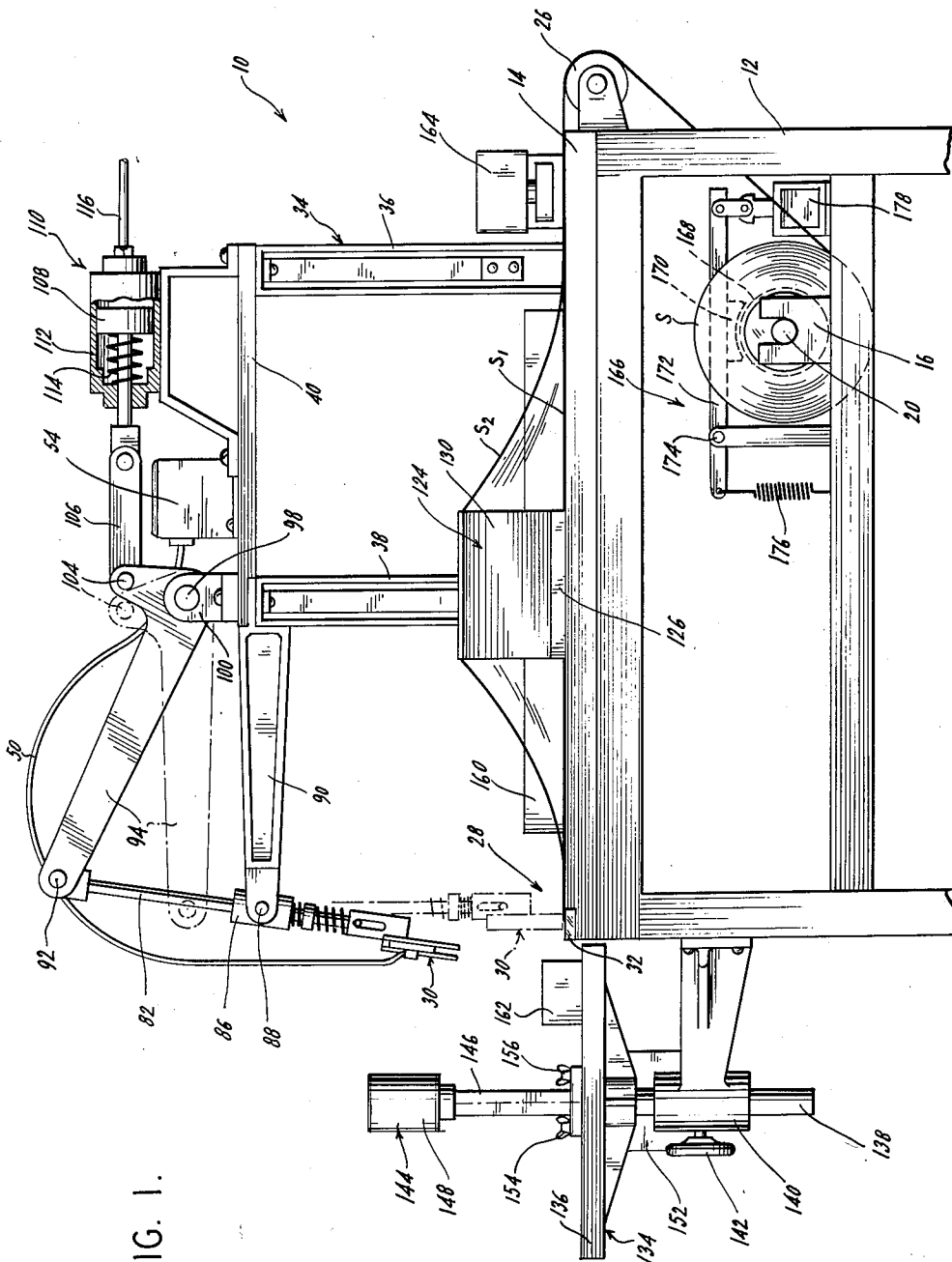


FIG. 1.

INVENTOR,
SAMUEL J. RIVMAN
JULIUS RIVMAN
BY WILLIAM A. JACOBS

Amster & Levy
ATTORNEYS

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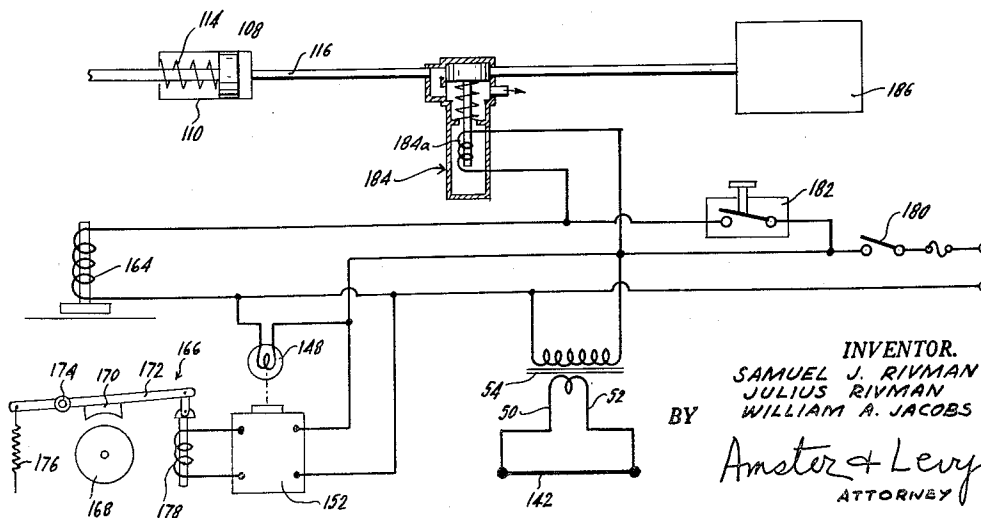
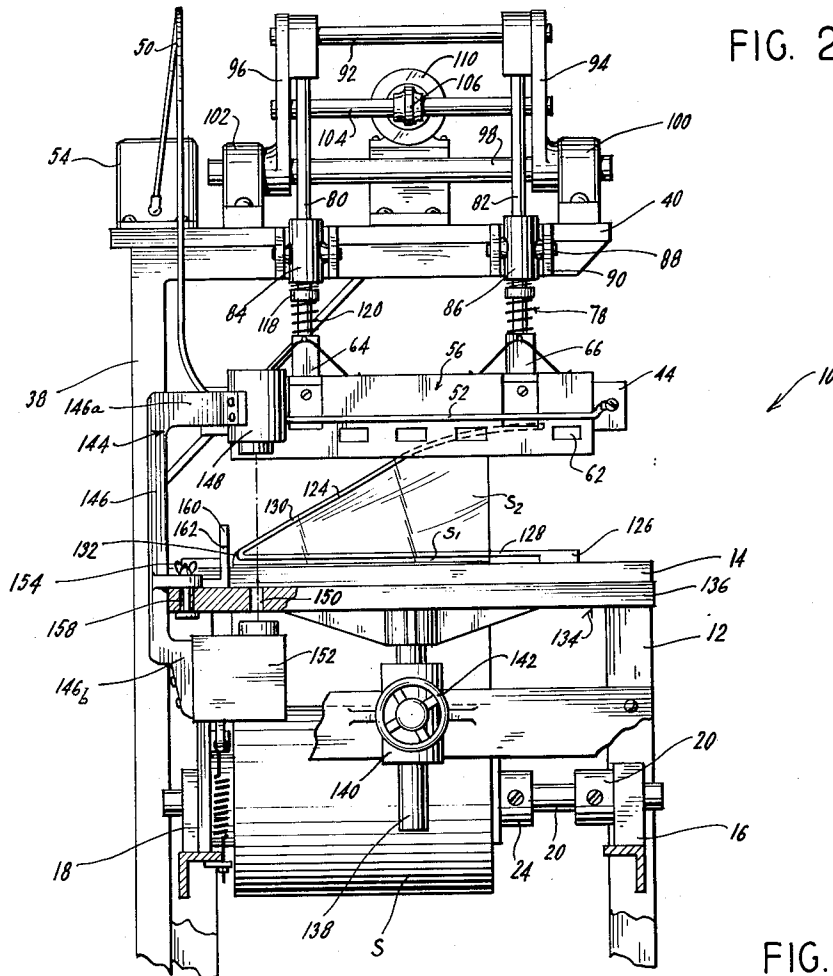
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3 Sheets-Sheet 2



INVENTOR.
SAMUEL J. RIVMAN
JULIUS RIVMAN
WILLIAM A. JACOBS

BY

Amster & Levy
ATTORNEY

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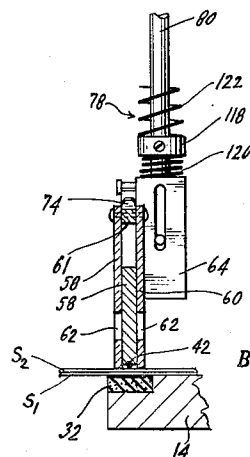
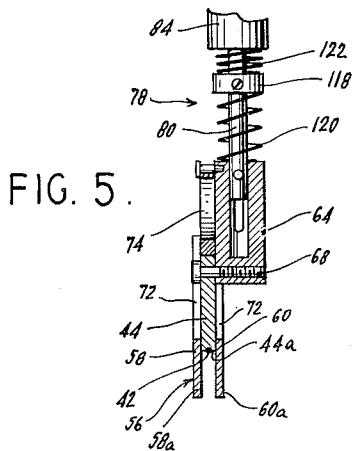
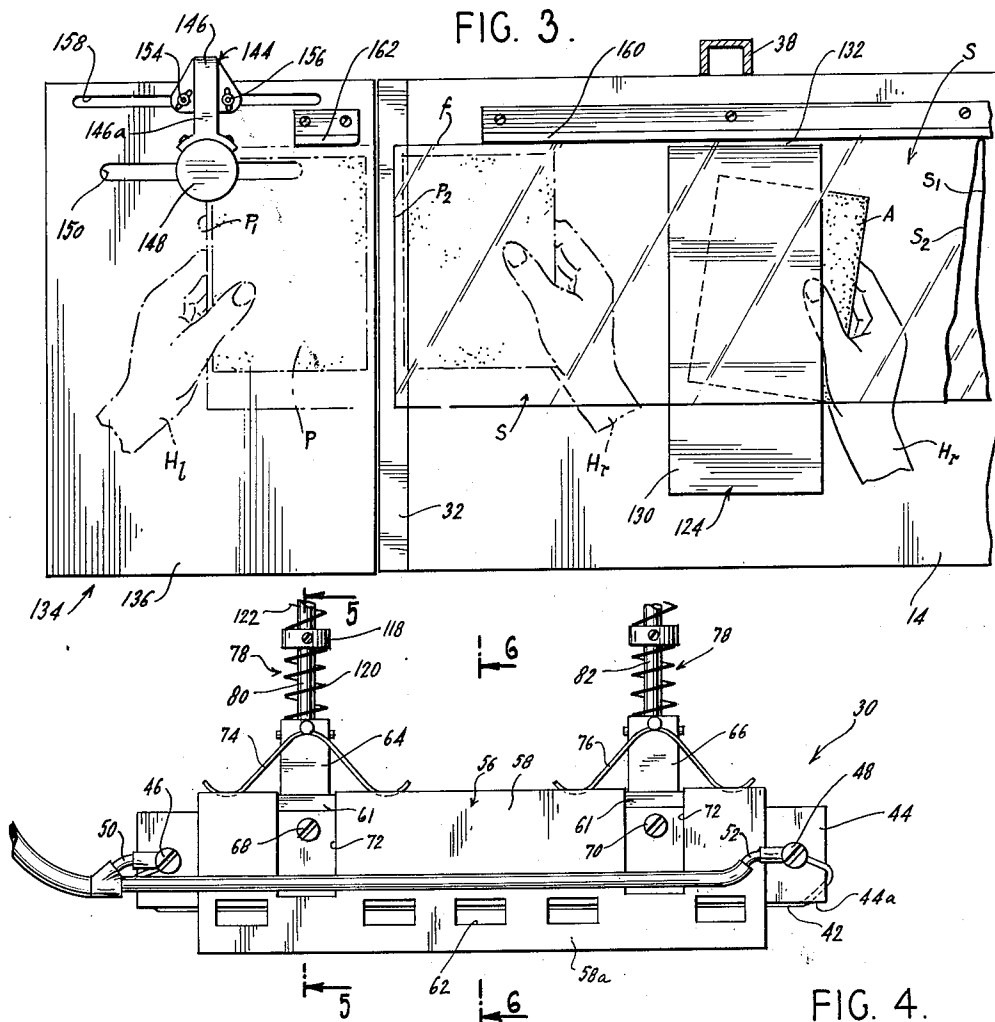
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PACKAGING METHOD AND MACHINE

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3 Sheets-Sheet 3



INVENTOR.
SAMUEL J. RIVMAN
JULIUS RIVMAN
WILLIAM A. JACOBS

BY

Ametex & Levy
ATTORNEYS

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3,067,553

PACKAGING METHOD AND MACHINE

Samuel J. Rivman, Roslyn Heights, Julius Rivman, Forest Hills, and William A. Jacobs, Flushing, N.Y., assignors, by mesne assignments, to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

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5 Claims. (Cl. 53—28)

The present invention relates generally to a packaging method and machine, and in particular to an improved and simplified process and apparatus for substantially simultaneously filling and manufacturing of tailored bags or enclosures for a wide variety of objects.

Present day merchandising techniques have brought about the need for packaging of items in individual fitted bags or enclosures. Among the items which are now being packaged in clear films, such as polyethylene, Pliofilm and cellophane are various soft goods including shirts, blouses, uniforms, pillow cases, pajamas, children's wear, sweaters, curtains, underwear, robes, as well as hard goods including toys, games, tools, food stuffs, and similar products. A common approach to the packaging of these articles involves the purchase of completed bags, which are initially constructed and printed for the particular article, and hand filling. Such hand filling of the individual bags is quite difficult and time consuming, especially when employing a bag which is closely fitted to the article. Accordingly, resort has been made to package-filling aids which open the bag to facilitate easier access to the interior thereof. In a typical package-filling aid, a supply of bags is loaded at one side of a duck-bill guide and the article to be filled is advanced toward the bag through the duck-bill guide. A blower is directed toward the mouth of the bag so that the item may be guided into the air-open bag. Initially, the operator must bring about some separation between the opposed portions of the bag adjacent the mouth so that the air may distend the bag to its open condition. For thinner gauge materials, it becomes exceptionally difficult and time consuming to open the bag even when employing a packaging aid. This may be attributed to the static attraction or tendency to cling of superposed plies of packaging films. As a practical matter, the thinnest gauge packaging material that may be used is of the order of one and one-quarter mils. This approach to individual packaging of articles is inherently expensive, from the standpoint of the cost of the initial bag, the equipment necessary to fill the bag, and the time and labor required to fill the bag.

A number of different automatic machines have been suggested for manufacturing bags and for automatic filling of the bags. Typical of these machines are those working with polyethylene film in which a continuous strip of material is folded longitudinally to provide opposed sections joined at a fold line. The folded strip is then formed into a series of connected bags or envelopes, each having an upwardly directed open mouth for the insertion therein of an article or quantity of fill. The individual bags are constructed by sealing the opposed sections together along lines extending at right angles to the fold line. Filling of the connected bags is achieved by provision of a filling funnel which enters the open mouth of the bag and through which a measured quantity of bulk material or an article is guided into the bag. This filling operation presents a rather difficult problem, particularly in view of the tendency of the packaging materials to cling or stick together by static forces. Again, some positive means are required to separate the confronting sections adjacent the mouth prior to insertion of the filling

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funnel into the completed bag. As a practical matter, the filling problem has made it necessary to construct the bags somewhat larger than the articles to render insertion somewhat easier and more feasible on a mass production basis.

Apart from the inherent complexities of this approach, machines of this type are limited in their use to packaging hard goods, preferably measured quantities of small articles which are to be packaged as a unit. This type of equipment is not suited for the packaging of soft goods, due in part to the tendency of such soft goods to fall to the bottom of the package. This results in distortion of the package and does not present a neat and attractive unit for sale. Further, these machines cannot attain the requisite versatility for the varying packaging problems which are encountered from day to day in the typical manufacturing operation. For example, a manufacturer of shirts must package articles of different sizes, different colors, and different styles. Normally, each would require a specially prefabricated package of the proper size and having appropriate size, color, and style indicia printed thereon. Further, the cost of installing and maintaining equipment suitable for each size of package would be prohibitive. On the other hand, it is difficult to convert a single machine over from one packaging operation to another. Such changeovers are required quite frequently, and each involves a substantial amount of work by a skilled mechanic.

Still further, machines are available which continuously form polyethylene film into a generally tubular configuration about articles placed at spaced intervals along the tube. Provision is made for continuous lengthwise sealing along the top of the tube and at spaced intervals transversely of the tube so that individual packages may be constructed. Apart from the high cost of this type of equipment, the completed package does not permit access to the contents thereof without the destruction of the package. Thus, as a practical matter it is impossible to use this type of package for merchandising the many items which must be withdrawn from the package for inspection by a potential purchaser. Once again, this type of equipment does not exhibit the needed flexibility for changeover to handle the wide variety of items which are packaged by a typical manufacturer.

It is broadly an object of the present invention to provide an improved packaging method and apparatus which obviates one or more of the aforesaid difficulties. Specifically, it is within the contemplation of the present invention to provide for the rapid and economic packaging of articles by a process and apparatus characterized by their versatility and adaptability to readily enclose a wide variety of articles in properly fitting bags or envelopes.

In accordance with method aspects of the present invention, articles are packaged in a length of stock which is folded longitudinally to include superposed sections joined at a fold line. The superposed sections are joined together along a first line seal extending substantially transverse to the fold line to complete one side of a package or envelope. The article is inserted between the sections into a position extending to one side of the first line seal. Thereupon, the other side of the package or envelope is completed by the formation of a second line seal which is spaced from the first line seal in accordance with the width of the packaged article. The formation of the line seal completing one package, provides the requisite line seal for the first side of the next package, the sealing and trimming operations being carried out simultaneously. One of the most pronounced advantages of the present method is the ability to insert the article into the partially-completed package conveniently and quickly. This convenient way of filling may be compared

with systems wherein the package is filled through a mouth close in size to the article to be packaged and its attendant difficulties.

In accordance with further aspects of the present invention, a packaging machine is provided which includes sealing and trimming means operative in a sealing zone for joining and cutting off superposed sections of heat-sealable material along seal lines extending substantially at right angles to the fold line of the material. A spreader is provided in advance of the sealing zone for continuously maintaining the sections separated whereby successive articles can be placed into a partially completed bag by insertion at its open side. The assembly of the article and the partially-completed bag is advanced horizontally past the sealing zone, manually or automatically, to a position wherein the sealing and trimming means is again employed for joining and cutting off the sections along a second sealing line to complete the package.

Among the advantages realized in accordance with the present invention are substantial savings in initial material cost, labor and packaging time. The capacity to make many size packages eliminates the need for maintaining inventories of different size bags. Further, the combined package filling and sealing operation eliminates the necessity of a separate filling step and the use of ancillary bag filling aids. Still further, the horizontal packaging system makes the same particularly suitable for packaging of soft goods and does not present the problem of the goods falling to the bottom of the package. Still further, the completed package has an open flap or mouth which is exceptionally useful for display, demonstration, inspection and trying on by customers. Still further, a manufacturer is able to tailor bags to the size of the article to be packaged therein and, as will appear hereinafter, is able to stamp or print onto the individually-tailored bags designations of size, color, and the like for even comparatively short runs. Still further, the present method inherently eliminates the problems incident to overcoming static forces when attempting to fill completed packages and thereby allows the manufacturer to use exceptionally thin packaging films.

The above brief description, as well as further objects, features and advantages of the present invention, will be best appreciated by reference to the following detailed description of an illustrative method and apparatus, when taken in conjunction with the accompanying drawings, wherein:

FIG. 1 is a front elevational view of a packaging machine embodying features of the present invention;

FIG. 2 is an elevational view, with parts broken away and sectioned, taken from the left of FIG. 1;

FIG. 3 is a fragmentary plan view of the table and adjustable table extension of the present packaging machine, several successive positions during a typical assembly operation being illustrated by dot-dash lines;

FIG. 4 is a side elevation view, on an enlarged scale and with parts broken away, showing the details of the sealing head of the present packaging machine;

FIG. 5 is a sectional view taken substantially along the lines 5—5 of FIG. 4 and looking in the direction of the arrows;

FIG. 6 is a sectional view taken substantially along the lines 6—6 of FIG. 4, but showing the guard of the sealing head in its retracted position; and,

FIG. 7 is a schematic and diagrammatic representation of a typical control circuit for the several component mechanisms of the present packaging machine.

Referring now specifically to the drawings, there is shown a packaging machine 10 embodying features of the present invention which includes an elongated table 12 having an elongated flat top 14. Although the top 14 is illustrated as extended in a horizontal plane, in some

instances it may be advantageous to incline the top, as will be detailed hereinafter.

A roll supply of packaging stock, generally designated by the letter S, is supported in the illustrative apparatus beneath the table top 14 in position for feed lengthwise of the table top. For large and heavy rolls, an extension may be provided to the right of the table (as viewed in FIG. 1) to accommodate the supply of stock. The supply S of packaging material is in the form of a folded length of sheet stock which includes superposed sections s_1 , s_2 adjoining at a longitudinally-extending fold line f . Olefin resin sheeting is useful in accordance with the present invention (i.e., polyethylene sheet or folded stock) and is characterized by its ability to be sealed or fused by the application of heat and pressure. The supply of material is supported on opposed upstanding bearings 16, 18 which cradle opposite ends of a supporting shaft 20 which receive the roll. Appropriate stop collars 22, 24 orient the material supply S in relation to the table 12. The material passes over an idler roller 26 which is journaled at the adjacent end of the table 14 and onto the flat upper surface of the table top 14. The folded length of material then passes lengthwise of the table toward a sealing zone or location 28 at the end of the table top 14 remote from the idler roller 26.

A sealing and cutting head 30 is arranged at the sealing location or station 28 to provide successive trimmed seal lines p_1 , p_2 joining the superposed sections s_1 , s_2 substantially at right angles to the fold line f . The sealing head 30 is movably mounted and is adapted to be brought into the broken-line position of FIG. 1 wherein the sealing head cooperates with a resilient platen or base 32 for forming the line seals, as will be fully described hereinafter. In the illustrative apparatus, the sealing head 30 and its associated mechanisms are mounted on a framework 34 which includes uprights 36, 38 at the rear side of the table top 14, and an overhanging platform 40 which extends forwardly from the upright 36, 38 over the table top 14. The platform 40 carries the mechanisms which mount the sealing head 30 for movement between the full and broken-line positions of FIG. 1.

The details of the sealing and cutting head 80 are seen best in FIGS. 4 to 6 inclusive. The head includes a resistance wire 42 for sealing and cutting which is supported on the lower or leading face 44a of a backup member 44. The wire 42, which may be of Nichrome, is partially seated within a complementary channel or groove formed in the leading face 44a of the backup member 44 so that it is confined and supported in a straight line with a substantial portion projecting below the face 44a. In the illustrative apparatus, the wire 42 has a round cross-section and is straight. However, the section and configuration of the wire is subject to a latitude of change. For example, the wire may be in the form of a helix or spiral whereby a transversely perforated seal is formed. Further, the wire may have cut-outs at spaced locations along its length whereby the same is effective to produce a longitudinally perforated seal. Still further, the wire may be shaped in length to form other than linear seals. Opposite ends of the wire 42 are connected to terminals 46, 48 on the backup member 44 to which are connected the respective lines 50, 52. The lines 50, 52 are connected to a high current, low voltage source provided by the secondary of a variable transformer 54 (FIG. 1) which is mounted on the platform 40 and has its high voltage primary connected to a suitable source of line potential. The provision of the variable transformer 54 or powerstat allows for adjustment of the temperature of the sealing and trimming wire in accordance with the type and gauge of the sealing material.

Slidably mounted on the backup member 42 is a combined wire guard and stripper 56 which includes guard plates 58, 60 and a connecting bar or spacer 61. In the retracted position of the sealing head 30, the spacer 62

lies against the upper edge of the backup member 44 (see FIG. 5) and the lowermost ends 58a, 60a of the plates 58, 60 extend to a location well below the wire 42. Thus, the resistance wire 42 is enclosed and protected. Accidental access to the wire is virtually precluded due to the relatively narrow width of the backup member 44 and the comparative close spacing of the guard plates 58, 60. A number of air-circulating openings, one being designated by the reference numeral 62, are provided in the guard plates 58, 60 at spaced locations along their lengths to conduct away some of the heat resulting from the passage of current through the resistance wire.

It has been found most advantageous to fabricate the backup member 44 as well as the guard plate 58, 60 of laminated fiber glass, such as is sold under the trademark Mycalex, which laminate is a poor heat conductor, yet has good strength at high temperatures. It has been found possible to operate a resistance wire of No. 18 gauge Nichrome from a 110 volt A.C. stepped down to 12 volts without excessive heating of the guard plates 58, 60.

The combined wire guard and stripper 56 rests upon the backup member 44 which in turn is carried by blocks 64, 66 of a balanced spring suspension 78. As seen in FIGS. 4 and 5, the blocks 64, 66 are connected to the backup member 44 by bolts 68, 70 which extend through the backup member 44 and are engaged in appropriate threaded holes in the respective blocks 64, 66. The guard plates 58, 60 are cut away, as indicated at 72, to allow for relative movement between the backup member 44 and the plates 58, 60. Appropriate leaf springs 74, 76 are carried by the blocks 64, 66 and bear against the spacer 61 of the combined wire guard and stripper 56 to urge the wire 42 into the retracted position of FIGS. 4 and 5. As will appear hereinafter, the leaf springs 74, 76 permit the backup member 44 and the heated resistance wire 42 to be advanced against the material passing over the resilient platen 32 after the leading ends of the plates 58, 60 are in position to clamp the material against the platen.

The balanced spring suspension 78 includes mounting shafts 80, 82 which are connected to the respective suspending blocks 64, 66. The mounting shafts 80, 82 extend slidably through sleeve bearing 84, 86 each of which is journaled for pivotal movement by stub shafts 88 which are engaged within brackets 90 carried by the platform 40. The upper ends of the mounting shaft, 82 are connected by a cross shaft 92 which is pivoted between the longer arms of bell crank levers 94, 96. The bell crank levers are in turn pivoted by a shaft 98 received within bearings 100, 102 carried on the platform 40. The shorter arms of the bell crank levers 94, 96 are interconnected by a further cross shaft 104 which is coupled by a link 106 to the piston 108 of a pneumatic driver 110 which includes a piston cylinder 112, a biasing spring 114, and an air inlet 116. In response to the admission of air into the driver 110, the piston 108 travels through a prescribed forward stroke placing the spring 114 in compression and imparting motion to the link 106, which through its coupling to the balanced spring suspension, rocks the bell crank levers 94, 96 in the counterclockwise direction on their axis 98 and causes the sealing head 30 to move from the retracted full-line position to the extended broken-line position. Upon release of pressure in the driver 110, the spring 114 restores the suspension to the retracted position.

On each of the mounting shafts 80, 82 intermediate the respective suspending blocks 64, 66 and the sleeve bearings 84, 86 there is provided an adjustable stop collar 118 and a pair of springs 120, 122. The springs 120 serve to cushion the sealing head 30 when driven into contact with the platen 32, the springs 120 being placed in compression in the event that the driving force of the head 30 against the platen 32 is excessive. On the return stroke of the head to the retracted position, the

springs 122 are effective to cushion the suspension. The spring suspension system has been found to be particularly useful to compensate for the slight variations in stroke length imparted by the drive 110. When the sealing head 30 is driven downwardly, the leading ends 58a, 60a of the guard plates 58, 60 engage the platen 30 on opposite sides of the location which is to be sealed and trimmed. As the drive continues, the backup member 44 and the spring 42 translate downwardly in the guide way defined between the lowermost ends 58a, 60a of the guard plates 58, 60 and eventually the heated resistance wire 42 comes into contact with the folded stock S which is gripped between the plates 58, 60. Relative motion between the backup member and the guard plates 58, 60 is taken up by the leaf springs 74, 76 which are somewhat flattened out. The contact of the heated resistance wire 42 against the superposed sections s_1 , s_2 causes the formation of a seal between the sections and simultaneously severs or cuts the sections. The heated resistance wire 42 provides a comparatively wide seal and severs the seal along its center line. In effect, each operation of the heated resistance wire 42 forms two seals which complete the second side of one bag and the first side of the next adjacent bag. The reliable formation of the seal throughout the length of the heated wire 42 is assured by the floating or spring suspension for the sealing head 30. In this preferred form, the platen 32 is fabricated of a neoprene or rubber base and is covered by a sheet of fiber glass which is coated with Teflon to prevent sticking of material to the platen. The platen is resilient yet is capable of withstanding the temperatures of the heated resistance wire 42.

In advance of the sealing zone 28 there is provided a V-shaped spreader 124 which serves to separate the superposed sections s_1 , s_2 of the folded sheet stock S as it passes along the table 14. The spreader 124 includes a mounting block 126 which maintains the lower plate 128 of the spreader in spaced parallel relation to the table top. Thus, the bottom section s_1 of the supply S is provided with sufficient clearance to pass beneath the spreader plate 128 and over the table top 14. The lower spreader plate 128 carries a top spreader plate 130 which extends from the rear side of the plate 128 toward the front and makes an included angle of approximately 45°. The spreader plates 128, 130 meet at an apical line 132 along which the fold f of the supply S is advanced during operation of the machine. The angle formed between the spreader plates 128, 130 may be varied in accordance with operational requirements to afford the required space between the sections s_1 , s_2 for the insertion therebetween of the article A to be packaged. Within the contemplation of the present invention is a spreader in which the blades are adjustable relative to each other to change the included angle therebetween. Further, for handling stock of various width it may be desirable to mount the entire spreader for adjustment fore and aft of the table top, so that the operator may work as close to the front of the table as is possible. As will be more fully appreciated from a description of a typical sequence of operations, which follows hereinafter, the spreader 124 serves to provide easy insertion of an article into the partially-formed bag at the sealing station.

Disposed to the left of the table 12, as seen in FIG. 1, is an adjustable-height table extension 134 which includes a top 136 mounted on a depending supporting shaft 138 which is slidably and non-rotatably mounted in a sleeve bearing 140. A hand wheel 142 is threaded into the sleeve bearing 140 and engages the supporting shaft so that the extension top 136 may be fixed in various positions of adjustment relative to the main table top 14. The provision for adjustability of the table extension 134 is particularly useful when packages are to be formed about an article of appreciable height. By adjusting the table top extension 136 so that the mid-plane of the article A lies substantially in the plane of the top face

of the platen 32, both layers or sections of the packaging material will be equally wrapped about the article and positioned on the platen 32 for sealing. Of course, there will be a tendency for both the bottom and top layers of the material S to contour about the article A so that the seals will be formed in a plane substantially midway between the upper and lower faces of the article.

The adjustable-height table extension 134 carries a sensing unit 144 which is energized or tripped by the package to bring about operation of a feeder braking mechanism which will be subsequently described. The sensing unit 144 includes a C-shaped bracket 146 which has one arm 146a extending above the table top 136 and has another arm 146b extending below the table top. The upper arm 146a carries a light source 148 which is directed through an elongated longitudinal slot 150 in the table extension and toward a photocell relay 152. The entire sensing unit 144 is mounted for adjustment toward and away from the platen 32 and the sealing location 28 by mounting studs 154, 156 which ride within a slot 158 along the rear side of the table extension. The sensing unit 144 is fixed at a location corresponding to the width of the desired package; and when a wider or narrower package is to be formed, the sensing unit 144 is appropriately moved in relation to the sealing zone 28.

In order to facilitate the guiding of the packaging material S in relation to the sealing and sensing units, aligned guide flanges 160, 162 are provided respectively on the top 14 of the table 12 and on the top 136 of the table extension 134. The flange 160 is spaced from the apical line 132 of the spreader 124 by a distance permitting the insertion therebetween of the stock S. The flange 162 is aligned with the flange 160.

In advance of the V-shaped spreader 124, there is arranged a printing unit 164 which is controlled electrically by the operator as will be hereinafter described. The printing unit 164 is of conventional structure and accordingly will not be described in detail. Its function is to apply appropriate indicia to the stock S for the particular articles being packaged. Usually, the packaging material is printed except for certain designations which can only be applied after it is determined what is to go into the package. For example, in packaging shirts, size, color and style designations are only determined during the final packaging operation. Cost considerations dictate that the printing on the initial run be common to all styles, sizes, colors, etc. Conveniently, the printing unit 164 provides a means by which it is possible to tailor the printing on each package for the particular article. As will be detailed hereinafter, the printing unit 164 operates simultaneously with the sealing head 30, at which time the stock S is stationary. The printing unit 164 is located a fixed number of package lengths away from the sealing zone to obtain proper registry with the previous printing on the stock, as is well understood in the art.

Associated with the stock supply or feed is a braking mechanism 166 including a brake drum 168 and a movable brake shoe 170 carried on a pivoted lever 172. The lever 172 is pivoted at 174 and has a spring 176 connected to its short arm to normally bias the shoe 170 out of contact with the band 168. A solenoid-controlled relay 178 is fixed to the long arm of the lever 172 and is effective under control of the sensing unit 144 to brake the stock supply S before the sealing operation. As the package P is brought to a position wherein the sensing unit 144 is tripped, a brake is applied to the supply which prevents overfeed of the supply and aids the operator in attaining proficiency, speed, and uniformity in package size.

Reference will now be made to the schematic and diagrammatic showing of FIG. 7 for a description of the control circuit which coordinates the several components of the packaging machine. A main control switch 180 is provided in the input line 50 which is closed to condition the machine for operation. Closing of the switch 180

connects the resistance wire 42 via the transformer 54 to the input lines 50, 52 and energizes the photo relay 152 which controls the braking mechanisms 166. The printer 164 is connected to the lines 50, 52. A solenoid-controlled air valve 184 has its energization coil 184a connected to the input lines 50, 52 via the foot switch 182. The valve, which is of conventional structure, serves to connect an air compressor 186 to the inlet 116 of the pneumatic driver 110, the valve having the usual provision for bleeding off the air after each successive operation.

In a typical packaging cycle, the operator advances the partially completed package to the sensing location which breaks the supply S of stock and thereupon the operator depresses the foot switch 182. Upon closing of the foot switch 182, the printer 164 is operated and simultaneously the air compressor 186 is connected to the inlet 116 of the pneumatic actuator 110 to bring about operation of the sealing head 30. Operation of the sealing head completes the package P which then is removed from the table extension 134 whereby the photocell relay is restored to its normal condition and releases the braking mechanism 166. The photocell relay 152 may be of the on-off type or arranged to respond to a change in light level. Thus, when working with relatively clear stocks, the mere presence of the several layers of stock in the light path may be sufficient to initiate the braking operation. Optionally, the photocell sensing unit 144 may be arranged to actuate the entire system in lieu of the separate foot switch control 182. However, it has been found that the separate control of the sealing head 30 minimizes the possibility of an operator accidentally having one of his hands beneath the sealing head at the time of its operation. The operator depresses the foot switch 182 while removing the completed package with his left hand, and while in the act of inserting the next article A into the partially-completed package with his right hand. The positive control of the sealing head 30 by the foot switch 182 further avoids spurious operation of the sealing head 30 as might occur with a rather critical photoelectric control.

An actual packaging sequence will now be described in conjunction with FIGS. 1 and 3. The operator grasps the article A to be packaged in his or her right hand H_r and thrusts the same between the superposed sections s_1, s_2 in the region of the spreader 124 and advances the article to the first dotted line position wherein the article A extends to the right of the resilient sealing platen 32 and the trimmed side seal p_1 at the platen. When the article A is in the partially-completed bag or package defined by the one side seal p_1 and the fold f , the operator pulls the package with his left hand H_l over the extension 134 of the table top. When the portion of the package adjacent the first edge p_1 comes beneath the sensing unit 144, the feed of the stock S is held back by the braking mechanism 166 and the operator knows that the uncompleted and open side of the package P is in position on the resilient platen 32 for sealing by the operation of the sealing head 30. Thereupon, the operator hits or trips the foot switch 182 causing the sealing head to provide the second trimmed side seal p_2 which completes the package P and forms the first side seal of the next-adjacent package.

By changing the width of the folded stock and the location of the sensing unit 144 a wide variety of articles may be wrapped in accordance with the present method and with the illustrative apparatus. The method is particularly suited to the high speed semi-automatic packaging and finds application in many industries where heretofore the varied packaging requirements from day to day make it prohibitive or impossible to use presently available equipment and methods.

A latitude of modification and substitution is intended in the foregoing disclosure. For example, it may be desirable to employ the packaging apparatus in position

wherein the table 14 is inclined downwardly toward the sealing zone 28 whereby gravity will aid in the assembly of articles and the advance of the articles in relation to the sealing zone. With this type of arrangement, it is desirable that the table extension 134 be appropriately foreshortened so that the operator may sit at the left of the machine, that is facing the side of the sealing head 30.

Other variations and modifications are intended. Accordingly, it is appropriate that the appended claims be construed broadly and in a manner consistent with the spirit and scope of the present invention.

What we claim is:

1. A packaging machine comprising an elongated table along which a folded length of material having superposed sections joined at a fold line is to be advanced toward one end thereof, a sealing head at said one end of said table including a wire extending transverse to said table, means for heating said wire, means mounting said sealing head for movement toward and away from said table, a platen on said one end of said table cooperating with said wire in forming a trimmed seal between said superposed sections extending substantially at right angles to said fold line, means operatively connected to said sealing head and normally maintaining the same in a retracted position spaced from said table, means adapted for control by an operator and operatively connected to said sealing head for moving said sealing head toward said table to bring said wire into cooperating relation with said platen, a spreader including spaced spreader arms arranged on said table in advance of said platen for separating said superposed sections of said folded length whereby an article can be inserted between said superposed sections, a table extension beyond said platen located to support said article in position for sealing said superposed sections therebehind, means mounting said table extension for height adjustment relative to said table whereby to align the surface of said table with the mid-plane of articles of varied thicknesses for sealing said superposed sections symmetrically thereabout, and means for fixing said table extension in selected positions of its adjustment.

2. The method of packaging articles employing a folded length of heat-sealable material having superposed sections joined at one side along a fold line comprising the steps of opening the folded length by drawing the leading end of said folded length of heat-sealable material past a hollow, V-shaped spreader having an open inlet side parallel to and adjacent the open side of folded material and an open outlet side disposed at right angles to the path of travel of the folded material and adjacent a transverse sealer, sealing the leading end of said folded material, forwardly of the spreader, transversely of the length of material while leaving the open edge unsealed, inserting an object in the spread open edge through the inlet side of the spreader and behind the transversely sealed end, moving the folded material and object past the spreader and transverse sealer with said object passing through the open outlet side of said spreader, and simultaneously sealing and severing said folded web along a second transverse seal line behind the inserted article.

3. Apparatus for packaging articles comprising a support for a supply of heat-sealable material having superposed sections joined at one side along a fold line, a hollow spreader fixed to said support, said spreader having joined spaced spreader arms forming an open inlet side

disposed along a line parallel to and adjacent the open side of said folded material and an open outlet side disposed at right angles to said inlet side, a transverse sealer and cutter disposed adjacent the outlet side of the spreader for simultaneously sealing and cutting the folded material in a direction transverse to said fold line while leaving the open side of said folded material in an unsealed condition.

4. The method of packaging articles employing a folded length of heat-sealable material having superposed sections joined at one side along a fold line comprising the steps of opening the folded length by drawing the leading end of said folded length of heat-sealable material past a spreader having an open inlet side parallel to and adjacent the open side of folded material and an open outlet side disposed at right angles to the path of travel of the folded material and adjacent a transverse sealer, sealing the leading end of said folded material, forwardly of the spreader, transversely of the length of material while leaving the open edge unsealed, inserting an object in the spread open edge through the inlet side of the spreader and behind the transversely sealed end, moving the folded material and object past the spreader and transverse sealer with said object passing through the open outlet side of said spreader, and simultaneously sealing and severing said folded web along a second transverse seal line behind the inserted article.

5. Apparatus for packaging articles comprising a support for a supply of heat-sealable material having superposed sections joined at one side along a fold line, a spreader fixed to said support, said spreader including spreader arms forming an open inlet side disposed along a line parallel to and adjacent the open side of said folded material and an open outlet side disposed at right angles to said inlet side, a transverse sealer and cutter disposed adjacent the outlet side of the spreader for simultaneously sealing and cutting the folded material in a direction transverse to said fold line while leaving the open side of said folded material in an unsealed condition.

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