Feb. 19, 1957 W. M. SHOFFNER 2,781,622

PACKAGING DEVICE

Filed Oct. 2, 1953

5 Sheets-Sheet 1

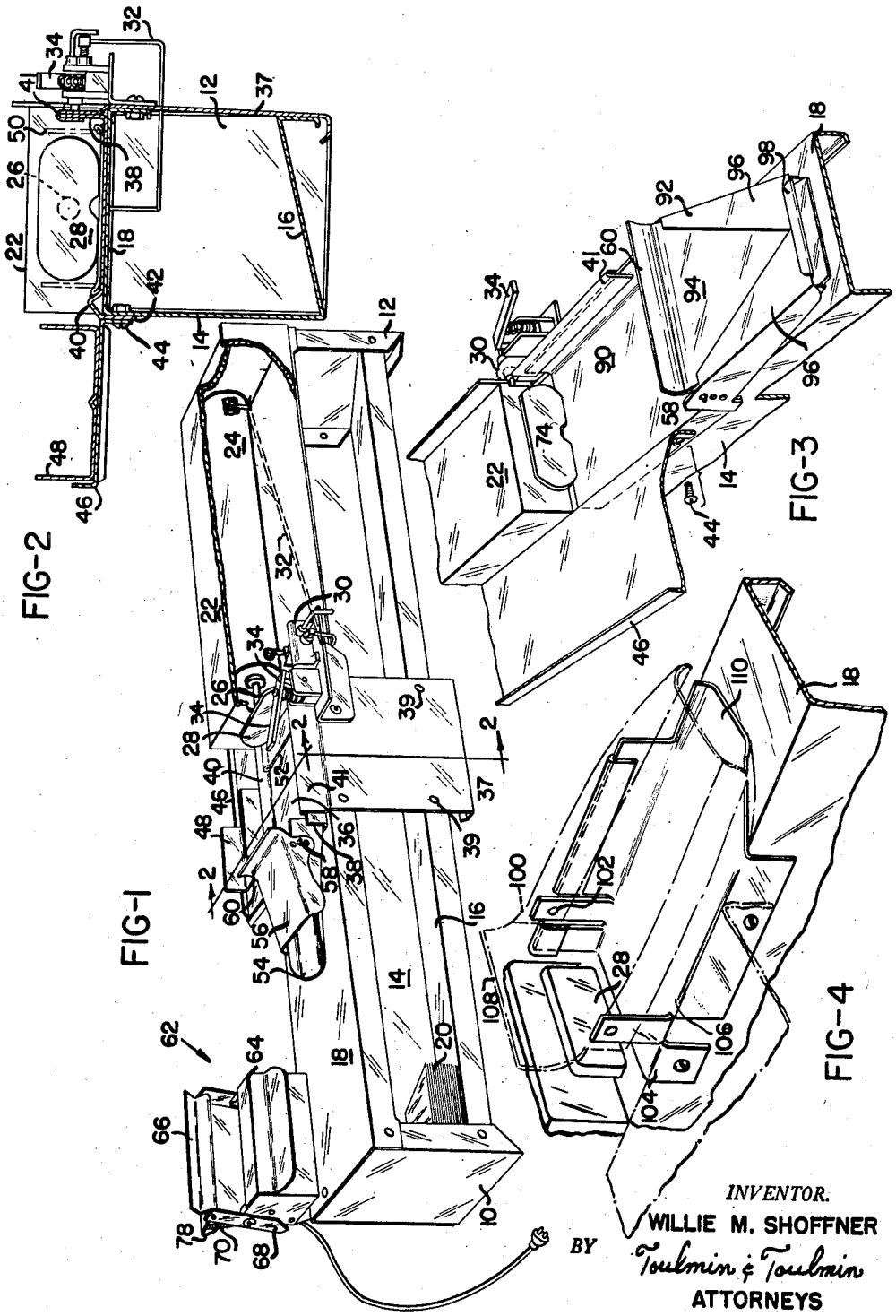


FIG-1

FIG-2

FIG-3

FIG-4

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FIG-5

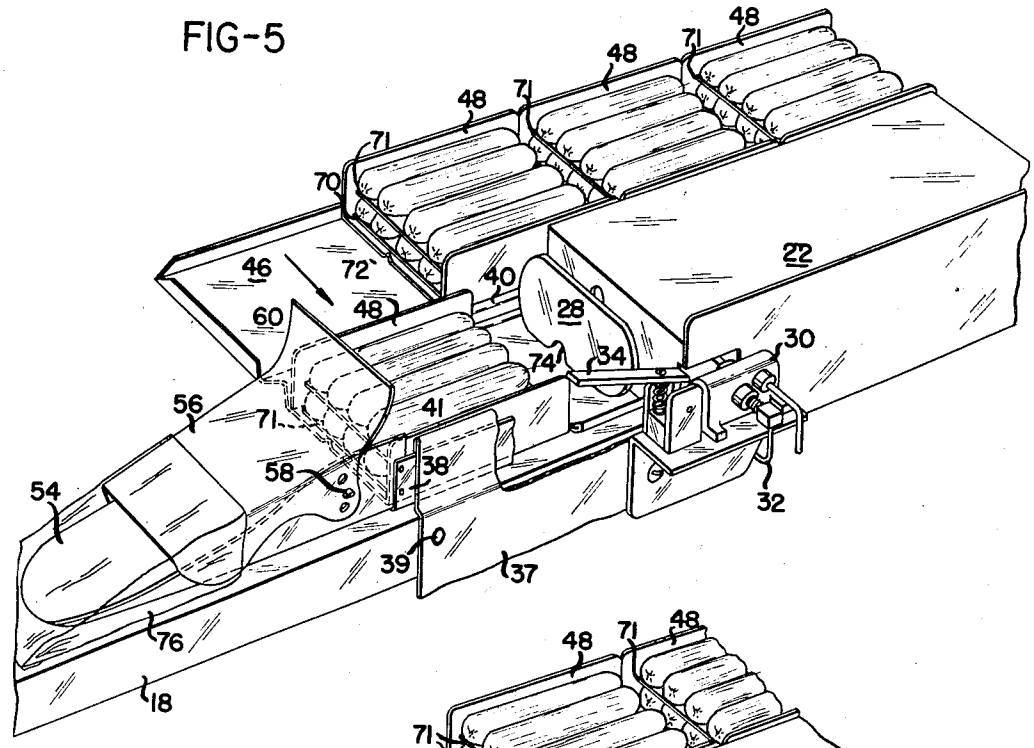
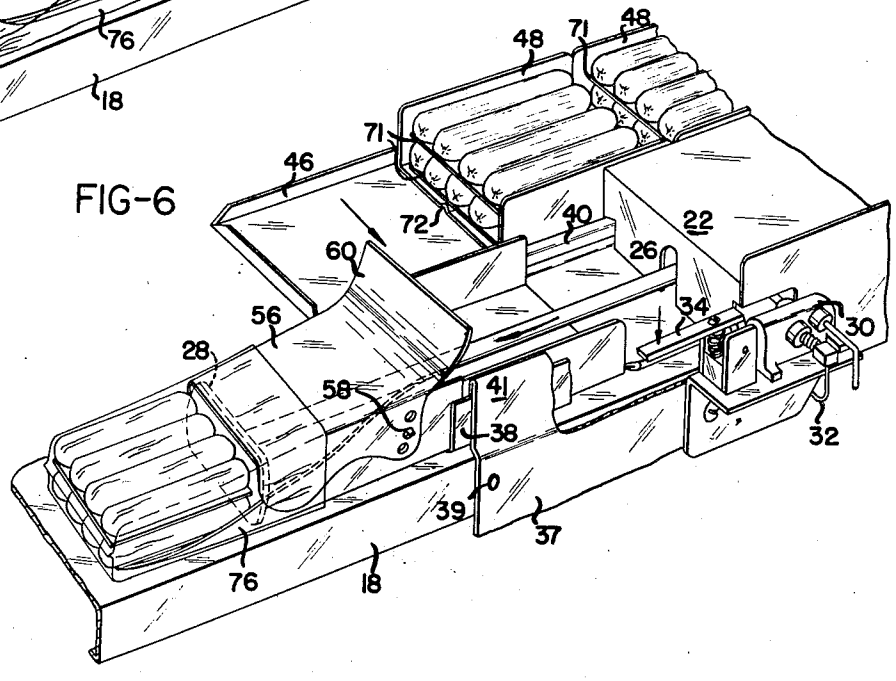



FIG-6




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PACKAGING DEVICE

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FIG-7

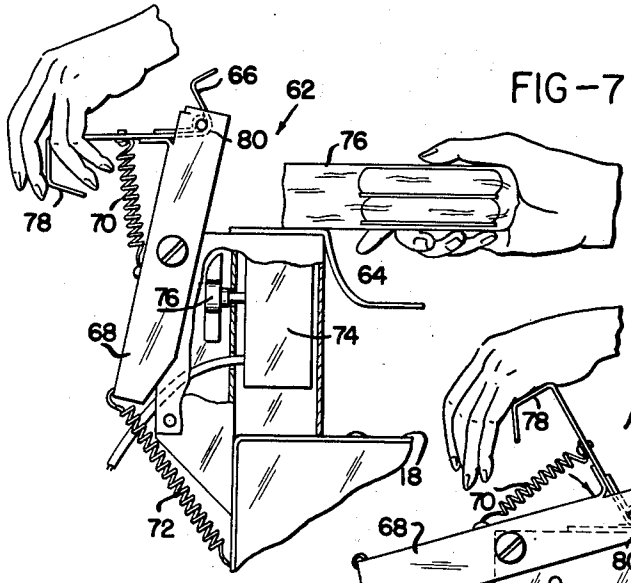



FIG-8

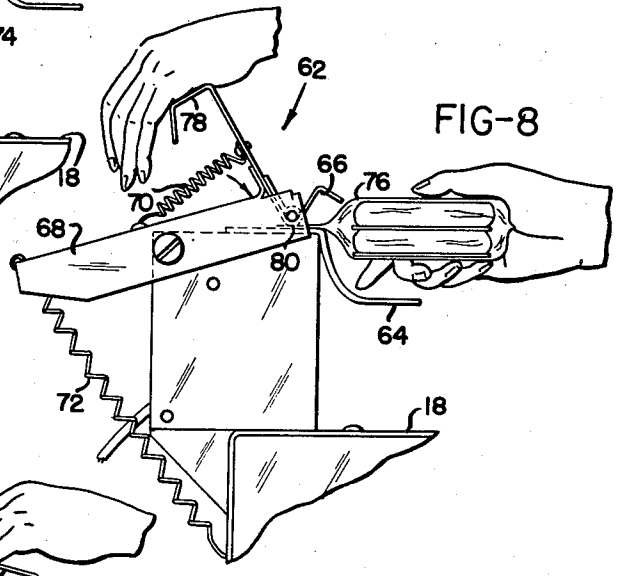
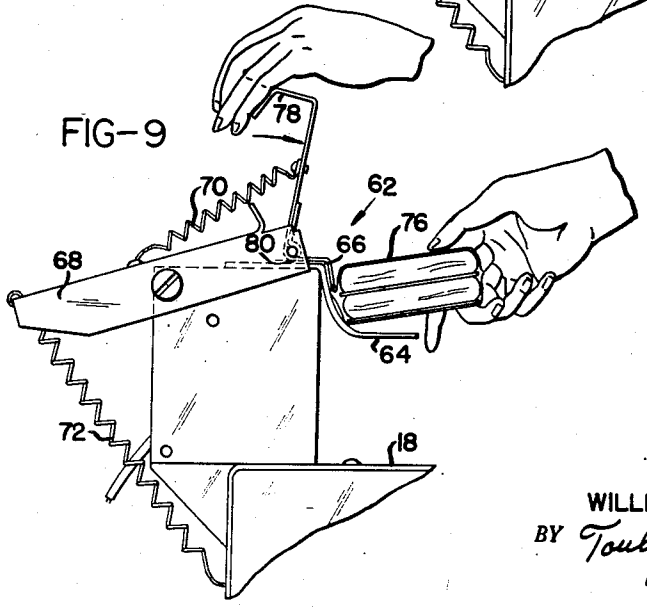



FIG-9




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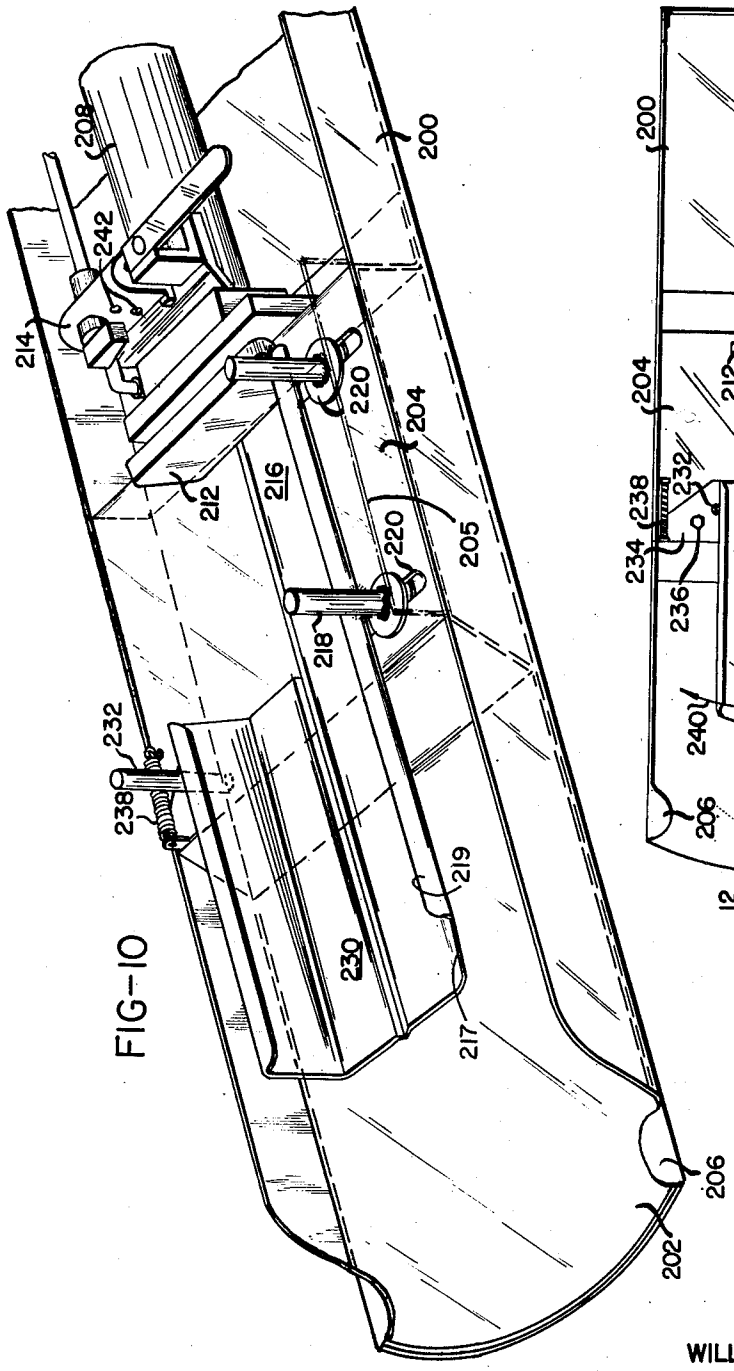



FIG-10

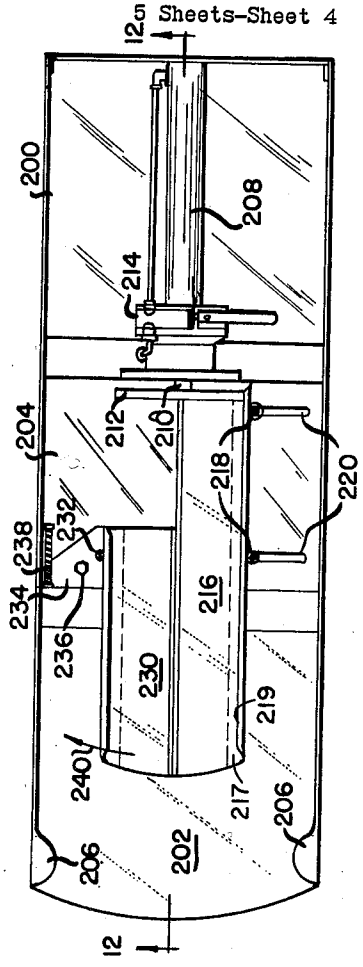


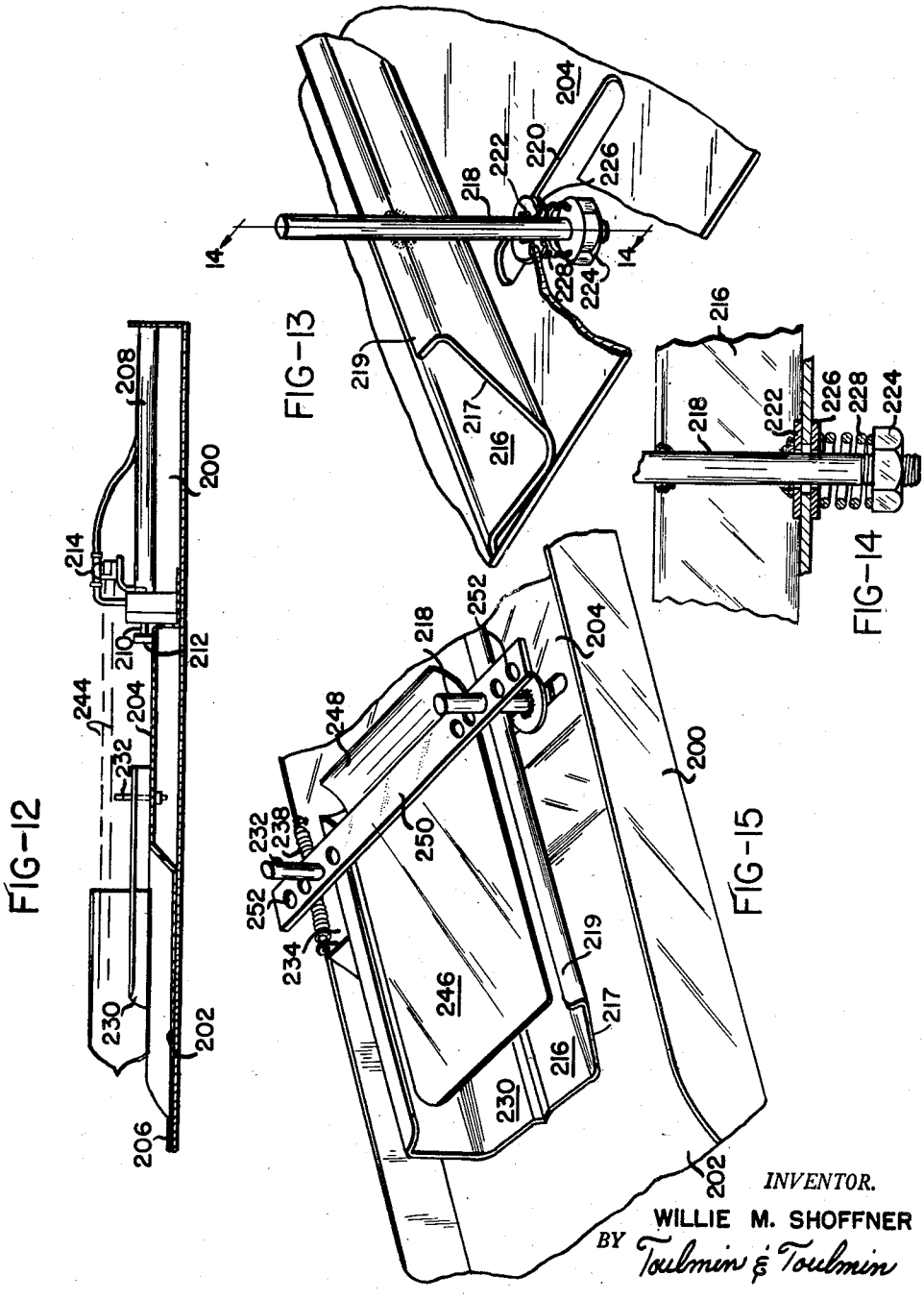

FIG-11

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United States Patent Office 2,781,622
Patented Feb. 19, 1957



2,781,622

# PACKAGING DEVICE

Willie M. Shoffner, Dayton, Ohio, assignor to Roto-Table Co., Dayton, Ohio, a corporation of Ohio

Application October 2, 1953, Serial No. 383,733

16 Claims. (Cl. 53—258)

This invention relates to a packaging device of the type similar to that illustrated in co-pending Willie M. Shoffner et al. application, Serial No. 320,716, filed November 15, 1952, assigned to the same assignee as the instant application, said application having issued on August 10, 1954, and bearing Patent No. 2,685,996.

The packaging device of the present invention is constructed to accomplish the rapid packaging of either loose articles, articles in trays, or articles that have been grouped together.

A conventional way of packaging items of the nature referred to, particularly meat and foodstuff, is to wrap them in a flat sheet which is either heat-sealed or taped closed so that a relatively tight enclosure is provided around the article so wrapped, thereby to exclude air and to provide for a relatively neat appearing package. This method of packaging, however, is slow and is difficult, particularly with irregularly shaped articles, to provide a tight package and one which is air-tight.

According to modern merchandising procedures, it is advantageous and convenient to display articles of foodstuff, such as meat products and the like, in an open refrigerated case. In this case the packaging method of employing a flat wrapper as referred to will cause the package to be easily torn, and the difficulty of closing the flat wrapper tight permits the product to dry out.

A preferable way of packaging almost any articles is in a bag, and bags are generally less expensive than flat sheets of wrapping material. However, bags are inconvenient to handle rapidly and thus have not been widely used, particularly in the packaging of foodstuff.

Having the foregoing in mind, it is a primary object of the present invention to provide an improved apparatus for packaging articles in bags so that the articles can be packaged rapidly and with little labor.

A still further object of this invention is the provision of an apparatus for packaging articles in bags in such a manner that substantially all the air is eliminated from the bag, thus improving the keeping qualities of the articles so packaged.

Another object of this invention is the provision of an apparatus for packing articles in bags such that substantially all of the air is excluded from the package and the package hermetically sealed.

A still further object is the provision of an apparatus for packaging articles in bags such that the apparatus can be adjusted to accommodate articles of various sizes and shapes.

Still another object of this invention is the provision of an apparatus especially adapted for packaging articles which are in trays so that the article and tray together can be introduced into a close fitting bag and the bag then sealed at the open end.

A still further particular object is the provision of an apparatus of the nature referred to which is readily adaptable to a wide variety of articles to be packaged.

Another particular object of this invention is the provision of an apparatus of the nature referred to which



is small and compact and inexpensive to construct whereby it will be economical for large markets to employ a number of the devices.

It is also an object of this invention to provide a packaging apparatus of the nature referred to including a mechanism for heat-sealing the bags.

These and other objects and advantages of this invention will become more apparent upon reference to the following specification taken in connection with the accompanying drawings, wherein:

Figure 1 is a perspective view of a packaging device constructed according to my invention;

Figure 2 is a transverse section indicated by line 2—2 on Figure 1;

Figure 3 is a perspective view showing the device with a different spout arrangement thereon;

Figure 4 is a view similar to Figure 3 but shows still another spout arrangement on the device;

Figure 5 is a perspective view showing the apparatus at one stage of the packaging operation;

Figure 6 is a view like Figure 5 but showing the device after the article being packaged is pushed completely in the bag;

Figure 7 is a fragmentary view showing the filled bag at the beginning of the sealing operation on the open end of the bag;

Figure 8 is a view like Figure 7 showing the apparatus with the sealing operation partially completed;

Figure 9 is a view like Figures 7 and 8 but showing the apparatus with a sealing operation completely finished;

Figure 10 is a perspective view showing a modified form of my packaging device particularly adapted for packaging articles that are carried in trays;

Figure 11 is a plan view looking down on top of the modification of Figure 10;

Figure 12 is a longitudinal sectional view indicated by line 12—12 on Figure 11;

Figure 13 is a fragmentary perspective view showing the arrangement of an adjustable slide forming a part of the apparatus and along which the trays containing the articles being packaged are slidable;

Figure 14 is a vertical sectional view indicated by line 14—14 on Figure 13 showing the construction of a slidable support for the tray of Figure 13; and

Figure 15 is a perspective view showing the provision of a holddown member provided in association with the modification of Figure 10.

Referring to the drawings somewhat more in detail, the apparatus illustrated in Figures 1 and 2 comprises a frame part having ends 10 and 12 and a back part 14. Extending between end parts 10 and 12 inclining upwardly from the bottom of back part 14 is a tray portion 16. A substantially flat top wall 18 is provided so that the space above tray portion 16 provides a convenient storage place for bags such as those indicated at 20 in Figure 1.

At the right end of the frame, as is viewed in Figure 1, is an enclosure 22 within which is enclosed an air cylinder 24 having a ram 26, and on the outer end of which ram is a pusher plate 28. An air valve 30 is connected with the opposite ends of cylinder 24 as by conduit means 32 so that when the operating lever 34 of the air valve is in its upper position, as is illustrated in Figure 1, the ram in the motor will be urged to its retracted position, whereas pressing downwardly on lever 34 will reverse the supply of air to the cylinder and drive ram 26 and pusher plate 28 leftwardly.

Immediately forwardly of pusher plate 28 there is provided transversely extending flat platform element 36, preferably of stainless steel or the like, and having its right hand edge, as shown in Figure 2, turned upwardly as at 38 and having at its left hand edge, also seen in

Figure 2, a longitudinally extending V-shaped elevation **40** and a dependent edge portion **42** lying along back wall **14** of the frame and secured thereto as by the screws **44**.

On the front side of the machine, adjacent platform element **36**, is a vertically extending panel **37** secured to the frame of the machine as by the bolts or rivet means **39**, and having its upper edge extending upwardly and bent over the upstanding side edge **38** of platform element **36** as indicated at **41** in Figures 1 and 2. The bent over portion **41** slidably receives upstanding edge **38** of platform element **36** so that merely by removing bolts **44** an entire platform element can be slipped endwise off the machine.

Screws **44** are also advantageously availed of for supporting a supply slide **46** along which trays **48** carrying the articles to be packaged can be brought to the machine. These trays are adapted for being placed ahead of pusher plate **28** in the position indicated by the dot-dash outline **50** in Figure 2, and are moved into that position by pulling them laterally from slide **46** over upstanding portion **40** of element **36**.

A strip of material **52** may be provided on element **36** forming a backstop for the trays **48** and also providing means for supporting the pusher plate **28** at a level which will prevent it from striking against the edge of trays **48**. At the end opposite pusher plate **28**, and attached to the inside and top surface of element **36**, is a spout portion **54** generally concave upwardly and tapered somewhat inwardly. A holddown or upper spout portion member **56** is pivoted toward the rear of the spout member between pins **58** extending into a series of apertures in the holddown plate. Upper spout portion **56** is concave downwardly so as to fit over spout portion **54** and has an upturned rear edge **60** to form a tapering inlet opening to the space between spout portion **54** and holddown plate **56**.

The rear edge of spout portion **54** forms an abutment for engaging the front edge of trays **48** so that, when pusher plate **28** is operated, the trays will remain stationary.

At the left end of the device, spaced from the end of spout portion **54**, is a sealing mechanism generally indicated at **62** and comprising a stationary angularly shaped heated platen portion **64** and a movable clamp portion **66** carried on arms **68**. As will best be seen in Figures 7 through 9, clamp portion **66** is biased by spring **70** on arms **68** in a counterclockwise direction as viewed in Figures 7 through 9, while arms **68** are biased by a spring means **72**.

An electrical heating element **74** positioned beneath platen **64** is provided for heating the platen to a desired temperature, and a control knob **76** is located in back of the heating element for adjusting the temperature thereof.

As to the operation of the modification of Figures 1 and 2, reference may be had to Figures 5 through 9. In Figure 5 it will be observed that a plurality of the trays **48** are located on a supply slide **46**, and one tray **48** is in position in front of pusher member **28**. Each tray contains two layers of wieners or sausages or the like having a card **71** between the layers and a card **71** beneath the lower layer. As will be seen in Figure 5, the lower wall of each tray **48** has an upstanding center rib **72** such that the lower card **71** is spaced above the bottom wall of the tray. Pusher member **28** is also provided with a notch **74** in its lower edge to provide clearance over the ribs **72** in the trays.

With the device positioned as it is illustrated in Figure 5, a bag, such as a cellophane or pliofilm bag, is placed over the spout and holddown member as at **76**. The handle **34** of valve **30** is then depressed and this will drive pusher member **28** leftwardly to its Figure 6 position, which pushes the contents of the tray **48** that is in front of the pusher member through the space between the spout and holddown member and the bag **76**. The spout and holddown member spread apart, thus opening the bag mouth and permitting the articles being packaged to be pushed into a bag no larger than is absolutely necessary, thereby providing a container that is devoid of air as is possible.

After the articles have been pushed completely into the bag at **76**, handle **34** of the valve is released and the pusher member will retract, whereupon the empty tray **48** can be removed and a new tray pulled into position.

The filled bag is then placed on platen **64** of the sealing device **62**, as illustrated in Figure 7. The operator then grasps the handle part **78** of clamp member **66** and pulls forward which causes rotation of arms **68** to their Figure 8 position, whereupon the hinged portion at **80** of clamp member **66** will press the bag against the top part of platen **64**. The relative strength of spring means **70** and **72** is such that the movable parts of the sealing device will move to their Figure 8 position before spring **70** commences to yield.

The continued pulling on handle part **78** of the clamp member will rock the clamp member to its Figure 9 position, and in which position the bag will be drawn tightly about the articles being packaged and firmly against the heated platen **64**, thus effecting a hermetically tight seal in the open end of the bag. The packaging operation is now complete and the packaged article can either be placed in a larger container for shipping to a point of sale or can be placed directly in a display case.

It has been mentioned that the apparatus of this invention is adapted to different types and sizes of articles, and reference to Figure 3 will show one modified arrangement of the device. In Figure 3 the spout portion and element **36** of the Figure 1 construction have been removed by removing bolts **44** and sliding the spout portion and platform element endwise out of the apparatus as previously described, whereupon another platform element **90** having a spout portion **92** can be put in place and secured in position by replacing the bolts **44**.

The modified spout portion **92** of the Figure 3 modification is characterized by both the upper and lower spout portions being formed in three parts, a central part **94** having its rear edge turned up as in the case of the upper spout portion **56** of Figure 1, and have two side portions **96** which movably engage center portion **94** as by means of the turnback member **98** on the said central portion. By this arrangement the spout can be adjusted in size laterally, thereby to accommodate bags of different sizes so that a bag exactly the right size for receiving the article to be packaged can be employed. At the same time the arrangement of Figure 3 is also characterized in having no abutment edges therealong for engaging the edge of a tray, such as the tray **48**, whereby it can be employed for packaging articles such as large pieces of meat which do not have trays associated therewith. The articles could be pushed from the platform element **90** dierctly into the bag without the use of any platforms or cards or the like.

A still further modified arrangement of my invention is illustrated in Figure 4. This modification is particularly useful for large articles to be packaged, which articles may approximate in length the total length of movement of pusher member **28**. In order to provide ample movement of the article by the pusher member for thrusting the article completely in the bag, the upper spout portion **100** in Figure 4, indicated in dot-dash outline, is pivoted at **102** immediately forward of pusher member **28** at the upper ends of a pair of tabs **104** turned upwardly from the platform element **106**. The rear edge of upper spout member **100** is turned upwardly at the back as at **108**, and the arrangement is such that the spout member can be turned to a substantially vertical position about its pivotal support so that an article can be placed on platform member **106** immediately in front of pusher member **28**. Thereafter, when the upper spout member is lowered it forms, with the lower

spout member, formed on the end of platform member **106**, an inwardly tapering configuration that will readily be received within the mouth of a bag which is to receive the article to be packaged. Thus, the articles which are substantially the length of the stroke of pusher member **28**, can be placed into receiving bags with the same efficiency that obtains in connection with the operations described for the Figures 1 and 2 modification.

It will be noted that in each of the three modifications referred to the lower spout member extends upwardly somewhat from the top wall of the device, thereby making it quite simple to place the bag over the discharge end of the spout and likewise to receive the bag and contents that have been placed therein from the spout.

Figures 10 through 15 illustrate a still further modified form of my invention based on the same general principles of the invention of the already described modifications, but adaptable to certain other classes of articles to be packaged. In particular, the modification of Figures 10 through 15 is particularly adapted for packaging articles that are carried in trays of the type employed for packaging meat products and the like.

Referring to Figures 10 and 15, the modification illustrated therein comprises a frame part **200** which may be of ordinary sheet metal and mounted within the frame portion **200** at the lefthand end as the device is illustrated in Figures 10 and 11, is a stainless steel plate **202** having a raised part **204**. The side walls of frame **200** are advantageously formed inwardly as at **206** to retain the left ends of the frame and platform together, while at the other end the frame and platform would be welded, riveted or bolted together.

At the right end of the frame there is provided an arrangement with cylinder **208** having a ram **210** with a pusher plate **212**. A valve **214** is mounted on the top of the left end of cylinder **208** for reversibly supplying air to the cylinder and for driving ram **210** and pusher member **212** thereof back and forth.

Immediately leftwardly of pusher member **212** is an elongated slide member **216** having a flat bottom wall, an outwardly inclined side wall **217**, and a fairly short lip **219** turned in at the upper edge of the side wall. This tray is adjustably mounted on raised portion **204** of the platform member by the vertical rods **218** welded to the side edges of the slide and extending downwardly through the transverse slots **220** in raised portion **204**.

Each of rods **218** has a washer welded thereto above raised portion **204** of the platform member, as indicated at **222** in Figures 13 and 14, and beneath the said raised portion **204** of the platform each rod **218** has a nut **224** between which and a washer **226** there bears a spring **228**. The arrangement is such that the slide **216** is resiliently retained in any position of lateral adjustment within the slots **220**.

Adjacent slide **216** is a second slide **230** having welded thereto a single vertically extending rod **232**, by means of which it is secured to a flat bracket **234** pivoted on raised portion **204** of platform by pivot bolt **236**. A spring **238** between bracket **234** and a fixed point provide means for biasing slide **230** in the direction of arrow **240** in Figure 11.

The described arrangement is particularly useful for packaging articles in trays of the nature referred to, and which trays are light trays with outwardly tapering side walls. The trays containing the articles to be packaged are placed in position on the slides **230** and **216**, the said slides having been adjusted laterally relative to each other to slidably accommodate the tray. Thereafter, the bag which is to receive the tray and the articles therein is placed over the ends of slides **216** and **230**. At this time the spring **238** serves to urge slide **230** in a direction to spread the bag opening laterally so that a bag no larger than necessary need be employed.

For at least certain classes of articles I employ the discharge from air valve **214** for expanding the opening



of the bag vertically, such discharge means being represented by the ports **242** in the valve, and which ports discharge the airstreams **244**, as illustrated in Figure 12, thereby to expand the bag during movement of the pusher employed to facilitate entrance of the articles into the bag.

I also provide a holddown or upper spout member **246** in Figure 15, which consists of a substantially flat plate having its rear edge turned upwardly as at **248** and carrying a transverse bar **250** having aperture means **252** at its opposite ends for slidably fitting over rods **218** and **232** connected with the slides. The bar **250** may consist of a plurality of the aperture means on each end thereof, or a spout member **246** could be provided for each adjusted position of the slides or, alternatively, the member **246** could be provided with a bar having a single aperture on one side and a slot on the other side, thus providing for an infinite adjustment of the slides.

The device illustrated in Figures 10 through 15 is particularly useful for packaging articles which may consist of cuts of meat that are placed in trays of the nature referred to, or loose articles that may be carried in said trays, such as candy and the like.

It will be obvious that a heat-sealing station, as illustrated with the first modification, could be provided with the modification of Figures 10 through 15 if desired. It will also be apparent that the Figures 10 through 15 modification could be constructed so as to be fitted detachably to the Figures 1 and 2 modification in the manner of the structures of Figures 3 and 4 if so desired and, in which case, the air cylinder and pusher plate and frame member of the Figures 10 through 15 modification would be eliminated and the member **204** would not be mounted on frame part **200**, but would, instead, be formed for detachable connection with the frame of the machine in the manner of the Figures 1 through 4 modification. This could be done by providing member **204** with upstanding edge at **205** to fit under portion **41**, a downturned edge on the opposite side, and with the member **204** being cut off at the top of the inclined part under the spout.

It will be understood that this invention is susceptible to modification in order to adapt it to difference usages and conditions, and, accordingly, it is desired to comprehend such modifications within this invention as may fall within the scope of the appended claims.

I claim:

1. In a packaging device; a frame, a reciprocable ram in the frame having a pusher member at the end, a spout in the frame in front of said pusher member, said spout being divided longitudinally into two parts, each part having a flat bottom wall and outwardly inclined side walls to form a tray slide, one of said parts extending to adjacent the retracted position of said pusher member and being laterally adjustable on said frame, the said other part extending from the outer end of said one member part-way therealong and being pivotally supported on said frame, and spring means biasing said other part about its pivotal support in a direction to separate the outer ends of said parts.

2. In a packaging device; a frame, a reciprocable ram in the frame having a pusher member on the end, a platform over which the pusher member moves when actuated, a spout on the platform in front of the pusher member divided down the middle into two parts, one of said parts extending backwardly to the region of said pusher member, lateral slots in the platform at the outside edge of said platform, pin means on the said one part frictionally engaging said slots, the other said part extending from the outer end of said one part part way therealong, a pivoted bracket on the platform at the outside of said other part, pin means on said other part fixed to said bracket, and a spring biasing said bracket in a direction to separate the outer ends of said parts.

3. In a packaging device; a frame, a reciprocable ram in the frame having a pusher member on the end, a platform over which the pusher member moves when actu-

ated, a spout on the platform in front of the pusher member divided down the middle into two parts, one of said parts extending backwardly to the region of said pusher member, lateral slots in the platform at the outer edge of said platform, pin means on the said one part frictionally engaging said slots, the other said part extending from the outer end of said one part part-way therealong, a pivoted bracket on the platform at the outside of said other part, pin means on said other part fixed to said bracket, and a spring biasing said bracket in a direction to separate the outer ends of said parts, each said part having a flat bottom wall, outwardly inclined side walls and turned-in upper edges for supporting and guiding an article holding tray.

4. In a packaging device; a frame, a reciprocable ram in the frame having a pusher member on the end, a platform over which the pusher member moves when actuated, a spout on the platform in front of the pusher member divided down the middle into two parts, one of said parts extending backwardly to the region of said pusher member, lateral slots in the platform at the outer edge of said platform, pin means on the said one part frictionally engaging said slots, the other said part extending from the outer end of said one part part-way therealong, a pivoted bracket on the platform at the outside of said other part, pin means on said other part fixed to said bracket, a spring biasing said bracket in a direction to separate the outer ends of said parts, each said part having a flat bottom wall, outwardly inclined side walls and turned-in upper edges for supporting and guiding an article holding tray, and an upper spout portion comprising a plate overlying said parts and having means loosely engaging at least one of the pin means for each said part of the spout.

5. In a packaging device; a frame, a reciprocable ram in the frame having a pusher member at the end, a spout in the frame in front of said pusher member, said spout being divided longitudinally into two parts, each part having a flat bottom wall and outwardly inclined side walls to form a tray slide, one of said parts extending to adjacent the retracted position of said pusher member and being laterally adjustable on said frame, the said other part extending from the outer end of said one member part-way therealong and being pivotally supported on said frame, and spring means biasing said other part about its pivotal support in a direction to separate the outer ends of said parts, said frame comprising a bottom wall and a platform thereon, said platform being elevated rearwardly of the outer end of the spout and in front of the pusher member and supporting said spout whereby the outer end of the spout is elevated so as to be accessible.

6. In a packaging device; a frame, a reciprocable ram in the frame having a pusher member at the end, a spout in the frame in front of said pusher member, said spout being divided longitudinally into two parts, each part having a flat bottom wall and outwardly inclined side walls to form a tray slide, one of said parts extending to adjacent the retracted position of said pusher member and being laterally adjustable on said frame, the said other part extending from the outer end of said one member part-way therealong and being pivotally supported on said frame, spring means biasing said other part about its pivotal support in a direction to separate the outer ends of said parts, said frame comprising a bottom wall and a platform thereon, said platform being elevated rearwardly of the outer end of the spout and in front of the pusher member and supporting said spout whereby the outer end of the spout is elevated so as to be accessible, an air motor to drive said ram, and means to direct the exhaust of the air motor into the mouth of a bag on said spout to distend the bag.

7. In combination in a packaging device of the nature described and having a frame with means thereon to push articles into heat-sealable bags; a heated angular platen, an angular clamp member, a carrier pivotally supporting the clamp member, a first spring biasing the carrier to



retract the clamp member from the platen, a second spring biasing the clamp member toward retracted position on the carrier, and said first spring being yieldable before said second spring whereby the mouth of a bag placed on the platen will first be clamped thereto and then pressed about the platen during a single continuous movement of the carrier and clamp member.

8. In combination in a packaging device of the nature described and having a frame with means thereon to push articles into heat-sealable bags; a heated platen in the shape of a step, a clamp member of a shape complementary to said platen, a carrier pivoted relative to the platen and pivotally supporting said clamp member, a first spring biasing the carrier to retract the clamp member from the platen, a second spring stronger than said first spring biasing the clamp member on the carrier away from mating position with said platen, and handle means on the clamp member for actuating the carrier and the clamp member.

9. In combination in a packaging device of the nature described and having a frame with means thereon to push articles into heat-sealable bags; a heated platen having a flat top surface and front surface depending therefrom, a carrier pivoted to the platen rearwardly of the said top surface, a clamp member pivoted to the carrier having a flat surface in front of its pivotal connection with the carrier to engage the top surface of the platen and a second surface to engage the front surface of the platen, first spring means biasing the carrier to retract the clamp member from the platen, second and stronger spring means biasing the clamp member on the carrier to tilt the clamp member up away from the platen, and a handle on the clamp member to actuate first the carrier and then the clamp member so a heat-sealable bag held with its mouth on the platen will first be gripped against the top of the platen and then drawn up about the contents of the bag with the mouth of the bag being simultaneously heat sealed.

10. In a packaging device; a frame, a motor in the frame, a ram in the frame connected with the motor to be reciprocated thereby, a pusher member on the end of the ram, said frame having a top wall and a portion of one side wall upstanding above said top wall, means depending on the inside of the said portion of said one side wall to form a guide, a plate on the top wall of the frame having an edge turned up to slidably engage said guide, means to secure said plate to said frame, and spout means carried by said plate adapted for insertion into the mouth of a bag.

11. In a packaging device; a frame, a reciprocating motor in the frame and a ram connected thereto, a pusher member on the end of the ram, said frame having a top wall and a portion of one side wall upstanding above said top wall, means depending from the top edge of said upstanding portion of said one side wall on the inside thereof to form a guide, a plate on the top wall of the frame in front of the pusher member with one edge turned upwardly to engage said guide and the opposite edge turned down to lie along the opposite side wall of the frame, and spout means on the end of said plate having its outer end spaced upwardly from the top of the frame adapted for insertion into the mouth of a bag.

12. In a packaging device; a frame, a reciprocating motor in the frame and a ram connected thereto, a pusher member on the end of the ram, said frame having a top wall and a portion of one side wall upstanding above said top wall, the upper edge portion of the upstanding portion of said one side wall being formed downwardly on the inside of the wall to form a guide, a plate on the top wall of the frame in front of the pusher member with one edge turned upwardly to engage said guide and the opposite edge turned down to lie along the opposite side wall of the frame, spout means on the end of said plate having its outer end spaced upwardly from the top of the frame adapted for insertion into the mouth of the bag, a slide along one side of the frame for supplying the mate-

rial to be packaged and extending along the turned down portion of said plate and at the same level as the plate, and said plate having a raised portion over which the said material is drawn from the slide onto the plate in front of the pusher member.

13. In a packaging device; a frame, a reciprocating motor in the frame and a ram connected thereto, a pusher member on the end of the ram, said frame having side and top walls and a portion of one side wall upstanding above the top wall of the frame and having its upper edge bent over toward the inside to form a guide, a plate on top of the frame in front of the pusher member with one edge turned upwardly to engage said guide and the opposite edge turned down to lie along the opposite side wall of the frame, spout means on the end of said plate having its outer end spaced upwardly from the top of the frame adapted for insertion into the mouth of the bag, a slide carried by said frame for supplying the material to be packaged extending along the turned down portion of said plate and at the same level as the plate, said plate having a raised portion over which the said material is drawn from the slide onto the plate in front of the pusher member, said material being supplied to the device in trays, and said plate comprising spaced abutments to engage the ends of said trays so that the pusher member will push the material therein from the trays.

14. In a packaging device; a frame, a reciprocating motor in the frame and a ram connected thereto, a pusher member on the end of the ram, said frame having top and side walls and a portion of the side walls upstanding above the top wall of the frame with the upper edge bent downwardly on the inside to form a guide, a plate on the top wall of the frame having an edge turned up to slidably engage said guide, means to secure said plate to said frame, a lower spout portion formed on the outer end of the plate spaced upwardly from the top of the frame for insertion into the mouth of a bag, and an upper spout portion above the lower spout portion having its rear end pivotally supported adjacent the retracted position of said pusher member whereby an article that is substantially as long as the stroke of the pusher member can be pushed into a bag.

15. In a packaging device; a frame, a motor in the frame, a ram driven in reciprocation by the motor, a pusher member on the end of the ram, said frame having



top and side walls and a portion of one side wall upstanding above the top wall of the frame, means on the inside of the upstanding portion of the side wall forming a downwardly opening guide, a plate on the top wall of the frame having an edge turned up to slidably engage said guide, means to secure said plate to said frame, an upwardly concave lower spout portion on the outer end of the plate inclined upwardly from the top of the frame so a bag can be placed over the spout, a downwardly concave upper spout portion overlying said lower spout portion and pivoted to said plate in the region of the retracted position of said pusher member, and the rear edge of said upper spout portion being turned upwardly to clear said pusher member when the upper spout portion is pivoted upwardly to place an article to be packaged on said plate.

16. In a packaging device; a frame, a pusher member reciprocable in the frame, a motor to actuate the pusher member, a spout member detachably secured to the frame in line with said member, the outer end of the spout being spaced upwardly from said frame for receiving a bag, and means for distending the mouth of said bag for receiving the material pushed therein by said pusher member, said spout being divided longitudinally into two parts, means supporting one of said parts on said frame for lateral adjustment, means pivotally supporting the other of said parts on said frame for lateral swinging movements, spring means biasing said other part to move its outer end laterally away from said one part thereby to distend a bag placed over said spout, said motor comprising an air cylinder, a manual valve to control the supply of air to the cylinder, and an exhaust part in the valve directed toward the end of said spout whereby the exhaust air from the cylinder will expand a bag on the spout during a packaging operation.

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