June 18, 1963 B. A. ARVIDSON 3,093,944

ARTICLE PLATFORM SUPPORT

Filed Nov. 15. 1960 2 Sheets-Sheet 1

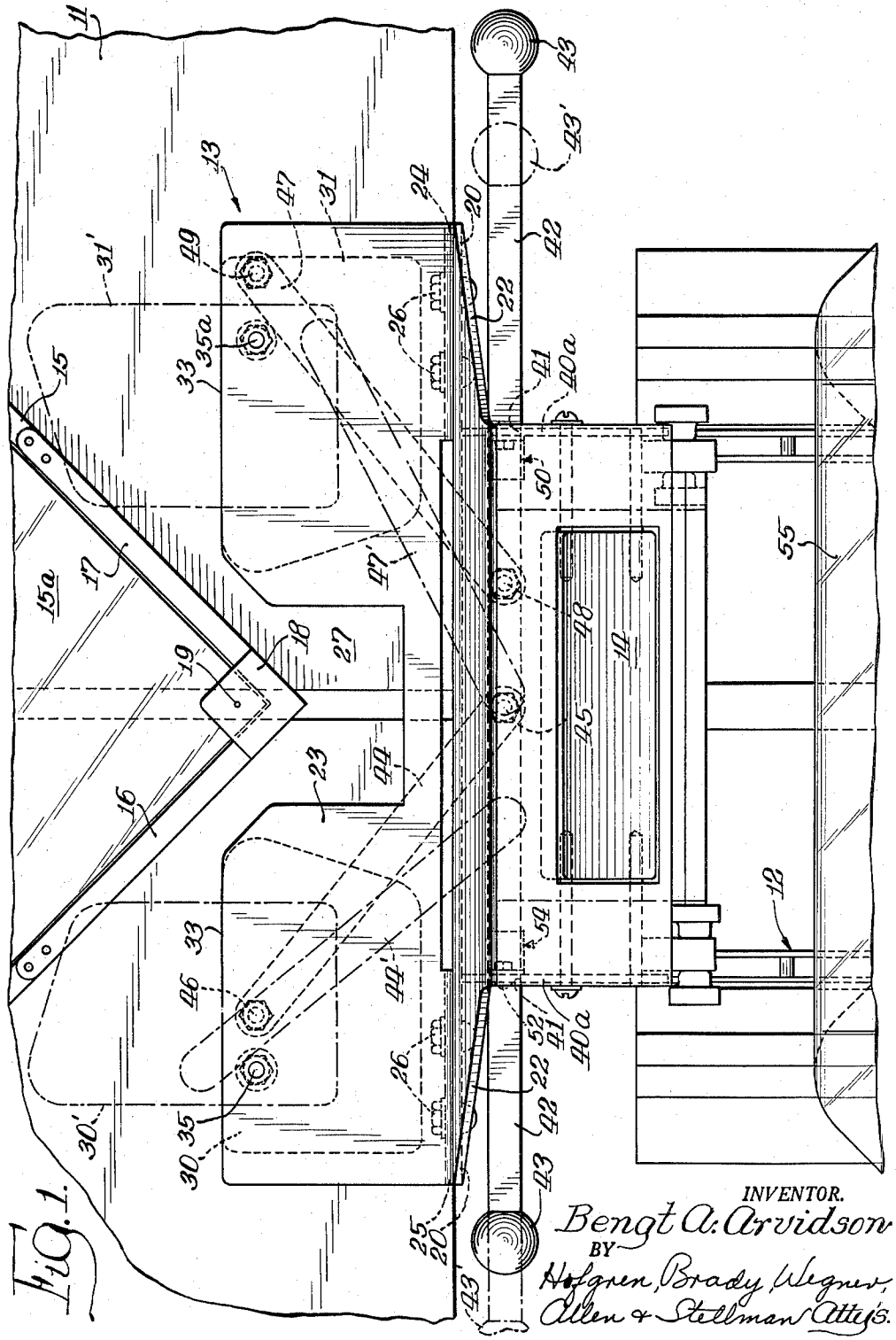


FIG. 1.

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Filed Nov. 15, 1960 2 Sheets-Sheet 2

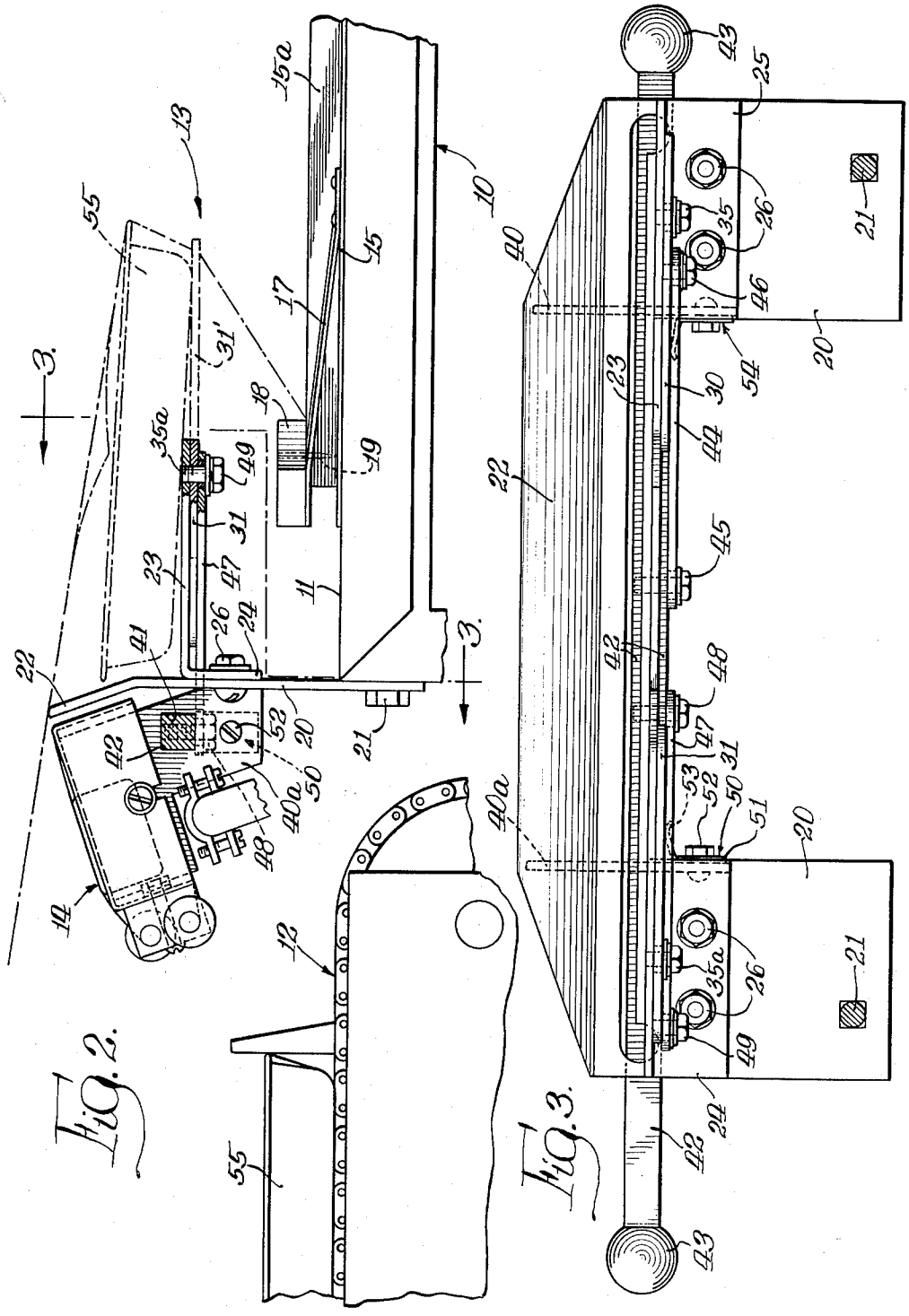


FIG. 2.

FIG. 3.

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ARTICLE PLATFORM SUPPORT

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This invention relates to an article supporting platform and more particularly to a platform for supporting articles during partial wrapping thereof with a wrapping material.

The platform disclosed by this invention is adaptable for use in partially wrapping an article and also for use with a wrapping apparatus of the type described in my copending application 762,461, filed September 22, 1958, now Patent No. 2,954,654, which discloses a wrapping method and apparatus for packaging meats, produce and other commodities for sale in self-service stores by the use of wrapping material. Since product sizes vary considerably, the instant platform must be readily adjustable to conform therewith.

An object of this invention is to provide a new and improved wrapping aid in the form of a platform for supporting articles of different sizes that may be quickly and properly adjusted to conform to the size of the supported article.

Another object of this invention is to provide a support for articles of various sizes having a stationary platform and a movable platform with means whereby the movable platform may be moved relative to the stationary platform to vary the width of the support.

A further object is to provide such a support with means including an elongate rod slidable within said support whereby simple manual movement of the rod will vary the width of the support to conform with the width of the article.

Further objects and advantages will become apparent from the following detailed description taken in connection with the accompanying drawings in which:

FIG. 1 is a plan view of an embodiment of the platform associated with a package wrapping apparatus;

FIG. 2 is a side view partly in section of the platform and wrapping apparatus; and

FIG. 3 is an end view of the platform taken substantially along line 3—3 of FIG. 2.

While this invention is susceptible of embodiment in many different forms, there is shown in the drawings and will herein be described in detail an embodiment of the invention with the understanding that the present disclosure is to be considered as an exemplification of the principles of the invention and is not intended to limit the invention to the embodiments illustrated. The scope of the invention will be pointed out in the appended claims.

As shown generally in the drawings, the platform support and wrapping apparatus comprises a frame indicated generally at **10** having a top **11** which is disposed adjacent an article receiving conveyor indicated generally at **12** for moving an article through subsequent wrapping operations. The platform support is indicated generally at **13** and is positioned above and adjacent an end of the frame **10**. A hot plate **14** for sealing the wrapping material is mounted in fixed relation to the frame **10** adjacent the platform support **13**.

The table top **11** is adapted to support a tray **15** which carries a stack of superimposed sheets **15***a* of wrapping material. The tray **15** carries a pair of leaf spring members **16** and **17** which together carry at their end a block **18** mounting a downwardly extending sharp pin **19** for piercing each of the sheets in the corner thereof to hold the sheets in the tray **15**. Various trays are available for providing different sizes of wrapping material.

An embodiment of the platform support **13** to which this invention applies, includes a vertical member **20** in

the form of a plate secured to the frame **10** by means such as threaded bolts **21**, rising a distance above the table top **11** and having its top portion **22** bent in a direction toward the hot plate **14**. The member **20** extends substantially across an end of the frame **10**, as shown in FIG. 1 and mounts the main platform support composed of a plate **23** having a pair of downwardly bent legs **24** and **25** at one edge thereof, one adjacent each of the ends of the plate and at right angles thereto. The legs are secured to the member **20** by nuts and bolts **26**. The plate **23** is provided with a cut-out area intermediate the ends thereof to facilitate manual grasping of an article positioned on the platform. This cut-out area is indicated at **27** in FIG. 1.

An auxiliary platform comprises a pair of generally rectangular plates **30** and **31** positioned below the plate **23**, one on either side of the cut-out area **27** and having their top surfaces in near contact therewith. An edge **33** of each of the two plates **30** and **31** when retracted lies in line with an edge of plate **23** remote from the frame member **20**. Each of the plates **30** and **31** are pivotally connected to the plate **23**, adjacent the edge **33**, by individual bolts **35** and **35***a* about which the plates may move relative to the stationary plate **23** and assume positions as shown by dotted lines, and referred to as **30'** and **31'**, in FIG. 1.

A pair of brackets **40** and **40***a* extend outwardly from the vertical member **20**, at right angles thereto and on the opposite side from the plate **23**, to support the hot plate **14**. Each of the brackets is provided with in-line holes **41** which are preferably square but may be of any desired shape. The holes are located just below the hot plate **14** and slidably receive an elongate rod **42**. The ends of the rod extend beyond the ends of the vertical member **20** and terminate in rounded portions or knobs **43** that facilitate manual shifting of the rod from either side.

An elongate flat link **44** has one end pivotally connected to the bottom side of the elongate rod **42**, to the left of the center thereof, as viewed in FIG. 1, by a bolt **45** and has the other end pivotally connected to the movable plate **30** adjacent and to the right side of pivot bolt **35**, by a bolt **46**. Similarly, a flat elongated link **47**, the same size and length of link **44**, has one end pivotally connected to the underside of the elongated rod **42**, an equal distance to the right of the center thereof, as viewed in FIG. 1, by a bolt **48**. The other end of the link **47** is pivotally connected to the underside of the movable plate **31** by a bolt **49** located adjacent and to the right side of the pivot bolt **35***a*.

An L-shaped leaf spring **50** has one of its legs **51** affixed to the inside surface of the bracket **40***a* just below the opening **41** by a suitable nut and bolt **52**. The other leg **53** of the leaf spring **50** extends generally parallel to the rod **42** and is bent upwardly against the bottom surface of the rod as shown in FIG. 3. Another L-shaped leaf spring **54** is secured in a similar manner to the bracket **40**. The two springs **50** and **54** offer frictional resistance to the movement of the elongate rod **42** preventing it from moving in the holes **41** unless force is applied at the ends of the rod by the operator.

The operation of the embodiment of the platform support and the wrapping apparatus will now be described.

In the following example it will be assumed that the article to be supported is of a large size and the full extension of the platform support is required. The operator slides the elongate rods **42** as far to the left as possible as viewed in FIG. 1 and the rod assumes a position shown by the dotted lines and designated as **43'**; the links **44** and **47** move to the positions designated at **44'** and **47'** and the plates **30** and **31** pivot equally and oppositely about the pivot bolts **35** and **35***a* in a counterclockwise and clockwise direction respectively, to assume the posi-

tion designated as 30' and 31', thereby extending the size of the platform support to receive the large sized articles. An article, such as a tray 55 is placed on the platform support 13 above the wrapping material 15 and is partially wrapped in a manner more fully described in my co-pending application Serial No. 762,461, filed September 22, 1958. The partially wrapped article is then lifted from the platform support 13 and placed on the hot plate 14 to seal the wrapping material and thence to the conveyor 12 to be moved to a subsequent wrapping operation.

If a small article is to be wrapped the operator merely shifts the elongate rod 42 to the right, as viewed in FIG. 1 pivoting the movable plates 30 and 31 in equal and opposite directions to position them entirely underneath the stationary plate 23. It should be noted that there are numerous intermediate positions that the movable plates 30 and 31 may assume to accommodate a variety of article sizes.

The springs 50 and 54 provide a sufficient restraining force against the elongate rod 42 to prevent relative movement of the rod and the plates 30 and 31 during normal use of the platform support, but readily yield to allow movement of the rod by the operator when he wishes to adjust the size of the platform.

I claim:

1. A platform for supporting articles to be wrapped, comprising: a frame; a main plate affixed to said frame and lying in a horizontal plane; a pair of second plates operatively associated with said first plate and movable relative thereto; an elongate rod longitudinally movable on said frame; and a pair of links, each of said pair of links connecting one of said second plates to said rod, whereby the pair of second plates are moved relative to the first plate to vary the size of the platform in response to movement of the rod.

2. An expandable support for articles of various sizes, comprising: a frame, having a pair of brackets mounted thereon; a plate affixed to said frame and lying in a horizontal plane; a pair of movable plates beneath said plate and operatively associated therewith; an elongate rod movable in said brackets; a pair of links, each of said pair of links connecting one of said movable plates to the center portion of said rod, whereby said movable plates are moved relative to said fixed plate to increase the size of said support upon movement of the rod; and means for retaining said movable plates in their extended position.

3. A platform for supporting articles, comprising: a frame having a main plate extending generally horizontally therefrom; a pair of movable plates normally disposed beneath and adjacent said main plate, and pivotally mounted to said plate for movement in a generally horizontal plane; an elongate rod longitudinally movable in said frame; means inter-connecting said elongate rod with said movable plates, including a pair of links, whereby movement of the rod in one direction will shift said links and pivot said movable plates equally and in opposite directions about said pivotal mounting to positions beyond said main plate; and friction means for retaining said rod and said plates in position, including spring means mounted on said frame and in contact with the rod.

4. A support for articles, comprising: a frame, having a main plate extending generally horizontally therefrom; means defining an opening in said plate intermediate the end thereof and remote from said frame to facilitate manual grasping of an article; a pair of movable plates normally disposed beneath and adjacent said main plate, one on each side of said opening, and pivotally mounted to said plate for movement in a generally horizontal plane; an elongate rod longitudinally movable in said frame; means interconnecting said elongate rod with said movable plates, including a pair of equal length links, one of said pair of links having one end spaced to one side of a point midway the length of said rod and pivotally connected thereto, the other end of said one link being pivotally connected to one of said movable plates between the pivotal mounting thereof and the center of said platform, the other of said pair of links having one end spaced to the other side of said midway point and pivotally connected to said rod, and the other end pivotally connected to the other of said movable plates adjacent the pivotal mounting thereof and remote from the center of said platform, whereby said links will shift and pivot said movable plates equally and in opposite directions about their respective pivotal mountings in response to rod movement; and friction means in contact with the rod for retaining said rod and said movable plates in position.

References Cited in the file of this patent

UNITED STATES PATENTS

2,954,654	Arvidson	Oct. 6, 1960
2,974,458	Muskat	Mar. 14, 1961