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FRANKFURTER WRAPPING MACHINE

Filed April 25, 1948 2 SHEETS—SHEET 1

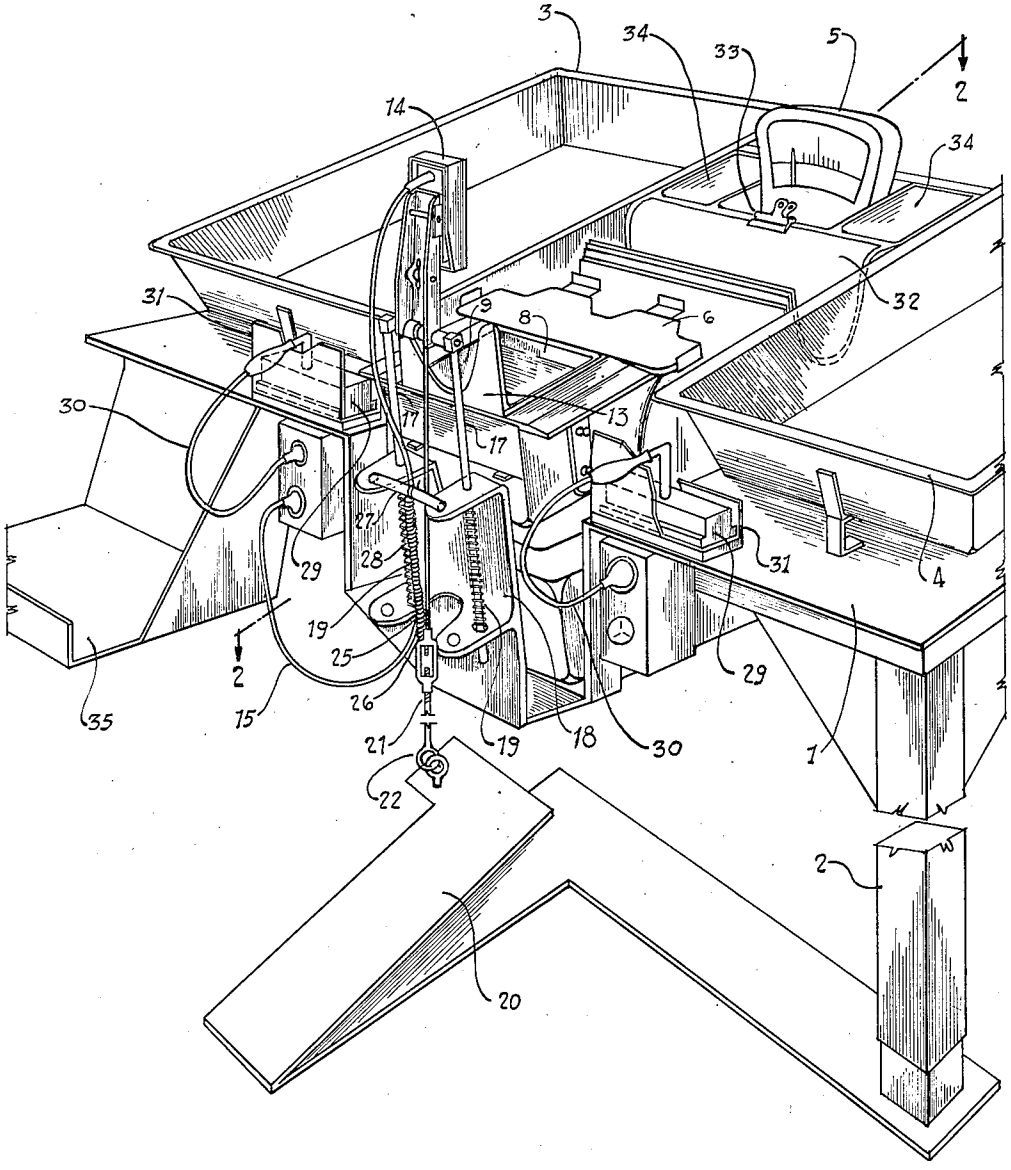



Fig. 1.

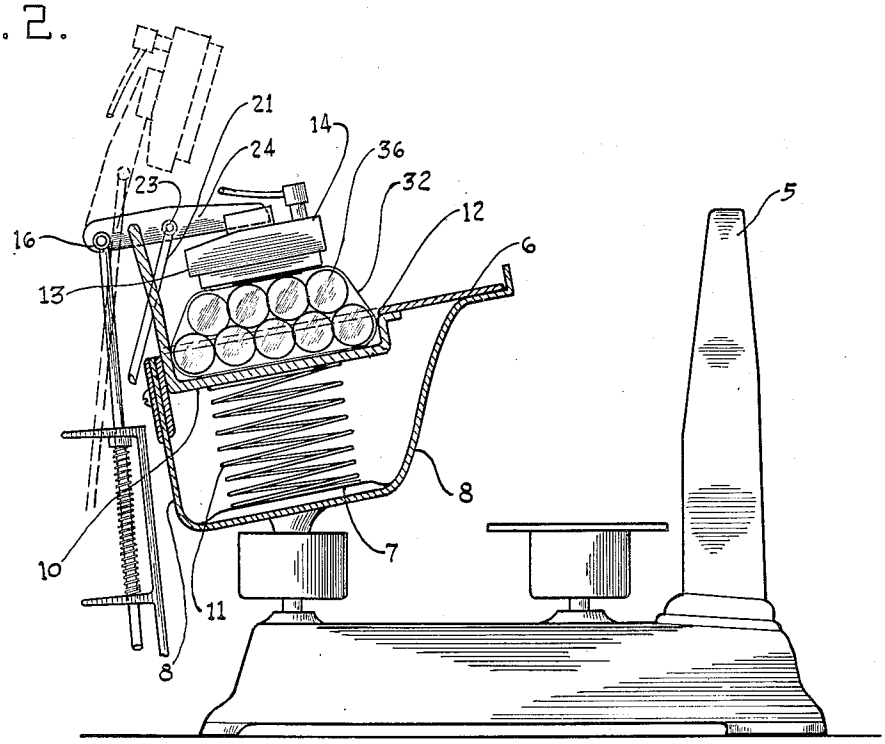
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Fig. 2.



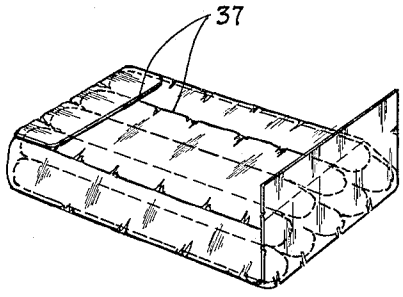




Fig. 3.

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## FRANKFURTER WRAPPING MACHINE

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3 Claims. (Cl. 53—74)

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This invention relates to a wrapping machine and more particularly to a method and apparatus for folding and sealing a wrapper around a plurality of generally cylindrical articles such as frankfurters and the like.

One of the objects of the present invention is to provide an improved method and apparatus therefor for folding and sealing a wrapper around a plurality of articles of generally cylindrical shape such as frankfurters.

Another object of this invention is to provide a machine of simplified construction in which a one-pound unit of frankfurters, for example, is weighed out, wrapped in a sheet of heat-sealable transparent material and thereafter heat sealed.

Other objects will be apparent from the description and claims which follow.

In the drawings:

Figure 1 is a perspective view of the apparatus of the present invention.

Figure 2 is a view, partly in section, taken substantially on line 2—2 of Figure 1.

Figure 3 is a perspective view of a substantially completed package wrapped and sealed in accordance with the present invention.

Referring particularly to Figure 1, reference numeral 1 indicates a wrapping and packing table braced by suitable standards 2. Suitably secured upon table top 1 are a plurality of frankfurter-holding trays 3 and 4. Also mounted upon table 1 is a scale housing indicated generally by the numeral 5.

Scale 5 includes a weighing pan 6 having a bottom 7 and side and end walls 8 and 9, respectively. As best seen in Figure 2, a cradle or supporting member 10 having a spring 11 associated therewith is disposed within the four walls defining well-like pan 6. As will be obvious from an inspection of this figure, cradle 10 is adapted to be moved downwardly against the action of spring 11 when pressure is applied to the cradle. Scale pan 6 also has a projecting lip 12 to limit the upward movement of the cradle. The upper portion of cradle 10 is cut away as at 13 for a purpose to be later described.

Sealing element 14 heated by any suitable source of electric current as at 15 is pivotally mounted on bar 16 rigidly secured to a pair of uprights 17 which pass through suitable openings in supporting bracket 18 rigidly secured to table 1. A pair of compression springs 19 mounted on uprights 17, in conjunction with a suitable washer or lug (not shown) located on each of the uprights, serves to support the uprights in an upstanding position and thus to also

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provide for flexibility of movement of sealing element 14. Foot treadle 20 and link 21, secured to treadle 20 as at 22 and at its upper end being pivotally secured as at 23 to supporting member 24 of sealing element 14, serve to draw heat sealer 14 swinging on its pivotal mounting downwardly from the position shown in dotted lines to the position shown in full lines in Figure 2 for the sealing operation. As will be obvious from an inspection of the drawings, the sealing means is so mounted that supporting member 24 passes between U-shaped cut-away portion 13 of cradle 10 so that the face of heater 14 will always be parallel to the face of the article being heat sealed.

Spring 25 connected to link 21 as at 26 and at its opposite end to bar 27 as at 28, which bar is rigidly secured to supporting bracket 18, serves to raise sealing element 14 back to its upright position when pressure is released on foot treadle 20. A pair of hand manipulatable sealing irons 29, heated by any suitable source of electric current as at 30, is disposed within a pair of holding elements 31 mounted adjacent to scale pan 6.

A supply of heat-sealable cellophane sheets 32, or other similar transparent heat-sealable wrapping material of the type conventionally used for the packaging of food products, is placed immediately in front of scale pan 6 for easy reach by the operator and is held in place by spring clip 33. A pair of holders 34 is provided for holding a supply of relatively stiff cardboard inserts (not shown) for use in packaging the product. Bracket 35 is provided for holding a shipping container (not shown) so that the wrapped and sealed food packages may be placed therein.

In operation, the scale is initially balanced so that no weight indication is produced on the scale dial. The operator places transparent sheet 32, of sufficient size to completely enclose a pound of frankfurters, for example, on scale pan 6 and cradle 10. The proper number of frankfurters 36 is selected from holding trays 3 and 4 and neatly arranged on the wrappers so that no further rearrangement is necessary except to interchange links as necessary to obtain the desired weight. The sides of the transparent sheet 32 are folded tightly in overlapping relationship across the top of the package as clearly shown in Figure 2. The operator steps on foot treadle 20 which, through the linkage mechanism previously described, draws heat-sealing element 14 down against the overlapped portions of the wrapper and the heat seal is made. Downward pressure is continued so that the frankfurters

and the wrapper are pushed down with cradle 10 against the action of spring 11 whereby the package passes within the four walls defining scale pan 6. In passing down between the walls of the scale pan, the extending end portions of the sheet are wiped tightly up over the ends of the frankfurters; and after the frankfurters are pushed downwardly with cradle 10 until the lower face of heater 14 is parallel with the upper surface of scale pan 6, heaters 29 are picked up by the operator and are wiped inwardly over the ends of the package toward heater 14 so that the end flaps of the wrapper are heat sealed as shown at 37 in Figure 3. Obviously, the operator may apply any type of conventional sealing tape to these end flaps when the package is held in the receptacle by sealer 14 if so desired. As soon as the sealing is completed, the heaters 29 are replaced in their respective holders 31, and the treadle 20 is released so that heater 14 returns to the dotted-line position shown in Figure 2. The spring 11 then forces cradle 10 upwardly so that the completed package may be removed from the machine. Thereafter, the packages are placed in a shipping container located on a bracket 35.

The present invention has been devised for facilitating packaging, and the machine has been designed for the most efficient motions for hand packaging of small, generally cylindrical articles such as frankfurters and the like though obviously the invention is not limited thereto.

Obviously, many modifications and variations of the invention as hereinbefore set forth may be made without departing from the spirit and scope thereof, and therefore only such limitations should be imposed as are indicated in the appended claims.

We claim:

1. In combination with a weighing scale means for weighing and wrapping a plurality of articles comprising a well having bottom, side, and end walls, a package-supporting member having a spring affixed thereto, said spring resting on the bottom of said well whereby the weight of the package is transmitted to said scale, a pivotally-mounted heat sealer, and means for moving said heat sealer into engagement with the top of said package for heat sealing the said portions of a wrapper therearound and for further moving said heat sealer to depress the package into said well whereby the walls of the well wipe the extending end portions of said wrapper over the end of the package.

2. A wrapping and sealing apparatus for use in combination with a weighing scale, comprising a support, a scale pan, a package-supporting member, a compressible element yieldably supporting said package-supporting member near the top of said pan, a pivoted heat-sealing unit mounted on said support above said package-supporting member, means for moving said sealing unit into engagement with a package carried by said package-supporting member to partially seal portions of a wrapper therearound and for further depressing said sealing unit into the interior of said scale pan against the action of said compressible element whereby the walls of said pan wipe the unsealed portions of said wrapper upwardly over the package for further sealing the package.



3. In an apparatus for weighing, wrapping, and sealing a package of articles, the combination comprising a pan supported on a scale platform, a package-supporting member mounted on a spring in said pan whereby the weight of the article on said member is transmitted to said scale, a heat-sealing unit pivotally-mounted above said member, means for moving said heat sealing unit into engagement with said package to seal side portions of the wrapper therearound and for further depressing the package into the interior of said pan against the action of said spring whereby the walls of said pan serve to wipe the end portions of the wrapper over the ends of said package and movable heat-sealing means positioned laterally of said package for sealing the ends of the package.

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