Dec. 19, 1933. E. L. SMITH ET AL 1,940,375

METHOD AND MACHINE FOR WRAPPING ARTICLES

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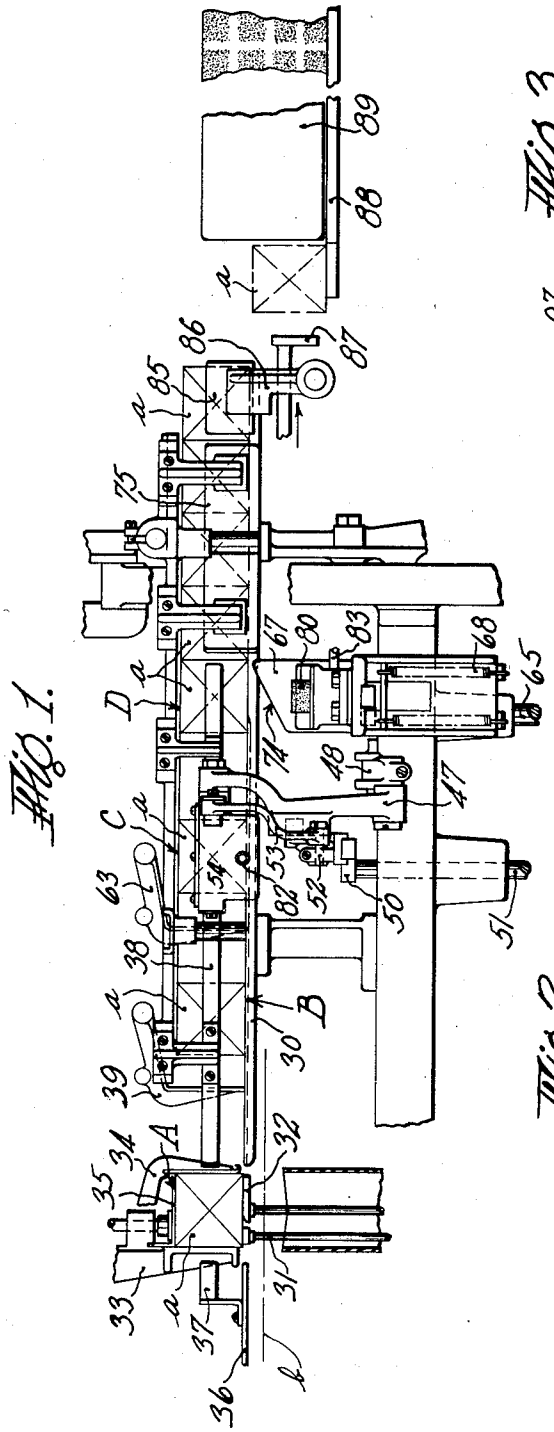


Fig. 1.

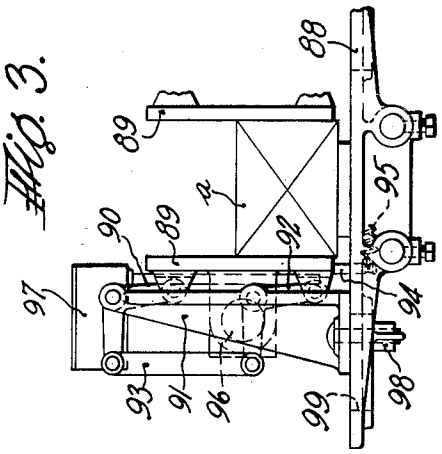


Fig. 3.

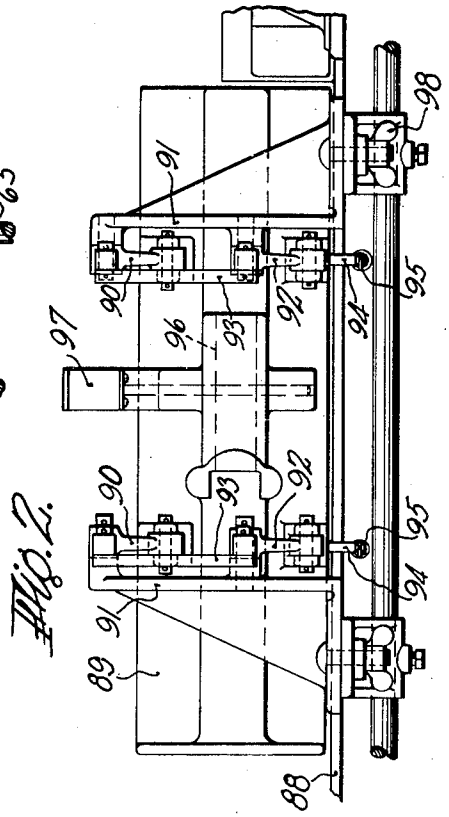


Fig. 2.

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Fig. 4.

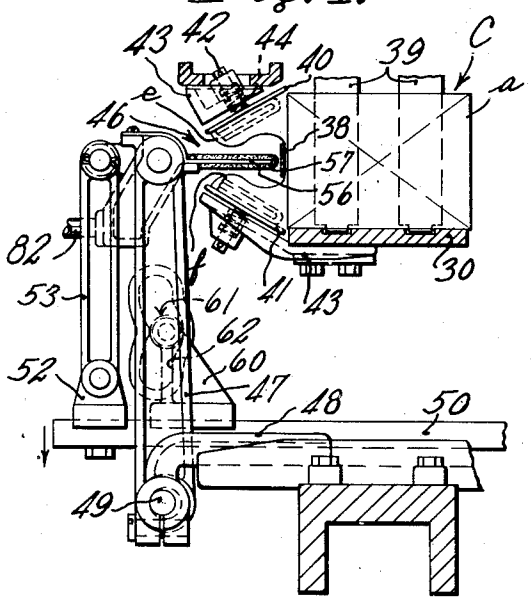


Fig. 6.

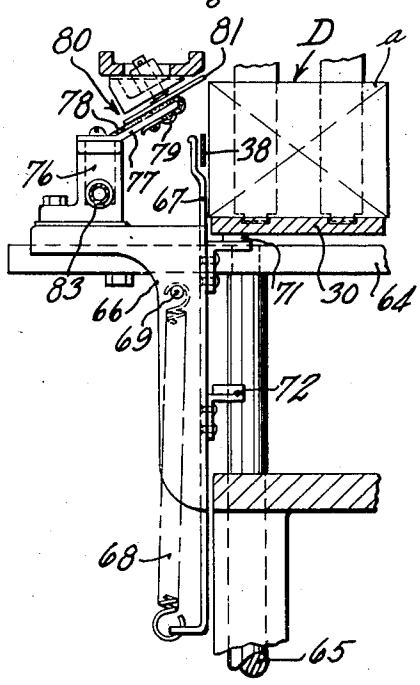


Fig. 5.

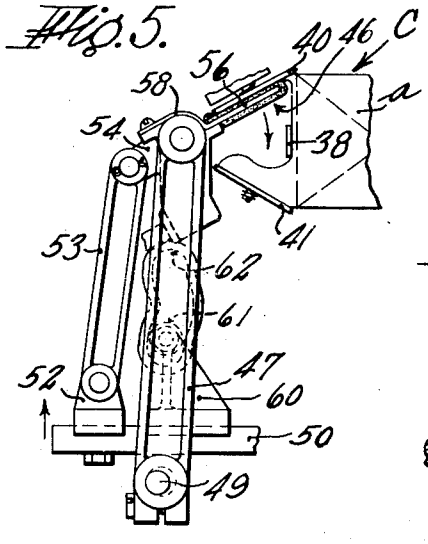


Fig. 7.

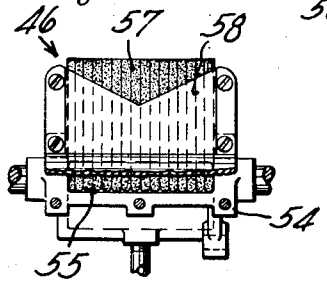
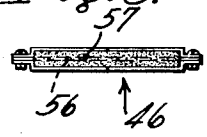


Fig. 8.



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Fig. 9.

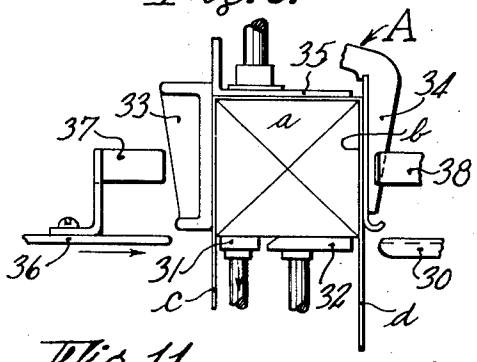


Fig. 10.

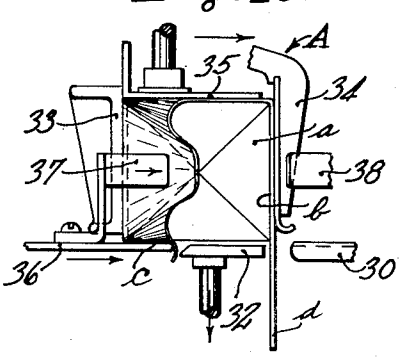


Fig. 11.

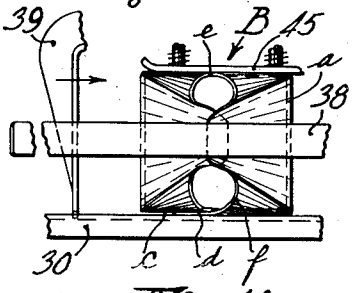


Fig. 12.

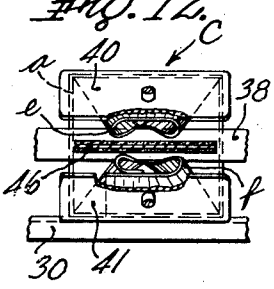


Fig. 13.

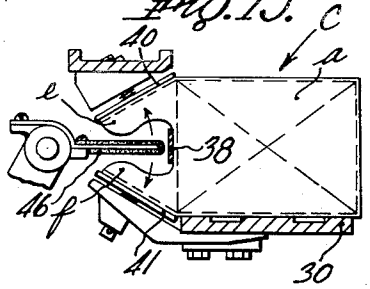


Fig. 14.

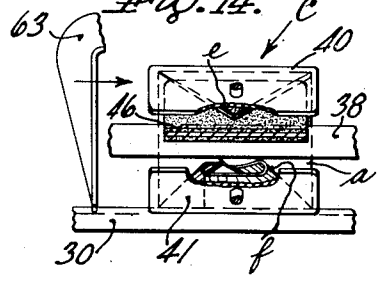


Fig. 15.

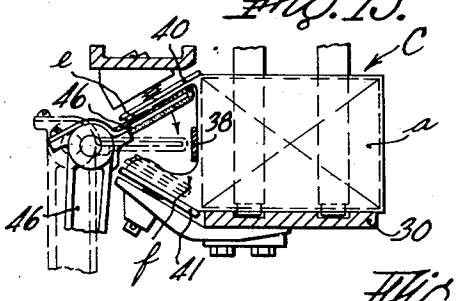


Fig. 16.

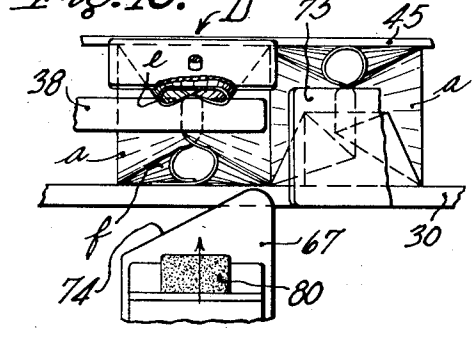
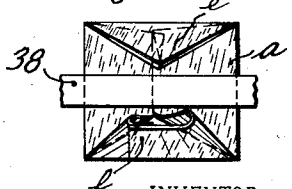


Fig. 17.



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Fig. 18.

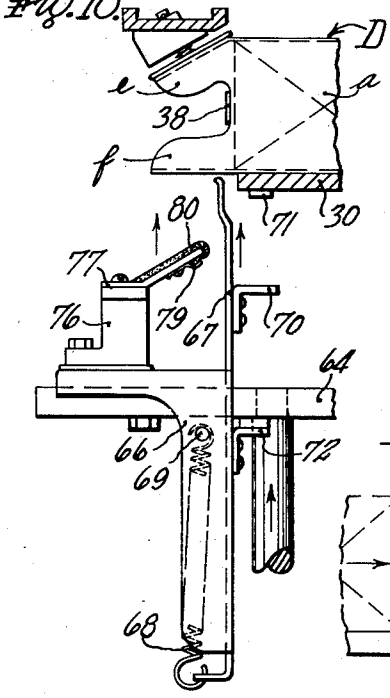


Fig. 19.

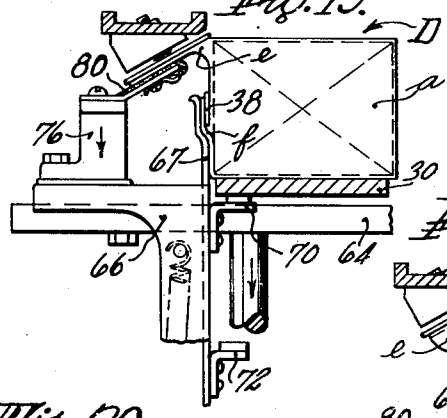


Fig. 22.

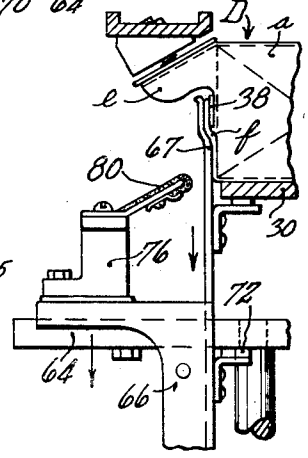


Fig. 20.

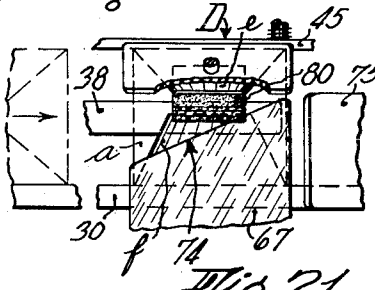


Fig. 23.

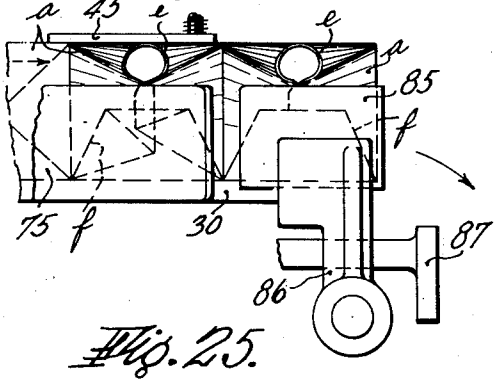


Fig. 21.e

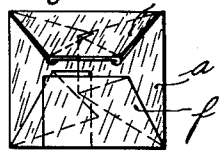


Fig. 24.

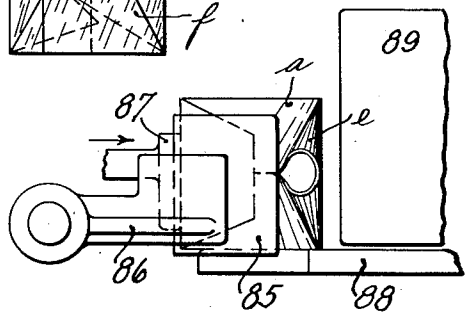
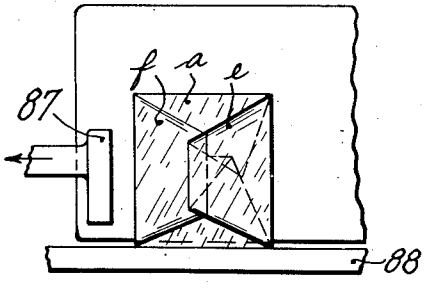


Fig. 25.



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Patented Dec. 19, 1933

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UNITED STATES PATENT OFFICE

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METHOD AND MACHINE FOR WRAPPING ARTICLES

Elmer L. Smith, Longmeadow, and Lars G. Krusell, Springfield, Mass., assignors to Package Machinery Company, Springfield, Mass., a corporation of Massachusetts

Application July 13, 1931. Serial No. 550,497

26 Claims. (Cl. 93—2)

This invention relates to improvements in wrapping methods and machines. One object of the invention is to provide a novel manner of applying a sealing liquid to the end flaps of a package in process of being wrapped. A further object is to provide novel mechanism for carrying out this improved method. A further object is to provide a novel mechanism for forming a moisture-proof end seal in a wrapper of cellophane or the like. A further object is to provide means for making a square ended fold of the two point type on a package of substantially square cross-section. A further object is to provide improved folding mechanism applicable to wrapping machines generally. A further object is to provide improved means for applying a sealing liquid to the end flaps of a package, applicable to wrapping machines generally. A further object is to provide improved means for mounting the heaters which act on the ends of packages, either to dry out the volatile constituent of a sealing liquid or to heat seal the end flaps of packages in case the wrapping material is susceptible of this treatment. Additional objects will appear from the following description and claims, taken with the accompanying drawings, in which:

Fig. 1 is a fragmentary side elevation of a wrapping machine to which the invention has been applied;

Fig. 2 is a side elevation of a portion of the delivery channel, showing the mounting of the heating members;

Fig. 3 is a fragmentary end view of this portion of the delivery channel;

Fig. 4 is a fragmentary cross-sectional view of the first applying device for the sealing liquid with a guard plate removed;

Fig. 5 is a similar view showing the parts in a different position of operation;

Fig. 6 is a fragmentary cross-sectional view of the second applying device for the sealing liquid;

Fig. 7 is a face view of the first applying device;

Fig. 8 is an end view thereof; and

Figs. 9 to 25, inclusive, are detail views illustrating the successive stages in the wrapping operation.

Since the steps of wrapping and sealing the article have been illustrated for convenience in connection with the elements of the mechanism which perform these steps, the mechanical features of the invention will be considered first and the method dealt with in the light of these features. The machine to which the invention has been applied is in general of the type shown in the Fischer Patent 1,196,094, August 29, 1916, and in the application of Paul Langhammer, Serial No. 438,843, filed March 25, 1930. For this reason a detailed description of the structure of the article feeding, wrapper feeding, and general actuating mechanism has been omitted, and only that part of the mechanism which directly coacts in the folding and sealing of the wrapper has been illustrated.

The wrapping mechanism is grouped around a longitudinally extending table 30 which supports the partially wrapped article during the major part of its travel through the machine. An article *a* is raised to the level of this table, picking up a wrapper *b* on the way, by a pair of elevating plungers 31 and 32 actuated once during each machine cycle by any suitable cam or linkage mechanism. This wrapper is preferably moisture-proof cellophane or similar material. The elevated article is received in a reciprocable pocket formed by a pusher member 33, a forward member 34 swung upwardly to clear the article on the return stroke of the pocket, as in the Fischer patent and the Langhammer application, and a weighted, vertically slidably top plunger 35. The pocket receives the article and wrapper in the position A of Fig. 1, causing the wrapper to be draped downwardly in U-form with the two extensions *c* and *d* preferably of unequal length (Fig. 9), the one to the rear being shorter. The extension *c* is folded under the article by a plate 36, actuated once during each cycle by any of the usual operating mechanisms. As the plate advances (Fig. 10), the plunger 31 descends, plunger 32 remaining in its upper position a short time thereafter to permit the support of the package to be assumed by the plate.

Carried by the plate 36 is a pair of rear tucking plates 37, each plate being made considerably narrower than the height of the package in order to restrict its effect to the central part of the wrapper. The purpose of this proportioning of the size of the folder to that of the package will be explained below in considering the formation and sealing of the end folds. Opposed to the plates 37 are a pair of stationary rails or tuckers 38, of similar width, past which the article is carried in its travel to the idle station B. From this point the partially wrapped article is picked up by pivoted pusher fingers 39 mounted for a forward straight line movement while in the angular position of Fig. 1, and to be

swung upwardly during its return stroke to clear the next succeeding article as described in the Fischer patent referred to, or as shown in the Langhammer application These fingers preferably extend into grooves in the bed plate, as shown in Fig. 4, so as to extend their fold holding function to the lower corner of the package. At the station C, where the article is deposited by the pusher 39, a sealing liquid is applied in a manner and by mechanism which will now be described.

Due to the narrowness of the folders 37 and 38 the outstanding top and bottom flaps *e* and *f* are not creased flat, as is usual, but remain with rounded and open ends as shown in Fig. 11. The flaps are somewhat, but not greatly, flattened by passing respectively under and over plates 40 and 41 (Fig. 12), each of which is mounted on a stud 42 (Fig. 4) slidable in a stationary bracket 43 and pressed into position by a light spring 44. The top of the package is at this time being held by the usual spring pressed upper rail 45.

As the flaps *e* and *f* at each end of the package pass between the plates 40 and 41, they straddle a sealing liquid applying device indicated generically at 46 and shown in detail in Figs. 4, 5, 7, and 8. A link 47 is pivoted to a stationary bracket 48 by pin 49 which is preferably made eccentric (as shown in Fig. 4) to supply an adjusting means. Reciprocating vertically adjacent the link 47 is a cross head 50 supported on rods 51 (Fig. 1) which are moved up and down once during each cycle by any suitable cam mechanism. At each end of the cross head is fixed a bearing 52 to which a second link 53 is pivoted. A hollow casing 54 is pivoted both to the link 47 and to the link 53, functioning both as a fluid reservoir 55 and as a support for a thin plate 56 which forms the core of the sealing liquid applying device 46. Wicks 57 extend from the reservoir 55 through holes in the plate and around its top and bottom surfaces (Figs. 4, 7, and 8). The upper and lower wick surfaces are protected by guard plates 58 (Fig. 7) which leave exposed only the portion of the wick area which corresponds with the portion of the flap to be coated. This feature will be returned to later.

It will be seen that as the cross head 50 moves up or down from the intermediate position of Fig. 4, the projecting liquid dauber 46 will be caused to move towards the upper plate 40 and the lower plate 41 respectively. The upper position is shown in Fig. 5. At the same time that the dauber swings to one or the other of its extreme positions, it is desired that it reach into the corner between the flap and the end of the package to apply liquid at this point. For this purpose a bracket 60 on the cross head is provided with a roll 61 extending into a groove 62 in the relatively stationary link 47. The coaction of the roller and cam causes the dauber to reach well into the corners, as shown in Fig. 5, and yet to retract from the package end on its swing to the other extreme position sufficiently to clear the center of the article and the plate 38. The springs 44 are preferably made quite light, so that no creasing pressure will be given to the edges of the flaps *e* and *f*. The flaps therefore open up again after they are released by the dauber, particularly when a resilient wrapping material such as moisture-proof cellophane is used, permitting a method of treatment which will be dealt with fully below in considering the process aspects of the mode of wrapping followed.

A second pusher 63 now takes the package, with sealing liquid applied to the inner surfaces of the flaps *e* and *f*, to a station D where the bottom flap *f* is folded against the article end and additional sealing liquid is applied to the inner surface of the top flap *e*. A cross head 64 (Fig. 6) extends across the machine at this point, being carried on rods 65 which are reciprocated vertically once during each cycle by any suitable cam mechanism. Attached to each end of the cross head is a bracket 66 having a plate 67 secured to it as by a screw and slot connection so as to be free to slide vertically a limited amount. Springs 68 are stretched between the bottom of the plate 67 and a pin 69 on the bracket so that as shown in Fig. 18 the plate will normally be held in its most elevated position relative to the bracket, its upward movement being limited by contact of a stop 70 on the plate with a pad 71 on the table 30. As the cross head rises, the plate will rise with it. The upper limit of the plate's travel is determined so that it extends past the end of the completely folded flap *f* (Figs. 19 and 20). Upon the descent of the cross head (Fig. 22), the plate will remain elevated until the cross head has moved some little distance, and will then be moved down by the contact of the cross head with a lower stop 72.

As best shown in Fig. 16, the plate 67 is tapered at 74 at its upper end, slanting from its forward edge downwardly towards its rear. This accomplishes two things. In the first place, the plate does not descend far enough to release the fold *f* completely, until the package in position D is moved on between side plates 75 by the contact of a succeeding package with it. This succeeding package has, of course, its lower flap *f* extending from it, and this flap would strike the rear side of the folding plate unless the plate were cutaway in the manner shown. A further advantage of this form of plate is that, as shown in Fig. 16, contact of the ascending plate with the flap *f* is made in a direction to tighten up the overlap of the extended portions of flaps *c* and *d* and thus to resist the tendency to unwrap which occurs due to the springy character of the material.

The bracket 66 also carries a reservoir 76 from which projects a strip 77. A wick, or series of wicks, 78 projects from the reservoir, extends over the surface of the strip, and is secured to its lower side by a clip 79. This wick constitutes a second dauber 80 and serves to apply a coating of sealing liquid to the end portion of the inner surface of flap *e*, pressing it against a plate 81 mounted and spring pressed similarly to plates 40 and 41. Suitable flexible tubes 82 and 83 extend respectively from the reservoirs 55 and 76 to a suitable constant level source of liquid supply. Such a source is described in the Langhammer application Serial No 507,923, filed January 10, 1931, and need not be dealt with in detail here.

The article is pushed along between side plates 75 by the pressure of succeeding articles with the upper flaps *e*, now adhesive over their entire surfaces, projecting over the plates as shown in Fig. 16. As also shown in that figure, the side rails 38 preferably extend through the station at which the flaps *f* are folded, these flaps, although coated with solvent, being folded directly against the outer surface of the rail as shown in Figs. 19, 20, and 22. With the use of a solvent rather than

an adhesive and the employment of a wrapping material such as moisture-proof cellophane, no harmful smearing of the rail will occur, due both to the small quantity of soluble material carried by the cellophane and to the fact that probably the major portion of the action of the solvent occurs after the wrapped packages have been introduced into the heaters.

As the packages are forced one by one beyond the plates 75, they pass between side plates 85 of an oscillating holder 86 which is moved by suitable mechanism once during each cycle from the position of Fig. 23 to that of Fig. 24. In the latter position the package is within range of a reciprocating pusher 87 which carries the package over the delivery table 88 and between the heating plates 89 which also serve to fold the flaps *e* against the ends of the article. The heating plates are preferably mounted as shown in Figs. 2 and 3, so that they have a parallel motion towards and from each other. For this purpose each plate is pivoted near its top to a pair of spaced bell cranks 90, each journaled in a stationary bracket 91. Similar bell cranks 92 are journaled lower down in the bracket so that they can be pivoted to the heating plate near its lower edge, the second arms of each pair of cranks being connected by links 93. Pins 94 upon the lower edge of the opposed heating plates are connected by springs 95 so that the plates are always drawn towards each other with a yielding pressure. This construction is particularly advantageous in a case like the present where it is desired to subject the end folds to a long heating of relatively low intensity, since the ordinary ways of mounting the heaters will not give uniform pressure over the entire heater length. Heat may be supplied to the plates in any suitable way, as by the usual electric heating unit 96 controlled by a thermostat 97. For adjusting the heaters laterally to accommodate different sizes of packages, the brackets 91 may be coupled to the delivery table 88 by screws 98 passing through slots 99.

The manner of wrapping the article with the apparatus described will now be considered. The wrapper *b* is first folded in tubular form around the article in the usual way, a stripe of sealing liquid being preferably applied to the inner margin of flap *d* as the wrapper sheet is fed into the machine. Where moisture-proof cellophane is used as a wrapper, the sealing liquid is preferably a solvent such as ethylene glycol monomethyl ether, which is a water-like organic solvent non-adhesive in itself and passing readily through wicking without clogging on evaporation. When applied in a thin film to moisture-proof cellophane, this solvent dissolves or softens the moisture-proof coating, so that when two or more surfaces are brought together and held until the solvent has substantially evaporated, they will adhere firmly. The evaporation of the solvent can be hastened by heat, it being preferred to use a degree of heat low enough to avoid fusion of the coating material as high temperatures have been found deleterious to the qualities of the coating.

In the present case it is desired to form a double point fold with square ends. With a package of a width substantially greater than its height, the use of ordinary tuckers will produce folds of this character. See for example the patent to Smith No. 1,731,946, October 15, 1929. With an article of substantially square cross-section, such as that illustrated in the present case, the use of folders which act against the entire height of the package to form the front and rear end tucks will cause the folds to be drawn to a point, as in the case of the upper flap *e* in the condition shown in Fig. 17. It is for this reason that the tuckers 37 and 38 are made narrow, each of them contacting only with a small area at the center of the height of the package. The sides of the tubular wrapper end extensions are not by this means made into true tucks against the article end, but are, as shown in Fig. 11, bent in so as to overlap each other, leaving the upper and lower flaps free to extend outwardly in generally open form. As the flaps pass between the plates 40 and 41, they are somewhat flattened, but still preserve their square ended appearance due to the narrowness of the tuckers.

The initial application of sealing liquid is by the dauber 46, which has a compound motion so that it passes well into the corners between the flaps and the end of the article. The pressure against the uncreased flaps causes them to assume temporarily a pointed form, indicated by the flap *e* in Fig. 17. In that figure, the flap *f* is shown in the position it occupies while supported by the plate 41, and the flap *e* is shown as flattened by the action of the dauber 46 adjacent the base of the flap. When the dauber moves away, the flap reassumes substantially its former rounded condition. It will be seen from Fig. 17 that the outer surface of flap *f* is greater in area than that of the temporarily flattened flap *e* for the reason that in the latter case some of the material of the flap has been drawn inwardly around the bend. When the flap is released, this material moves back so that it is again on the outside. The dauber 46 is, therefore, preferably restricted in its effective area by the guard plates 58 so that the portion of the wrapper which belongs on the outer part of the flap and was brought transiently to the inner side will not be coated.

Due to the fact that the dauber 46 extends well against the base of the flap, the solvent will be spread thoroughly over the base of the flap, and when the latter is folded against the underlying folds a tight seal will result at this point. A different condition, however, results nearer the end of the flap. The dauber 46 acts while the elements of the flap are closed up or drawn to a point, and when the flap again opens up there will be an uncoated portion of generally triangular shape near its end. This surface corresponds with the upper inside part of the tubular extending flap *e* shown in Fig. 23. With the lower flap *f* this condition is not of so much importance, as this flap is folded first and is covered by the flap *e*. The case is quite different with this latter flap. If the central area at the end is not coated, there will be an open passage straight to the interior of the package which will destroy the desired moisture-proof property of the wrapping.

The interior of the flap *e* is therefore given a second coating of solvent with the dauber 80, which contacts with the flap only comparatively near its end. The absence of pressure between the dauber and the base of the flap prevents the folds being again drawn in to a point. Fig. 21 shows the condition of the flap *e* as the solvent is being applied for the second time. Upon the removal of the dauber 80 the flap *e* may again open up as in Fig. 23, but it has now been coated thoroughly, and when the package is

forced between the heater plates as in Fig. 25, the flap will once again be flattened out. Due to its long contact with the heater plates, which are preferably maintained at a temperature below that at which fusion of the moisture-proofing coating occurs, the solvent will first soften the coating and will then evaporate, leaving adjacent layers of the coating firmly secured together.

We claim:

1. A method of wrapping and sealing articles which comprises folding the wrapper upon four sides of the article with a tubular extension of the wrapper projecting beyond the end of the article, tucking in opposite central portions of the wrapper leaving the portions of the tucks adjacent the upper and lower flaps unconfined and uncreased, folding one of said flaps against the end of the article, folding the second flap part way towards the end of the article to expand the flap, applying a sealing liquid to the interior of said second flap while so folded, and completing the folding of the second flap against the end of the article.

2. A method of wrapping and sealing articles which comprises folding the wrapper upon four sides of the article with a tubular extension of the wrapper projecting beyond the end of the article, tucking in opposite central portions of the wrapper leaving the portions of the tucks adjacent the upper and lower flaps unconfined and uncreased, folding one of said flaps against the end of the article, exerting a non-creasing pressure upon the remaining flap adjacent its base to contract it and simultaneously applying a sealing liquid to its inner surface, removing the pressure, exerting pressure upon the flap adjacent its end with the flap inclined towards the end of the article to flare the end and simultaneously applying a sealing liquid to its inner surface, and completing the folding of the second flap against the end of the article.

3. A method of wrapping articles in moisture-proof cellophane which comprises folding a sheet of cellophane around four sides of an article leaving a tubular extension of the wrapper at each end of the article, tucking in the central portions of the sides of the extensions so as to overlap them one upon the other leaving the portions of the tucks adjacent the upper and lower flaps unconfined and uncreased, applying a solvent to the inner surface of one of each pair of the end flaps and folding said flaps against the ends of the article, exerting a non-creasing pressure upon the second flap of each pair adjacent its base to contract it and simultaneously applying a solvent to its inner surface, removing the pressure and permitting the natural resiliency of the cellophane to open up the flaps, exerting pressure upon said flaps with the flaps inclined towards the ends of the article to flare the flap ends and simultaneously applying a solvent to their inner surfaces, and completing the folding of said second flaps against the ends of the article.

4. A method of applying a sealing liquid to an uncreased wrapper flap which comprises flattening the flap in separate operations by pressure extending over different areas and applying sealing liquid to the interior of the flap at each operation.

5. A method of applying a sealing liquid to an uncreased wrapper flap which comprises flattening the flap in separate operations by pressure extending in the first operation over an area adjacent its base and in the second operation over an area adjacent its end, and applying a sealing liquid to the interior of the flap at each operation.

6. A wrapping machine having means for forwarding an article having side tucks and opposed uncreased wrapper flaps extending from the end thereof, means for holding the central portions only of the side tucks, a dauber movable against one of the flaps adjacent its base, a second dauber movable against the same flap adjacent its end after release of the flap by the first dauber, means for holding the flap in an inclined position during the operation of the second dauber, and means for folding the dauber flap against the end of the package.

7. A wrapping machine comprising means for holding an article with an outstanding flap, a plurality of separate daubers positioned to contact with different areas of said flap, and means for causing successive contact between the daubers and the flap.

8. A solvent applying device for wrapping machines which comprises a substantially flat dauber having a thickness permitting it to extend between opposed flaps of a partially wrapped package and having a wick exposed upon opposite faces thereof whereby the dauber may contact with the inner faces of the opposed wrapper flaps.

9. A solvent applying device for wrapping machines which comprises a double-faced dauber having a normal position between opposed flaps of a partially wrapped article, and means for moving the dauber into contact alternately with the inner surfaces of the opposed flaps.

10. A solvent applying device for wrapping machines which comprises a double-faced dauber pivoted for swinging movement and having a normal position between opposed flaps of a partially wrapped article, and means for oscillating the dauber into contact alternately with the inner surfaces of the opposed flaps.

11. A solvent applying device for wrapping machines which comprises a double-faced dauber having a normal position between opposed converging flaps of a partially wrapped article, and mechanism for imparting to the dauber a compound movement whereby it oscillates into contact alternately with the inner surfaces of the opposed flaps and retracts from the article to clear it in its intermediate position.

12. A solvent applying device for wrapping machines comprising a frame, a support on the frame for holding a partially wrapped article with spaced outstanding flaps, a link pivoted to the frame, a second link extending substantially parallel to the first link, a member pivoted to the second ends of both links and carrying a solvent applying device normally extending into the space between the flaps, means for reciprocating the second link to cause oscillation of the applying device, and mechanism for oscillating the links during the reciprocating movement of the second link to carry the applying device into the corners of the flap and to cause it to clear the end of the article in its intermediate position.

13. A solvent applying device for wrapping machines comprising a substantially flat plate, a wicking folded over the plate so as to be exposed on both sides thereof, a reservoir into which the wicking extends, and means for causing relative movement between the plate and a

wrapper flap in a direction substantially normal to the plate.

14. A solvent applying device for wrapping machines comprising a plate, a wicking extending over the surface of the plate, a guard plate restricting the area of the plate-supported wick which comes into contact with the wrapper flap, and a reservoir into which the wicking extends.

15. A solvent applying device for wrapping machines comprising a plate, a wicking folded over the plate so as to be exposed on both sides thereof, a pair of guard plates clamped around the plate so as to restrict the area of the plate-supported wick which comes into contact with the wrapper flap, and a reservoir into which the wicking extends.

16. A wrapping machine having means for forwarding along a path an article having opposed outstanding flaps at its end, a dauber positioned alongside the path of the article and between the paths of the outstanding flaps, and means for moving the dauber alternately into contact with said flaps.

17. A wrapping machine having means for forwarding intermittently along a path an article having opposed outstanding flaps at its end, a dauber positioned alongside the path of the article at one of its rest stations and between the paths of the outstanding flaps, and means for moving the dauber alternately into contact with said flaps while the article is stationary.

18. A machine for wrapping articles in a material having a soluble coating upon its surface comprising mechanism for forwarding along a path an article having a wrapper folded around it with a tubular extension at each end, means for forming rear tucks in each of said wrapper extensions, a stationary tucker positioned to form the front tuck in each extension and to hold both tucks throughout the folding of one of the end flaps in each extension, means for applying a solvent to the inner surfaces of said flaps, a folder turning one of each pair of solvent coated end flaps against the stationary tucker, a holding device to receive the article as it is forwarded beyond the stationary tucker and to press the folded flap against the article end, means for folding the second pair of flaps, and a heating device for causing the solvent to soften the coating on the wrapping material and then to evaporate leaving the overlapping folds in adhering relation.

19. In a wrapping machine of the type having devices for folding a wrapper sheet completely around an article leaving tubular extensions of the wrapper beyond the ends of the article with the margins of the wrapper sheet overlapping in one side of the extensions, folding devices for forming tucks in the sides of the wrapper extensions adjacent the sides containing said overlapping margins, and a reciprocating folder for the margin-containing flap having a flap-contacting face slanted with respect to said flap in a direction to cause contact to result in the first instance with the side of that one of the flaps the margin of which laps over the other.

20. A wrapping machine having mechanism for forwarding intermittently in abutting relation a series of articles each having its wrapper end extensions formed with opposed side tucks leaving spaced flaps between them, reciprocating folders movable adjacent a position of rest of the articles, and a pair of stationary side plates receiving between them the article forwarded from said position of rest, the reciprocating folders being timed in their operation to recede from flap folding position during the advancing movement of the articles and having their flap-contacting edges slanted off in the direction of the articles approaching them to avoid interference with the flap to be folded on the succeeding article.

21. A wrapping machine having means for folding a wrapper about four sides of an article having a tubular wrapper extension at its end, tucking devices engaging the center only of opposite sides of the wrapper extension without confining the portions of the tucks adjacent the intermediate flaps, means for holding one of said intermediate flaps inclined towards the end of the article, means for applying a sealing liquid to the inner surface of said flap while it is so held, and means for folding said flap against the end of the article.

22. A wrapping machine having means for supporting an article with spaced wrapper flaps extending therefrom, means for holding said flaps inclined towards each other and the end of the article, and means for applying a sealing liquid to the inner surface of at least one of said flaps while so held.

23. A wrapping machine having heating members for opposite ends of the package comprising parallel heated plates, a parallel motion linkage supporting the plates, and spring means constantly urging the plates towards each other.

24. A wrapping machine comprising means for wrapping an article so as to produce an outstanding flap having on one face shoulders formed by folded portions thereof, a wick support, a solvent carrying wick exposed upon the support, and means for pressing the flap and the wick together to force solvent from the wick into the space between the folded portions of the flap.

25. A solvent applying device for wrapping machines which comprises a substantially flat wick support of a thickness permitting it to extend between opposed flaps of a partially wrapped article, and a wick exposed upon opposite sides of the support in position to contact with the inner faces of the opposed wrapper flaps.

26. A wrapping machine comprising means for forwarding along a path a partially wrapped article having spaced projecting flaps at one end, a wick support located adjacent said path in position to be straddled by the spaced flaps, a solvent bearing wick exposed upon opposite sides of the support, and periodically acting means to cause contact between the wicks and the inner faces of the spaced wrapper flaps.

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