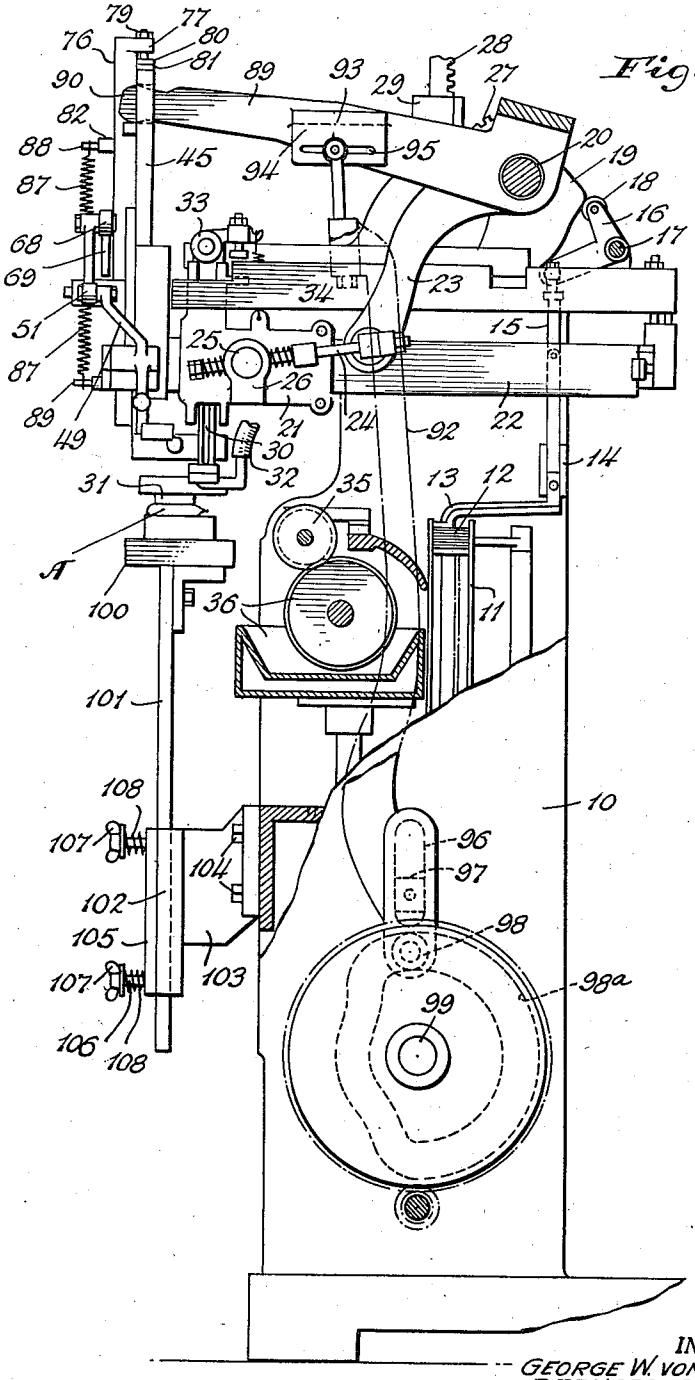
Dec. 1, 1942. G. W. VON HOFE ET AL 2,303,775

LABELING MACHINE

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Fig. 1.



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LABELING MACHINE

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Fig. 2.

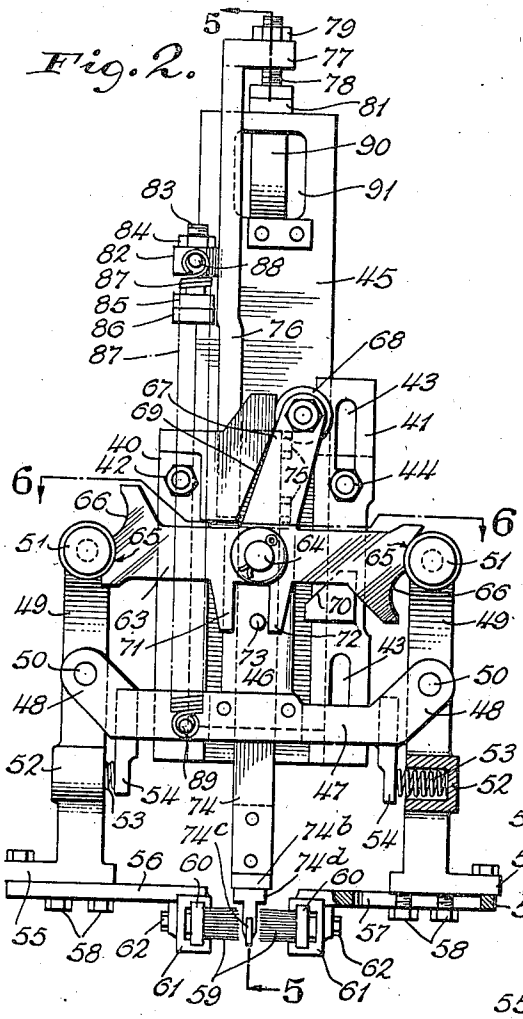
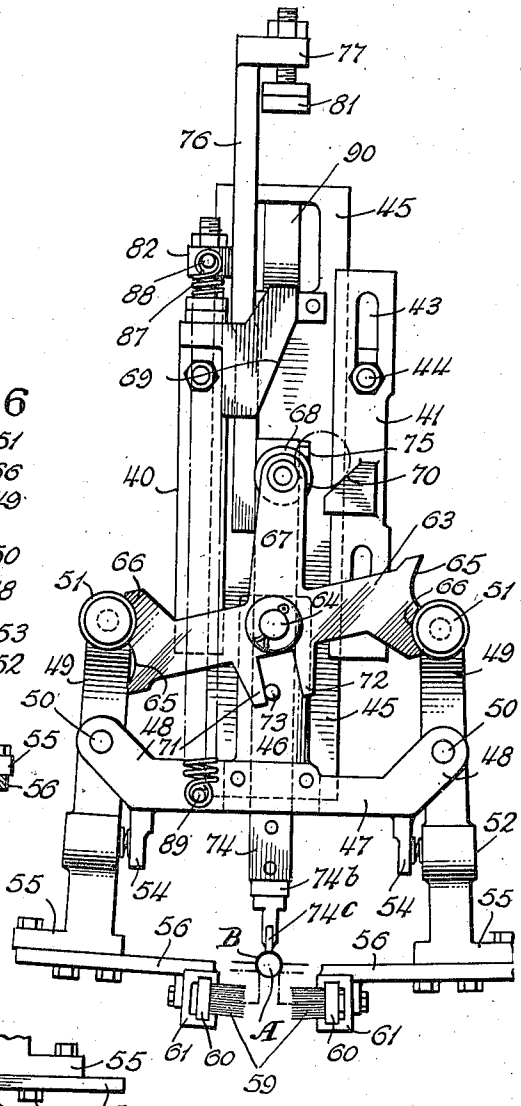


Fig. 3.



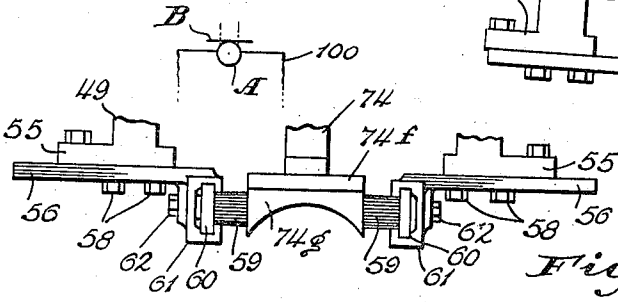
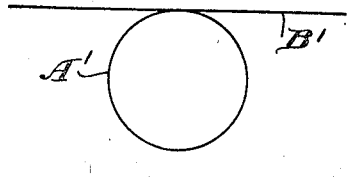


Fig. 7.



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LABELING MACHINE

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Fig. 4.

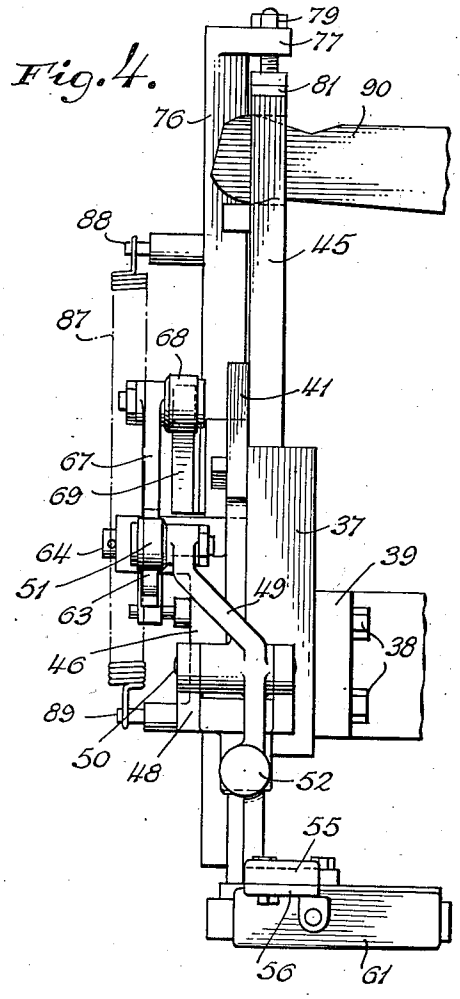


Fig. 5.

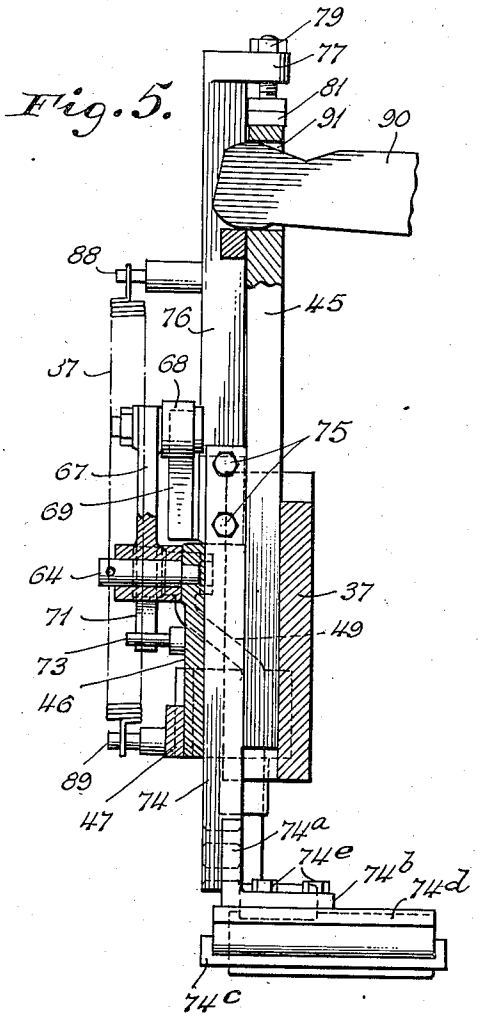
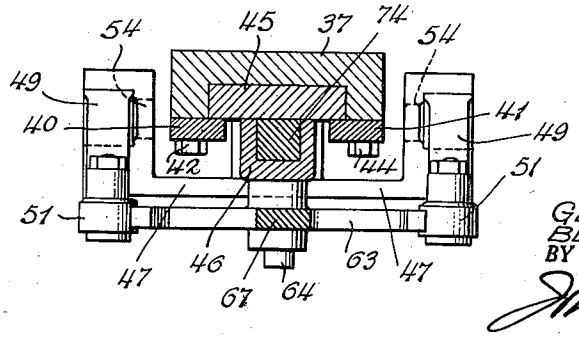


Fig. 6.



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UNITED STATES PATENT OFFICE

2,303,775

LABELING MACHINE

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Application November 9, 1939, Serial No. 303,564

26 Claims. (Cl. 216—55)

The invention relates to labeling machines and has for its object to provide a novel apparatus adapted to be embodied in such machines and constituting a simple means for efficiently and accurately applying labels to containers including those of minute dimensions as exemplied by conventional small ampules. Other more specific objects will appear from the description hereinafter and the features of novelty will be pointed out in the claims.

In the accompanying drawings which illustrate an example of the invention without defining its limits, Fig. 1 is a side elevation, partly in section, of a machine embodying the novel apparatus; Fig. 2 is an enlarged front elevation of the novel apparatus; Fig. 3 is a corresponding view of said apparatus with the parts in another position; Fig. 4 is a side elevation of the novel apparatus; Fig. 5 is a longitudinal section on the line 5—5 of Fig. 2; Fig. 6 is a horizontal section on the line 6—6 of Fig. 2, and Fig. 7 is a fragmentary front elevation showing a different arrangement of the apparatus.

The labeling machine selected for the purpose of illustrating and describing the novel apparatus, includes an upright supporting frame 10 on which a suitable container or hopper 11 is mounted in position for proper co-operation with the associated elements of the machine; the container or hopper 11 contains a supply of labels in the form of an upright stack 12 from the upper end of which the labels are successively removed for application to the articles for which said labels are intended. Suitable provision is made, in any customary manner, for periodically restoring the upper end of the stack 12 to a predetermined level in proper operative relation to the co-operating elements of the machine; as the elevating mechanism whereby this periodical adjustment is effected does not per se constitute a novel feature of the machine, and as such mechanism is well-known, it has not been deemed necessary to illustrate the same.

For the purpose of controlling the aforesaid elevating mechanism, the machine may include a feeler 13 arranged to rest upon the upper end of the stack 12 and vertically movable in an upright guide 14 on the frame 10. The feeler 13 is connected by means of a link 15 with a bell-crank lever 16 fixed upon a shaft 17 rotatably mounted on the frame 10, said lever 16 being provided with a roller 18 located in operative relation to a cam 19; the latter is carried by a shaft 20 journalled on the frame 10. In the operation of the machine, the feeler 13 will follow the stack 12 as it diminishes in height and at a predetermined point will cause the elevating mechanism to be operated in a manner to restore the upper end of the stack 12 to its initial level; this is accomplished by the action of the bell-crank lever 16 and cam 19 in co-operation with mechanism not shown, it being understood that the shaft 20 is rocked on its axis when the machine is in operation.

In the machine as illustrated, the means whereby individual labels are successively removed from the stack 12 and transferred therefrom to the point of application to the elements to be labeled, is of the suction operated type, and per se may be of any suitable construction. As shown, the label transferring means consists of a carriage 21 slidably mounted upon a horizontal guide rail 22 supported on the frame 10 in any convenient manner; the carriage 21 is slidably reciprocated on the rail 22, for instance, by means of an arm 23 fixed upon the shaft 20 and having its free end pivotally connected with a coupling rod 24 which in turn is yieldingly and pivotally connected at 25 with a lug 26 forming part of or fixed upon the carriage 21 as shown in Fig. 1.

In the operation of the machine, the carriage 21 is reciprocated on the rail 22 by rocking the shaft 20, which swings the lever 23 to alternately push and pull the carriage 21 lengthwise of the rail 22. The mechanism whereby said shaft 20 is rocked may comprise a gear segment 27 fixed upon the shaft 20 and meshing with a rack 28 vertically movable in a guideway 29 suitably located upon the frame 10 as illustrated in Fig. 1. The rack 28 is vertically reciprocated to rock the segment 27 and shaft 20 in timed relationship with the other elements of the machine, in any conventional and well-known way.

The carriage 21 serves as a support for a member 30 which is vertically slidable on said carriage 21 and at its lower end carries the suction head 31. The specific construction of the latter may be of any conventional type, the suction head 31 in any case being connected with a source of suction, for instance, by means of a suitable tube 32. Throughout the major portion of the reciprocation of the carriage 21 the member 30 is held against downward vertical movement by means of a roller 33 which travels lengthwise of a fixed rail 34; at predetermined points the rail 34 is recessed to permit downward vertical movement of the member 30. This enables the suction-head 31 to remove terminal labels from the upper end of the stack 12 and effect the initial appli-

cation thereof to the articles for which said labels are intended. The aforesaid vertical movements of the member 30 and its associated elements on the carriage 21 may be effected by means of any suitable mechanism; as the latter per se forms no part of the novel apparatus, it has not been considered necessary to illustrate the same.

In the labeling machine illustrated in the drawings, the labels picked up successively by the suction-head 31 from the stack 12 are provided with a coating of adhesive on one surface during the transfer of said labels from the stack 12 to the point of application to the elements for which said labels are intended. For this purpose each label subsequent to its removal from the stack 12 by the suction-head 31 is carried into progressive tangential contact with the adhesive applying roll 35 of the adhesive applying means 36 suitably mounted in proper position in the machine as shown in Fig. 1; the adhesive applying means 36 may be of any suitable construction and needs no further description as per se it does not constitute a novel feature of the instant machine.

The novel apparatus in the form in which it is embodied in the illustrated machine, constitutes a mechanical unit which comprises a main guide member 37 secured in an upright position by means of bolts or the like 38, on a supporting bracket 39 suitably mounted upon or forming part of the machine frame 10. Gib plates 40 and 41 are located on the front of the main guide member 37 and project inwardly beyond the side ribs of said member 37 so as to extend over the guide channel thereof for the purpose to be more fully set forth hereinafter. The gib plate 40 is fixed in place on the guide member 37 in any convenient manner as by means of screws 42, while the gib plate 41 is provided with slots 43 for the accommodation of screws 44 whereby said gib plate 41 is adjustably mounted on said main guide member 37. The latter in conjunction with the inwardly projecting portions of the gib plates 40 and 41 provides a vertical guideway in which a main slide 45 is slidably mounted for movement in vertical directions.

An auxiliary channeled guide member 46 is suitably fastened upon the face of the main slide 45 to move therewith and forms part of or is secured to a bracket 47 which includes forked bearings 48 projecting at upward inclinations in opposite directions from the bracket 47 as shown in Figs. 2 and 3.

The bearings 48 provide supports for wiping devices illustrated in the form of brush levers 49 which are pivotally connected therewith at 50 and at their upper ends carry rollers 51 the purpose of which will appear more fully hereinafter; at intermediate points the levers 49 are provided with sockets 52 for the accommodation of coil springs 53 which bear with their outer ends against abutment members 54 which project downwardly from the bearings 48 preferably as integral parts thereof as shown in Figs. 2, 4 and 6. At their lower ends the brush levers 49 are formed with transversely extending heads 55 on which holders 56 for label wipers or equivalent label applying means are adjustably mounted; as shown in the illustrated example, the holders 56 are located in surface engagement with the heads 55 and provided with slots 57 for the accommodation of screws 58 whereby said holders 56 are fixed in adjusted positions on said heads 55.

In the illustrated example, the wipers or label applying means are shown in the form of brushes 59, the backs 60 of which are adjustably mounted in grooved supports 61 forming part of or secured to the holders 56; set screws 62 are provided for clamping the brush backs 60 against movement in the supports 61. With the arrangement as shown and described, the brushes 59 extend transversely to the holders 56 and project toward each other in spaced parallel relation; the brushes 59 may be adjusted toward and away from each other by shifting the holders 56 relatively to the heads 55 and furthermore may be adjusted in directions at right angles to the aforesaid adjustment by shifting the brush backs 60 in the supports 61. It is accordingly easily possible to adjust and set the brushes 59 or equivalent label applying means in any desired manner relatively to each other and to the articles being labeled.

The novel apparatus, in addition to the parts so far mentioned, includes control means whereby the wiping devices are controlled, or more specifically, whereby the brush levers 49 are rocked on the pivots 50 to shift the brushes 59 from operative positions to inoperative positions and vice versa during an operative cycle of the labeling machine. The aforesaid means is illustrated in the form of a control device comprising a rocking lever 63 pivotally mounted on a stud 64 carried by the auxiliary guide member 46. At its opposite outer ends the lever 63 is provided with recesses 65 and 66 for the reception of the rollers 51 of the brush levers 49; the arrangement is such that the recesses 65 are located at a somewhat greater distance from the pivot 64 of the lever 63 than the recesses 66 for the purpose to be more fully set forth hereinafter. The control device further comprises an arm 67 preferably constituting an integral part of the lever 63 and extending upwardly therefrom in an oblique direction as illustrated in Figs. 2 and 3; at its upper end the arm 67 is provided with a roller 68. The latter is arranged to engage and co-operate with stationary cams 69 and 70 during the vertical movements of the main slide 45 in an operative cycle of the labeling machine as will appear more fully hereinafter; the cam 69 in the example shown is carried by and forms part of the gib plate 40 and the cam 70 projects from and comprises an integral part of the gib plate 41 and is selectively adjustable therewith to different set positions relatively to the cam 69. To definitely arrest the rocking movements of the control device, the rocking lever 63 may include depending stop lugs 71 and 72 suitably spaced apart and co-operating with a stop pin 73 projecting outwardly from the auxiliary guide member 46 into the rocking paths of said lugs 71 and 72 as shown in Figs. 2 and 3.

In addition to the parts so far mentioned, the novel apparatus includes pressure means whereby the labels are initially applied to the articles for which they are intended and held in place thereon while the application of the labels to said articles is completed as will be clearly set forth hereinafter. In its illustrated form the pressure means consists of a pressure plunger 74 slidably guided in the auxiliary guide member 46 and detachably connected by means of screws 75 or the like, with an auxiliary pressure slide 76. At its upper end the latter is formed with a transverse lug 77 projecting over the upper end of the main

slide 45 into registry therewith and carrying an adjustable stop in the form of a screw 78 in threaded engagement with said lug 77 and fixed in an adjusted position thereon by a lock nut 79; the screw 78 is provided at its lower end with a head 80, the free surface of which is preferably covered with a resilient stop pad 81 as illustrated in Figs. 2 and 3. At its lower end the pressure plunger 74 is recessed for the accommodation of a bracket 74a suitably fastened in place and including a horizontal member 74b. A pressure member 74c suitable for the particular type of labeling operation being performed is mounted on a carrier 74d detachably connected with said horizontal member 74b by screws 74e. As shown in Figs. 2 and 3, the pressure member 74c is of relatively narrow form and is specially designed for use in connection with receptacles A of small dimensions such as exemplified by conventional ampules. A lug 82 projects outwardly from the auxiliary pressure slide 76 at an intermediate point for the accommodation of an adjustable stop screw 83 in threaded engagement with said lug 82 and fixed against unintentional movement relatively thereto by a locknut 84; at its lower end the screw 83 carries a head 85 having a resilient stop pad 86 secured on its free surface adapted to engage the upper end of the gib plate 40 for the purpose to be described further on in the description. The auxiliary pressure slide 76 and the pressure plunger 74 with their associated parts are yieldingly connected with the main slide 45 by means of a coupling spring 87 having its one end connected with a pin 88 projecting from the lug 82 and its other end attached to a pin 89 extending outwardly from the bracket 47.

For the purpose of operating the apparatus shown in detail in Figs. 2 to 6 inclusive, the machine includes a lever 89 loosely mounted on the shaft 20 and provided with a rounded front end 90 projecting into a slot 91 located at the upper end of the main slide 45, as illustrated in Fig. 2. Any suitable mechanism may be provided in the machine for rocking the lever 89 on the shaft 20 to vertically reciprocate the main slide 45 and its associated elements in the intended manner. In the illustrated example, the aforesaid mechanism includes an operating member 92 having its one end pivotally connected at 93 with a bracket 94 forming part of or mounted upon the lever 89; in the preferred arrangement, the bracket 94 is provided with a slot 95 in which the pivot 93 is adjustable and capable of being set, in order to selectively vary the operative movements of the lever 89 and the parts actuated thereby. At its lower end the operating member 92 is provided with a recess 96 for slidably accomodating a block 97 pivotally mounted on the frame 10 and serving to guide the member 92 in its operation; the latter may be effected by means of a roller 98 conventionally carried by said member 92 and acted on by a suitable cam 98a fixed upon a shaft 99 journalled in the frame 10 in any convenient manner.

The machine furthermore includes means for holding the articles in position for the application of the labels thereto. The aforesaid means for supporting said articles may be of any suitable type and, as shown in Fig. 1, may consist of a support 100 carried by an upright bar 101 mounted in the head 102 of a bracket 103 fastened to a suitable part of the frame 10, for instance, by means of screws 104. The bar 101 is adjustably fixed in the head 102 by means of a friction plate 105 secured in place by screw-threaded studs 106 provided with wing nuts 107 which constitute abutments for the one end of coil springs 108 the other ends of which engage the friction plate 105 and yieldingly force the latter into surface contact with the bar 101.

With this arrangement the support 100 may be constructed and selectively adjusted to support articles of various shapes and dimensions in proper label receiving relation to the novel label applying means. At the same time the yielding holding force developed by the friction plate 105 on the bar 101 will enable the support 100 to yield in order to prevent breakage of the articles if, for any reason, the labeling means developes abnormal pressures on said articles.

In describing the operation of the machine, and the novel apparatus included therein, it will be assumed that labels are being applied to relatively small articles such as ampules A; it is, of course, to be understood that this is in no sense intended to define the operative scope of the machine or the aforesaid novel apparatus.

In practice, the carriage 21 is reciprocated on the rail 22 by the associated operating mechanism and occupies temporary positions of rest at the right and left hand ends respectively of said rail 22 in Fig. 1 of the drawings. During the inactive period at the right hand end of the rail 22, the suction head 31 is moved downwardly into contact with the terminal label at the top of the stack 12, it being understood that at this stage the feeler 13 occupies a raised position out of the way in order to enable the suction head 31 to reach the top of the stack 12 without interference. At the proper moment, suction is made effective in the suction head 31 to lift the terminal label from the top of the stack by the upward movement of the member 30 which remains in a raised position during the travel of the carriage 21 toward the left hand end of the rail 22 in Fig. 1; during this travel toward the left, the label B carried by the suction head 31 passes in progressive tangential contact with the adhesive applying roll 35 and thus receives a coating of adhesive on its one surface. During the period of rest at the left hand end of the rail 22 in Fig. 1, the suction head 31 moves into contact with the ampule A which previously has been placed in position upon the support 100 and initially applies the label B carried by the suction head 31 at the time to the ampule A. When the aforesaid initial application of the label B to the ampule A has been effected, the suction in the suction head 31 is discontinued in the well-known way and the suction head is lifted away from the ampule A to a position above the adhesive applying roll 35, and at the proper time the carriage 21 is again shifted toward the right on the rail 22 and the operative steps just described are repeated. After the initial application of the label B to the ampule A has been completed in the illustrated example of the operation of the machine, an intermediate portion of the label B will be in adhesive engagement with the ampule A while the two opposite end sections of the label will project in opposite directions beyond said ampule as shown in Fig. 2.

In proper synchronism with the other operative movements of the machine, the lever 89 is rocked about the axis of the shaft 20 in a downward direction to correspondingly move the main slide 45 in the guideway provided by the main guide member 37 and the inwardly projecting portions of the gib plates 40 and 41. This downward movement of the main slide 45 is com-

municated through the medium of the coil spring 87 to the auxiliary pressure slide 76 and the auxiliary pressure plunger 74 and associated elements carried thereby.

At the same time the downward movement of the main slide 45 will carry with it the bracket 47, the lever 63 and the brush levers 49 with the parts attached to and associated with these elements. At the start of the aforesaid operative movements the parts occupy the positions illustrated in Fig. 2, and as said movements proceed, the pressure member 74c will finally contact with that portion of the label B which is in adhesive engagement with the ampule A on the support 100. As the pressure member 74c comes into engagement with the label B on the ampule A, the resilient stop pad 86 of the stop screw 83 will coincidentally come into contact with the upper end of the gib plate 49 to thereby arrest the downward movement of the pressure member 74c and prevent the same from developing a pressure upon the ampule A or equivalent thin glass container or other article sufficient to smash or otherwise injure said ampule A or equivalent article; in other words, the arrangement is such that the ampule A or its equivalent will be protected against any harmful strain at this stage. When the pressure member 74c finally contacts with that portion of the label B which is in adhesive engagement with the ampule A and the stop pad 86 coincidentally engages the gib plate 49, further downward movement of the pressure slide 76 and pressure plunger 74 will be prevented. At this stage the continued downward operation of the lever 89 will correspondingly move the main slide 45 independently of the pressure slide 76 and pressure plunger 74 and will thereby stretch the spring 87 and compress the resilient stop pad 86 of the stop screw 83 against the gib plate 49; the slight additional downward movement of the pressure slide 76 and pressure plunger 74 resulting from the aforesaid compression of the resilient stop pad 86 under the influence of the stretched spring 87 will cause the pressure member 74c to develop a slight pressure upon the label B whereby said label B is firmly held in place on the ampule A and an intermediate portion of said label B is adhesively attached thereto without any danger of fracture of or other injury to the ampule A or its equivalent.

As the aforesaid independent downward movement of the main slide 45 continues, the wiping devices or specifically the brushes 59 will engage the outwardly projecting portions of the label B and fold the same into contact with the ampule A whereby the adhesive application of the label B to said ampule A is completed; as the brushes 59 or their equivalent move downwardly as described, they will exert a wiping action whereby the aforesaid portions of the label B will be adhesively applied to the ampule A in a smooth and efficient manner. As the aforesaid operations progress, the roller 68 of the arm 67 which, with the rocking lever 63 moves downwardly with the main slide 45, will engage the stationary cam 70 which previously has been adjusted to the proper set position; as the downward operations continue, the roller 68 will move along the cam 70 and will be forced thereby to the left in Fig. 3. The resulting corresponding movement of the arm 67 will rock the lever 63 on its pivot 64 whereby the rollers 51 of the brush levers 49 will be forced out of the recesses 65 of said lever 63 against the tension of the springs 53; as the rollers 51 pass out of said recesses 65, said rollers 68 will momentarily pass over the projections or high points between each pair of recesses 65 and 66 and accordingly will be forced outwardly in directions away from each other. This outward displacement of the rollers 68 will result in pivotal movements of the brush levers 49 whereby the brushes 59 or their equivalent are moved inwardly toward each other and toward the ampule A or other article being labeled. The arrangement is such that the last mentioned operations take place at the moment when the brushes 59 or their equivalent are acting upon the ends or end portions of the label B which is being applied to the ampule A or other article at the time; the aforesaid inward movements of the brushes 59 or their equivalent accordingly result in momentarily developing additional pressures upon the opposite end portions of the particular label A whereby the adhesive connection thereof with the ampule B or other article is positively and efficiently effected. As the rollers 51 pass beyond said high points between each pair of recesses 65 and 66 the springs 53 will act on the brush levers 49 in a manner to finally snap the rollers 51 into the recesses 66 of said rocking lever 63. Because of the fact that the recesses 66 are nearer to the pivot 64, the parts at this stage will occupy the positions shown in Fig. 3 in which the brush levers 49 diverge in a downward direction, and the brushes 59 are moved away from each other sufficiently to clear the ampule A.

When this point in the operative cycle has been reached, the lever 89 will be rocked in an upward direction and accordingly will shift the main slide 45 upwardly to thereby correspondingly raise the rocking lever 63 and its associated parts, and also the bracket 47 and the brush levers 49 with the brushes 59; in the initial stages of the last mentioned operations, the levers 49 and brushes 59 remain in the positions shown in Fig. 3. The aforesaid upward movements will progressively reduce the tension in the spring 87 and finally will bring the main slide 45 into engagement with the pad 81 of the stop screw 78; from this stage onward, continued upward movement of the main slide 45 and its associated elements will correspondingly move the auxiliary pressure slide 76 and the pressure plunger 74 with its pressure member 74c in an upward direction. As these operations progress, the roller 68 will engage the stationary cam 69 and will be forced thereby to the right in Fig. 3; this causes the arm 67 to be correspondingly actuated and accordingly rocks the lever 63 on its pivot 64 in a manner to shift the rollers 51 from the recesses 66 back into the recesses 65 of said lever 63. As a result the brush levers 49 are swung on their pivots 50 in directions to move the brushes 59 toward each other so that the parts eventually are restored to the positions shown in Fig. 2, and the apparatus is ready to repeat the operative cycle set forth hereinbefore. At an appropriate point in the cycle of operations the labeled ampule A is removed either manually or automatically from the support 100 and replaced by another ampule to which a subsequent label B is applied in the manner described.

It will be understood that by properly setting the brushes 59 or by substituting a suitable pressure member and its carrier for the pressure member 74c and carrier 74d, the labeling machine and more particularly the novel apparatus, may be used with equal efficiency for labeling articles other than the ampules A.

For instance, as illustrated in Fig. 7, relatively larger cylindrical bottles A' may have labels B' adhesively applied thereto by adjusting the holders 56 on the heads 55 of the brush levers 49 to set the brushes 59 in position for proper wiping co-operation with the particular bottle A' or equivalent article; in addition, a carrier 74f provided with a pressure member 74g shaped and dimensioned to properly function with respect to the bottle A' is substituted on the pressure plunger 74 for the carrier 74d and pressure member 74c illustrated in Figs. 2 and 3. In all respects the apparatus of Fig. 7 may be the same and operate the same as the one shown in Figs. 1 to 6 inclusive.

The novel apparatus in all of its forms is of maximum efficiency in operation and requires no skilled supervision, and at the same time constitutes a mechanical unit capable of being readily embodied in existing labeling machines of the type for which it is adapted. The apparatus is particularly effective in applying labels to small articles such as ampules and at the same time may be efficiently utilized for applying labels to articles other than those indicated hereinbefore. Furthermore, although the mechanical unit is designed primarily for incorporation in labeling machines to apply labels to articles, this does not define the limits of utility of said unit.

Various changes in the specific forms shown and described may be made within the scope of the claims without departing from the spirit of the invention.

We claim:

1. In a labeling machine, means for supporting an article to be labeled, an upright main guideway, a main slide movably mounted in said guideway, an auxiliary channeled guide member mounted upon said main slide to move therewith, a bracket including oppositely projecting bearings carried by said auxiliary guide, wiping levers pivotally mounted at intermediate points in said bearings, a wiper adjustably mounted on one end of each of said levers, a roller mounted on the opposite end of each of said levers, springs acting on said levers and exerting a tension thereon normally tending to move said wipers away from each other, a rocking lever pivotally carried by said main slide and provided at its opposite ends with recesses arranged in cooperating pairs at different distances from the pivot of said rocking lever for receiving the rollers of said wiping levers, an arm projecting from said rocking lever, a roller carried by said arm, opposed cams located upon said main guideway in spaced relation in the path of said last named roller, a pressure plunger slidably mounted in said auxiliary guide member, a pressure member carried by said pressure plunger, an auxiliary pressure slide carrying said pressure plunger, a coupling spring whereby said auxiliary pressure slide and said pressure plunger and pressure member are yieldingly connected with said main slide, means for delivering an adhesive coated label for initial application to said article, and means for operating said main slide to shift said pressure member into engagement with a predetermined portion of said label and for subsequently operating said main slide independently of said pressure member whereby said coupling spring is placed under tension to cause said pressure member to press the predetermined portion of said label into adhesive connection with said article and to hold said label against shifting thereon, and whereby said wipers are operated to adhesively apply other portions of said label to said articles, the roller on said arm of the rocking lever during said operation of the main slide engaging one of said cams whereby said rocking lever is pivotally rocked to shift the rollers of said wiping levers from one co-operating pair of said recesses to another co-operating pair of said recesses whereby said wiping levers are actuated by their associated springs to move said wipers to inoperative positions away from each other prior to the return movement of said main slide, said roller on said arm of the rocking lever engaging the other cam during said return movement of the main slide to rock said rocking lever in a return direction whereby the rollers of said wiping levers are shifted back to another co-operating pair of said recesses whereby said wiping levers are operated to restore said wipers to their operative positions.

2. In a labeling machine, means for supporting an article to be labeled, an upright main guideway, a main slide movably mounted in said guideway, movable wiping means carried by said main slide, pressure means slidably mounted on said main slide, a coupling spring whereby said pressure means is yieldingly connected with said main slide, control means carried by said main slide for controlling the adjustment of said wiping means from an operative to an inoperative position and vice versa, means for delivering an adhesive coated label for initial application to said article, means for slidably actuating said main slide in an operative movement whereby said pressure means is concurrently shifted into engagement with a predetermined portion of said label and the actuation of said main slide is continued independently of said pressure means to place said coupling spring under tension to cause said pressure means to press the predetermined portion of said label into adhesive connection with said article and to hold said label against shifting thereon, and whereby said wiping means is operated to adhesively apply other portions of said label to said article, and means for actuating said control means during the operative movement of said main slide to adjust said wiping means to said inoperative position subsequent to the application of said label to the article, and for operating said control means during the return movement of said main slide to restore said wiping means to said operative position.

3. A mechanical unit comprising a main guideway adapted for mounting in a machine, a reciprocable main slide movably mounted in said main guideway, an auxiliary guide member carried by said main slide, a bracket including oppositely projecting bearings carried by said auxiliary guide member, wiping levers pivotally mounted at intermediate points in said bearings, co-operating opposed wipers mounted on said wiping levers at one end thereof, rollers carried by said wiping levers at their other ends, springs acting on said wiping levers in a manner tending to move said wipers away from each other, a rocking lever pivotally carried by said main slide and provided at its opposite ends with recesses arranged in co-operating pairs at different distances from the pivot of said rocking lever for receiving the rollers of said wiping levers, an arm projecting from said rocking lever, a roller carried by said arm, a pressure plunger slidably mounted in said auxiliary guide member, a pressure member removably carried by said pressure plunger, an auxiliary pressure slide carrying said pressure plunger, a coupling spring whereby said auxiliary pressure slide and said pressure plunger

and pressure member are yieldingly connected with said main slide, and opposed cams located upon said main guideway in spaced relation in the path of the roller of said arm and arranged to respectively act on the latter at predetermined points in the reciprocal movements of the main slide whereby the rollers of the wiping levers are shifted to and from the respective co-operating pairs of recesses of said rocking lever to adjust the wipers from operative to inoperative positions and vice versa.

4. A mechanical unit comprising a main guideway adapted for mounting in a machine, a reciprocable main slide movably mounted in said main guideway, an auxiliary guide member carried by said main slide, a bracket including oppositely projecting bearings carried by said auxiliary guide member, wiping levers pivotally mounted at intermediate points in said bearings, co-operating opposed wipers mounted on said wiping levers at one end thereof, rollers carried by said wiping levers at their other ends, springs acting on said wiping levers in a manner tending to move said wipers away from each other, a rocking lever pivotally carried by said main slide and provided at its opposite ends with recesses arranged in co-operating pairs at different distances from the pivot of said rocking lever for receiving the rollers of said wiping levers, an arm projecting from said rocking lever, a roller carried by said arm, pressure means slidably mounted in said auxiliary guide member, a coupling spring whereby said pressure means is yieldingly connected with said main slide, and a plurality of cams located on said main guideway for individually acting on the roller of said arm at predetermined points in the reciprocal movements of said main slide whereby the rollers of the wiping levers are shifted to and from the recesses of said rocking lever to adjust the wipers from operative to inoperative positions and vice versa.

5. A mechanical unit comprising a main guideway adapted for mounting in a machine, a reciprocable main slide movably mounted in said main guideway, an auxiliary guide member carried by said main slide, a bracket including oppositely projecting bearings carried by said auxiliary guide member, wiping levers pivotally mounted at intermediate points in said bearings, co-operating opposed wipers mounted on said wiping levers at one end thereof, a rocking control device pivotally carried by said main slide in co-operative relation with said wiping levers, pressure means slidably mounted in said auxiliary guide member, a coupling spring whereby said pressure means is yieldingly connected with said main slide, and a plurality of cams located on said main guideway for individually operating said control device at predetermined points in the reciprocal movements of said main slide to pivotally actuate said wiping levers and thereby adjust the wipers from operative to inoperative positions and vice versa.

6. A mechanical unit comprising a main guideway adapted for mounting in a machine, a reciprocable main slide movably mounted in said main guideway, an auxiliary guide member carried by said main slide, pivoted wiping devices carried by said main slide in opposed co-operative relation with each other, a movable control device carried by said main slide in co-operative relation with said wiping devices, pressure means slidably mounted in said auxiliary guide member and yieldingly connected with said main slide, and means on said main guideway for operating said control device at predetermined points in the reciprocal movements of said main slide to adjust said wiping devices from operative to inoperative positions and vice versa.

7. A mechanical unit comprising a main guideway adapted for mounting in a machine, a reciprocable main slide movably mounted in said main guideway, pivoted wiping devices carried by said main slide in opposed co-operative relation with each other, a movable control device carried by said main slide in co-operative relation with said wiping devices, pressure means slidably mounted on said main slide and yieldingly connected therewith, and means for operating said control device at predetermined points in the reciprocal movements of said main slide to adjust said wiping devices from operative to inoperative positions and vice versa.

8. A mechanical unit comprising guiding means adapted for mounting in a machine, a reciprocable main slide movable in said guiding means, wiping devices movably mounted on said main slide, reciprocable pressure means slidably mounted in surface engagement with said main slide, a yielding coupling connection between said main slide and pressure means whereby the main slide and pressure means are movable together throughout predetermined parts of the reciprocation thereof, and whereby said main slide is movable independently of said pressure means, and means whereby said wiping devices are adjusted at predetermined points in said reciprocation from operative to inoperative positions and vice versa.

9. A mechanical unit adapted for mounting in a machine comprising co-operating pressure means and wiping means movable over a given path in operative and return directions, control means for said wiping means, and cams co-operating with said control means to adjust said wiping means from operative to inoperative positions and vice versa at predetermined points in said path, at least one of said cams being adjustable to different set positions.

10. A mechanical unit comprising a channeled guide member adapted for mounting in a machine, gib plates carried by said guide member and projecting inwardly over the channel thereof to provide a guideway, co-operating pressure means and wiping means slidably mounted in said guideway for reciprocation therein, control means for said wiping means, and cams carried by said gib plates co-operating with said control means to adjust said wiping means from operative to inoperative positions and vice versa at predetermined points in said reciprocation, one of said gib plates being slotted for adjustment on said guide member whereby the cam carried by said slotted gib plate may be shifted to different set positions.

11. A mechanical unit comprising supporting means adapted for mounting in a labeling machine, pressure means movable relatively to said supporting means into engagement with an article being labeled to fix a deposited label against displacement thereon, applying means movably carried by said supporting means for applying said deposited label in its previously fixed position to said article, and means for arresting the movement of said pressure means independently of its engagement with said article to protect the latter against injury by said pressure means.

12. A mechanical unit comprising guiding means adapted for mounting in a labeling machine, associated pressure means and wiping

means, means for operating said pressure means and wiping means concurrently to shift said pressure means into engagement with an article being labeled to fix a deposited label against displacement thereon and for independently operating said wiping means to apply said deposited label in its previously fixed position to said article, and co-operating means on said supporting means and pressure means respectively for arresting the operation of said pressure means independently of its engagement with said article whereby the latter is protected against injury by said pressure means.

13. A mechanical unit comprising supporting means adapted for mounting in a labeling machine, pressure means movable relatively to said supporting means into engagement with an article being labeled to fix a deposited label against displacement thereon, applying means movably carried by said supporting means for applying said deposited label in its previously fixed position to said article, and a stop adjustably mounted on said pressure means for engagement with said supporting means to arrest the movement of said pressure means independently of its engagement with said article whereby the latter is protected against injury by said pressure means.

14. A mechanical unit comprising guiding means adapted for mounting in a labeling machine, applying means movable in said guiding means for exerting a progressive pressure on a label to apply the latter to an article, and means for operating said applying means to momentarily increase the applying pressure thereof on predetermined portions of said label.

15. A mechanical unit comprising guiding means adapted for mounting in a labeling machine, applying means movable in said guiding means for exerting a progressive pressure on a label to apply the latter to an article, and means for momentarily increasing the applying pressure of said applying means upon the opposite end portions of said label.

16. A mechanical unit comprising a guideway adapted for mounting in a labeling machine, a reciprocating slide movably mounted in said guideway, wiping means carried by said slide for exerting a progressive wiping pressure on a label to apply the latter to an article, means for adjusting said wiping means from operative to inoperative positions, and means for momentarily increasing the wiping pressure of said wiping means upon the opposite end portions of said label during the adjustment of said wiping means from an operative to an inoperative position.

17. A mechanical unit comprising a guideway adapted for mounting in a labeling machine, a reciprocating slide movably mounted in said guideway, wiping means carried by said slide for exerting a progressive wiping pressure on a label to apply the latter to an article, a movable control device carried by said slide for adjusting said wiping means from operative to inoperative positions and vice versa, and means associated with said control device for increasing the wiping pressure of said wiping means upon the opposite end portions of said label.

18. A mechanical unit comprising a guideway adapted for mounting in a labeling machine, a reciprocable slide movably mounted in said guideway, a bracket carried by said slide and including oppositely projecting bearings, wiping levers pivotally mounted at intermediate points in said bearings, co-operating opposed wipers mounted on said wiping levers at one end thereof for exerting a progressive wiping pressure on a label to apply the latter to an article, a rocking control device pivotally carried by said slide in co-operative relation with the other ends of said wiping levers, a plurality of cams located on said guideway for individually operating said control device at predetermined points in the reciprocal movements of said slide to pivotally actuate said wiping levers and thereby adjust the wipers from operative to inoperative positions and vice versa, and means associated with said control device for increasing the wiping pressure of said wipers upon the opposite end portions of said label during the adjustment of said wipers from an operative to an inoperative position.

19. A mechanical unit comprising a main guideway adapted for mounting in a labeling machine, a reciprocable main slide movably mounted in said main guideway, an auxiliary guide member carried by said main slide, a bracket including oppositely projecting bearings carried by said auxiliary guide member, wiping levers pivotally mounted at intermediate points in said bearings, co-operating opposed wipers mounted on said wiping levers at one end thereof for exerting a progressive wiping pressure on a label to apply the latter to an article, rollers carried by said wiping levers at their other ends, springs acting on said wiping levers in a manner tending to move said wipers away from each other, a rocking lever pivotally carried by said main slide and provided at its opposite ends with recesses arranged in co-operating pairs at different distances from the pivot of said rocking lever for receiving the rollers of said wiping levers, an arm projecting from said rocking lever, a roller carried by said arm, pressure means slidably mounted in said auxiliary guide member, a coupling spring whereby said pressure means is yieldingly connected with said main slide, a plurality of cams located on said main guideway for individually acting on the roller of said arm at predetermined points in the reciprocal movements of said main slide whereby the rollers of the wiping levers are shifted to and from the recesses of said rocking lever to adjust the wipers from operative to inoperative positions and vice versa, and projections on said rocking lever between the recesses thereof and effective on said rollers during the shifting thereof from one co-operating pair of said recesses to the other co-operating pair of said recesses for momentarily increasing the wiping pressure of said wipers upon the opposite end portions of said label.

20. In a labeling machine, means for supporting an article to be labeled, an upright main guideway, a main slide movably mounted in said guideway, movable wiping means carried by said main slide, pressure means slidably mounted on said main slide, a coupling spring whereby said pressure means is yieldingly connected with said main slide, control means carried by said main slide for controlling the adjustment of said wiping means from an operative to an inoperative position and vice versa, means for delivering an adhesive coated label for initial application to said article, a rocking lever for slidably actuating said main slide in an operative movement whereby said pressure means is concurrently shifted into engagement with a predetermined portion of said label and the actuation of said main slide is continued independently of said pressure means to place said cou-

pling spring under tension to cause said pressure means to press the predetermined portion of said label into adhesive connection with said article and to hold said label against shifting thereon, and whereby said wiping means is operated to adhesively apply other portions of said label to said article, operating means for rocking said lever adjustably connected therewith to vary the operative rocking movements of said rocking lever and to correspondingly vary the operative range of said wiping means, and means for actuating said control means during the operative movement of said main slide to adjust said wiping means to said inoperative position subsequent to the application of said label to the article, and for operating said control means during the return movement of said main slide to restore said wiping means to said operative position.

21. In a labeling machine, the combination of pressure means arranged to engage an article being labeled to fix a deposited label against displacement thereon for subsequent attachment to said article in the deposited position, and means whereby said pressure means is prevented from developing an injurious pressure on said article.

22. In a labeling machine, the combination of supporting means for supporting articles to be labeled, pressure means, at least one of said means being movable to bring said pressure means into engagement with an article on said supporting means to fix a label deposited on said article against displacement thereon, means for arresting said movable means to prevent the pressure means from developing an injurious pressure on said article, and applying means for completing the application of said deposited label in its deposited position to said article.

23. A mechanical unit comprising a carrying member adapted to be removably mounted in a machine, and co-operating pressure means and label applying means mounted on said carrying member and removable as a whole therewith from said machine.

24. In a labeling machine, the combination of pressure means arranged to engage an article being labeled to fix a deposited label against displacement thereon for subsequent attachment to said article in the deposited position, and means for arresting the pressure developing action of said pressure means at a predetermined point to prevent injurious pressure thereby on said article.

25. A pressure unit comprising guiding means adapted for mounting in a labeling machine, pressure means movably mounted in relation to said guiding means for applying a predetermined portion of a label to an article in adhesive connection therewith and for maintaining said label against displacement thereon, label applying means movably mounted in relation to said guiding means for subsequently applying the remainder of said label to said article in adhesive connection therewith, and means relatively stationary during the movement of said applying means to cause the latter to exert pressure on said label.

26. A pressure unit comprising guiding means adapted for mounting in a labeling machine, pressure means movably mounted in relation to said guiding means for applying a predetermined portion of a label to an article in adhesive connection therewith and for maintaining said label against displacement thereon, label applying means comprising pivotal levers movably mounted in relation to said guiding means for subsequently applying the remainder of said label to said article in adhesive connection therewith, and relatively stationary means acting as an abutment causing said pivotal levers to rotate and exert an applying pressure on said label.

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