

May 15, 1934.

R. W. PHILLIPS

1,959,293

STRIP SERVING DEVICE

Filed May 12, 1930

4 Sheets-Sheet 1

Fig. 1.

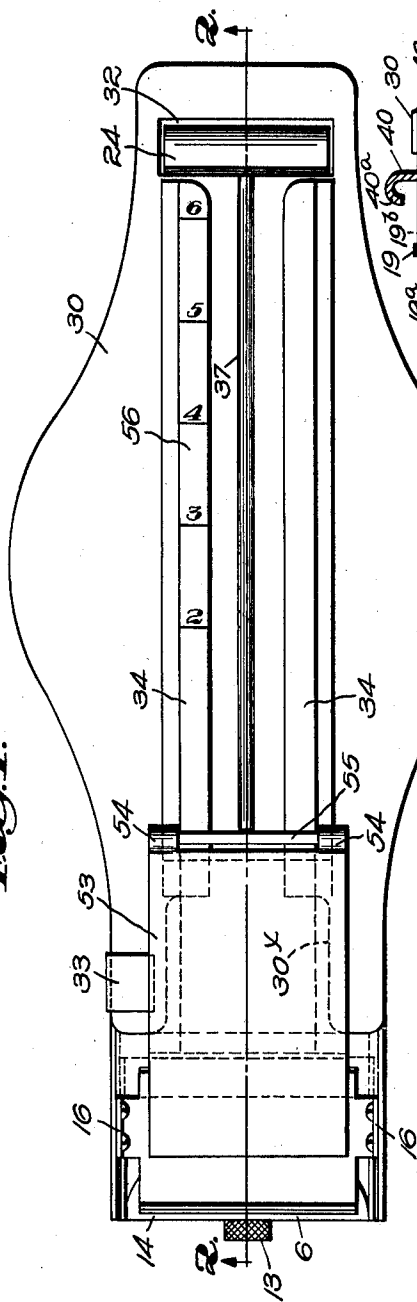


Fig. 2.

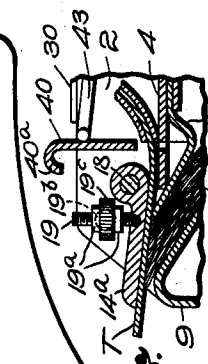
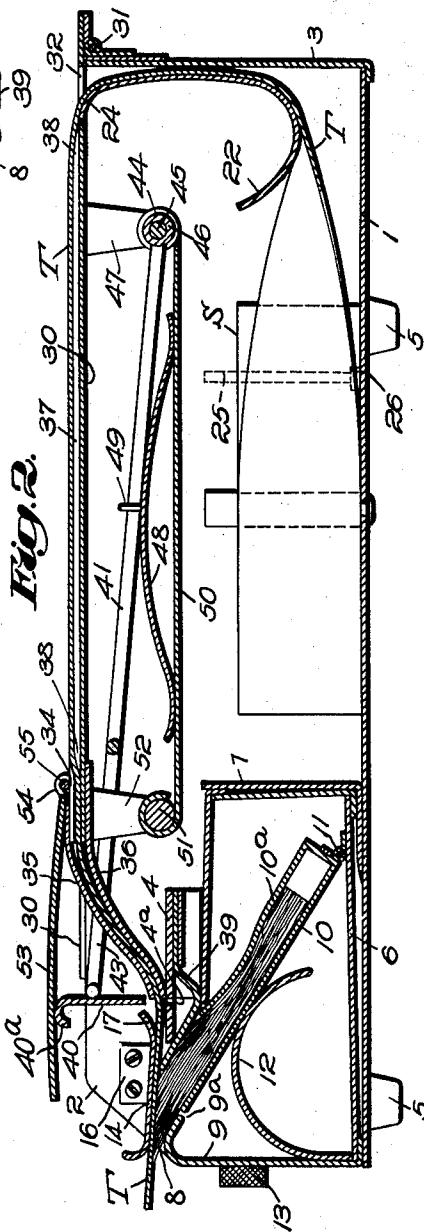


Fig. 2.



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4 Sheets-Sheet 2

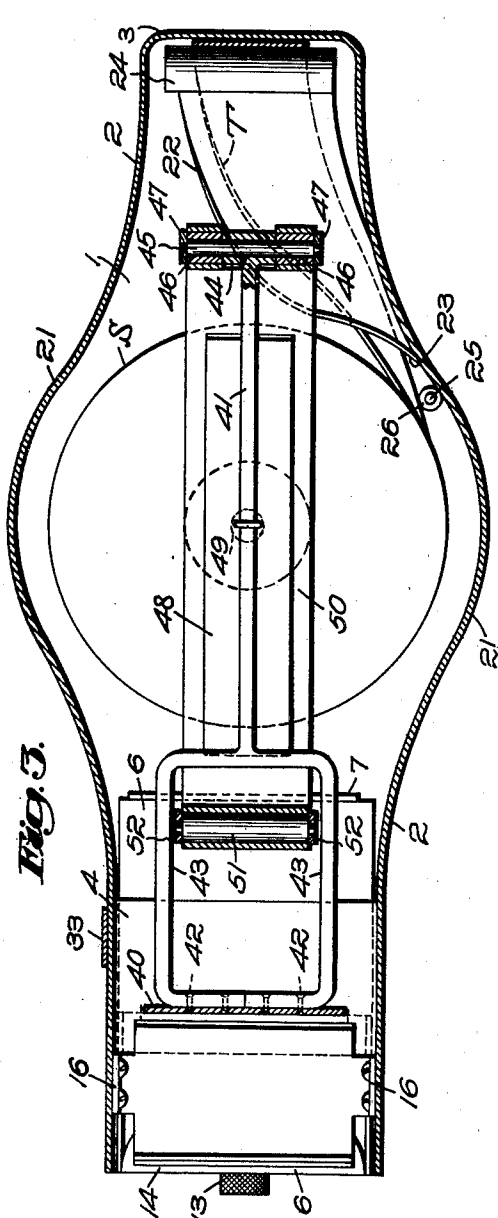


Fig. 3.

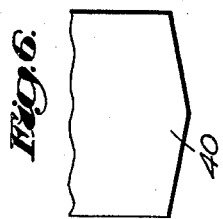


Fig. 6.

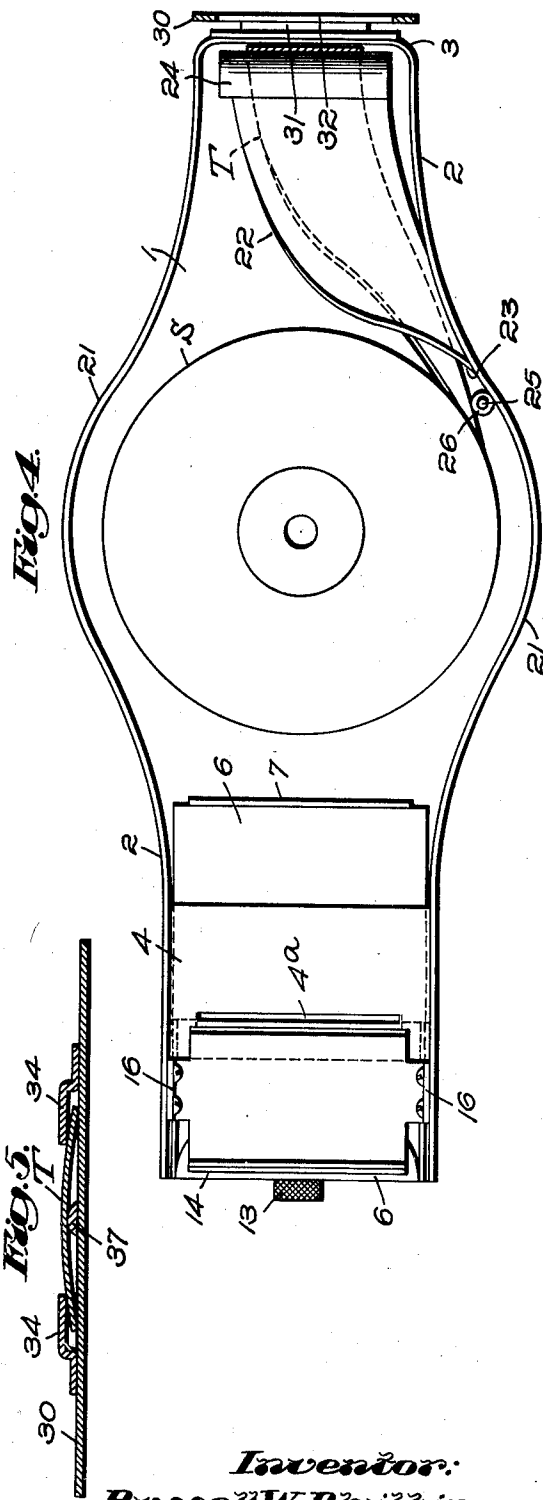


Fig. 4.



Fig. 5.

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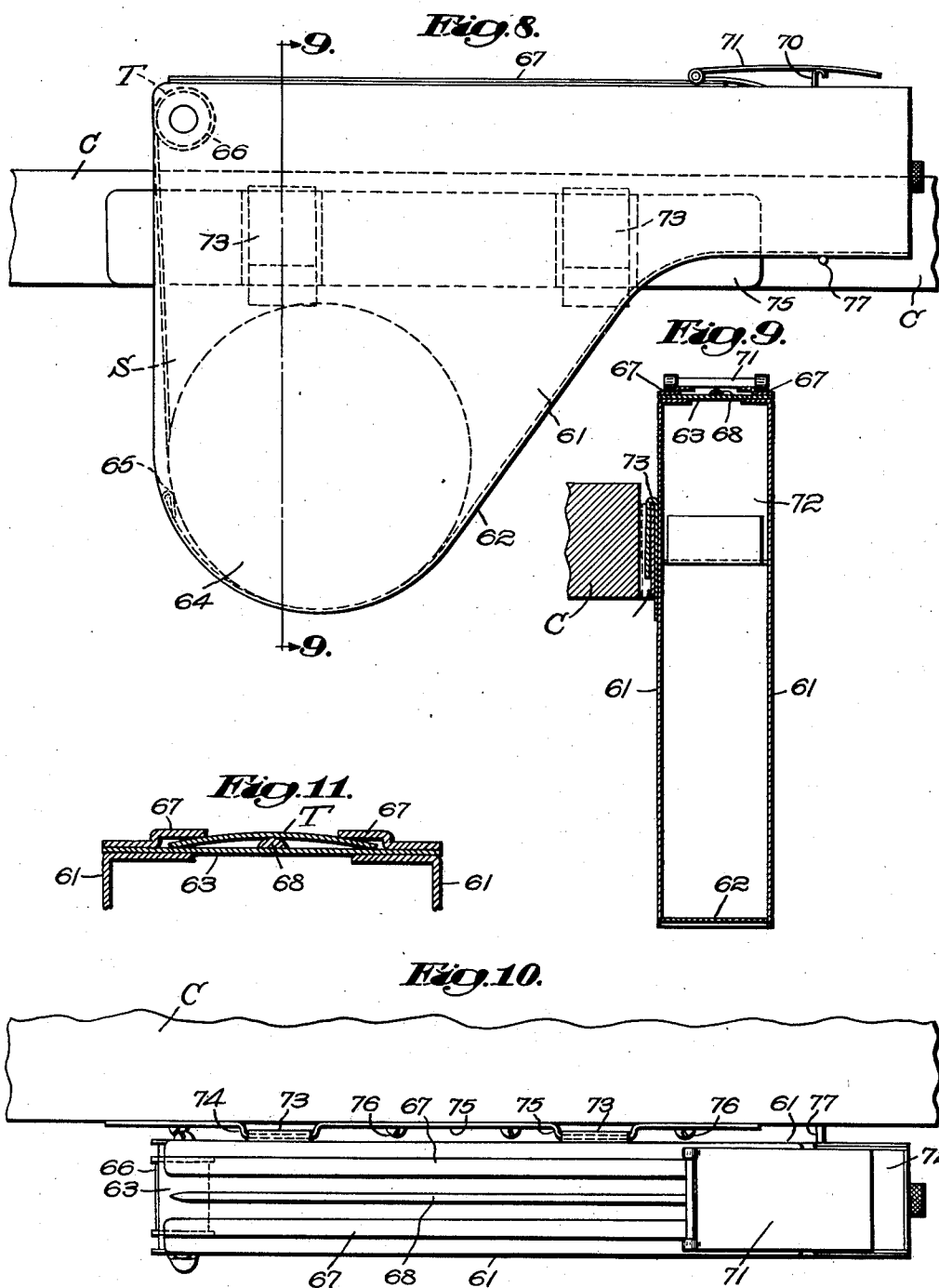
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STRIP SERVING DEVICE

Filed May 12, 1930

4 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

1,959,293

STRIP SERVING DEVICE

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Application May 12, 1930, Serial No. 451,773

21 Claims. (Cl. 164—42)

My invention relates to mechanism for serving strip material, such as gummed tape, particularly for packaging, labeling and the like purposes, wherein moistened or adhesive lengths of strip material are delivered for use. It aims to provide simplified and improved means of the class described.

In the drawings, illustrating by way of example certain embodiments of the invention,

Fig. 1 is a plan view of a strip server in accordance with one form of the invention;

Fig. 2 is a longitudinal vertical section on the line 2—2 of Fig. 1;

Fig. 3 is a horizontal section taken just below the cover or feed table;

Fig. 4 is a plan corresponding to Fig. 1 but with said cover or feed table elevated;

Fig. 5 is a vertical cross section, on an enlarged scale, through the feed guide and cover element;

Fig. 6 is a front elevation of the lower portion of a knife or cutter element;

Fig. 7 is a partial vertical section corresponding to the upper left portion of the device as illustrated in Fig. 2, but showing a modified embodiment of the invention;

Fig. 8 is a side elevation of a further embodiment of the invention, the device being shown supported in operative position as upon a store counter, table or the like;

Fig. 9 is a vertical transverse section on the line 9—9 of Fig. 8;

Fig. 10 is a plan of the device as in Fig. 8;

Fig. 11 is a vertical transverse section on an enlarged scale through the strip feed throat of Figs. 8 to 10;

Fig. 12 is a vertical longitudinal section through a device similar to that of Fig. 8 but showing a modified cutting mechanism and roll-supporting means;

Fig. 13 shows the floating spindle for the roll supply of Fig. 12, in front and in end elevation;

Fig. 14 is a front elevation of one of the roller bearings for the roll supply, such as in Fig. 12;

Fig. 15 is a view corresponding to Fig. 14 showing a modified form of roller; and

Fig. 16 is a vertical cross section corresponding to Fig. 11 and showing a feed throat construction which may be used in any of the illustrated machines and which is particularly adapted for feeding wider strips, for example, 3 inch.

Referring first to Figs. 1 to 4, the device as illustrated comprises a frame or housing, including the base 1, the vertical side walls 2 and the rear wall 3. Near their front ends the frame sides may be connected as by a cross-strap 4, Figs. 2, 3

and 4. The entire housing may be formed of one or more sections of sheet metal and desirably rests on cushioned feet 5.

Moistening means is provided at the delivery end of the device. Herein for the purpose I have shown a reservoir 6 received on the base 1, between the frame sides 2 and positioned as by a rear stop 7. In conjunction therewith I preferably employ novel means for supporting a capillary-feed or brush moistener 8 in improved cooperative relation with the strip to be moistened. Heretofore in this type of moistener the capillary-feed element or brush has stood substantially vertical, with the free ends of its hairs or bristles projecting above the reservoir, approximately perpendicular to the path of the tape or at a relatively slight angle to the perpendicular, and with the bristles or hairs unsupported over considerable portions of their length and at their extremities, so that they soon became objectionably deformed and inefficient.

Accordingly my present invention contemplates provisions whereby the moisture-conveying fibres or hairs of the brush 8 remain straight, being held against objectionable flexing, at their free ends or elsewhere. For this purpose, the front wall 9 of the reservoir is extended inwardly and downwardly as indicated at 9a at a relatively small angle with the horizontal, approximately 45° as shown. In substantial continuation of said inclined portion 9a is a flat brush rest 10 in which the moistener is removably but firmly positioned as by the reversely extending clamp or holder 10a. The brush support as a whole is vertically yieldable, the rest being illustrated as pivoted on the reservoir as at 11 and urged upwardly by suitable spring means 12. The reservoir and brush are removable as a unit, as by means of the finger-piece 13.

The strip or tape T coming from the supply S is passed across the brush in a path approaching parallelism with its hairs or bristles, as clearly seen in Fig. 2. Cooperating with the brush is an overlying plate or guide 14 which may be variously constructed and arranged. In Figs. 1 to 6 I have illustrated such plate or guide as a member having lateral flanges 16 by which it is secured to the frame sides 2 and having its rear edge somewhat upturned as at 17 to receive the tape and to assist in guiding it to and across the moistener, the latter being urged by its spring into moistening relation with the tape passing between it and said plate. One alternative construction for said plate is shown in Fig. 7, wherein the guide element or tape depressor 14a overlying the moisten-

er is likewise stationary but variably positionable. It is pivotally supported as at 18 and has attached to it an upright post 19 extending loosely through ears 19a on a lug 19b pivoted in the adjacent side wall 2. Adjustably threaded on the post is a nut 19c, lying between the ears 19a. By turning said nut the guide element may be adjusted relatively to the moistener, but is held fixed in any given position.

It will be understood that the disclosed mechanism, in any of the forms shown, is equally adapted for use with pre-gummed strips or tape, which are rendered adhesive by moistening, or with non-gummed strips or tape which it renders adhesive by application of liquid adhesive thereto, and the terms such as "gummed tape" and "moistening means" as herein employed, both in the description and in the claims, in conformity with usage in the art, refer to either or both such practices, that is, they refer to rendering the strip adhesive, broadly, either by moistening a gummed surface or by applying liquid adhesive to a surface not previously gummed.

The form of the device as in Fig. 1 to 6 is especially useful in position on the tops of counters, wrapping tables and the like, being of minimum height and presenting no tall obstruction above the surface on which it rests. It nevertheless is made to accommodate an undiminished supply of tape. To this end the strip or tape supply, herein the roll S seen in Figs. 2, 3 and 4, is positioned with its axis vertical, its core being rotatably received on a vertical post or stud 20. The sides of the housing may be bowed or otherwise laterally projected as at 21, Figs. 3 and 4, to accommodate a roll of the desired size, or the latter may be allowed to project through the housing sides. The delivery and opposite end portions of the device, however, need be little wider than the breadth of the strip to be handled.

While the roll or tape supply is drawn or fed off about a vertical axis, the strip T is preferably led to the moistening means, and delivered, in substantially a horizontal plane. Accordingly I provide guide means within the housing, seen in Figs. 2, 3 and 4, effective to twist or turn the strip. It herein comprises a spiral strip 22, conveniently of sheet metal, extending from one side of the housing, at a point adjacent the roll, as at 23, and progressively twisted or turned in a helical manner through a total angle of about 90°, to receive the unwinding strip and turn it from a vertical to a horizontal plane. The rear portion of this twisting guide or turner 22 is bent forwardly as indicated at 24, Fig. 3.

The turner 22 may be positioned to lead off from either side of a supported strip roll, and to twist the strip either to the right or to the left, accordingly as it is preferred to use a strip wound with its gummed or applying face inside or outside.

The roll S as illustrated is assumed to be wound with the gummed or applying face outward, and accordingly is unwound in a counterclockwise direction, as viewed in Figs. 3 and 4, from the right side of the roll (that at the bottom of said figures), and the top edge of the strip is progressively turned over and down toward the left (toward the top in said figures). It passes flatwise upwardly and forwardly over the reversed end 24 of the turner, with its gummed or applying face then down.

In any case the device is preferably made readily adaptable to handle either form of tape wind and for this purpose I may provide an auxiliary re-

movable guide post 25 threaded at its base for reception in a boss 26 on the floor of the housing. If a roll wound gummed side in is to be used, it is set on the roll stud 20 other face up, so that the strip leads off clockwise, in the opposite direction from that shown in the drawings. The auxiliary guide post 25 is put in place and the strip, while still upright, is reversed about said post and then passed to the turning guide 22 in the same fashion as in the drawings. When not needed the auxiliary post may be removed.

The frame or housing as illustrated has a top or cover 30 adapted to serve as a feed table. This cover is made removable for the insertion of fresh roll supplies, being herein hingedly supported at 31 upon the rear wall 3 of the housing. A feed aperture 32 of the width of the strip is formed in the rear portion of the cover, through which the strip T emerges for forward feeding movement along the outer face of the cover or feed platform 30 and up to the moistening means. The cover may be held closed as by the removable clip 33.

In its forward and now horizontal travel the strip is passed through a receiving and guiding throat, the bottom wall of which, in this instance, is the cover itself. As seen in plan in Fig. 1 and in section in Figs. 2 and 4, the side portions of the strip are guided both laterally and vertically by longitudinal channel members or throat portions 34 secured along their outer edges to the cover plate and spaced therefrom along their inner portions, which overlap the tape. The opposed inner edges of said members 34 are spaced laterally to provide a strip-exposing feed opening or finger slot between them. The cover 30 is centrally recessed at its forward end, as seen at 30x in Fig. 1, and the strip guide throat is carried downwardly and forwardly therethrough to deliver the strip in the plane of the moistener. Said forward, inclined portion of the throat herein comprises a flattened tubular or substantially tubular element including upper and lower walls 35 and 36, Fig. 2, secured to or made integral with the cover 30, in continuation of the throat formed by the channel members 34.

As an important feature of my invention the strip is fed through the described channel or throat with a minimum of frictional engagement with the cooperating guide surfaces, reducing likelihood of sticking or jamming in the throat and enabling it to run free at all times, while the strip or tape itself is also braced or stiffened for additional convenience or handling. Accordingly the tape is arched or flexed vertically in one or the opposite direction and is so guided that considerable areas are entirely out of contact with any guiding surface.

Various constructions may be employed in attaining this result. In the present instance I have shown a raised element or rib 37, relatively narrow, and extending lengthwise the throat in the exposed portion thereof. The tape moving through the throat is thus arched, substantially as seen in Fig. 5. To feed the tape the operator merely places a finger thereon above the rib, and moves his finger along the tape guide throat, carrying or pushing the tape along with it. In addition to its functions above mentioned the rib acts to guide operator's finger, insuring the desired straight-line movement and cooperating with the visible-feed channel to feed the tape freely and easily. At the front and rear ends of the throat, the rib is bevelled off as indicated at 38, Fig. 2, for the free delivery and reception of

the tape. The reversed end 24 of the turning guide 22 terminates in line with the rear of the throat and of the rib, see Fig. 2, so that the strip passes freely out from the housing and into its arched form in and through the throat.

While I have illustrated the tape arching or flexing means as a continuous rib, it need not extend uninterruptedly through the entire length of the throat and may be otherwise formed, as by rollers, traveling endless belts or carriers and other devices, and if desired may be continued through the inclined throat portion 35, 36. Within the contemplation of my invention, the flexing of the tape may be either a concaving or convexing, that is, either up or down, and either its intermediate or its edge portions may be the raised or depressed parts. If desired, and particularly in connection with relatively wide strips such as 3 inch tape, two or more similar and parallel ribs 68a may be provided, as in Fig. 16, in which case they may so spaced that one finger of the operator will move along and upon one rib and the adjacent finger will naturally engage over and follow the other rib. In actual practice it is found that this flexing or arching of the tape has the additional advantage of stiffening the delivered moistened length, so that it is more readily fed and easier to handle and apply for the purpose intended, as the portion delivered resists the tendency to coil and remains conveniently extended.

The fore throat members 35, 36 terminate at the point at which the strip is to be cut off, in the manner to be described, and means is provided whereby the strip is accurately guided from the throat to and past the moistener. Said guiding means herein includes the front portion of the cross-strap 4 previously mentioned, the inclined rear part 17 of the plate 14, and a somewhat resilient piece 39 secured to the cross-strap and formed to extend across from the front edge of the reservoir top wall to the brush 8 at substantially the line of engagement of the strip T therewith. The front part of said piece is in substantial parallelism with the brush and serves also to assist in properly directing the hairs or bristles of the latter.

While any preferred means may be employed to cut off the strip, I have herein illustrated for that purpose novel mechanism having an intimate and improved cooperation in and with the feeding and moistening operations. In the form of Figs. 1 to 6, and as best seen in Figs. 2 and 3, this severing mechanism is mounted on the cover 30, moving out of position therewith to expose the tape supply, as in Fig. 4.

Referring to Figs. 2 and 3, said severing or cutting mechanism comprises a movable knife or blade 40, the lower or cutting portion of which is shown in Fig. 6, it preferably having a bluntly tapered or otherwise inclined cutting edge as there shown by way of example. This knife is carried at the front end of an elongated knife lever or arm 41, being attached thereto as by rivets 42, Fig. 3, or otherwise. The front end of the knife lever is forked, as at 43, to straddle the tape throat parts 35, 36 and the adjacent lever-supporting parts to be described. At its rear end it is provided with a hub 44 whereby it is pivotally mounted on a pin 45 supported in collars 46 at the lower ends of a pair of posts or ears 47 hung on the cover 30.

By reason of the relatively great length of the knife lever 41, its angular movement is relatively slight and the knife follows substantially

a straight path, the arc about the remote pivot point 45 being so reduced as to be negligible. Little effort is required to operate the knife due to the relatively great leverage afforded in the construction illustrated. The knife is normally urged upwardly into its inactive or rest position, as in Fig. 2, by any suitable spring means. Herein I have shown for this purpose a leaf spring 48 secured intermediate its ends to the knife lever, as at 49, and bearing on a shelf 50 supported at its rear end by the knife pivot posts 47 and at its forward end by a stud 51 carried by a similar pair of posts 52 hung from the cover 30.

The knife may be operated by engagement directly with its upper portion, which may be flanged for that purpose, as at 40a, Figs. 2 and 7. It will be noted that this operating portion of the knife lies substantially in the same plane with the tape feed throat. Thus the continued, straight-line movement of the operator's fingers brings them into engagement with the knife, and continued thereacross in a wiping manner effects severance of the tape. Such direct-engaged knife arrangement is illustrated in Fig. 7, like numerals referring to like parts as in Figs. 1-6. The feeding effort is applied to the strip or tape T to the rear of the cutting mechanism, and of the moistener, giving what I may term a push feed, but nevertheless the various parts are so constructed and related that the engaging feeding, moistening and severing is practically a single operation, effected by one continuous substantially straight-line movement of the operator's hand, the latter being in direct engagement with the tape during its feed.

This straight-line manual engaging, feeding and cutting action may be emphasized and facilitated as in the mechanism of Figs. 1 to 6, by the provision of a knife-operating plate, actuator or finger-guide 53, Figs. 1 and 2, comprising a portion of the severing means, bridging across between the knife 40 and the upper run of the tape guide throat and in direct continuation of and substantially in the plane of the latter. Said plate is formed with eyes 54 at its rear edge by which it is pivoted on a bar 55 secured to the throat members 34.

This knife-actuator and its support herein constitute means for definitely limiting the tape feed, being functionally common both to the severing mechanism and to the feed means. When the operator's finger, in feeding engagement on the tape in the throat, is brought up against this combined feed-stop and knife actuator, said feeding engagement is broken and the feed ceases. The operator's fingers are moved on without interruption and without change in line of travel, across the plate or actuator 53, depressing the knife 40 and severing the tape against the cross member 4, the latter being slotted as at 4a, Fig. 2, for the passage of the knife. Operation is thus effected by one natural, smooth, continuous straight-line movement of the operator's hand in the direction of tape feed and without previous manipulation of any tape-grasping device.

In cooperative relation with this feed stop or limiting means 53-55, means is provided whereby predetermined lengths of the strip may be delivered. At a suitable location, herein upon one of the side members 34 of the feed throat, is an index 56 graduated in units of tape length, figured with respect to the leading edge of the tape, assumed to lie just to the rear of the knife 40, where it is left after each length is fed, mois-

tened and cut off. To deliver any particular strip length the operator has but to place his finger on the strip opposite the graduation of the index marked with the length desired.

- 5 The described direct-engagement manual feed and co-operating feed limiting provision in conjunction with the visible feed obtained by the tape-exposing feed throat, and with or without said index means, is particularly useful in connection with labelled or printed strips or tape. Such labels are printed in any convenient uniform spacing, each impression occupying 3 inches, for example. It is desirable to cut the tape between impressions rather than across a label.
- 10 On any label there will be some spot which, when engaged by the operator's finger as the point for beginning the feed, will automatically insure the delivery of full impressions or labels, assuming the strip is initially cut between impressions and its leading edge is at the knife. Such spot might be some particular letter of the printed matter or some portion of a printed design. If a tape length bearing but one full label is desired, and the impressions are, for example, three inches long, the operator engages that exposed "spot" which is nearest the "3 inch" graduation of the index; if two impression lengths are required, the exposed "spot" nearest the "6 inch" graduation is used, etc. If at any time a label or impression is cut into, the operator may automatically compensate and correct by engaging the strip a corresponding distance above or below the "spot", feed and cut the strip, and thereafter return to the same "spot" for subsequent deliveries, whereupon correct full-label lengths will again be obtained.
- 35 With full automatic or semi-automatic machines in which the point of initiation of strip feed is mechanically fixed such compensation is difficult or impossible, and generally the part-label left at the leading end of the strip must first be cut off as a separate operation; otherwise the error is automatically repeated and many labels may be mutilated.

Referring now to Figs. 8 to 11, the form of the invention there shown is particularly adapted for use where the horizontal counter or table space is limited, or in other places where little space is available, as for example in the narrow aisles between counters of stores, particularly certain chain stores.

Accordingly the device as a whole is constructed and arranged with its major extent in a vertical plane, rather than in a horizontal plane as in Figs. 1 to 6, means being provided for suspending it as upon a wall or at a side of a table counter top, or the like.

As illustrated the device comprises a container or housing including side walls 61, bottom wall 62 and top wall 63, preferably formed of one or more pieces of sheet metal. The supply of strip material S in roll form is operatively positioned with its axis horizontal, rather than vertical as in Figs. 1 to 6, the housing being downwardly extended to provide the tape well or roll support 64. The under wall 62 terminates at the lower rear portion of the device, as at 65, leaving the rear end open for insertion and removal of the tape supply.

The strip or tape T is led upwardly from the supply over a guide roll 66 journaled in the frame sides, and thence along the top wall 63, through a receiving and guiding throat including the overhanging strip members 67, similarly as in Figs. 1 to 6. Longitudinally extending tape arching and friction reducing means is also desirably employed,

as indicated at 68, see particularly Fig. 11, also as in the previously described form of the invention. The top wall or cover of the housing in this instance is shown as fixed. The tape guiding and feed mechanism, the severing means and the moistening means may be substantially as in Figs. 1 to 6. Since the top wall need not be removable and the tape roll support is otherwise accessible, the knife lever and associated parts may be mounted directly on the side walls if desired. The movable blade is indicated at 70, Fig. 8, and the combined actuator and feed stop appears at 71 parallel to and substantially in a plane with the feed throat. The tape moistening means is designated as a whole by the numeral 72 and preferably includes a reservoir, protruding brush and overlying guide, the brush being inclined to approach parallelism with the tape and being supported flatwise throughout substantially its entire length, as in the form of Figs. 1 to 6.

As above stated, the strip server of Figs. 8 to 11 is particularly constructed and arranged for suspension, or lateral support, and to this end there are provided upon one of its vertical faces one or more hangers or hooks 73 for reception in corresponding eyes or straps 74 of a supporting member 75 secured as by screws 76 to the vertical face of the wall, counter or table C. The entire device is thus readily removable from its operative position merely by lifting it to disengage the lateral hangers from their receiving means. If desired, additional support may be provided at the delivery end of the device, preferably about in line with the severing means, as by the finger 77 projecting from the main support C.

The operation of the device of Figs. 8 to 11 is similar as in Figs. 1 to 7, suitable index means 78 being provided, which in cooperation with the knife-actuator and feed stop 71, makes possible the accurate delivery of strips of various but predetermined lengths as desired.

Referring now to Figs. 12 to 16, the device there illustrated, as a further embodiment of my invention, is generally similar to that of Figs. 8 to 11, but shows a somewhat modified cutting mechanism as well as novel roll-supporting means. As in said Figs. 8 to 11, the device of Figs. 12 to 14 includes a container or housing having side walls 61, a bottom wall 62 and a top wall 63, of sheet metal or other suitable material.

The position of a tape roll is indicated at S in the tape well or roll support 64, the under-wall 62 being terminated as at 65 to leave a rear opening for the insertion of the rolled strip supply. In this instance automatic roll-centering means is provided to assist in supporting the roll and to facilitate the delivery therefrom. As seen in Figs. 12 and 14, said means comprises one or more, and herein a pair of concave rollers 80 journaled in the opposite side walls 61, as at 81, below the strip roll. Each roller comprises two similar but oppositely disposed conical portions, substantially as in Fig. 14. The roll supply S rests upon these rollers, which serves not only as rotary bearings to enable the tape roll to turn easily but also to keep it centered with respect to the feed channel. The axis of the roll supply is retained in a given vertical plane with respect to the supporting roller or rollers as by means of a floating spindle 82 having reduced and squared portions 83 at its opposite ends, see Fig. 13, received in slots formed in the container side walls. These slots include an upper entrance

portion 84 leading in from the rear of the container side walls, desirably at a slight downward angle, and a substantially vertical spindle-directing main portion 84a. The main part of the floating spindle 82 is wider than the slots 84, 84a whereby the spindle is held against lengthwise displacement; it is also prevented from turning by reason of the squared reduced portions 83 engaged in the slots.

In Fig. 15 I have shown a modified form of bearing roller for the tape supply including a main roller portion 80a of a width to receive a given minimum width tape, for example, 1½" or 2" tape. At the opposite ends of the main roller are cooperating stepped portions 80b and 80c spaced to receive and center wider rolls, for example 2½" and 3" rolls respectively. It will be understood that the rollers such as those of Figs. 14 or 15 may be employed in connection with the device of Figs. 8 to 11 as well as that of Fig. 12.

The strip or tape from the supply S is lead upwardly over a guide roll 66 similarly as in Fig. 8 and thence along the top wall through the feed throat including the over-hanging strip members 67; see Fig. 16. Tape arching and finger guiding means is preferably provided lengthwise the feed throat, as in the previous instances. In Figs. 12 to 16 the illustrated device is intended to be capable of handling somewhat wider strips, for example, up to a 3" widths, and in this connection I have illustrated the longitudinally extending means in the feed throat as including a plurality of parallel ribs 68a, herein two, desirably so spaced that they will respectively underlie two adjacent fingers of the operator's hand in their natural position of engagement upon the tape for feeding it thus guiding the fingers and insuring an accurate straight-line feed for the tape. The tape passes through the forwardly and downwardly extending continuation of the feed throat formed by the members 35, 36 as in Fig. 2, whence it is delivered across a transverse member or table 84 and beneath a stationary guide 85, passing between the latter and the moistening means indicated as a whole at 72, and which may be the same as in the previous figures.

The cutting mechanism of Fig. 12 comprises a movable blade of knife 90, shown in its full depressed position, having been brought down through a slot in the platform 84, thus severing the tape. The knife 90 is carried at the forward end of an elongated knife lever comprising a forked front portion 91 which straddles the inclined front end of the feed throat 35, 36. From said forked portion 91 a pair of arms 92 extend rearwardly and are pivotally supported as at 93 upon a lug 94 depending from the container top wall 63. A guide lug 95 may be provided near the front of said arms, adapted to extend between and guide them in their vertical movement. In conjunction with the knife and its supporting lever, I have provided a combined actuator spring and stop element, herein illustrated as a single piece, including the attaching portion 96 secured to the upper part of the knife 90 as at 97, and a substantially horizontal plate-like finger piece and return-spring 98, shown in Fig. 12 in full lines in its depressed position and in dotted lines in its normal or elevated position. The rear edge of said plate-like spring member 98 bears on a fixed portion of the machine, herein the forward ends of the channel members 67, where it receives the operator's finger or fingers directly from the tape, at the

end of their feeding movement, for which it constitutes a stop. The lower part of said attaching portion 96 acts as a lower stop for the knife, by engagement with the platform 84. It will be noted that this combined feed-stop, knife return-spring and actuator, in its cutting position, forms substantially a continuation of the plane of the feed throat whereby the feeding and severing of the tape may be accomplished by a single continuous straight-line movement of the operator's hand, as in the preceding figures. It is unnecessary for the operator's hand to move first in one direction to operate some tape-gripping device, then in another direction to feed the tape, and again to be interrupted and changed to another direction to cut the tape. All these operations, in accordance with my invention, may be performed in the course of the single, uninterrupted and substantially uni-planular down-bearing forward movement of the operator's fingers or hand.

The claims of the present application are directed chiefly to the novel features or aspects of applicant's invention which are concerned with the housing, feeding, and cutting of the strip or tape, which features are herein claimed both specifically and also generically with respect to copending applications, including S. N. 526,659, S. N. 603,778 and S. N. 603,777. Because of the official requirements as to division and classification other novel features or combinations of elements of which certain embodiments are herein disclosed, are claimed in said copending applications. For example, claims for moistening or adhesive-rendering means are contained in my copending application S. N. 603,777 and/or in divisional applications thereof; claims for roll-supporting and strip guiding means of which one embodiment is illustrated in Figs. 12-15 herein are contained in my copending application S. N. 603,778, while the positioning or suspending means adapting the machines for installation in confined locations such as store aisles, or otherwise than by mere superposition on a table or counter, for example, as at the sides of or wholly or partly below the working surface of counters, wrapping shelves, and the like, one embodiment of which means is illustrated in Figs. 8-11 hereof and is herein claimed specifically, is claimed generically and also specifically in my said copending application S. N. 603,778.

It will be understood that the invention is not limited to the particular illustrative embodiments thereof as shown and described, its scope being pointed out in the following claims:

1. In a strip serving device, a housing including a base, side walls and a top cover pivotally supported on said housing and cooperating with said side walls to provide a normally closed chamber, a strip roll support in said chamber, a strip guide along the outer face of the cover, the latter having a feed aperture for the passage of the strip to said guide, and means to direct the strip from the roll through said aperture to the guide during either open or closed position of the cover and providing for opening of the latter while the strip remains in its guide.

2. In a strip serving device, a housing including a base and a cover, the latter having a normal closed position in a plane substantially parallel to the base and being swingable to open position, a strip roll support in the housing receiving a roll with its axis substantially perpendicular to the housing base and cover, a strip receiving throat along the cover, and strip-turn-

ing means in the housing to conduct the strip spirally from the roll for reception in said throat.

3. In a strip serving mechanism, means rotatably to support a strip roll with its axis upright, a strip feed throat in a plane substantially perpendicular to the roll axis, and a helical guide for conducting the strip from the roll to the feed throat.

4. In a strip serving device, a strip supply support, a strip delivering channel having closed bottom, side and inwardly extending opposed top elements, the latter providing between them a longitudinal strip-exposing portion through which the strip may be engaged directly by the operator's finger and moved along the channel, and means associated with the channel to terminate the strip feed at a predetermined point.

5. In a strip serving device, a strip supply support, a strip delivering channel having closed bottom, side and inwardly extending opposed top elements, the latter providing between them a closed bottom and having an upper longitudinal strip-exposing portion whereby the strip may be engaged by the operator's finger and the latter guided to move the strip along the channel, means to terminate the strip feed, and stationary means along the channel and operatively positioned relative to said feed terminating means whereby various predetermined strip lengths may be selected for feeding by the operator.

6. In a strip serving device, a strip supply support, a strip delivering channel having closed bottom, side and inwardly extending opposed top elements, the latter providing between them a closed bottom and having an upper longitudinal strip-exposing slot through which the strip may be engaged by the operator's finger and the latter guided to move the strip along the channel, a finger stop to terminate the strip feed at a predetermined point, and associated indicator means calculated with respect to said finger stop variously to determine the point of engagement of the strip by the operator in initiating the strip feed thereby enabling him to feed various strip lengths as selected.

7. In a strip serving device, a housing including an openable cover, a strip feed channel along the cover, a knife lever pivotally hung from the cover, within the housing and extending in the direction of the feed channel, spring means on the cover to urge said lever away from the strip path, and a cutting member transversely disposed at one end of the lever.

8. Strip serving mechanism comprising a support for a strip supply, a strip feed throat, a cutter movable across the strip path at the delivery end of said throat, an elongated lever pivoted at one end near the strip-entrance end of the throat, extending lengthwise of the latter, and carrying said cutter at its opposite end thereby to position the cutter for said movement at the delivery end of the throat, and spring means normally holding the cutter clear of the strip path.

9. In a strip serving device, a strip feed guide, a strip cutting element comprising a blade and means supporting the same for movement toward and from the guide to cut the tape, and a plate-like spring member carried by said cutting element, normally holding the blade away from the guide and positioned for passage of the operator's hand thereacross to actuate the blade.

10. In a strip serving device, a strip supply support, a strip delivering channel having a longitudinal strip-exposing slot through which the

strip may be engaged by the operator's finger and moved along the channel, a vertically movable blade to cut the strip at the delivery end of said channel, and a plate-like spring member having its forward portion operatively connected to said blade and its rear portion bearing downwardly on fixed means adjacent the forward end of said strip-exposing slot, said member serving as an actuator to receive the operator's down-pressing finger drawn across it in continuation of the strip feeding movement, thereby to operate said blade, and said member serving also to return the blade to and retain it in elevated position.

11. In a strip serving device, a strip supply support, a strip delivering channel having a longitudinal strip-exposing slot through which the strip may be engaged by the operator's finger and moved along the channel, a vertically movable blade to cut the strip at the delivery end of said channel, and a plate-like spring member operatively connected thereto and comprising a combined blade-return spring, feed-stop and blade depressor.

12. In a strip serving mechanism, means rotatably to support a strip roll with its axis upright, a strip feed throat in a plane substantially perpendicular to the roll axis, a helical guide for conducting the strip from the roll to the feed throat, and strip reversing means adapting said guide to deliver the strip to the feed throat with either side up as selected.

13. Apparatus for serving lengths of adhesive strip material, comprising, in combination, a frame, means for rotatably supporting a strip roll, guide means to conduct the strip from the roll for delivery, and strip reversing means adapting said guide means to deliver the strip with either side exposed in a given direction as selected.

14. Strip serving mechanism comprising a frame, a strip supply support thereon, a strip guide along the frame, and cooperating means for push-feeding a strip along said guide by direct engagement of the operator's hand upon the strip and for cutting off said strip by a single continuous unidirectional movement of the operator's hand.

15. In a strip serving device, a frame, a closed-bottom guide throat on the frame for the push-feed of the strip by direct finger engagement therewith, a depressible cutter blade, spring means normally elevating the latter, and a substantially horizontal plate pivotally supported so as to overlie the cutter blade and constituting a cutter actuator disposed in immediate continuation of the path of the finger feed movement along said throat for operation by an uninterrupted continuation thereof.

16. In an apparatus for serving lengths of adhesive strip material, in combination, a frame, means to support a supply roll of the strip material, strip guide means to conduct and deliver strip lengths from a supported roll, and means adapting said apparatus for detachable association with a support such as a counter, wrapping shelf or the like, said means comprising cooperating elements respectively upon the apparatus and on the support, said elements including one or more hook-like hanger elements and a cooperating receiving element therefor.

17. In a strip serving device, a support for a strip supply, a feed channel having a closed-bottom element and having side members and a longitudinal strip-exposing top opening, said

bottom element of the channel having a longitudinal formation symmetrically disposed with respect to the channel side members, for arching the strip transversely as it is fed through said channel.

18. In a device for serving lengths of adhesive strip material, a support for a strip supply, a closed-bottom channel along which the strip is fed, lateral guides for the strip along said platform, said guides having inner side edge portions overhanging the channel bottom, and longitudinally extending means along the channel bottom and adapted to contact a longitudinal central portion of the strip thereby to arch the latter as it is fed.

19. In a strip serving device, a strip feed guide having a centrally closed bottom and enclosing side portions overlapping the bottom and having a central longitudinal open portion between said side portions, through which open portion the strip may be directly manually engaged frictionally and carried along and against said closed bottom, thereby to feed the strip, a support for a roll supply adjacent one end of said guide, and limiting means for said feeding action at the other end of the guide, whereby various selected predetermined lengths of the strip may be obtained corresponding to the distance of the initial point of engagement of the strip from said limiting means.

20. In a strip serving device, a support for a

strip supply, a forwardly directed feed channel having a centrally closed bottom and a longitudinally open top portion through which the operator's hand may directly engage the strip frictionally along and against the channel bottom to advance the strip from said supply through the channel, a cutter movable across the path of the strip to sever it, and a cutter actuator vertically movable in the longitudinal vertical plane of the feed channel and having a normal position adjacent said channel, said actuator located in the path of the operator's hand as it completes a feed stroke, whereby the strip is fed and severed by substantially a single continuous straight-line movement of the operator's hand.

21. In a strip serving device, a support for a strip supply, a forwardly directed feed channel having a centrally closed bottom and a longitudinally open top portion through which the operator's hand may directly engage the strip frictionally along and against the channel bottom to advance the strip from said supply through the channel, a cutter movable across the path of the strip to sever it, and a cutter actuator having a normal position adjacent and operative in the same vertical plane with the feed channel, the rear portion of said actuator constituting a feed stop positively delimiting the feeding operation as the cutter actuator becomes operative.

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