March 24, 1936. R. W. PHILLIPS 2,035,375

MEANS FOR MOISTENING, OR RENDERING ADHESIVE, STRIP MATERIAL

Original Filed March 31, 1931

Fig. 1.

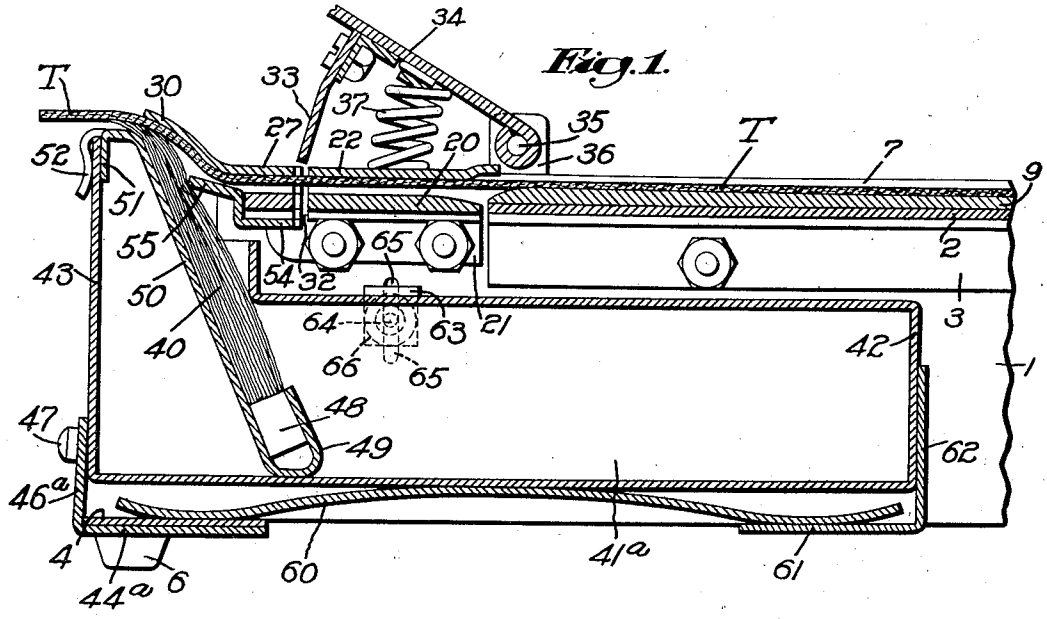
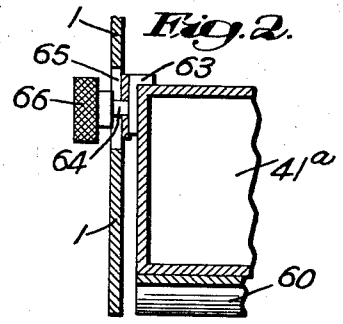


Fig. 2.



Inventor:
Russell W. Phillips;
by Emery, Booth, Varney & Townsend
Atty's

Patented Mar. 24, 1936 2,035,375

UNITED STATES PATENT OFFICE

2,035,375

MEANS FOR MOISTENING, OR RENDERING ADHESIVE, STRIP MATERIAL

Russell W. Phillips, Rockville Centre, N. Y., assignor, by mesne assignments, to Nashua Gummed & Coated Paper Company, Nashua, N. H., a corporation of Massachusetts

Original applications March 31, 1931, Serial No. 526,659, and April 7, 1932, Serial No. 603,777. Divided and this application April 9, 1934, Serial No. 719,716

3 Claims. (Cl. 91—14.5)

My present invention relates to the art of serving or delivering moistened or adhesive strips such as packaging or other tape, labels, and the like, and aims to provide simplified and otherwise improved means of the class described, having reference more particularly to the moistening or adhesive-rendering means and its relation to strip serving apparatus. The present application is a division of my copending applications S. N. 526,659, filed March 31, 1931, now patent No. 1,959,294, dated May 15, 1934 and S. N. 603,777, filed April 7, 1932, the latter application being a continuation in part of the one first mentioned.

In the drawings, illustrating by way of example one embodiment of the invention,

Fig. 1 is a longitudinal vertical section through the front portion or delivery end of a strip serving device embodying one form of the invention; and

Fig. 2 is a vertical cross-section illustrating the controlling or stop means for the reservoir and moistener.

The strip moistening or adhesive applying means of my present invention is adapted for use independently or in association with strip serving or label handling apparatus of various constructions. For the purposes of illustration I have shown it in connection with a strip serving device such as that of my copending applications above mentioned and wherein the device as a whole comprises a housing or frame, herein including longitudinal side walls or frames, one of which is indicated at 1. The side frames support a platform or feed table 2, attached to them as by means of the angle strips 3, integral with or secured to the side frames in any suitable manner, as by bolting. The side frames desirably are further interconnected and braced, as by a front cross strap 4, and herein by an intermediate cross member 61, again referred to later. Cushioning feet or supports for the housing desirably are provided, one of which is seen at 6, Fig. 1.

The platform or feed table 2 may be of any length suitable to conduct or guide the strip T from a supply, not shown, generally in roll form. The table 2 provides the bottom wall for a feed throat or channel along which the strip or tape T is fed to the cutting and moistening means. The feed channel as illustrated also includes oppositely disposed side members or guides, one of which is seen at 7, Fig. 1, these being secured to the housing in any suitable manner, as by clamping a depending portion or flange between the adjacent side frame 1 and the corresponding angle strip 3. Obviously the construction and manner of assembly of the housing and feed channel may be widely varied. In this instance that portion of the feed table 2 which forms the bottom of the feed channel is provided with one or more longitudinal ribs or raised formations, one of which is seen in section at 9, Fig. 1, such formations serving to elevate a portion of the strip or arch it and to reduce friction upon the tape during its feed, whether the latter be manual, by engagement of the operator's fingers directly upon the tape, or whether effected by mechanical means.

At the forward portion of the machine illustrated in Fig. 1, the tape or strip T is fed to and past suitable cutting or severing means, and past the moistening means, for delivery. The feed channel previously described may be structurally continuous up to the delivery point, if desired, but in the illustrated example I have shown an auxiliary feed and cutting platform or table 20, providing in effect a forward extension of the main platform 2. This auxiliary table 20 is carried by and between the side frames 1 in any convenient manner, as by side brackets 21 bolted or otherwise attached to the side frames. During its advance across the table 20 the strip T is additionally guided as by the overlying rear clip-like guide element 22, forming with the table 20 an enclosed guide or tape throat. This guide 22 may be positioned in any suitable manner, preferably removably, as by means of depending spring fingers adapted to be sprung down onto the side frames 1. In advance of this rear guide member or clip 22 is a somewhat similar guide member 27, which may be similarly detachably supported and has a forwardly and upwardly projecting somewhat resilient lip 30 beneath which the strip is conducted directly to, across and in contact with the moistening element 40, to be described. The front edge of said portion 30 of the front guide 27 may have the additional function of constituting a stationary knife or severing element, against which the strip may be upwardly and rearwardly deflected and so cut or torn off, the edge of said member 30 being for that purpose serrated or otherwise formed.

Cut-off means of the shear type is also herein illustrated, the front feed table 20 being slotted, as at 32, and the front and rear guides or clip members 22 and 27 being spaced in vertical alignment with the slot 32, to afford a passage for a movable knife or blade 33. The latter as illustrated is carried on a depressible actuator or finger plate 34 pivoted on a cross shaft 35 in extensions or posts 36 rising from the side frames.

The blade **33** and its actuator normally are elevated, substantially as shown in Fig. 1, as by means of a suitable spring **37**, herein attached to the actuator **34** and bearing between the latter and the guide **22**. This actuator mechanism, including the blade **33**, its actuator and spring, may be swung rearwardly into an inoperative position, and the guides **22** and **27** may be removed, to give access directly to the underlying parts across which the strip T is delivered. In Fig. 1 the front portion of the cutter actuator **34** has been broken off to conserve space, the actuator preferably being forwardly extended, as in said copending applications, for convenient engagement by the fingers or heel of the operator's hand.

The moistening means of my present invention comprises a reservoir or tank **41***a*, herein having an enclosed rear portion **42** and a somewhat higher front portion **43**. This reservoir, together with the moistener **40** therein and associated parts to be described, is mounted and positioned for bodily vertical yielding movement toward and away from the strip path, or with relation to a normally stationary overlying guide member such as the guide **27**, **30** already described. For this purpose the reservoir unit as a whole is supported upon spring means, herein illustrated, Figs. 1 and 2, as one or more leaf springs **60** which may be secured to the under face of the reservoir or may rest independently on underlying supporting means, in this instance upon the front cross strap **4** and upon the intermediate cross member **61** previously mentioned. The latter cross piece **61** is provided with an upturned portion or flange **62** serving as a rear positioning stop for the reservoir and also as one guide means for the reservoir in its vertical movement. The reservoir unit **41***a* is further retained and positioned longitudinally and also vertically guided as by means of a spring retaining clip or latch **44***a* secured at its rear to the rear portion of the cross strap **4** and having an upturned front portion or lip **46***a*. The latter is of adequate vertical extent to cooperate with and guide the reservoir in its various vertical positions, by engagement with its front wall, but by reason of its resilient character may be depressed to release the reservoir unit for withdrawal from the apparatus, a knob or finger piece **47** being provided to facilitate such operation.

The moistening element proper **40**, previously referred to, is illustrated as a capillary element, wick or brush which, as shown, comprises a multiplicity of hairs or bristles set into a suitable anchoring composition or butt **48**. It is herein removably held in the clip-like or socketed lower portion **49** of an inclined bristle-supporting plate or rest **50**. The latter preferably extends the full length of the hairs or bristles of the brush, to support and align them approximately to their extreme free ends. The brush rest **50** desirably is removably positioned in and with respect to the reservoir as by means of a depending tongue or flange **51** adapted to engage the inner face of the front portion **43** of the reservoir. Hook-like clips **52** may also be provided on the brush rest, for engagement over the top of the reservoir front wall, clamping the latter between them and the flange **51**. It will be observed that the entire moistening unit comprising the reservoir moistener or brush **40** and its support may be removed as a unit or, when desired, the brush and its support may be removed without demounting the reservoir, direct access to the brush being obtained by removal of the normally stationary front guide **27**. The upper portions of the brush bristles may additionally be guided and aligned, and the quantity of moisture conducted by them may be controlled, as by means of the plate-like member **54**, preferably somewhat resilient, secured to the front feed table **20** and having an upwardly and forwardly projecting front portion **55** adapted to engage the adjacent portions of the brush bristles, substantially in the manner shown.

My present invention further contemplates adjustable means for accurately regulating and determining the vertical position of the reservoir and of the moistener, and whereby the position of these parts may be adjusted, for example, to compensate for wear upon the brush, of for any other reason, or to control the tension of the supporting spring means. In the form illustrated, referring particularly to Fig. 2, but as also seen in Fig. 1, this regulating or adjusting means herein comprises an adjustable stop or finger **63**, adapted to engage over the top of the reservoir **41***a*, thereby to limit and determine its position. This stop is carried at the inner end of a pin **64** which is vertically movable in a slot **65** in the adjacent side frame **1**. The outer end of the pin **64** is threaded to receive a clamping nut **66**. By releasing the latter and moving the stop **63** up or down, its position may be adjusted to locate the reservoir, or limit its upward movement, as desired. Such stop or regulating means may be provided at either or both sides of the machine.

From the foregoing it will be particularly noted that the reservoir and the moistener proper or brush **40** are vertically movable or yieldable as a unit, these two elements always yielding or moving together, and both of them moving relatively to the path of the strip T and to the overlying normally stationary guide such as the member **30**. Hence, the position of the brush or moistener in the reservoir and its extent of projection from it, need never be disturbed during normal operation of the apparatus, a proper and efficient moistening relation of the brush with the overlying normally stationary guide, or with the under face of the tape when the latter is present, thus being maintained.

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

I claim:

1. In a strip serving device, in combination with means to guide a strip coming from a supply, a reservoir adjacent the delivery end of the guide means, moistening means carried by and extending from within the reservoir toward the strip path, spring means bodily supporting the reservoir and said moistening means carried thereby, and means for adjusting the reservoir vertically with respect to the guide means thereby to present the moistening means in moistening relation to the guided strip under the desired degree of pressure of said spring supporting means.

2. In a strip serving device, in combination with means to guide a strip coming from a supply, a reservoir adjacent the delivery end of the guide means, moistening means carried by and extending from within the reservoir toward the strip path, means urging said reservoir and moistening means into moistening relation with the strip, and means variably to limit the movement of the reservoir and moistening means with respect to the strip path.

3. In a strip serving device, in combination with a frame and means thereon to guide a strip coming from a supply, a liquid reservoir on the

frame, below the strip path and adjacent the delivery end of the guide means, said reservoir having capacity for bodily vertical movement with respect to the frame and to the strip path, an upwardly directed removable brush moistener carried by and projecting upwardly in fixed position from within the reservoir toward the strip path, spring means supported by the frame, below and wholly external of the reservoir, for urging said reservoir and brush moistener into moistening relation to the strip, and stop means on the frame limiting the approach of the reservoir toward the strip.

RUSSELL W. PHILLIPS.