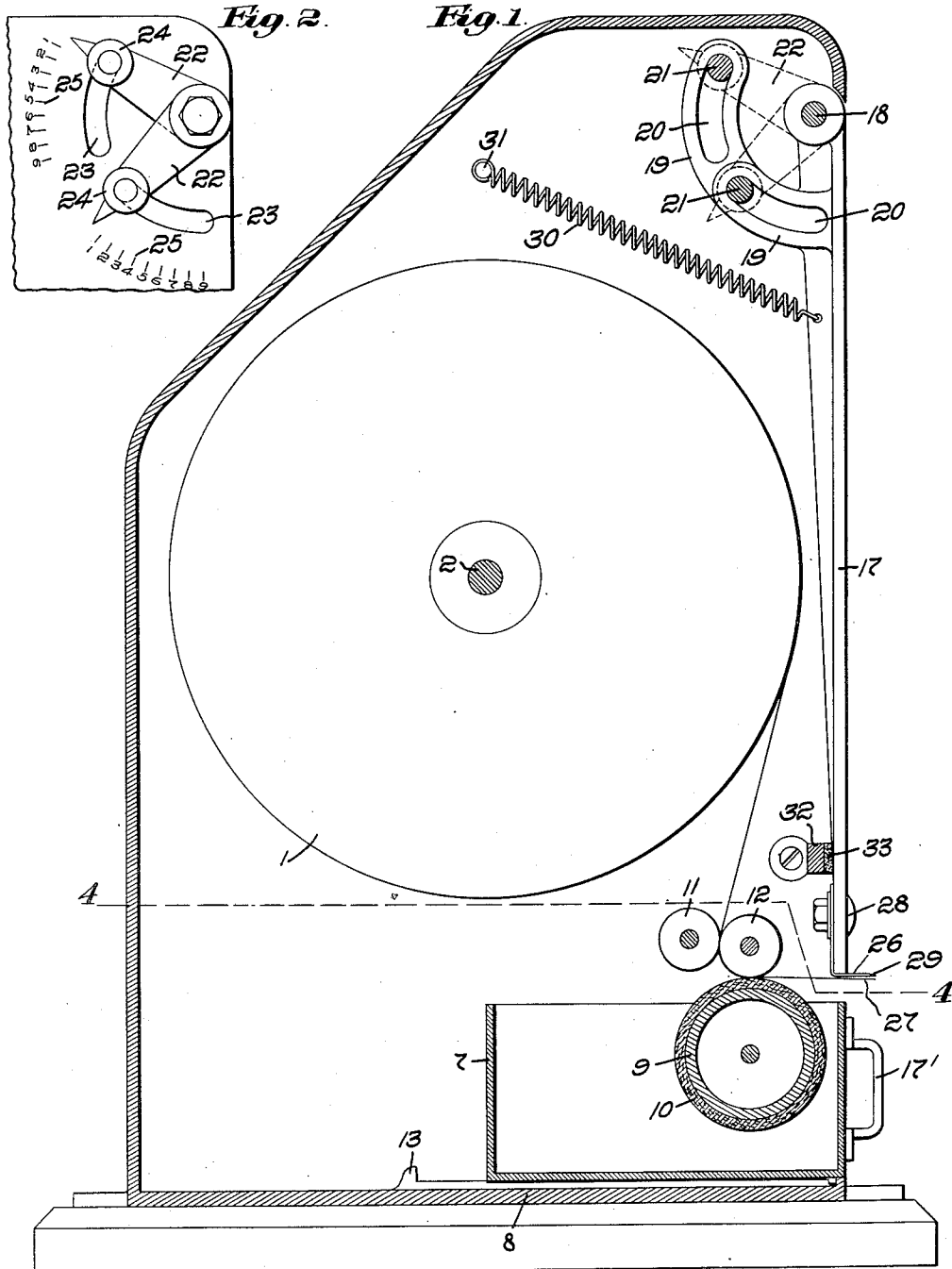


E. L. BROWNSON.
 STRIP SERVING APPARATUS.
 APPLICATION FILED AUG. 16, 1910.

1,120,788.

Patented Dec. 15, 1914.

3 SHEETS—SHEET 1.



Witnesses:
 Horace A. Crossman
 Robert H. Hammler.

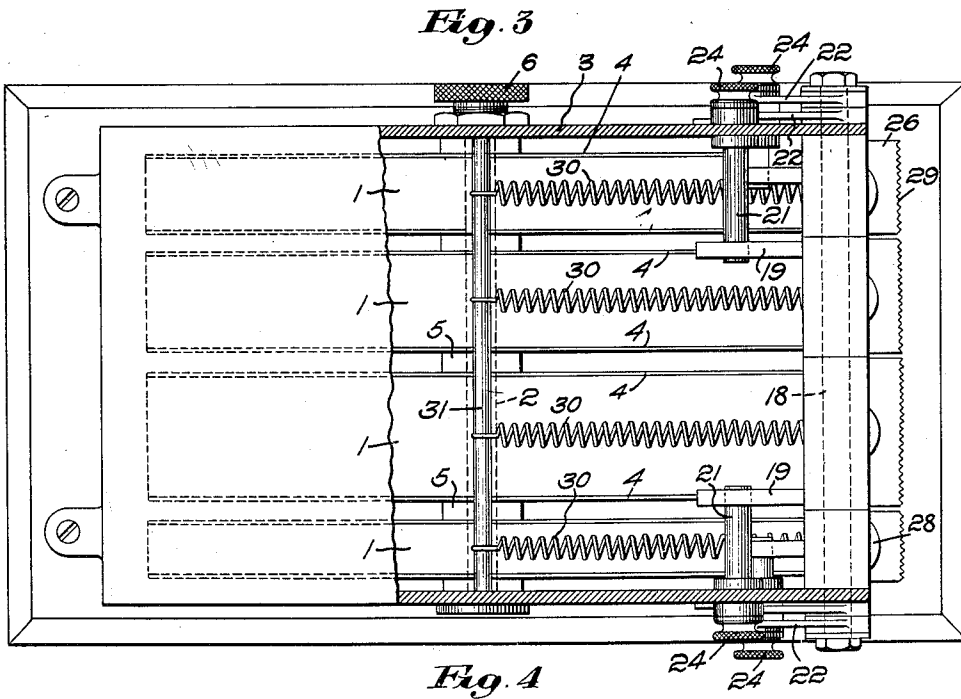
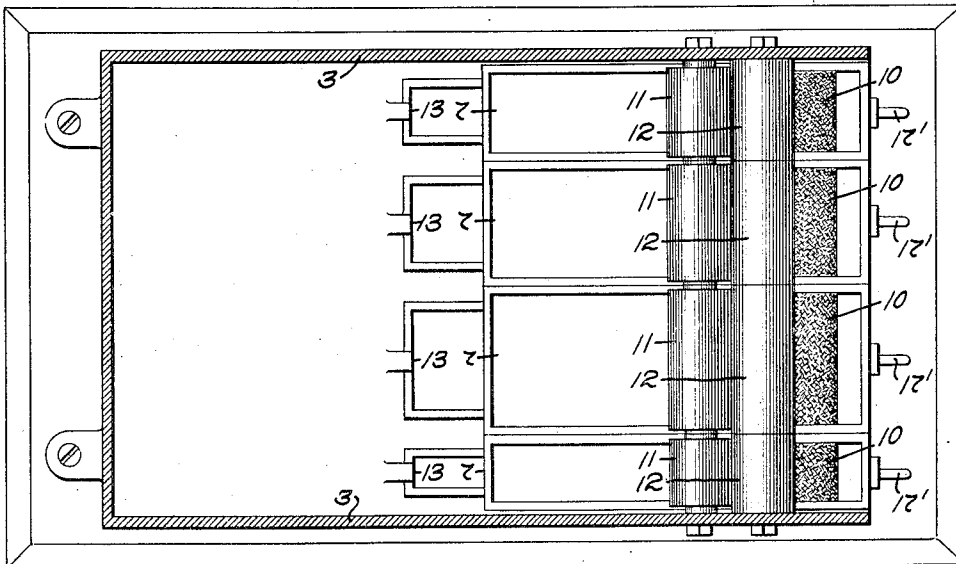
Inventor:
 Earl L. Brownson.
 by *Ernest North, James & James*
 Attys

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3 SHEETS—SHEET 2.



Witnesses:

Horace A. Crossman

Carl L. Choate

Inventor:

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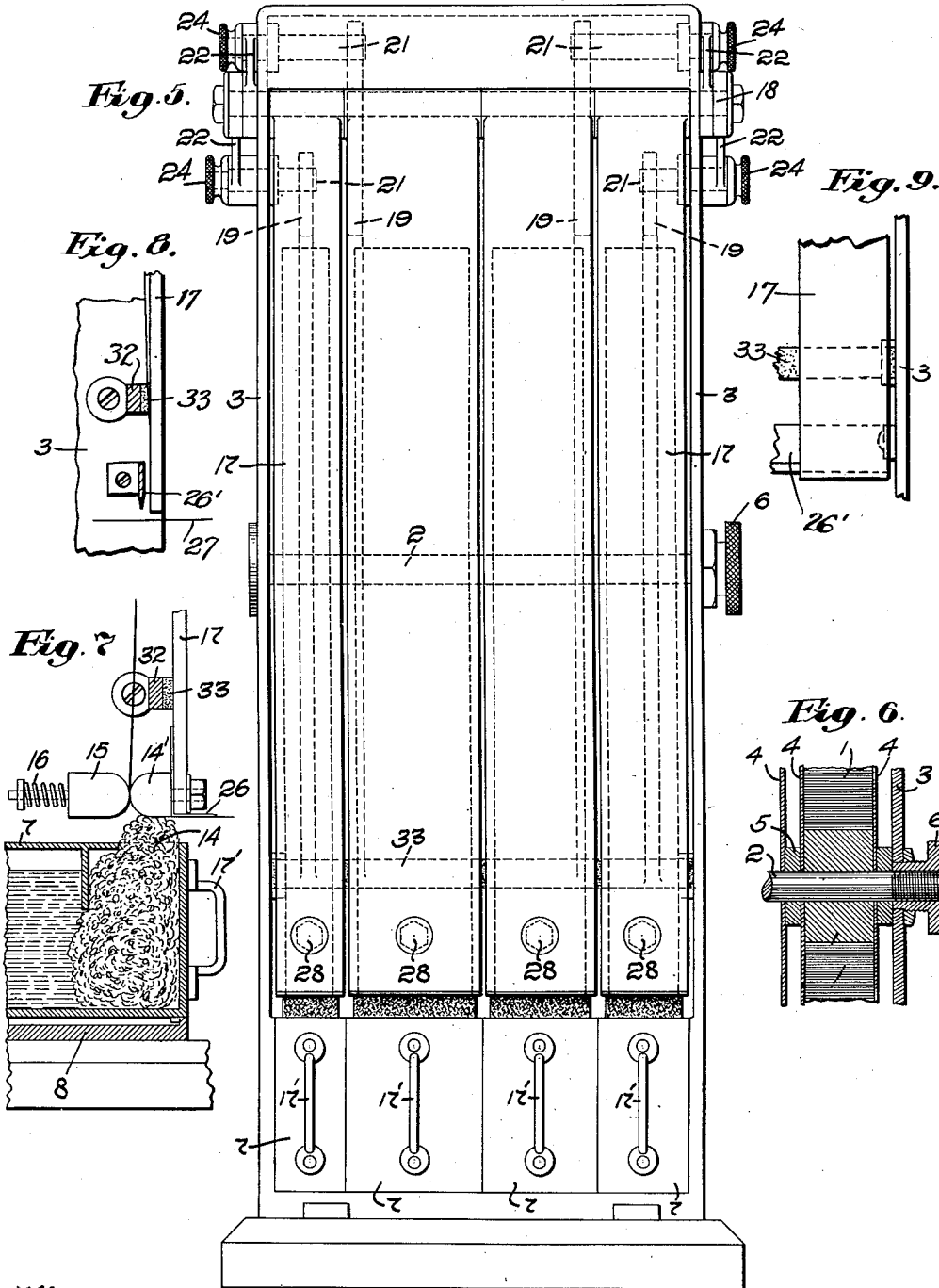
by Emily B. Smith, Attorney

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3 SHEETS—SHEET 3.



Witnesses:
 Horace A. Crossman
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UNITED STATES PATENT OFFICE.

EARL L. BROWNSON, OF HAVERHILL, MASSACHUSETTS, ASSIGNOR TO NATIONAL BINDING MACHINE COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

STRIP-SERVING APPARATUS.

1,120,788.

Specification of Letters Patent.

Patented Dec. 15, 1914.

Application filed August 16, 1910. Serial No. 577,502.

To all whom it may concern:

Be it known that I, EARL L. BROWNSON, a citizen of the United States, and a resident of Haverhill, in the county of Essex and State of Massachusetts, have invented an Improvement in Strip-Serving Apparatus, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to strip serving apparatus and more particularly to apparatus having provisions for effecting or determining the service of a measured length of strip and also to indicate or limit the delivery of a strip of predetermined length.

In order that the principle of the invention may be readily understood, I have disclosed a single embodiment thereof in the accompanying drawings, wherein—

Figure 1 is a vertical transverse section of a strip serving apparatus embodying my invention; Fig. 2 is a detail of the strip measuring or limiting means; Fig. 3 is a plan view and partially with the casing removed of the strip serving apparatus shown in Fig. 1; Fig. 4 is a horizontal section upon the line 4—4 of Fig. 1 of said apparatus; Fig. 5 is a front elevation of the apparatus; Fig. 6 is a detail in vertical section showing means for tensioning this strip or strips; Fig. 7 represents a slightly modified form of means for guiding and positioning the strip adjacent the moistener; and Figs. 8 and 9 are details in section and elevation showing in part a modified form of the invention.

Referring more particularly to the drawings, the strip rolls, of which one or more may be employed, are indicated at 1—1, 1—1, four rolls of different widths being indicated. These rolls are mounted in any suitable manner and preferably upon a single spindle 2 carried by the side walls of the casing 3. Preferably each roll is provided at its opposite sides with plates 4 spaced from each other if desired by washers 5. In order to tension said rolls, I may provide any suitable means, but have herein represented a thumb nut 6 threaded upon said spindle 2 and bearing upon one of the walls of the casing. It is, of course, evident that the strips may be packaged in any suitable manner. Preferably, however, they are rolls of paper, cloth or other desired material gummed upon one side, so that they

may be drawn upon preferably by hand and served past a suitable moistening device. If the strips be previously gummed the moistening device need merely be one for supplying water to the gum but if the strip be previously ungummed, then the moistening device should be a suitable means for applying adhesive to the strip as it is served.

In the present embodiment of my invention, the strip is intended to be served from the apparatus by draft thereon by the operator, but within the scope of my invention mechanical means may be provided for serving the strip. If a plurality of strips be employed, I preferably provide independent moisteners therefor, though if desired a single moistener may be utilized for a plurality of strips. Herein I have represented a series of moisteners equaling in number the strips and each consisting of a tank or reservoir 7 mounted upon the bottom 8 of the casing and having therein a preferably freely revoluble roll 9 having an absorbent surface 10 which may be composed of a flannel or other wicking or pad. Between the strip roll and the moistener roll 10 I interpose strip guiding and positioning means shown in Fig. 1, as a pair of loosely mounted rolls 11, 12 between which the strip passes. In the normal or operative position of the moistener roll 9, its periphery is in contact with the roll 12, so that the surface of the strip may be effectively moistened as the strip is drawn upon. I contemplate separating the strip and moistener during the periods of non-service, so that the strip may not become unduly moistened or weakened during such periods of non-use. While this separation may be effected in any suitable manner, I herein mount the tanks or reservoir 7 so that they may be slid backward against a stop 13 with the moistener rolls 9 out of contact with the rolls 12, and therefore out of contact with the strips.

The moistener itself may be of any suitable character, and in Fig. 7 is represented as a sponge or pad 14. The strip guiding means may also be of any suitable character, and in Fig. 7 I have represented the same as two non-revoluble sets of members 14', 15, yieldingly pressed toward each other by the coil spring 16. In this case also the tank or reservoir may be slid back in the manner heretofore described. Each tank may be provided with a handle 17' permitting ready manipulation thereof.

An important object of my invention is the provision of inexpensive and simple yet efficient and accurate means permitting the feeding or indicating the delivery of a predetermined length of strip, or for effecting or determining the service of a measured length of strip. Herein for the purpose I have represented the following means constituting one embodiment of mechanism for effecting this result. I provide a number of arms or members 17 which for the best results should equal in number the strip rolls. These arms are loosely journaled upon a stud 18 secured transversely of the casing in the upper portion thereof, the casing being open at the front save for said arms. Each of the arms is provided with a segmental extension 19, and in the present instance where four strip rolls are employed these extensions are of different lengths for convenience of operation. Each segmental extension is provided with a correspondingly shaped slot 20. Each slot 20 is adapted to receive a pin 21 carried by the outer end of a pointer arm 22 loose upon the spindle 18. Each pin 21 passes through a segmental slot 23 in that wall of the casing adjacent thereto. In the present instance and viewing Figs. 3 and 5, it will be observed that two of the pins 21 are upon each side of the casing, so that each side wall thereof is provided with two segmental slots 23 for the setting of the pointer arms 22 at the proper point. Upon the outer end of each pin 21 is provided a thumb nut 24 whereby when the arm or arms 22 are set at the desired position they may be tightened in place against the walls of the casing. The pointer fingers 22 are upon the outside of the casing and are hence readily accessible for inspection or adjustment. Adjacent the ends of the pointer arms 22 are scales 25, each division mark in the present instance indicating one inch.

It will be evident that by moving the pointer arms 22 downward in their slots 23 and securing them with their ends adjacent the mark indicating the desired length of strip to be served, the pins 21 carried by said pointer arms 22 are moved downward in the segmental slots 20 of the segmental extensions 19 of the arms 17. It is evident that when the pins 21 have been thus moved forward in their slots 20, thereupon each arm 17 may be moved forward to an extent determined by the position of its pins 21 in the slot 20. If, for example, the pointer arm 22 has been moved until its extremity is opposite the fifth mark upon the scale, then the lower end of the corresponding arm 17 may be swung forward five inches. It is obvious that by loosening the thumb nut 24, the device may function as an indicating mechanism. Each arm 17 is, in this embodiment of my invention, provided with

a digit grasping portion 26 positioned flatwise against the free end 27 of the strip, so that when the operative desires to serve a certain length of strip from one of the rolls he may with his thumb and finger grasp the protruding end 27 of the strip and the portion 26 of the arm 17. Supposing the pointer arm 22 of the appropriate arm 17 has been set to permit the lower end of the arm 17 to be swung outwardly five inches, it is evident that when the portion 26 and the strip end 27 are together grasped and the arm 17 is drawn outward five inches, precisely five inches of strip will be drawn from the roll. When this length of strip has been drawn from the roll, the service of a further length of strip is prevented, because the pin 21 acts as a stop to further movement of the arm 17. Thereupon the operative may release the arm 17 and suitably sever the protruding five inches of strip.

Any suitable means may be provided to sever the protruding strip end. Preferably, however, the portion 26 is itself a knife blade secured by a bolt 28 or otherwise to the lower end of the arm 17 and is provided with a knife edge 29. Each arm 17 is normally held in the position shown in Fig. 1 by a coil spring 30 connected at 31 to the interior of the casing, and the casing is provided at a suitable point with a transverse stop, such as a bar 32 which may be provided with a facing strip of felt 33 or the like to prevent jar or rebound. It will be evident that when the operative has drawn the desired length of strip and thereupon releases the arm 17, the latter is returned by the spring 30 to the position shown in Fig. 1. Thereupon the protruding end of the strip may be deflected by the operative against the knife edge 29, so that the predetermined or measured length of strip is thereby severed.

It is evident as already stated that the strip may be severed in any suitable manner. For example, the severing blade may be fast upon the casing rather than upon the arm 17, at some suitable point adjacent the point of delivery of the strip. Such construction is shown in Figs. 8 and 9, wherein the blade 26' is mounted upon the casing. The blade 26 or other severing means may be provided with a corrugated edge as shown in Fig. 3 or fashioned in any other effective manner.

It is apparent from the foregoing description that I have provided inexpensive yet exceedingly accurate means for effecting or determining the service of a measured length of strip and for limiting or indicating or otherwise determining the delivery of a strip of predetermined length.

It is obvious that my invention may be embodied in a structure containing but a single strip roll or a plurality of such rolls,

and that if a plurality of rolls be provided they may be of the same or different widths.

Having thus described one illustrative embodiment of my invention, I desire it to be understood that although specific terms are employed they are used in a generic and descriptive sense and not for purposes of limitation, the scope of the invention being set forth in the following claims.

10 Claims:

1. A strip serving apparatus from which a strip may be drawn by draft thereon by the operator comprising a strip support, a moistener to render the strip adhesive, said moistener being supported in the service path of the strip issuing from said support, moistened strip measuring means mounted upon said apparatus and having a limited movement with respect thereto in the direction of issuance of the strip past said moistener, said means having a part adjacent the free end of the strip so as to be grasped by the serving hand of the operator with the strip in serving the latter, thereby to indicate the delivery of a predetermined adhesive length of strip and strip severing means against which the strip may be drawn for severance.

2. A strip serving apparatus from which a strip may be drawn by draft thereon by the operator comprising a strip support, a moistener to render the strip adhesive, said moistener being supported in the service path of the strip issuing from said support, a moistened strip measuring, pivoted arm mounted upon the apparatus and movable with the strip in the service of the latter, said arm having a part in grasping proximity to the free end of the strip, so that the strip and arm may together be grasped by the serving hand of the operator and be conjointly moved while so grasped by the operator in serving the strip and strip severing means stationary during the severing operation.

3. A strip serving apparatus from which a strip may be drawn by draft thereon by the operator comprising a strip support, a moistener in operative relation thereto, and a strip severing member traveling with the strip during service thereof and determining the service of a measured length of strip.

4. A strip serving apparatus from which a strip may be drawn by draft thereon by the operator comprising a strip support, a moistener in operative relation thereto, and a pivoted arm having a severing blade received flatwise against the strip to be grasped by the operator for movement therewith during strip service.

5. A strip serving apparatus from which a strip may be drawn by draft thereon by the operator comprising a strip support, a moistener to render the strip adhesive, said moistener being supported in the service

path of the strip and a member movable in the direction of service of the strip during the drawing upon the strip, and in the opposite direction prior to strip severance, said member having associated means for indicating the service of a measured length of strip, said member also having strip severing means.

6. A strip serving apparatus from which a strip may be drawn by draft thereon by the operator comprising a strip support, a moistener in operative relation thereto, a pivoted arm 17 having segmental extension 19, said arm having a part adapted to contact with the strip, means for limiting the forward movement of said arm 17 with the strip and means to return the arm to normal position.

7. A strip serving apparatus from which a strip may be drawn thereon by the operator comprising a strip support, a moistener to render the strip adhesive, said moistener being supported in the service path of the strip issuing from said support, strip measuring means mounted upon said apparatus and having limited movement with respect thereto in the direction of issuance of the strip past the moistener, said means having a grasping part adjacent to the free end of the strip and constructed and adapted to be grasped together with the strip by the serving hand of the operator in serving the strip, means cooperating with said strip measuring means to indicate or determine the delivery of a strip of predetermined length, and strip severing means against which the strip may be drawn for severance and means automatically to return said strip measuring means to normal position.

8. A strip serving apparatus from which a strip may be drawn by draft thereon by the operator comprising a strip support, a moistener in operative relation to the strip issuing from said support, means whereby the strip and moistener may be separated during periods of non-service, and strip severing means mounted upon the apparatus and having a limited strip measuring movement with respect to said apparatus in the direction of issuance of the strip past said moistener, said strip measuring means having a grasping part adjacent the free end of the strip.

9. A strip serving apparatus from which a strip may be drawn by draft thereon by the operator comprising a strip support, a moistener in operative relation to the strip issuing from said support, strip measuring means mounted upon said apparatus and having a limited movement with respect thereto in the direction of issuance of the strip past said moistener, said measuring means having a grasping part adjacent to the free end of the strip to be grasped with the strip in serving the latter and strip sev-

ering means against which the strip may be deflected by the operator for severance, said severing means being so positioned with relation to the moistener that after strip severance the free end of the strip is in position to be grasped for further strip service.

5 10. An apparatus for serving an adhesive strip by draft thereon by the operator, said apparatus comprising a strip roll support, a device to render the strip adhesive as it is drawn from said support, said device being mounted in the service path of the strip, so that the strip when served is drawn in contact with said device, moistened-strip measuring means mounted upon said apparatus and having a thin end positioned flatwise in facing relation with the free end of the strip, whereby said end and strip may be grasped between the finger and thumb of the operator in serving the strip, said measuring means having a limited movement in the direction of strip service, whereby the service of a predetermined length of moistened strip is indicated by the termination of said limited movement of said measuring means and strip severing means against which the strip may be drawn for severance.

25 30 35 11. A strip serving apparatus from which a strip may be drawn by draft thereon by the operator comprising a strip support, a moistener in operative relation to the strip issuing from said support, strip measuring means in operative relation to said apparatus and having a limited movement with respect thereto in the direction of issuance of the strip past the moistener, said measuring

means having a grasping part adjacent to the free end of the strip to be grasped with the strip in serving the latter and strip severing means against which the strip may be deflected by the operator for severance, said severing means being so positioned with relation to the moistener that after strip severance the free end of the strip is in position to be grasped for further strip service.

12. An apparatus for serving an adhesive strip by draft thereon by the operator, said apparatus comprising a strip roll support, a device to render the strip adhesive as it is drawn from said support, said device being mounted in the service path of the strip, so that the strip when served is drawn in contact with said device, moistened-strip measuring means mounted in operative relation to said apparatus and having a thin strip severing end positioned flatwise in facing relation with the free end of the strip, whereby said end and strip may be grasped between the finger and thumb of the operator in serving the strip, said measuring means having a limited movement in the direction of strip service, whereby the service of a predetermined length of moistened strip is indicated by the termination of said limited movement of said measuring means.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

EARL L. BROWNSON.

Witnesses:

ARTHUR E. CARSON,
MAY H. LOWRY.