United States Patent

[11] 3,547,327

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[21] Appl. No. **751,493**
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[45] Patented **Dec. 15, 1970**

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[54] **DISPENSER FOR MULTIPLE MATERIAL WEBS**
4 Claims, 6 Drawing Figs.

[52] **U.S. Cl.** **225/38,**
225/42, 225/47, 225/80; 242/55.3
[51] **Int. Cl.** **B26f 3/02**
[50] **Field of Search** 83/649,
650, 922; 225/34, 37, 38, 42, 46, 47; 312/107,
111, 39

[56] **References Cited**

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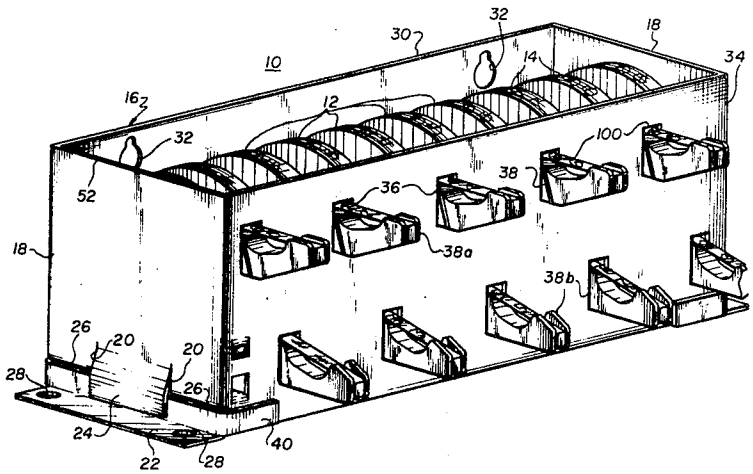
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Primary Examiner—Andrew R. Juhasz
Assistant Examiner—Leon Gilden
Attorney—David Teschner

ABSTRACT: The disclosure is directed to a dispenser for dispensing multiple webs of material adapted to be bench or wall mounted. The dispenser consists of a housing having therein a plurality of apertures through which individual material webs may be passed. Mounted within the housing is a rack assembly for receiving and selectively holding individual webs of material such that individual webs may be replaced or removed at will. Coupled to each of the housing apertures is a material end support having at a first end thereof a cutting edge for severing, in desired lengths, the material passed thereover. Slots in the material end supports at its end, opposite from that containing the cutting edge, are provided so that the position of the end support, with respect to the housing, may be selectively established in order to facilitate maximum packing density of the webs of material contained within the housing. Two opposite faces of the housing are preformed with slots therein to permit housings to be stacked one atop another and to provide for coupling with a mounting base such that a single dispenser, or stack of dispensers may be mounted to a mounting surface. Provision is also made in the dispenser housing for mounting the housing to a bulkhead or wall or other mounting surface. The rack for mounting and positioning individual material webs may be unitary such as to accept a plurality of such material webs or may be modular so that one web will be accommodated by each of the modular rack modules.

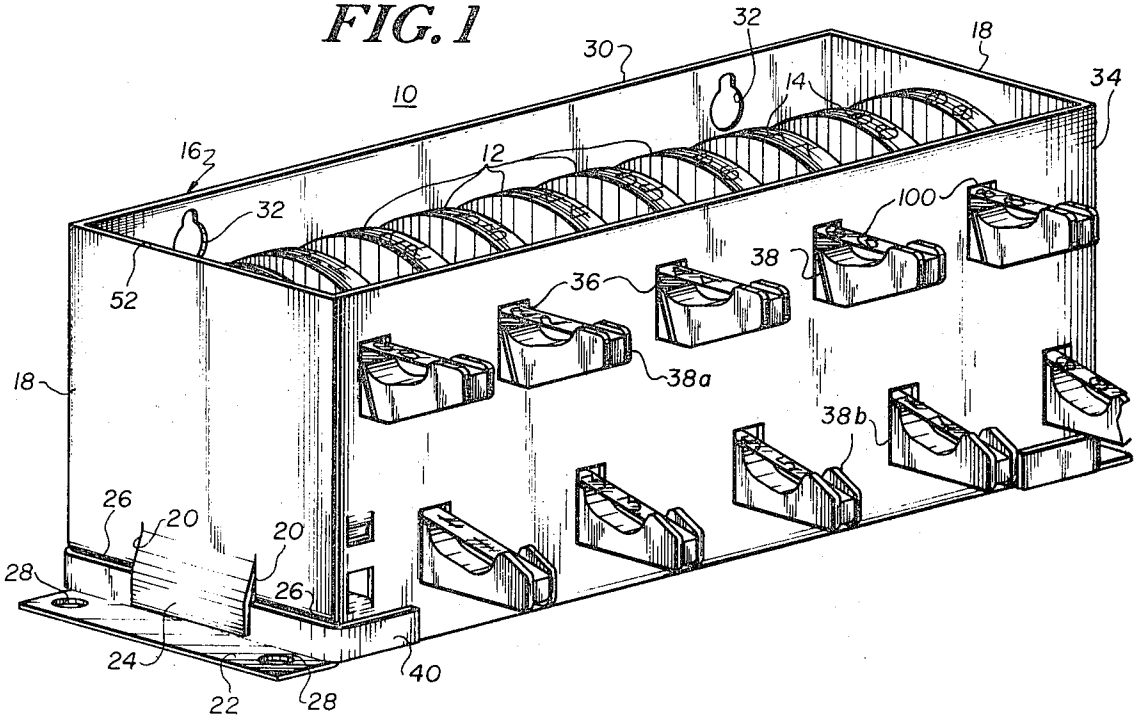


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SHEET 1 OF 2

FIG. 1



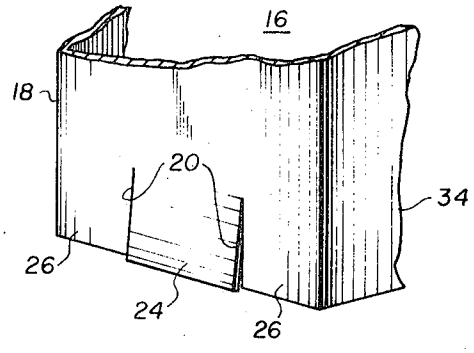


FIG. 2

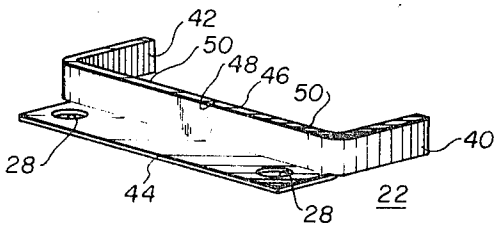


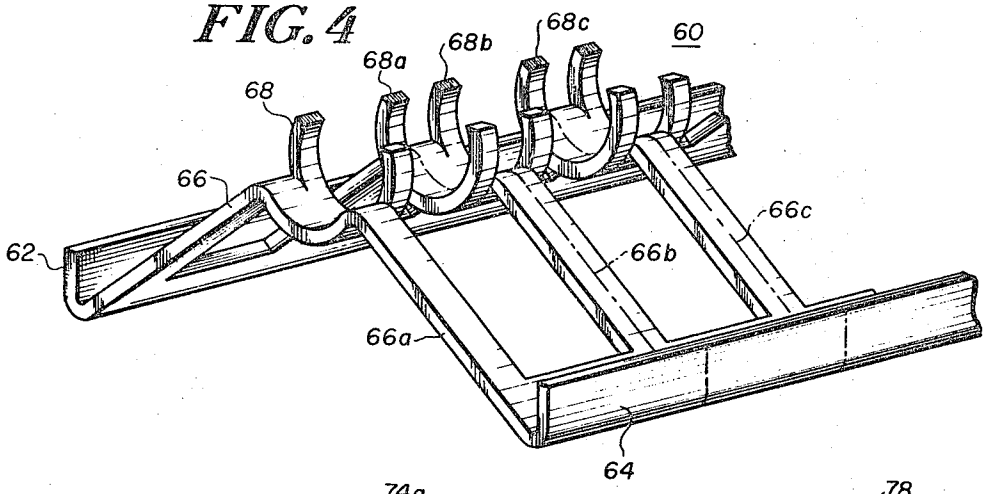
FIG. 3

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FIG. 4



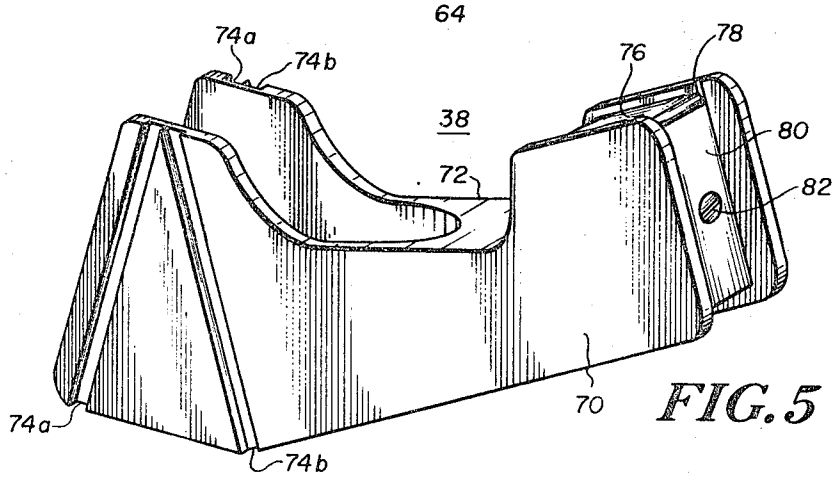


FIG. 5

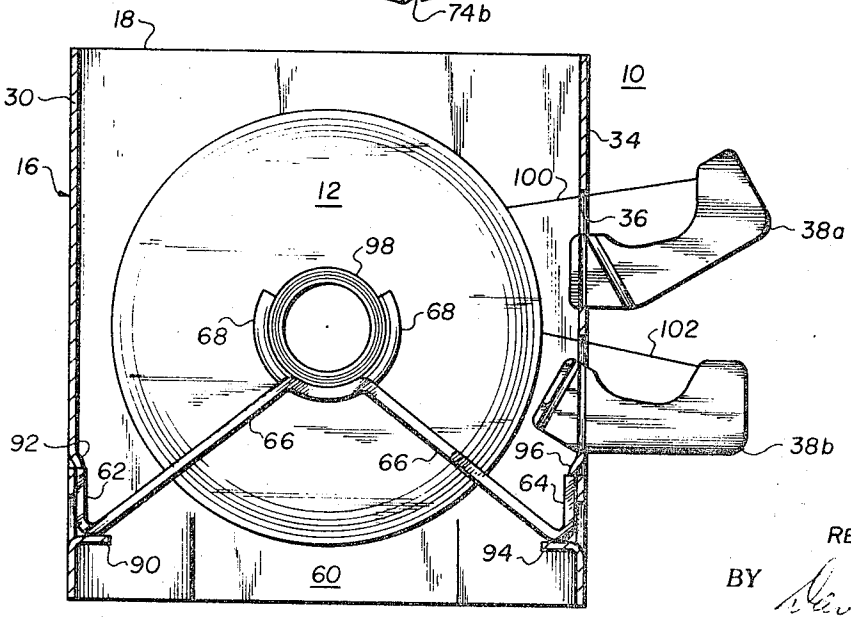


FIG. 6

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DISPENSER FOR MULTIPLE MATERIAL WEBS

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention is directed to the field of dispensing a plurality of material webs and particularly to the dispensing of desired lengths of marking tapes for the marking of cables, conductors or other similar articles.

2. Description of the Prior Art

In prior art devices for the dispensing of a plurality of material webs such as marking tapes, provision is made to place the individual material webs upon a unitary axle which is in turn mounted within the housing of the dispenser. Provision is made for a single support unit for supporting the material ends and further provision is made for a single cutting device adapted to traverse the entire support severing the material webs which have been placed in its path. Due to the unitary construction of the housing and supports and cutting device, the device is generally of great weight and bulk. Further, in order to change individual material webs, whether due to the expiration of the material upon a hub, or because the information printed upon the web is inappropriate to the particular situation, it is necessary to remove the entire axle thus removing all the webs contained within the dispenser housing. As a result, the remaining webs may not be employed during such replacement time. It is further necessary that all of the material webs adjacent the web to be replaced must be taken off of the axle so as to permit the removal and replacement of the desired web.

SUMMARY OF THE INVENTION

The present invention overcomes the difficulties noted above with respect to prior art devices for dispensing a plurality of material webs. This is accomplished by the provision of a dispenser housing having mounted therein a rack means for supporting and positioning individual material webs such that any one or a plurality of such webs may be selectively removed without disturbing the adjacent webs within the dispenser. Further, provision is made for material support ends which can be positioned selectively adjacent apertures placed within the housing through which the material webs are dispensed. These material end supports each having its own cutting edge may be selectively positioned in order to increase the packing density of material webs placed within the dispenser housing. Further, in order to increase the packing density of the material webs placed within the dispenser, the apertures in the housing through which the tapes are dispensed may be staggered and the material end supports similarly staggered such that the withdrawal of a particular material web will not interfere with those adjacent to it. Because the individual material end supports include their own cutting edge and because the support rack within the dispenser housing for supporting individual material webs are each fully replaceable damage to any particular part of the dispenser can be easily corrected by the replacement of that portion without disturbing the remaining portions of the dispenser. It is therefore an object of this invention to provide an improved form of dispenser for dispensing a plurality of material webs.

It is yet another object of this invention to provide an improved dispenser for dispensing a plurality of material webs wherein individual material webs within a dispenser may be replaced without disruption to the remaining webs.

It is still another object of this invention to provide an improved dispenser for dispensing a plurality of material webs wherein the cutting devices associated with individual ones of the webs may be selectively positioned to permit an increase in the packing density of the material webs contained within the dispenser.

It is yet another object of this invention to provide an improved dispenser for a plurality of material webs to be selectively stacked and fastened to mounting surfaces.

It is still another still another of this invention to provide an improved dispenser for a plurality of material webs wherein a support rack contained within a dispenser housing may be fabricated as an individual module and wherein the associated support end and cutting edge are similarly fashioned as discrete modules whereby replacement of component portions of the dispenser is possible without disruption of other material webs placed within the dispenser.

Other objects and features of the invention will be pointed out in the following description and claims and illustrated in the accompanying drawings, which disclose, by way of example, the principles of the invention, and the best mode which has been contemplated for carrying it out.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 is an isometric view of a dispenser constructed in accordance with the concepts of the invention;

FIG. 2 is an isometric view of a portion of one end wall of a dispenser housing of FIG. 1;

FIG. 3 is an isometric view of a mounting bracket employed with the dispenser of FIG. 1;

FIG. 4 is an isometric view of a support rack employed with the dispenser of FIG. 1;

FIG. 5 is an isometric view of a material end support and cutting means as employed with the dispenser of FIG. 1; and

FIG. 6 is a side elevation, partially in section, of the dispenser of FIG. 1.

Similar elements are given similar reference characters in each of the respective figures.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Turning now to FIG. 1 there is shown a dispenser **10** for dispensing a plurality of individual material webs **12** each of which may bear indicia such as **14** thereon. Dispenser **10** consists of a housing **16** open at its top and bottom surfaces. The end walls **18** are preformed with slots **20** to receive therein portions of a mounting bracket **22**. The portions of the walls **18** adjacent the slots are deformed such that the portion **24** is formed outwardly whereas the portions **26** are formed inwardly (see FIG. 2) so that when slid upon the end of the bracket **22**, the bracket **22** and housing **16** are joined. Apertures **28** placed in the bracket **22** permit the dispenser **10** to be mounted to a mounting surface (not shown). Placed in the back surface **30** of the housing **16** are keyhole slots **32** which permit the dispenser **10** to be mounted upon an upward extending mounting surface or bulkhead (not shown).

Placed within the front surface **34** of the housing **16** are a plurality of square apertures **36**. The apertures **36** are staggered along two lines such that odd-numbered ones of the material webs **12** will be passed through an aperture **36** on the higher line and those in even-numbered positions passed through the apertures **36** on the lower line. Coupled to each of the apertures **36** is a material end support **38** which may be positioned in one of two selective positions as is shown at **38*a*** and **38*b***.

Turning now to FIG. 3 there is shown a mounting bracket **22** as is shown in FIG. 1. Mounting bracket **22** has mounting ears **40** and **42**. Mounting ear **40** will extend along the front face **34** of the dispenser housing **16** whereas the ear **42** will extend along the rear face **30** of the dispenser housing **16**. Mounting apertures **28** are positioned along the tab **44** such that the mounting bracket **22** may be fastened to a mounting surface. The upper edge **46** of the mounting bracket **22** will be engaged by the slotted portion of the sidewalls **18** such that the portion **24** will extend over edge **46** on the frontal portion **48** thereof while the portions **26** of the sidewall **18** will extend along the back portion **50** of the edge **46** of the bracket **22**. Since the upper portion of the housing **16** is opened one dispenser **10** stacked upon another will have its portions **24** and **26** engage the upper edge **52** of the end walls **18** of the lower dispenser **10**.

Turning now to FIG. 4 there is shown a support rack **60** for supporting the individual ones of the material webs **12** within the housing **16**. Rack **60** has two outlying marginal areas **62** and **64** which will engage in locking relationship with locking tabs placed on the housing **16** as will be described below with reference to FIG. **6**. Extending from the marginal portions **62** and **64** are support members **66**. Each of the end support members **66***a*, only one of which is visible in FIG. **4**, have at their mid areas a single pair of spring fingers **68**. Intermediate support members **66***b* have at their mid areas two pairs of spring fingers **68**. Spring fingers **68***a* will combine with spring fingers **68** of the end supports **66***a* to support, position and hold the axle, or hub, of a single material web. The second set of spring fingers **68***b* cooperate with the spring fingers **68***c* of the intermediate support **66***c* to support a further material web. Alternatively, it is possible to construct the rack in such a manner, as is shown in the dotted line such that an individual module arrangement is complete in itself, having the desired two pairs of spring fingers **68**. The entire rack **60** is fabricated of flexible material such as steel, or plastic, so that the marginal portions **62** and **66** can be brought into engagement with support and locking tabs on the housing **16** as will be described below with reference to FIG. **6** and such that spring fingers **68** will be permitted to expand and close about the axle, or hub, of a material web placed therein.

Turning now to FIG. **5**, there is shown the details of a material ends supports **38**. Material ends support **38** has a first wall **70** and a second wall **72** each having therein a plurality of slots **74**. Slots **74***a* and slot **74***b* are arranged so that the position of the material end support **38** may be that shown as **38***a* or **38***b* in FIG. **1**. Material end support **38** terminates at a hub **76** across which the material web **12** is passed. The end walls **70** and **72** have further slots **78** therein into which is placed a cutting edge **80**. Cutting edge **80** may be staked to the hub **78** by means of a fastening device such as **82** or in the alternative may be constructed intrically with the end hub **78** to eliminate the necessity for the slots **78** and the staking as by means of a fastener **82**. Although two sets of slots **74***a* and **74***b* are shown to position the material end support **38** to two distinct positions, a plurality of such slots **74** may be employed if it is desired to have additional positions for the material end support **38**.

Turning now to FIG. **6** there is shown an end view, partially in section, of an assembled dispenser. Struck from the back surface **30** of the dispenser housing **16** is a support tab **90** and a locking tab **92**. Struck from the front surface **34** is a support tab **94** and a locking tab **96**. In order to insert the rack **60** into the proper position, as is shown in FIG. **6**, support members **66** are slightly compressed towards one another and the bottom portions of the upturned margins **62** and **64** will then be positioned with respect to the support tabs **90** and **94**. When the compressing forces upon the support members **66** are released they spring outwardly and engage the backwall **16** and the front wall **34** and thus positioning their upward extremes in contact with the locking tabs **92** and **96** respectively. The curved ends of the marginal portions **62** and **64** also act to guide themselves into the desired position. For a unitary rack **60** four sets of support tabs and locking tabs are required. If the rack **60** is made up of separate modules two pairs of support tabs and locking tabs are provided for each module. Once the rack **60** has been positioned individual material webs such as **12** can be positioned so that its hub **98** is forced between the spring fingers **68**. It should be recalled the hub **98** is merely the hub for a single material web **12** and does not extend through all of the webs **12** mounted within the housing **16**. Hub **98**, will for example, nest between the spring fingers **68***a* and **68***b* as is shown in FIG. **4**. Then the web **100**, contained upon the material web **12**, is conducted over a material end support **38***a* or **38***b* in accordance with the position of the web **12** in the group of webs. For example, as is shown in FIG. **1**, the first in each succeeding odd-numbered web, starting from the left hand portion of the figure are conducted through the upper line of apertures **36** and across material end supports in the position shown by support **38***a*. The second and each succeeding even-numbered web of material will be conducted as **102** through the lower set of apertures **36** and across a material end support such as **38***b*. It should be noted however, that should the packing density not be critical, all the apertures **36** may be mounted along a single center line and each of the material end supports **38** mounted along the same line. Should additional spacing be required more than two rows of apertures **36** may be provided and additional slots **74** provided in the material end supports **38** to facilitate additional positions of the material end supports **38**. When a single one of the material webs **12** has been used up, or should it be desirable to change a particular web **12** this may easily be done without disturbing adjacent material webs in that each is separately mounted upon its own hub and separately supported upon the web rack **60**. In a similar fashion, should anything effect the material ends supports **38**, or the cutting blades **80** thereupon the material end supports **38**, or the blades could readily be replaced.

While there have been shown and described and pointed out the fundamental novel features of the invention as applied in the preferred embodiments, it will be understood that various omissions and substitutions and changes of the form and details of the devices illustrated and in their operation may be made by those skilled in the art, without departing from the spirit of the invention.

I claim:

1. A dispenser for dispensing from any one of a plurality of material webs comprising: a housing having a plurality of apertures therein, one for each of said webs; said apertures proportioned to permit the passage of a web therethrough; a plurality of material end supports, one for each said plurality of apertures; said material end supports being mounted adjacent its associated aperture; a plurality of cutting means, one for each of said plurality of material end supports; each of said cutting means coupled to its associated material end support; rack means in said housing for receiving and positioning individual ones of said plurality of material webs and permitting said material webs to be dispensed upon the application of an external force to the ends of said material webs to cause said webs to pass through their associated housing apertures, over associated material end supports and be cut to desired lengths by their associated cutting means; said rack means further comprising two pairs of spring fingers for each of said material webs to releasably engage and hold the hub of a material web; support members coupled to said spring fingers to position said material hubs with respect to the associated ones of said housing apertures; and said housing has a plurality of pairs of support tabs and locking tabs for receiving in locking engagement the free ends of said support members whereby said rack means is releasably locked to said housing.

2. A dispenser for dispensing from any one of a plurality of material webs comprising: a housing having a plurality of apertures therein, one for each of said webs; said apertures proportioned to permit the passage of a web therethrough; a plurality of material end supports, one for each of said plurality of apertures; said material end supports being mounted adjacent its associated aperture; a plurality of cutting means, one for each of said plurality of material end supports; each of said cutting means coupled to its associated material end support; rack means in said housing for receiving and positioning individual ones of said plurality of material webs and permitting said material webs to be dispensed upon the application of an external force to the ends of said material webs to cause said webs to pass through their associated housing apertures, over associated material end supports and be cut to desired lengths by their associated cutting means; said rack means comprising a plurality of individual support modules; each of said modules comprising two pairs of spring fingers to releasably engage and hold the hub of a material web; and support members coupled to said spring fingers to position said material hub with respect to the associated ones of said housing apertures; said housing has a plurality of pairs of support tabs and locking tabs, two

pairs for each of said support modules; and said pairs of support tabs and locking tabs receiving in locking engagement the free ends of said support members of one of said support modules of said rack whereby said support modules are releasably locked to said housing.

3. A dispenser for dispensing from any one of a plurality of material webs comprising: a housing having a plurality therein, one for each of said webs; said apertures proportioned to permit the passage of a web therethrough; a plurality of material end supports, one for each of said plurality of apertures; said material end supports being mounted adjacent its associated aperture; a plurality of cutting means, one for each of said plurality of material end supports, each of said cutting means coupled to its associated material end support; and rack means in said housing for receiving and positioning individual ones of said plurality of material webs and permitting said material webs to be dispensed upon the application of an external force to the ends of said material webs to cause said webs to pass through their associated housing apertures, over associated material end supports and be cut to desired lengths by their associated cutting means; and each of said material end supports has slots in its end remote from the associated cutting means for releasably engaging selected edges of said housing apertures whereby said end supports are locked to said housing.

4. A dispenser for dispensing from any one of a plurality of material webs comprising: a housing having a plurality of apertures therein, one for each of said webs; said apertures proportioned to permit the passage of a web therethrough; a plurality of material end supports, one for each of said plurality of apertures; said material end supports being mounted adjacent its associated aperture; a plurality of cutting means, one for each of said plurality of material end supports; each of said cutting means coupled to its associated material end support; and rack means in said housing for receiving and positioning individual ones of said plurality of material webs and permitting said material webs to be dispensed upon the application of an external force to the ends of said material webs to cause said webs to pass through their associated housing apertures, over associated material end supports and be cut to desired lengths by their associated cutting means; and each of said material end supports has a plurality of slots at its end remote from the associated cutting means for releasably engaging selected edges of said housing apertures whereby said end supports are locked to said housing in any one of a plurality of selectable positions.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,547,327 Dated December 15, 1970

Inventor(s) Remo Mariani

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 5, line 7, after "plurality" insert -- of apertures --.

SIGNED AND SEALED
MAR 9 1971

(SEAL)
Attest:

Edward M. Fletcher, Jr.
Attesting Officer

WILLIAM E. SCHUYLER, JR
Commissioner of Patents