

Nov. 29, 1960

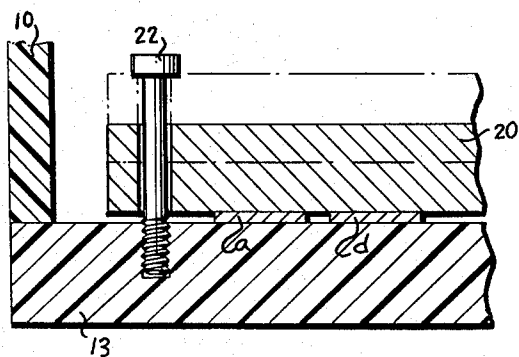
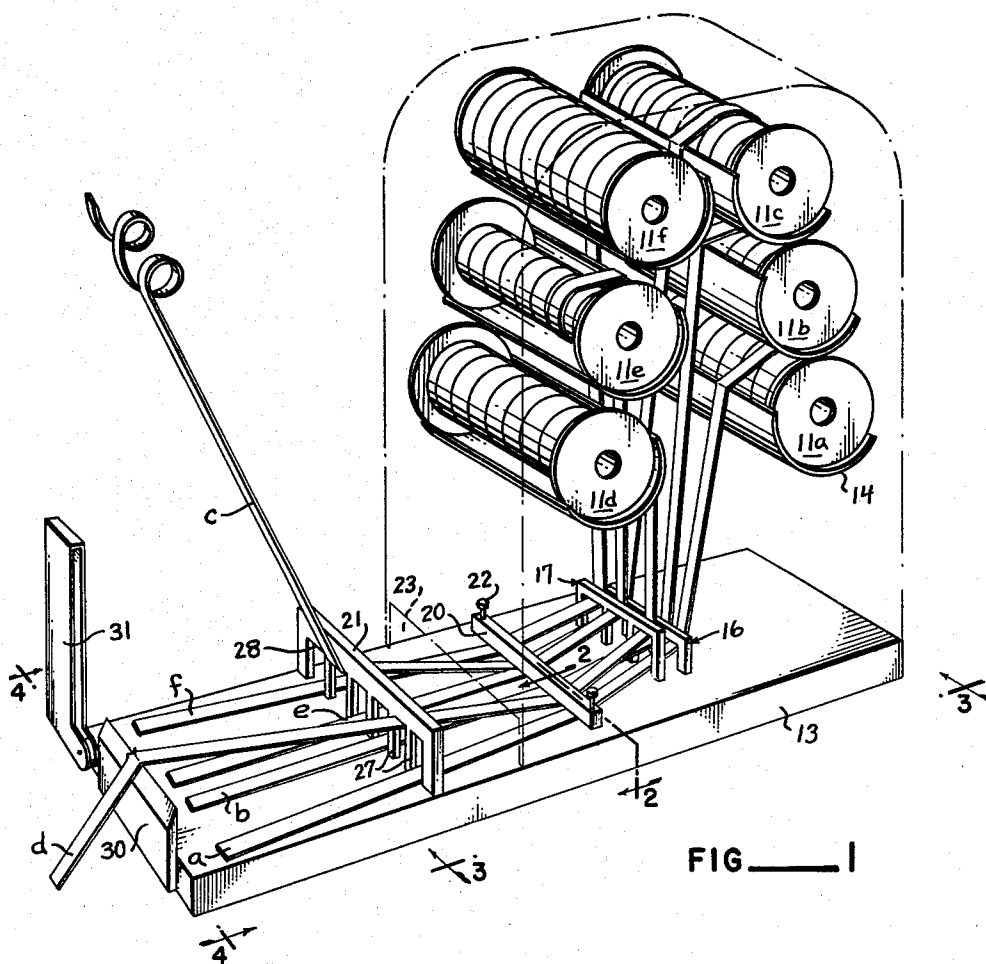
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2,961,736

MULTI-SPOOL RIBBON CURLING AND CUTTING DEVICE

Filed May 19, 1958

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

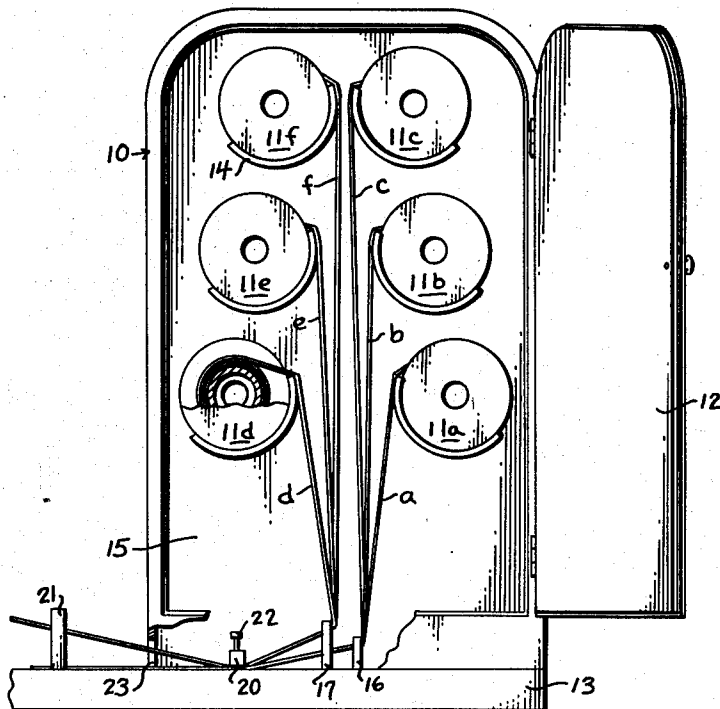


FIG. 3

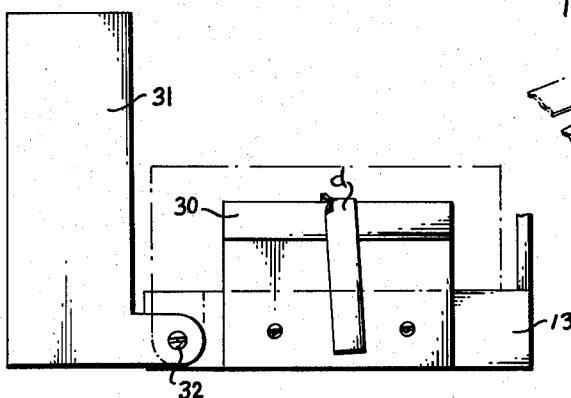


FIG. 4

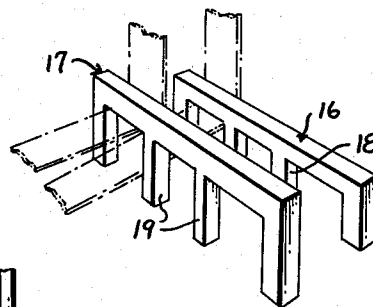


FIG. 5

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MULTI-SPOOL RIBBON CURLING AND CUTTING DEVICE

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9 Claims. (Cl. 28—1)

The present invention relates to a multi-spool ribbon dispenser whereby ribbon can be selectively unreeling from a plurality of spools and cut, and wherein provision is made for optionally curling the ribbon during the dispensing operation.

My invention aims to provide such a ribbon dispenser which will have a minimum of working parts, be of simple and economical construction and easy to load and operate, and which will attractively display the ribbon.

With yet additional objects and advantages in view which, with the foregoing, will appear and be understood in the course of the following description and claims, the invention consists in the novel construction and in the adaptation and combination of parts hereinafter described and claimed.

In the accompanying drawings:

Figure 1 is a perspective view of my ribbon dispenser with the housing for the ribbon spools being shown in phantom;

Fig. 2 is a transverse sectional detail view taken along the line 2—2 of Fig. 1;

Fig. 3 is a fragmentary side elevational view with the side door open and taken as indicated by line 3—3 in Fig. 1;

Fig. 4 is a front elevational view of an enlarged scale of the ribbon cutting blade and guard therefor and is taken as shown by the line 4—4 of Fig. 1; and

Fig. 5 is a detail perspective view of the dividers below the spool holders.

Referring to the drawings it is seen that a cabinet 10 for housing ribbon spools 11a-f and having a side access door 12 is mounted on the rear half of an elongated base 13. The spools are seated by their end hubs in saddle-like holders 14 one end of which is secured to the side wall 15 of the cabinet which is opposite the door 12. It will be noted that the saddles are arranged in two sets of tiers which are convergent upwardly so that the ribbons a-f reeling therefrom between the tier sets will travel downwardly in different planes toward the base 13. As best seen in Fig. 3 the saddles are transversely arched for about a half circle and are tilted upwardly somewhat toward the center of the housing. By this arrangement the spools will not unseat as the ribbons are drawn from the top thereof down to respective dividers 16, 17 mounted on the base 13, one divider for each set of tiers.

For purposes of example I have shown three tiers of spools in each set, and hence each of the dividers 16, 17 is given three ports. These ports are defined by series of legs 18, 19 which foot upon the base. In legs 18 of divider 16 are shorter than those 19 of divider 17 and are respectively aligned therewith longitudinally of the base so that ribbons a-c will travel forwardly from divider 16 through divider 17 in underlying relation to ribbons d-f.

From divider 17 the ribbons travel forwardly beneath a retarding bar 20 and fan out toward a curling bar 21 located in front of the cabinet. The retarding bar floats on a pair of upright pins 22 so that the weight of the bar rests on the ribbons. In fanning from the retarding bar

2

to the curling bar 21 the ribbons discharge from the cabinet through a front slot 23 formed at the bottom thereof.

The curling bar 21 is mounted above the base on separating fingers 27 which define individual gates for the ribbons. In passing through these gates the ribbons a-c are alternated with ribbons d-f. The lower front edge 28 of the curling bar is sharp between the fingers 27 so that when a ribbon is pulled upwardly thereagainst, as demonstrated by ribbon c in Fig. 1, it is curled.

For cutting the ribbons, a blade 30 is mounted on the forward end of the base 10. This blade is equipped with a guard 31 which is pivoted on the base by a screw 32 to swing into and out of shielding position.

Loading of my dispenser is readily performed when the door 12 is open: since the spools can then be slid lengthwise along their saddle 14 into a fully seated position. Each ribbon is then in turn drawn over the saddle and threaded forwardly through a designated port of one of the dividers 16, 17 and out through the housing slot. It is then pulled beneath and retarding bar 20 after the latter has been lifted on its pins 22 and finally threaded through a designated gate beneath the curling bar 21.

For display purposes it is preferred to have the housing 10 fabricated from a transparent plastic material. When a ribbon has been selected its free end is readily accessible at the front of base 13 to be gripped for unreeling it from its housed spool. As the ribbon unwinds in response to a manual pulling of the free end thereof it can be adequately tensioned due to the pressure of the retarding bar 20 and the friction between the hubs of the turning spool and its saddle 14. When the desired length of ribbon has been drawn it can be easily severed by forcing the ribbon against the cutting blade 30 as demonstrated by ribbon d in Figs. 1 and 4. After the ribbon is cut backlash thereof is prevented by the retarding bar 20. If it is desired to have the length of ribbon curled it is merely manually pulled over the curling edge 28 while performing the dispensing operation and is then severed.

The advantages of the invention will, it is thought, have been clearly understood from the foregoing detailed description of the embodiment which I have elected to illustrate. Changes in the details of construction will suggest themselves and may be resorted to without departing from the spirit of the invention, wherefor it is my intention that no limitations be implied and that the hereto annexed claims be given a scope fully commensurate with the broadest interpretation to which the employed language admits.

What I claim is:

1. In a ribbon dispenser, a spool holder, means providing a ribbon port below said holder, ribbon curling means in front of said port and having a ribbon discharge gate beneath, and ribbon cutting means in front of said gate.

2. In a ribbon dispenser, a spool holder, means providing a ribbon port below said holder, ribbon curling means in front of said port and having a ribbon discharge gate beneath, and ribbon retarding means between said port and gate.

3. In a ribbon dispenser, ribbon curling means having a plurality of side-by-side ribbon gates therebeneath, means for guiding a plurality of ribbons forwardly to said gates, and ribbon cutting means in front of said gates.

4. In a ribbon dispenser, a base, tiers of spool holders mounted above said base, divider means mounted below said holders and providing side-by-side ribbon ports, one for each said holder, and ribbon cutting means mounted on said base in front of said parts.

5. In a ribbon dispenser, a base, tiers of spool holders mounted above said base, divider means below said holders and providing side-by-side ribbon ports, one for each

3

holder, ribbon curling means carried by said base forwardly of said ports and presenting a front curling edge and ribbon discharge gates therebeneath, one respective gate for each said port, and ribbon cutting means mounted on said base in front of said gates.

6. In a ribbon dispenser, a base, front and back spaced sets of tiers of ribbon holders mounted above said base, said sets converging in the upward direction, and front and back spaced divider means below the space between said sets and mounted on said base, said divider means each providing side-by-side ribbon ports, one for each of its holders, said ports of the front divider means extending higher than those of the back divider means whereby ribbons from spools held by said back set of holders and threaded forwardly through said ports of the back and front divider means will pass beneath ribbons threaded forwardly through said ports of the front divider means from spools held by said front set of holders.

7. The structure of claim 6 in which a curling bar is mounted forwardly of said front divider means on base anchored separators providing side-by-side ribbon gates, one for each of said ports.

8. The structure of claim 6 in which ribbon cutting means is mounted on said base forwardly of said gates

4

and in which ribbon retarding means is mounted on said base between said front divider means and said gates.

9. In a ribbon dispenser, a base, front and back spaced sets of tiers of ribbon holders mounted above said base, front and back spaced divider means below the space between said sets and carried by said base, said divider means each providing ribbon ports, one for each of its holders, the ports of said front divider means having ribbon passage portions displaced from fore-and-aft alinement with the ports of said back divider means, whereby ribbons from spools held by said back ribbon holders and threaded forwardly through said back divider means will pass forwardly therefrom along different paths than ribbons threaded forwardly through said ribbon passage portions from spools held by said front set of holders.

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