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TAPE CARTRIDGE

Filed April 8, 1968

FIG. 1

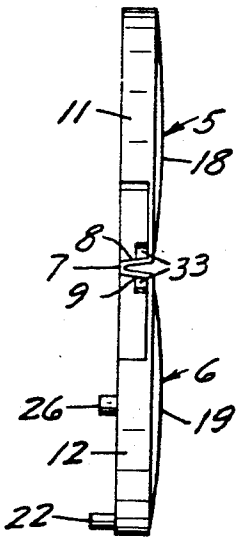


FIG. 2

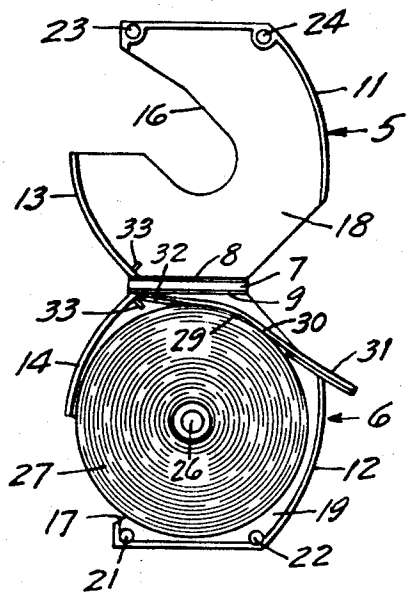


FIG. 3

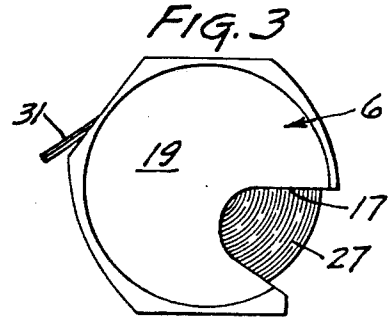
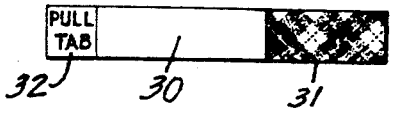


FIG. 4



INVENTORS
JOANNES F. VAN ROOIJ
BY PHILIP H. ZIMMER
Kinney, Alexander,
Sell, Steldt & DeLa Hunt
ATTORNEYS

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TAPE CARTRIDGE

Philip H. Zimmer, Minneapolis, and Joannes F. Van Rooij, St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

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U.S. Cl. 206—52 3 Claims

ABSTRACT OF THE DISCLOSURE

A cartridge for supplying and dispensing convolutely wound strip material which material has the free end thereof held to the outer convolution by a strip of pressure-sensitive adhesive tape. The tape strip is formed with a tap at each end affording easy withdrawal of the free end of the strip material from the cartridge by positioning the release tab and maintaining it at the outlet opening.

This invention relates to a cartridge for supplying strip material to an apparatus and in one aspect relates to a supply cartridge for containing and dispensing a plastic tape of the type used in the tape marking machines such as an embossing device.

Cartridges for containing and dispensing strip material are well known in the art, and several known patents exist on cartridges for containing and dispensing embossable strip material. One known U.S. Patent No. 3,127,989 provides a container formed of symmetrical sections which when hinged together provide a tape discharge outlet for the material. Material is supplied in this cartridge in roll form with the free end merely wound on the roll and disposed within the cartridge, making it difficult to locate and position through the proper discharge outlet. U.S. Patent No. 3,129,813 also discloses a magazine for tape storage and dispensing and this magazine uses a slot in the edge wall of the cartridge through which the free end of a convolutely wound strip of tape is positioned through the discharge outlet and returned back into the cartridge to hold it in position, permitting ready access to the end of the tape. However, in the production of this type of magazine for supplying the tape, considerable time and labor is utilized in placing the roll in the container with the free end through the slot to hold the same. It is also known that rolls of tape or other strip material are supplied with the outer free end of the strip material held to the roll by a pressure-sensitive tape. The tape used to tape the free end to the outer convolution may also be provided at one end with a tab. However, when utilizing this type of hold down for a roll of material in a cartridge the roll is still permitted to turn into the cartridge during shipment and handling, thus the tab for grasping the tape will be disposed inside the cartridge and not easily accessible to the user.

The present invention has the advantage over the previous known cartridges in that the novel hold-down member for the free end of the tape has a tab maintained in position at the discharge outlet due to the provision of a trailing tab on the opposite end of the securing tape strip which trailing tab abuts against a fixture in the cartridge, preventing rotation of the wound roll of strip material relative to the cartridge during shipping and handling.

The above and further advantages and features of the present invention will become more apparent upon reading the following detailed description which refers to the accompanying drawing wherein:

FIGURE 1 is an end view of the cartridge in open position;

FIGURE 2 is an elevational view of the cartridge in open position with the roll of tape disposed in the cartridge;

FIGURE 3 is an elevational view of the cartridge in closed position with the tape disposed therein; and

FIGURE 4 is a detail plan view of the hold-down tape.

The tape supply cartridge of the present invention comprises a blank forming two integral shells or halves identified as **5** and **6**. These halves are hinged by a web **7** along the mating upper edge flange **8** and **9** of each half, respectively, which flanges **8** and **9** are substantially straight and form the top of the cartridge. When the halves are folded upon one another they define a tape coil-receiving chamber. The chamber is provided with one peripheral discharge opening through which the tape may be withdrawn, which opening is formed between flanges **8** and **9** and edge flanges **11** and **12** which extend peripherally from the opening to and along the cartridge bottom. Additional edge flanges **13** and **14** extend from the top flanges **8** and **9** peripherally along the other side of the cartridge but terminate short of the bottom flange to cut-out sections **16** and **17** formed in the side walls **18** and **19** of the cartridge halves **5** and **6**, respectively.

Means are provided opposite the hinge or web **7** to hold the cartridge shells in closed position. As illustrated, the holding means comprises a pair of pins **21** and **22** on the shell **6** and sockets or holes **23** and **24** in shell **5** to receive said pins. Additional pins may be utilized as necessary to hold the cartridge closed. A stud **26** projects into the coil-receiving chamber from the center of side wall **19**. The cut-out section **16** is larger than cut-out section **17** to permit a winding spool to be inserted over stud **26** to wind the tape **27** into the closed cartridge, if desired, into a convolutely wound coil or roll. Alternatively, wound and taped (secured) rolls may be placed in the cartridge half **6** and then the cartridge half **5** may be closed upon the half **6**. The tape rolls should have an outer diameter somewhat less than the inner diameter of the chamber to permit easy insertion.

The free end **29** of the wound tape roll is secured to the outer convolution of the roll by a length of releasable pressure-sensitive tape **30**, preferably polyester backed transparent pressure-sensitive tape, on the ends of which are formed a release tab **31** having a length greater than the trailing tab **32** on the opposite end. Each tab is relatively stiff and the release tab **31** may carry a brand name, or other identifying mark and will have a major portion extending through the discharge opening. The tabs may be formed by covering the adhesive on the ends of the tape strip with paper or card stock or by removing or "killing" the adhesive on the ends of the tape strip.

The trailing tab **32** projects tangentially from the roll and abuts a fixture in the cartridge to restrict rotation of the roll which would cause tab **31** to be displaced from its position projecting out of the discharge opening. The fixture as illustrated comprises a small rectangular projection **33** disposed to project into the coil-receiving chamber from the top corner of each half of the cartridge opposite the discharge opening. The projections **33** project generally radially from the inside surface of flanges **13** and **14** and also are integral with the side walls **18** and **19**. The projections **33** form a trap for the free end of tab **32** between the projections and flanges **8** and **9**. Thus the tab **32** and the fixture restrain the roll against rotation in a counterclockwise direction as viewed in FIGURE 2 to displace the tab **31**, and the tab **31**, due to the relative stiffness of the tab and of the tape and position of flanges **11** and **12** relative to the end of the tape **30** and beginning of tab **31**, restrain rotation of the roll clockwise as shown in FIGURE 2 to displace the tab **31**. Thus shipment and handling of the cartridge does not cause the tab **31** to become displaced and not easily accessible to the user.

The user or purchaser desiring to withdraw the tape **27** merely grasps the tab **31** and pulls. This will release the free end **29** of the tape **30** from the outer convolution of the roll and it may be withdrawn. After extracting the free end of the tape **27** then the trailing tab **32** may be grasped to strip the tape **30** from the end of the tape **27**. The free end of the embossable tape **27** or other strip material may then be fed into a machine.

The terms "top," "clockwise," and "counterclockwise" as used herein are relative and are used for description and not as a limiting term.

What is claimed is:

1. A cartridge for supplying a secured convolutely wound length of strip material to the customer which affords easy access to the free end of the strip material to withdraw the same from the cartridge, said cartridge comprising a pair of members having side walls and edge flanges to define a coil-receiving chamber and having at least one interruption in the peripheral extent of the edge flanges to form a discharge opening in the outer periphery, the improvement comprising a length of pressure-sensitive adhesive tape placed over the free end of said strip material and a portion of the outer convolution of said strip material to secure the free end to said outer convolution, a tab formed at each end of said pressure-sensitive adhesive tape, one tab being positioned at said discharge opening to project beyond the edge flange, the other tab being positioned within said chamber, and projection means in said chamber projecting from the edge flanges toward said wound strip material to abut said other tab for restricting rotation of said strip material in said chamber.

2. A cartridge as claimed in claim **1** wherein said one tab has a length greater than said other tab and projects from the wound strip material through said discharge opening.

3. A cartridge as claimed in claim **1** wherein said projection means comprises a projection integral with a side wall and edge flange and projecting from said edge flange inwardly of the chamber to define with a flange a trap for said other tab in a position spaced circumferentially from said discharge opening.

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MARTHA L. RICE, *Primary Examiner.*