Nov. 20, 1956 C. P. TAYLOR 2,771,028

TAPE DISPENSING AND PRINTING DEVICE

Filed Sept. 29, 1952

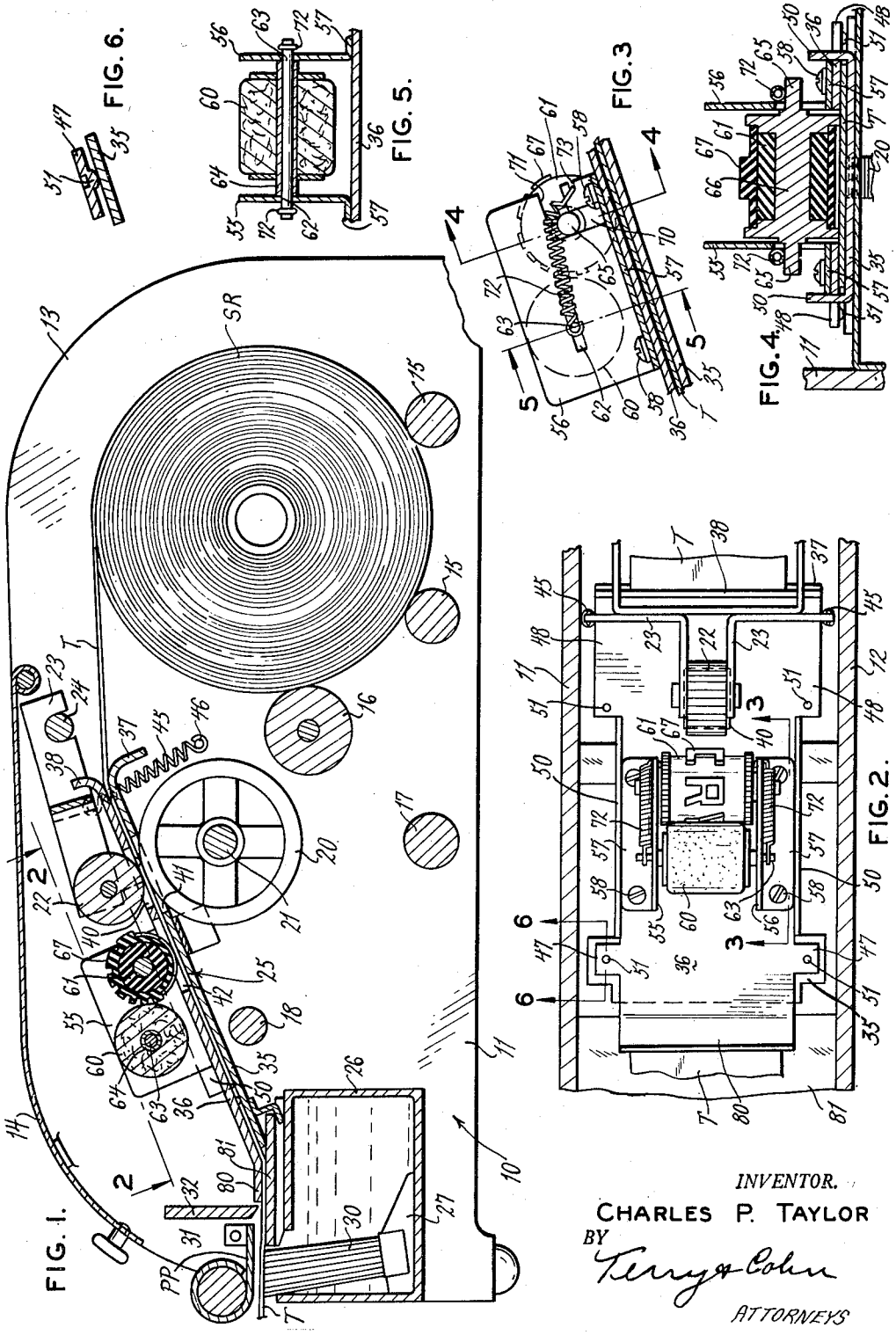

FIG. 1.

FIG. 6.

FIG. 5.

FIG. 3.

FIG. 4.

FIG. 2.

INVENTOR.
CHARLES P. TAYLOR
BY Terry & Cohn
ATTORNEYS

United States Patent Office 2,771,028
Patented Nov. 20, 1956

2,771,028

TAPE DISPENSING AND PRINTING DEVICE

Charles P. Taylor, Belleville, Ill., assignor to Ideal Stencil Machine Company, Belleville, Ill., a corporation of Illinois

Application September 29, 1952, Serial No. 312,057

13 Claims. (Cl. 101—227)

This invention relates to improvements in tape dispensing and printing devices, and more particularly to printing accessories for adhesive strip materials, such as gummed tape and the like.

Numerous types of tape dispensers are and have been available to the trade for the delivery of adhesive coated strip materials familiarly used in industrial and commercial packaging. There have been offered to the trade to some extent, printing attachments for use with such tape dispensers. However, those devices for imprinting paper, fabric or other tapes, have heretofore consisted of expensive, space-consuming accessories, entailing a considerable added investment for regular or optional imprinting, and rendering slow and difficult the physical selection between plain or imprinted tape, by a given machine. It is accordingly a major objective of the present improvements to provide, with and as a part of a tape dispenser, a low-cost printing attachment requiring no added housing provision, and which is sufficiently compact to be disposable within the usual frame or casing element of many prevalent dispensers.

An additional and highly important object is realized in a low-cost, highly efficient tape-printing accessory, which is readily interchangeable with any of the usual types of weight plate.

A still further object is realized in an arrangement, in keeping with the next preceding objective, of providing a printing attachment which functions as a combined weight plate and printer, and which may be readily removed from certain existing types of dispensers and replaced therein, in lieu of the weight plate, without requiring the use of screws, clamps, levers or other fastening elements, and of such nature that the interchange of weight plate and printer is readily effected without the requirement of tools or of any special skill, while requiring but a few seconds' time for substitution of either the weight plate or the printer, for the other, in operative assembly.

An additional and particularly valuable object is realized in certain novel provisions of a quick-detachable type-carrying element, such as a roller, thus enabling in a few seconds' time, substitution in assembly of any of a plurality of different type-bearing elements.

The foregoing and numerous other objects will more clearly appear from the following detailed description of a presently preferred embodiment, particularly when considered in connection with the accompanying drawings, in which:

Fig. 1 is a longitudinal sectional elevation of a tape dispenser and printer embodying the present improvements;

Fig. 2 is a top or plan view of a combined printer and weight plate as taken along line 2—2 of Fig. 1;

Fig. 3 is a side elevational view of the printing unit proper, and a portion of the base or weight plate and subjacent structure;

Fig. 4 is a transverse sectional view showing portions of the printing attachment and certain immediate adjacent

structure, this view being located by line 4—4 of Fig. 3.

Fig. 5 is a transverse sectional view similar to Fig. 4, but principally showing certain elements of the inking roll and a portion of the base or weight plate, and

Fig. 6 is a fragmentary sectional view showing a detail of one of the weight plate supporting portions, as viewed along line 6—6 of Fig. 2.

Referring now by characters of reference to the drawing, and first to Fig. 1, as illustrative of a typical assembly, there is shown for completeness and setting, portions of a housing, casing or frame, generally indicated at **10**, and comprised in part of side walls, one of which is indicated at **11**, and the other at **12**. The side walls are surmounted by a top closure **13**, included within which is a hinged cover **14**.

Transversely bridging the side walls **11—12** of the casing or frame, are a plurality of rollers **15** and **16**, serving to support and position a supply roll or the like of the tape, the roll being indicated at SR, from which as will be apparent, issues the length of tape T to be dispensed, or both dispensed and imprinted as desired. Additional shaft or roll elements **17—18** constitute parts of the operative mechanism not material to the present disclosure.

A power roller **20** is carried by a powered shaft **21**, the roller frictionally engaging the under surface of the length of tape T in the region of the tape chute, later described. Coacting with and located substantially above the powered friction roller **20** is a pressure-idler roller **22** carried by a pair of upwardly swingable supporting arms **23**, best seen in Fig. 2. This assembly, including arms **23** and roller **22**, is readily lifted to a position above the tape chute, as through a rock shaft **24**, provided with manual actuating means (not shown).

The tape chute generally indicated at **25**, will be later described in more detail, it now being apparent that the assembly **25** serves to maintain the tape as it is moved toward the dispensing zone in truly planar form between a region close to the supply rollers, and the moistening means. This latter comprises a liquid tank **26** within which is removably disposed a brush holder **27**, carrying an upwardly presented brush **30**, the latter engaging the under surface, here presumed to be the adhesive coated surface, of the tape T immediately adjacent the zone of issuance. A pivoted, weighted, pressure plate PP, rockably supported about a pivot rod **31**, urges the tape downwardly against the moistened brush **30** for wetting of the tape just prior to its delivery. A severance knife **32** extends transversely across the tape, in the example shown, just ahead of the zone of final tape delivery. The knife **32** may be of either fixed or actuated type, as desired.

The foregoing description of general assembly is herein included principally for completeness and understanding of advantages of the printing attachment, the latter now being more particularly described as such:

Since the printer, for simplicity of assembly, is shown as constituting a part of the tape chute **25**, it is noted as a preference that the chute proper comprises a fixed lower platen **35** and the weight plate **36**, spaced just slightly above the platen **35** so that the tape T may move between the elements **35—36** with only a relatively frictionless working clearance. The tape-receiving end of the chute is provided with a flared lip **37** on platen **35**, and a similarly located upturned margin **38** on the base or weight plate **36**. These plate elements are provided with rectangular apertures such as **40** in plate **36**, and **41** in platen **35**. While these apertures are rectangular and of differing area, they may be considered as in substantial registry to permit contact of the respective rollers **20** and **22** with opposite faces of the tape T, as same is propelled through the chute. A second aperture **42** is

provided in the weight plate 36 to permit the type roll of the printer, later described, to project through the weight plate to engage the tape T. It may here be noted that working pressure between the rollers 20 and 22 to urge same against the opposite face of the tape, is provided for by springs 45, engaging the outer extremities of the arms 23, and each secured to a fixed anchorage pin 46.

The manner of support and mounting of the printing attachment is of practical importance in relation to the facility for ready substitution or interchange of the printer for a weight plate. It may be noted that the corner regions of the weight plate or base 36, are provided with lateral projections 47 and 48, best seen in Fig. 2. Flange elements 50 extended upwardly from the side regions of the platen 35, interfit the recesses between the paired projections 47—48 at each side of the weight plate, thus positioning the latter against movement along the tape in either direction. Spacing between platen 35 and 36 is maintained by the provision of the depressed portions or dimples located at 51 (Fig. 2), and partly structurally revealed in Fig. 6. From this provision it will readily appear that the weight plate 36 requires no fastening elements of any kind, as such, but may be considered as floatingly supported and gravity-positioned.

Proceeding now to a description of the printing elements proper and their assembly, it will appear from Figs. 2, 4 and 5 that a pair of spaced bearing arms or side plates 55 and 56, are each provided with a foot flange 57, apertured for the reception of mounting screws 58, extended into tapped recesses in the weight plate or base 36. Elements 55—56 serve as spaced bearing arms for an inking roller 60, and a type-bearing element such as a printing roll 61. These rotary elements are journalled in and supported by the arms or plates 55—56 through the use of slotted apertures, located as will now be described.

Each of the bearing arm plates 55—56 is provided with a medial horizontal slot 62 through which extends, with some endwise projection, a small shaft or pin 63, the element 63 extending through a bushing 64, within which pin 63 has a working clearance. It is to be noted that the horizontal bearing apertures 62 permit movement of the inking roll 60, together with elements 63 and 64, toward and from the printing roll 61, later described. The roll 61 is provided with a stub shaft 65 at each of its ends, and which if desired and as shown, may be formed integrally with the hub portion 66 of the roll. In the example shown, the type-forming projections 67 are carried by a band, say of rubber or like flexible material, the band being adhesively secured to the core or other portion of the roll.

Bearing arm slots serving the stub shaft portions 65 are of inverted L shape, as best seen from Fig. 3, each comprising a vertical slot 70, the upper end of which communicates with a horizontal portion 71. From this arrangement it will appear that any selected printing roll 61 may be readily inserted in the printer assembly, and may as readily be removed, merely by introducing the roll with its stub shaft ends 65 through the horizontal legs 71.

A unique spring retention arrangement serves to position both of the rollers 60 and 61 in operative relation in the printer, and at the same time provide a bias of the inking roll to effect inking engagement thereof with the printing roll 61. This arrangement comprises a pair of tension springs 72, one at each side, and located exteriorly of the respective side plates or bearing arms 55—60. The circular tangs of each spring at corresponding ends are looped over the free projecting ends of shaft 63. The springs 72 thence extend downwardly and rearwardly so as to overlie the projecting portions of the stub shafts 62, the opposite end tang of each spring thence being seated in a small slot or kerf 73, one

of which is located about as shown in each of the bearing arms 55—56.

The springs 72 serve multiple purposes: one of these, due to the fact that the springs 72 are saddled over the stub shafts 65, is to urge the printing roll 61 downwardly as permitted by the vertical bearing arm slots 70. By virtue of this arrangement, springs 72 act to urge the printing roll and hence the type, into firm printing contact with the paper or other material of the tape T just below the opening 42, the tape in this region being backed by the lower platen 35. A second function of the springs 72, is, as above briefly mentioned, to serve as tension elements in urging the ink roll against the type bearing element, being roller 61. This function will now have become obvious since each spring has a relatively fixed anchorage at one end in the slot 73 and its opposite end looped over shaft 63 as described.

A third purpose of the springs 72 is to provide a quick detachable holding means for the rollers, as is of particular advantage in the case of the type roller 61. This arrangement permits, as will appear, ready removal of one, and virtually instant substitution of another type roller. Removal of roller 61 is accomplished merely by momentary deflection of the springs 72 away from their saddled relation to the elements 65, following which roll 61 may be withdrawn, first by lifting and then moving same outwardly through the horizontal slot 71. Substitution of the same or another roll is accomplished by an opposite sequence, followed by reapplication of the springs over the stub ends 65. It may be noted that when it is desired to remove the inking roller 60, the pin 63 is disengaged from the adjacent loops of springs 72, shaft 63 being drifted outwardly of bushing 64, then roller 60 being lifted out of the frame. Reapplication of the inking roll involves, now obviously, a reverse order of the same series of steps.

In case imprinting of the tape T is not necessarily desired, substitution of a plain weight plate for the weight plate-printer combination shown, is readily accomplished, as will now be apparent, by lifting the hinged cover 14, rocking shaft 24 to bring pressure roller 22 upward, then rearwardly beyond the plate, then grasping the printer assembly and lifting same from the position shown. It will here be presumed that the weight plate is a counterpart of the plate 36 as described, except for omission of the printer attachment proper, but in most cases a rod or block of metal being attached to the weight plate. When the latter is to be used, such a weight plate may then be reapplied to the assembly with the projections which are counterparts of those indicated at 47—48, set into the recesses therefor, and thus the plate brought automatically into correct registry and superposed relation to the fixed platen 35. Upon introduction to operative position of either the standard weight plate or the printer attachment, rock shaft 24 is again actuated to bring the pressure roller 22 to the position shown by Fig. 1 wherein it is retained by springs 45.

The operation of the whole assembly when utilizing the printer, is now thought to have become evident, but it may be noted for completeness that as the tape T is withdrawn from the supply roll SR, it extends forwardly and downwardly of the tape chute, with assured flattening by reason of the close parallel spacing of platen 35 and the weight plate 36. Due to the fact that the printing roller 61 is urged downwardly by springs 72 into frictional engagement with the tape, propulsion of the tape, in turn, actuates the printer by frictional engagement between the tape and the type roller. It will appear as novel and as conducive to simplicity and compactness of actuating mechanism, that the tape T is pushed into and thence through the printing mechanism, rather than being propelled by tape tension. This pushing propulsion of the tape, as will now be apparent, takes place between the powered roller 20 and the pressure roller 22.

As the now printed tape T proceeds out of the tape

chute, it is caused to move immediately beneath an angle end **80** (Fig. 1) of plate **36**. The portion overlies, in closely spaced relation, a short fixed platen element **81**. Beyond this region, the tape proceeds over the moistening brush **30**, being urged against the brush by the pivoted pressure plate PP, earlier described.

Suitable provisions, not shown as not material to present improvements, enable predetermination of the finite length of tape to be withdrawn; thus such length of tape will be moved under the driving influence of the power roller **20** to the tape chute beneath the printing roll **61**, beneath the cut-off region defined by knife **32**, thence outwardly of the moistening brush to delivery. Whether or not the knife **32** is of fixed or movable-shear type, is a matter of choice in respect to present improvement.

Although the invention has been described by detailed reference to a single currently preferred embodiment, the detail of description should be understood in an instructive, rather than in any restrictive sense, numerous variants being possible within the fair scope of the claims hereunto appended.

I claim as my invention:

1. In a tape dispensing and printing device, a frame having formed therein a holder for a supply roll of the tape, feed rolls between which the tape is movable, a tape chute beyond the feed rolls in the direction of movement of the tape toward a dispensing region, the tape chute including a channel member and a weight-plate lying adjacent to the channel member in spaced relation, the plate extending rearwardly of at least one of the feed rolls and having an aperture through which said one feed roll may extend to engage the tape, the weight plate being provided with a second aperture, a printing device carried entirely by and above the weight plate and including a type-bearing roll adapted to extend through the second said aperture of the weight plate into engagement with the tape as same passes through the tape chute, the printing device including an inking element normally engaging the type-bearing roll, and spring means operatively connecting said type roll and said inking element so as to urge said type roll and said inking element into mutual engagement, and to bias the type roll depthwise of said second aperture, means for actuating at least one of the feed rolls, and a tape severance knife located beyond the weight plate and printing device, in the direction of movement of the tape to a zone of tape issuance.

2. In a device for printing and dispensing a flexible tape, a holder constituting a frame for the device and a retainer for a supply roll of the tape, tape propulsion rolls, a tape chute comprised of paired, spaced, parallel plates, one located above the other, and between which the tape is propelled by the propulsion rolls, the upper one of said plates constituting and serving as a gravity-positioned weight plate, said weight plate being supported by said lower plate, a rotatable printing device carried by and above the weight plate and hence augmenting the mass thereof, the weight plate being provided with openings, one of said feed rolls etxending through one of said openings to engage the tape, the printing device including a rotary element normally extending through another said opening below the plane of the weight plate to engage the tape for actuation of the printing device incident to propulsion of the tape through the chute, the printing device being located between the tape propulsion rolls and the zone of issuance of the tape from the device.

3. In a device for printing a flexible tape incident to issuance thereof, a frame formed to provide a holder for a supply roll of the tape, tape feed rolls between which the tape extends as same is withdrawn from the supply roll thereof, a tape chute consisting of paired plates spaced one above the other and between which the tape is propelled by the feed rolls, said chute extending substantially around said feed rolls so as to assert a flattening and straightening effect on the tape in the region of said feed rolls, the upper of said plates constituting a weight plate overlying a planar length of the tape after withdrawal thereof from the roll and being located beyond the feed rolls in the normal path of movement of tape from the roll toward a zone of issuance thereof, said weight plate being supported on said lower plate, a rotatable printing device carried by and located above the weight plate, the weight plate being provided with openings, one of said feed rolls extending through one of said openings to engage said tape, the printing device including a rotatable member extending through another said opening and arranged to be actuated by the tape as same is propelled through the chute, the printing device and weight plate being located beyond the feed rolls whereby the tape is fed to the rolls by pushing action to direct same into the chute and beneath the weight plate and printing device, and a tape severance knife mounted substantially in a zone of issuance of the imprinted tape by the device, and in a region beyond the weight plate in the path of normal tape movement.

4. In a printing attachment for a flexible tape dispenser, a plate normally disposed adjacent and parallel to the tape as same is moved toward a zone of issuance from the device, spaced bearing arms carried by said plate, each of the bearing arms having two journalling slots, a pair of rollers, a shaft for each roller, the shafts extended in journalling relation into the respective bearing arm slots, and a tension spring extended along each of the bearing arms, each spring having one end portion connected to one of the roller shafts, one end of each spring being anchored to the adjacent bearing arm, each spring engaging the other said roller shaft, the springs loading one roller for movement in its journalling slot into engagement with the other roller, and loading the other roller for movement in its journalling slot depthwise through said plate.

5. In a printing attachment for a tape dispensing machine, a weight plate beneath which the tape is propelled toward a zone of tape issuance, a pair of bearing arms carried in upstanding relation by the weight plate and in spaced parallelism from each other, a pair of rollers each including a shaft carried by and between the bearing arms, each of the bearing arms having a substantially vertical slot and a substantially horizontal slot, each slot constituting journalling portions for one of the rolls, the shaft in the vertical slot extending outwardly of said bearing arms, and a pair of tension springs, one arranged parallel to each of the arms, each of said springs having one of its ends anchored to an end portion of one of the bearing arms, thence saddled over a roller shaft in the vertical slot, thence extended and connected to a roller shaft in the horizontal slot, said springs being adapted to urge the roller journalled in said horizontal slot into engagement with the other roller, and being adapted to bias the roller in the vertical slot depthwise through said weight plate.

6. In a combined tape dispenser and printing device for flexible gummed tape, a frame including a space in one end portion of the frame for receiving a supply roll of the tape, a pair of tape feed rolls, between which the tape passes, and by which the tape is moved toward a zone of severance and dispensing, a power shaft serving at least one of said rolls, a tape chute beyond the feed rolls in the line of normal movement of the tape, the chute comprised of a planar bottom portion, a weight plate supported by said portion, the weight plate extending rearwardly to a zone beyond at least one of said feed rolls, whereby the tape chute asserts a flattening and straightening effect on the tape in the region of the feed rolls, the weight plate being provided with an aperture to receive therethrough one of the feed rolls, and a second aperture beyond the first said aperture, a printing device carried by the weight plate, and comprised of a pair of spaced bearing arms one at each side of said second aperture, a pair of rollers comprising a type roller and an

inking roller together with shafts for said rollers bridging and journalled in the bearing arms, the bearing arms provided with slotted shaft journal portions, spring elements attached to the bearing arms and to one of the roller shafts and positioned to urge the rollers along the slotted journals into mutual engagement, and to bias the type roller in a direction depthwise of the second said weight plate aperture, hence against the tape as same passes through the tape chute, the type roller being formed for frictional engagement with the tape in the tape chute, whereby to be directly driven by the tape, a tape severance knife located near the zone of issuance as the tape is dispensed by the device.

7. In a combined tape dispenser and printing device for flexible gummed tape, a frame including a space in one end portion of the frame for receiving a supply roll of the tape, a pair of tape feed rolls, one above the other between which the tape passes, and by which the tape is moved toward a zone of severance and dispensing, a power shaft serving at least one of said rolls, a tape chute beyond the feed rolls in the line of normal movement of the tape, the chute comprised of a lower channel member having a planar bottom portion constituting a tape guiding platen, a weight-plate gravity-supported by said channel portion and laterally positioned between the sides of the channel, the weight plate being of a substantial mass and provided with an upturned portion at the tape-entrance end of said channel, the weight plate coacting with the channel to constitute the tape chute, the weight plate and the channel extending rearwardly to a zone beyond at least one of said feed rolls, whereby the tape chute asserts a flattening and straightening effect on the tape in the region of the feed rolls, the weight plate being provided with an aperture to receive therethrough one of the feed rolls, and a second aperture beyond the first said aperture, a printing device carried by the weight plate, and comprised of a pair of spaced bearing arms one at each side of said second aperture, a pair of rollers comprising a type roller and an inking roller together with shafts for said rollers bridging and journalled in the bearing arms, the bearing arms provided with slotted shaft journal portions, spring elements attached to the bearing arms and to one of the roller shafts and positioned to urge the rollers along the slotted journals into mutual engagement, and to bias the type roller in a direction depthwise of the second said weight plate aperture, hence against the tape as same passes through the tape chute, the type roller being formed for frictional engagement with the tape in the tape chute, whereby to be directly driven by the tape, a tape severance knife located near the zone of issuance of the tape from the device, and moistening means located adjacent said zone and acting upon the tape to moisten same as the tape is dispensed by the device.

8. As an article of manufacture, an accessory consisting of a combined printing device and weight plate for use in and with a flexible tape dispenser, and comprising a relatively heavy base plate characterized by a marginal conformity such as to enable substitution of the base plate for the weight plate of the machine with which it is to be utilized, the base plate being characterized by a plurality of spacer projections presented downwardly of the base plate, a pair of spaced bearing arms supported in upstanding relation by the base plate and spaced in parallel relation to each other, a printing roll and an inking roll, a shaft for each of said rolls, a horizontal slot in each of the bearing arms proportioned to receive in journalling relation the shaft of the inking roll, the bearing arms each being further provided with a vertical slot, the vertical slots adapted to receive the shaft of the printing roll, a tension spring anchored to each of the bearing arms, thence extending over in saddled relation, the printing roll shaft, thence extended to a connection with the inking roll shaft, the tension springs thus coacting to draw the inking roll toward the printing roll to maintain inking contact between the rolls, and the saddled relation of the springs on the printing roll shaft acting to bias the printing roller toward the base plate, the base plate having an opening permitting the printing roller to extend therethrough to a plane of printing impression just below the base plate.

9. In a tape dispenser and printing device, a frame having formed therein a holder for a supply roll of tape, feed rolls between which the tape is movable, a tape chute beyond the feed rolls in the line of normal movement of the tape, a chute comprised of a planar bottom portion, a weight plate supported by said bottom portion, the weight plate extending rearwardly to a zone beyond at least one of said feed rolls, the weight plate being provided with an aperture to receive therethrough one of the feed rolls, and a second aperture beyond the first said aperture, a printing device carried by the weight plate, said printing device comprised of a pair of spaced bearing arms, a type roller and an inking element bridging and journalled in the bearing arms, spring means operatively connected to said type roll and said inking element, and positioned to urge said type roll and said inking element into mutual engagement and to bias the type roll in a direction depthwise of the second said weight plate aperture, hence against the tape as the tape passes through the tape chute.

10. In a tape dispenser and printing device, a frame having formed therein a holder for a supply roll of tape, tape feed rolls between which the tape passes, a tape chute beyond the feed rolls in the line of normal movement of the tape, a chute comprised of a planar bottom portion, a weight plate supported by said bottom portion, the weight plate extending rearwardly to a zone beyond at least one of said feed rolls, the weight plate being provided with an aperture to receive therethrough one of the feed rolls, and a second aperture beyond the first said aperture, a printing device carried by the weight plate, said printing device comprised of a pair of spaced bearing arms, one at each side of said second aperture, a pair of rollers comprising a type roller and an inking roller together with shafts for said rollers bridging and journalled in the bearing arms, the bearing arms being provided with slotted shaft journalled portions, spring elements attached to the bearing arms and to one of the roller shafts, and positioned to urge the rollers along the slotted journals into mutual engagement and to bias the type roller in a direction depthwise of the second said weight plate aperture, hence against the tape as the tape passes through the tape chute, the type roller being driven directly by said tape.

11. In a tape dispenser and printing device, a frame having formed therein a holder for a supply roll of tape, feed rolls between which the tape passes, a tape chute beyond the feed rolls in the line of normal movement of the tape, the chute comprised of a planar bottom portion, a weight plate supported by said portion, said bottom portion and said weight plate extending rearwardly to a zone beyond the feed rolls, said weight plate and said bottom portion being provided with registering apertures to receive therethrough said feed rolls, the weight plate being provided with a second aperture beyond the first said apertures, a printing device carried by the weight plate, said printing device comprised of a pair of spaced bearing arms, a type roller and an inking roller bridging and journalled in the bearing arms, spring means operatively connecting said type roller and said inking roller, said means being positioned to urge the rollers into mutual engagement and to bias the type roller in a direction depthwise of the second said weight plate aperture, and hence against the tape as the tape passes through the tape chute.

12. In a tape dispenser and printing device, a frame having formed therein a holder for a supply roll of tape, feed rolls between which the tape is movable, a tape chute beyond the feed rolls in the normal movement of the tape, the chute comprised of a planar bottom portion,

weight plate supported by said bottom portion, said bottom portion and said weight plate being extended rearwardly to a zone beyond and around the feed rolls, and being provided with registering apertures to receive therethrough said feed rolls, the weight plate being provided with a second aperture beyond the first said aperture, a printing device carried above said weight plate, and comprised of a pair of spaced bearing arms, one at each side of said second aperture, a type roller and an inking roller bridging and journalled in said bearing arms, the bearing arms being provided with slotted journal portions, and spring elements attached to the bearing arms and to one of the rollers, said spring elements being positioned to urge the rollers along the slotted journals into mutual engagement and to bias the type roller in a direction depthwise of the second said weight plate aperture, hence against the tape and the tape passes through the tape chute, the type roller being directly driven by the tape.

13. In a printing attachment for use in a tape dispensing machine that includes a bed plate and feed rolls, a weight plate beneath which the tape is propelled by the feed rolls toward a zone of issuance, the weight plate being provided with an aperture to receive therethrough one of the feed rolls, and being provided with a second aperture beyond the first said aperture, a pair of bearing arms carried in upstanding relation by the weight plate and disposed in spaced parallelism from each other adjacent said second aperture, a printing roll and an inking roll, and a shaft for each of said rolls, each of said bearing arms being provided with a horizontal slot to receive in journalling relation the shaft of the inking roll,

the bearing arms each being provided with an L-shaped slot defined by a vertical portion and a horizontal portion opening outwardly of said arms, a tension spring anchored to each of the bearing arms below the axis of rotation of said printing roll shaft, said springs extending over the printing roll shaft in saddled relation, and thence extended to a connection with the inking roll shaft, the springs coacting to urge the inking roll toward the printing roll to maintain inking contact between said rolls, and the saddled relation of the springs on the printing roll shaft acting to bias the printing roll toward the weight plate and depthwise through said second aperture, the springs being easily removed from said saddled relation with the printing roll shaft so that the printing roll may be moved upwardly in said vertical portion of the L-shaped slot and outwardly through said horizontal portion for replacement.

References Cited in the file of this patent

UNITED STATES PATENTS

587,422	Biette	Aug. 3, 1897
977,675	Oehring	Dec. 6, 1910
1,532,837	Seiders	Apr. 7, 1925
1,787,882	Uttz	Jan. 6, 1931
1,876,369	Waterworth	Sept. 6, 1932
2,018,560	Levane	Oct. 22, 1935
2,695,560	Parfett	Nov. 30, 1954

FOREIGN PATENTS

14,180/28	Australia	Oct. 1, 1929