Jan. 21, 1936. C. D. RYAN 2,028,294

PRINTING MACHINE

Filed April 13, 1935 6 Sheets-Sheet 1

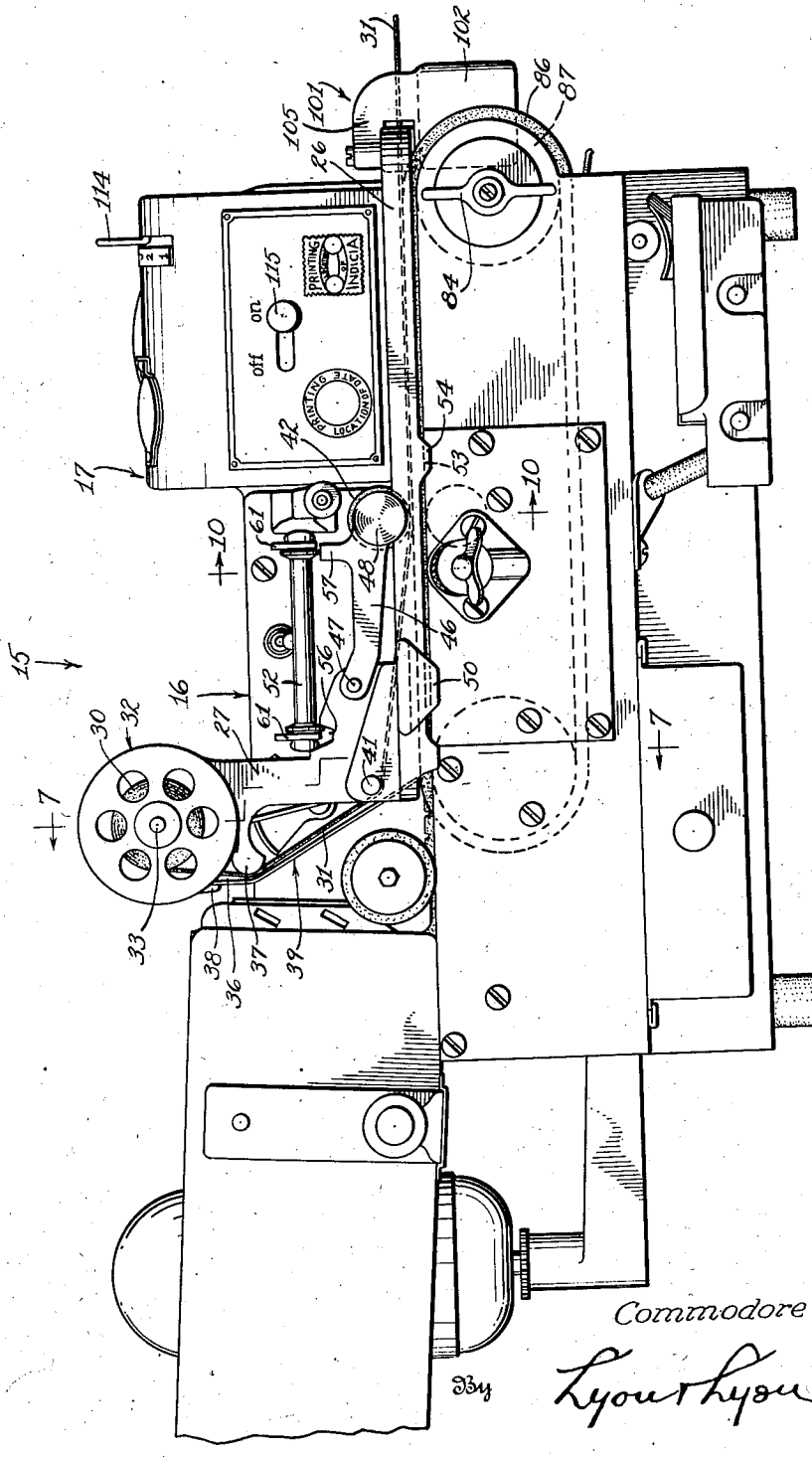


Fig. 1.

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Fig. 4.

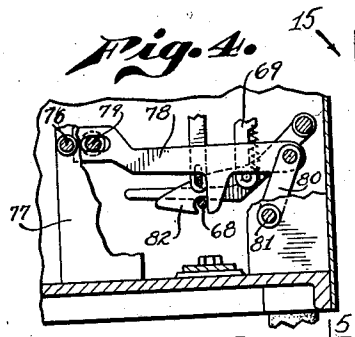


Fig. 2.

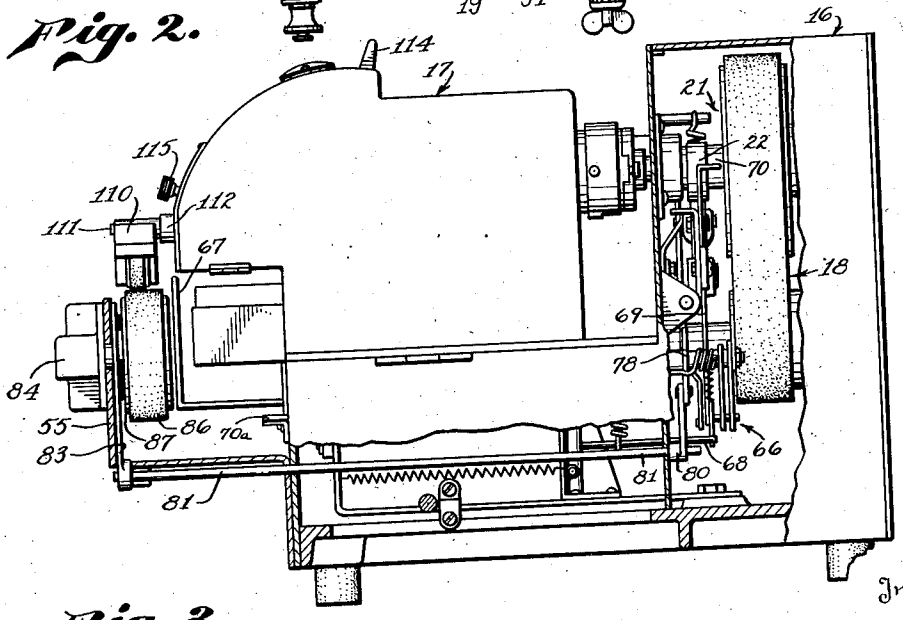


Fig. 3.

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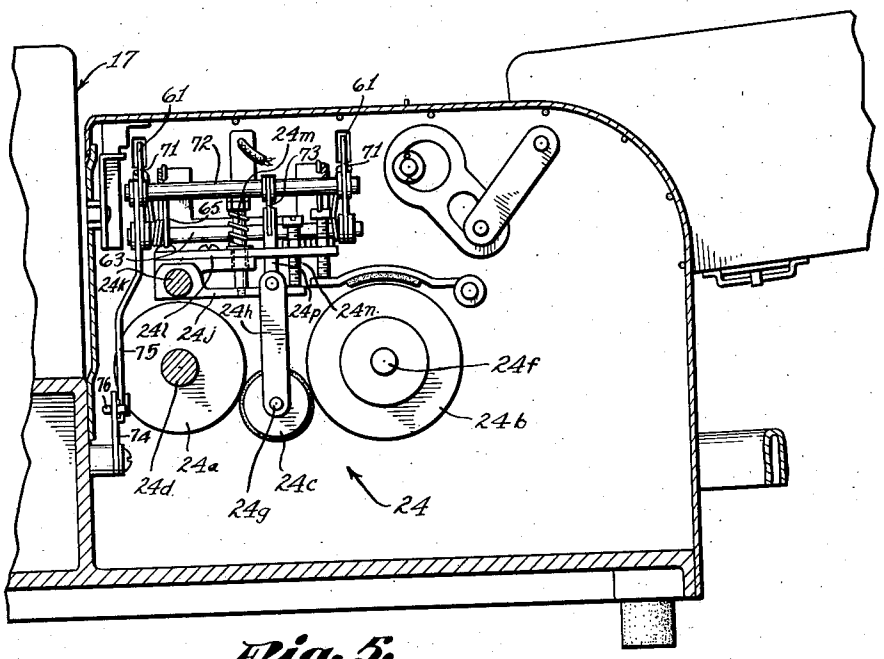


Fig. 5.

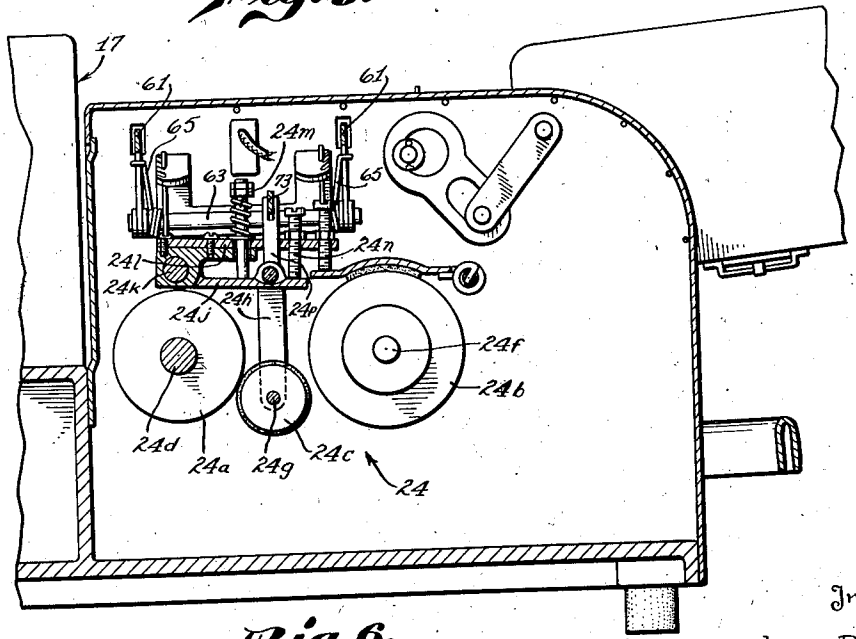


Fig. 6.

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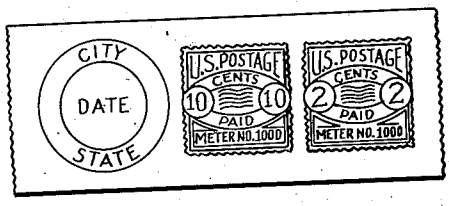


Fig. 13.

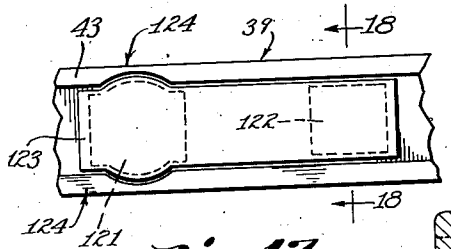


Fig. 17.

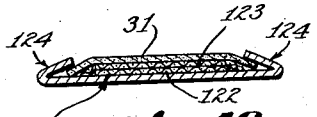


Fig. 18.

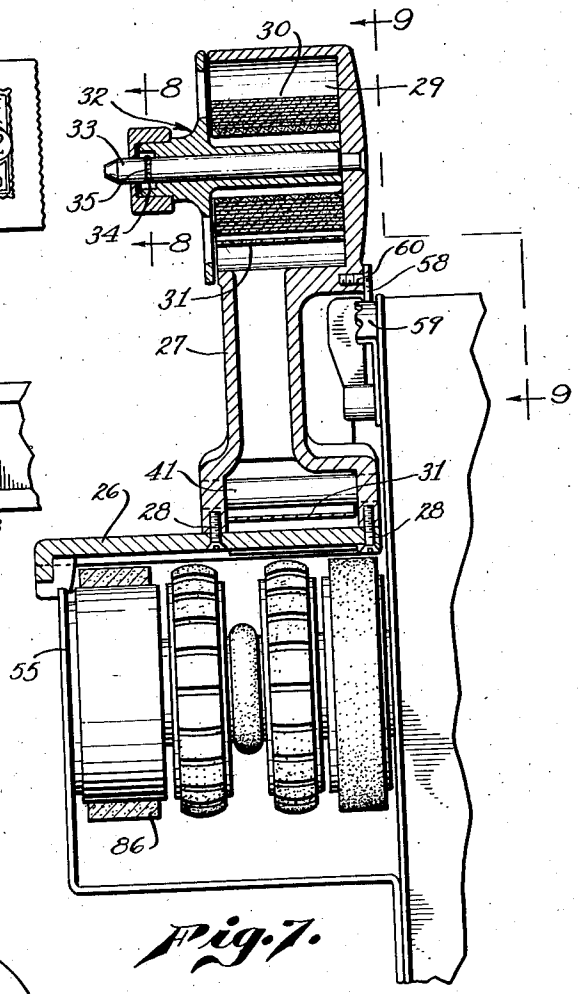


Fig. 7.

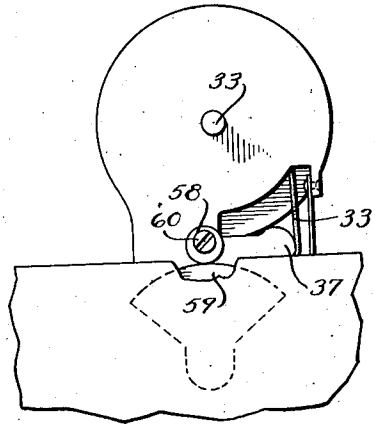


Fig. 9.

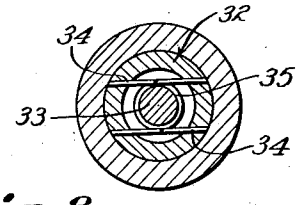


Fig. 8.

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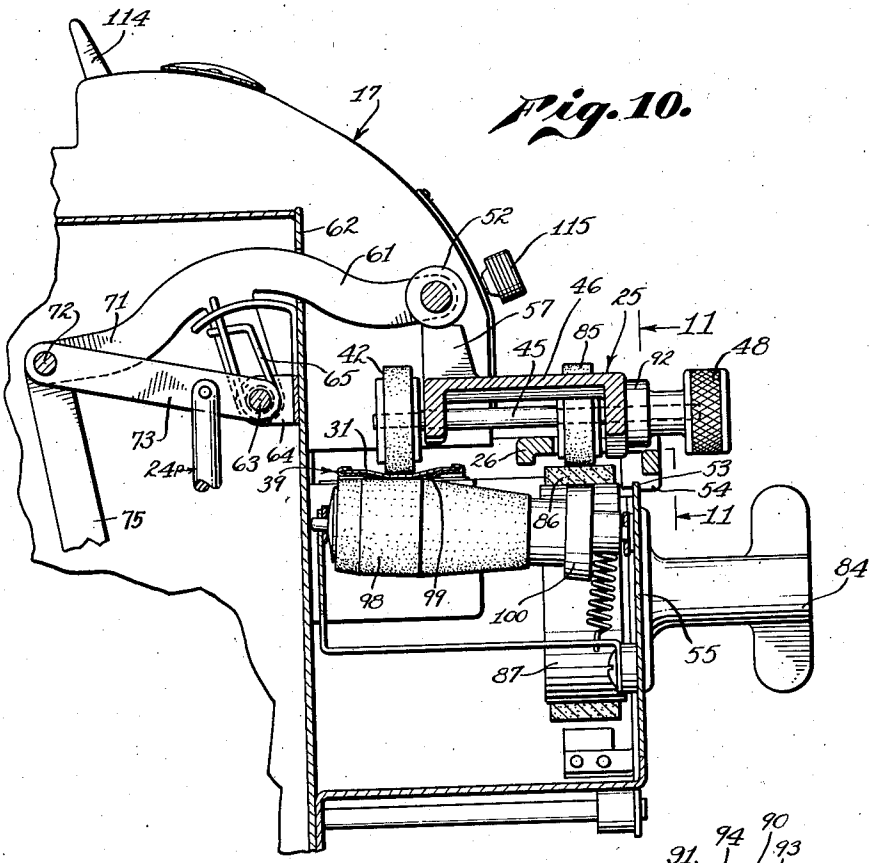


Fig. 10.

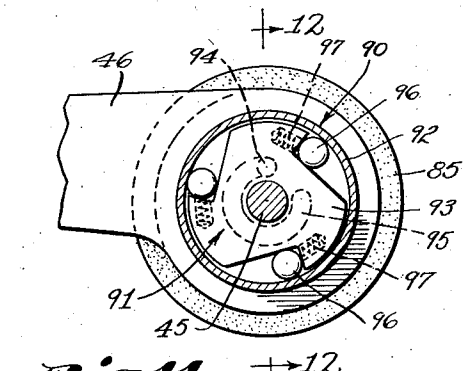


Fig. 11.

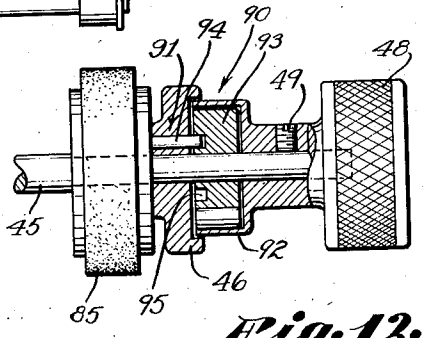


Fig. 12.

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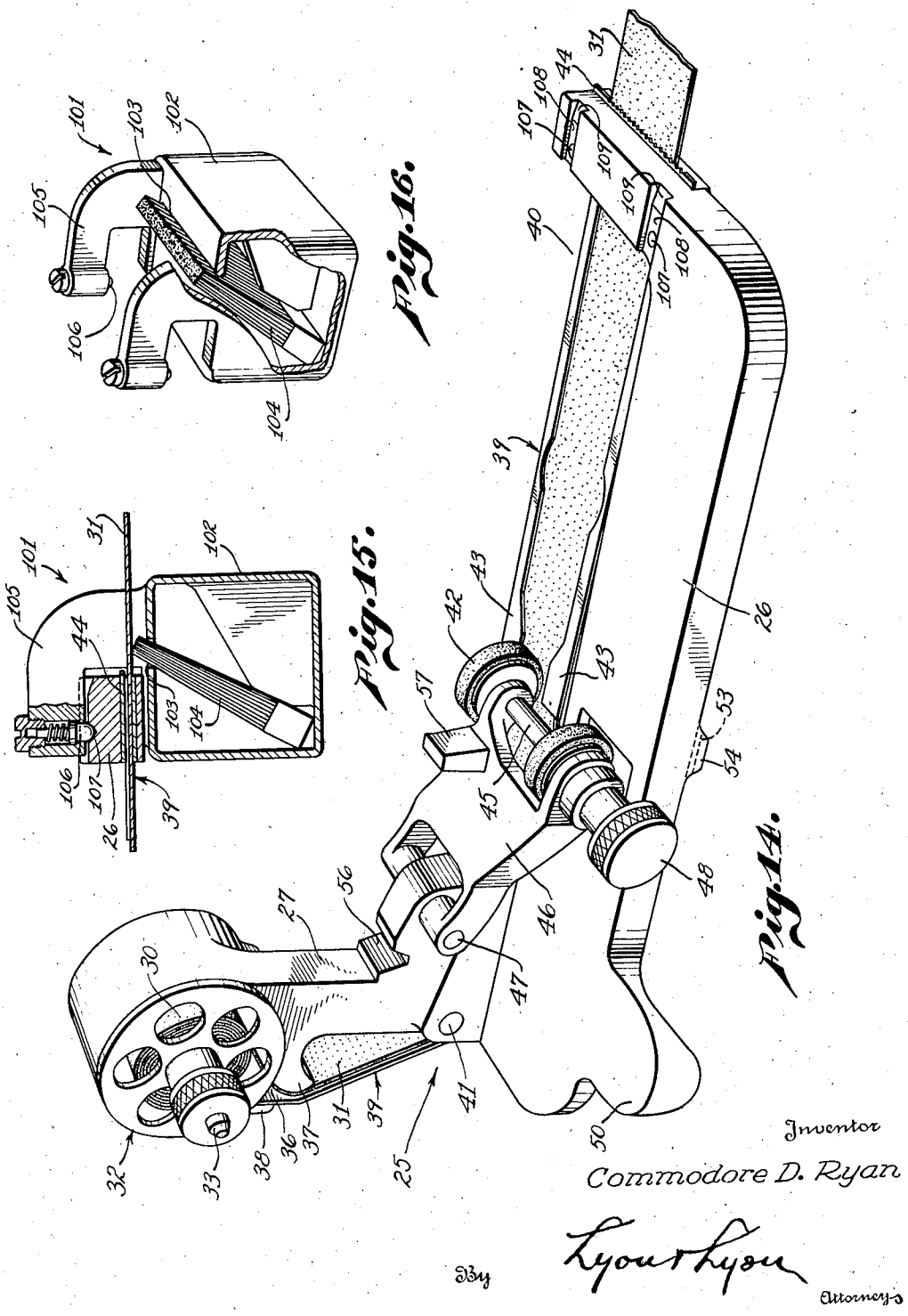
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Jan. 21, 1936. C. D. RYAN 2,028,294

PRINTING MACHINE

Filed April 13, 1935 6 Sheets-Sheet 6



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Attorneys

Patented Jan. 21, 1936

2,028,294

UNITED STATES PATENT OFFICE

2,028,294

PRINTING MACHINE

Commodore D. Ryan, Los Angeles, Calif., assignor to National Postal Meter Company, Los Angeles, Calif., a corporation of California

Application April 13, 1935, Serial No. 16,214

9 Claims. (Cl. 271—2.4)

This invention relates to a printing machine and especially to the means associated therewith for feeding a gummed tape into printing position.

One of the principal objects of this invention is to provide a power driven printing machine with a gummed tape feeding mechanism, which mechanism may be either permanently or detachably mounted upon the machine.

A further object is to provide the tape handling device with tape feeding means arranged to be operated from the machine conveyor during the actuation of the conveyor by the manually operable conveyor advancing and tripping mechanism.

It is a further object to provide the tape handling device with a guideway having one portion thereof arranged to support the tape in a printing position and a second portion arranged to present the tape to a tearing edge for severing the printed strip, after being advanced, from the main supply of tape; to provide a manually operable tape advancing and retracting mechanism; and to provide means for limiting the retractive action of said mechanism whereby the tape will be withdrawn a predetermined distance from its severing to its printing position.

Other objects and advantages of the invention will become apparent as the nature of the same is more fully understood from the following description and accompanying drawings, wherein is set forth what is now considered to be a preferred embodiment. It will be understood, however, that this particular embodiment of the invention is shown principally for the purpose of exemplification and that variations therefrom in details of construction or arrangement of the parts may equally be effected and yet remain within the spirit and scope of the invention as the same is set forth in the appended claims.

In the drawings:

Figure 1 illustrates a front elevational view of the printing machine of this invention with the gummed tape handling device attached thereto.

Figure 2 illustrates a partial sectional plan view on reduced scale of Fig. 1 with the conveyor truck instead of the attachment mounted thereon.

Figure 3 illustrates a right hand side view of Fig. 2 partially in section.

Figure 4 illustrates a fragmental sectional view of a portion of the means for rendering the manually operable tripping means inoperative.

Figure 5 illustrates on enlarged scale a fragmental sectional view taken substantially in the plane of line 5—5 of Fig. 2.

Figure 6 illustrates on enlarged scale a fragmental sectional view taken substantially in the plane of line 6—6 of Fig. 2.

Figure 7 illustrates a fragmental sectional view taken substantially in the plane of line 7—7 of Fig. 1.

Figure 8 illustrates an enlarged sectional view taken substantially in the plane of line 8—8 of Fig. 7.

Figure 9 illustrates a fragmental view taken substantially in the plane of line 9—9 of Fig. 7.

Figure 10 illustrates a fragmental sectional view taken substantially in the plane of line 10—10 of Fig. 1.

Figure 11 illustrates a fragmental sectional view on enlarged scale taken substantially in the plane of line 11—11 of Fig. 10.

Fig. 12 illustrates a fragmental sectional view taken substantially in the plane of line 12—12 of Fig. 11.

Figure 13 illustrates a section of the tape with the appropriate postage indicia printed thereon.

Figure 14 illustrates an enlarged perspective view of the tape handling attachment.

Figure 15 illustrates a perspective view, partly in section, of the moistening device.

Figure 16 illustrates a sectional view of the moistening device showing the manner in which it is mounted upon the discharge end of the attachment.

Figure 17 illustrates an enlarged fragmental view of a tape guideway having provided therein a resilient impression surface; and

Figure 18 illustrates a sectional view taken substantially in the plane of line 18—18 of Fig. 17.

The gummed tape handling device of this invention may be readily attached to the postage printing machine disclosed in the John Q. Finfrock application for United States Letters Patent Serial No. 741,235, filed August 24, 1934.

The machine of the Finfrock application is operable for the printing of postage stamps upon mail matter and is of the power driven type.

In order to increase the useful scope of the above machine, a novel gummed tape handling device has been devised for attachment thereto whereby postage indicia may be expeditiously printed on gummed tape and after a strip of the tape has received the appropriate value of postage printed thereon, either by one or a plurality of impressions, it may be glued to a parcel post package or upon over weight mail matter or other articles of mail requiring high values of postage.

The tape handling device has been so organized as to be attachable to the Finfrock printing machine without in any way requiring the machine to be structurally changed.

It is believed that a clearer understanding of the invention will be had by first briefly describing the printing machine before describing the tape handling attachment in detail.

Printing machine

The printing machine **15**, which for convenience may at times be referred to as the machine, may include a power plant **16** detachably supporting a postage printing meter **17**, conveniently referred to as the meter. The power plant is provided with a driving mechanism **18** having as its source of power an electric motor (not shown) and normally connected to the envelope feeding conveyor **19** by clutch means **20** and connectable to the meter through a one cycle clutch **21** whereby, when the meter clutch is tripped into operation, it will act to drive the meter through one full printing cycle and then automatically disengage to stop the meter. The one, or single, cycle clutch will be referred to herein as the cyclic clutch. The cyclic clutch is provided with a cam **22** acting through the cam lever **23** during its initial rotation to actuate the conveyor clutch control means **24** for disconnecting the conveyor from the driving mechanism and for reestablishing this driving connection when cam **22** arrives at substantially the end of its operating cycle. Thus, while the meter is in driving connection with the driving mechanism, the conveyor is automatically disconnected therefrom.

The description of the machine will now be interrupted for a detailed description of the tape handling device and will be again taken up along with the manner of attaching the device upon the machine and during the description of the operation of the machine to feed and print postage on gummed tape.

Tape handling attachment

The tape handling device **25**, commonly referred to as the attachment, may be assembled as a unit upon the base plate **26**, which may be of pressed or cast metal. The base plate of the attachment illustrated in the drawings is an aluminum casting.

A cast pedestal **27** (Fig. 14) may be fastened as by screw means **28** (Fig. 7) upon the left hand end and adjacent the inner face of the base plate. The pedestal may be more or less hollow in structure and may be provided at its upper end with an open sided cylindrical cavity **29** for the reception of a coil **30** of gummed tape **31**.

As may be observed most clearly in Figure 7, the coil of tape **30** may be carried by a coil supporting reel **32** journally mounted upon an axle **33** axially mounted in the pedestal cavity in any appropriate manner. The reel may be demountably retained upon the axle by any suitable form of means, as for example, by a spring wire **34** compressibly mounted in spring groove **35** formed in the distal end of axle **33**.

Referring to Figures 1 and 14, an opening **36** may be formed in the cavity for the tape to pass through. One side of the opening may be provided with a well rounded guiding surface **37** for guiding the tape as it leaves the cavity, while the other edge of the opening may be provided with a flange **38** to which flange one end of a tape guideway **39** may be fastened by any suitable means. The tape guideway extends downwardly and in the direction of the left hand edge of the base plate **26** along the bottom thereof and across the base plate opening **40** (Fig. 14) to the right hand edge of the plate where it is securely fastened. The tape, upon leaving the guiding surface **36** of the cavity, travels downwardly to and under guide rod **41** and finally engages the guideway **39** in the locality of the tape feeding roller **42**. At about this point the guideway is provided with side flanges **43** so arranged as to form a partially covered channel through which the tape may be freely propelled. Directly above the discharge end of the guideway there may be provided a metal tearing strip **44** (Figs. 14–15).

The tape feeding roller **42** may be rubber-tired and may be fastened upon the inner end of shaft **45**. The shaft may be journally mounted in the free end of a suitable swing frame **46** having its other end pivotally connected to pedestal **27** as by means of the pivot pin **47**. The tape feeding roller **42** may be rotated to propel the tape along the guideway by means of a hand wheel **48**, fastened upon the outer end of shaft **45**, as by means of a set screw **49**.

A handle **50** formed on the base casting **26** may be provided for readily handling the attachment when mounting it upon the power plant.

When it is desired to mount the attachment upon the power plant, it is necessary to first remove the envelope feed conveyor truck **51** (Fig. 2). This may be readily done by raising the hold down bar **52** which releases the truck so that it may be removed. When mounting the attachment upon the machine, the hold down bar should be maintained in its elevated position. The attachment, taken by means of handle **50**, is slid over the conveyor until the locating groove **53** of the depending flange **54** (Figs. 1–10 and 14) registers with the upper edge of the power plant front wall **55**. The holding bar may now be lowered to clamp the attachment to the power plant. The base plate bracket may be provided with a tapered notch **56** into which the tapered head of one end of the hold down bar may project to correctly position the attachment endwise, (Figs. 1 and 14). The opposite end of the hold down bar may ride upon the top surface of post **57** of the swing frame **46**, (Figs. 1–10 and 14). The rear portion of the attachment is supported by means of a cam plate **58** (Fig. 7 riding upon the top surface of a power plant bracket **59**. The cam plate **58** may be adjustably fastened to the attachment pedestal as by screw means **60** whereby the elevation of the rear edge of the attachment may be accurately adjusted. This adjustment need be made only when first adjusting the attachment to the power plant.

The structural detail of the hold down bar means **52** is shown clearly in Figure 10. The bar is supported between two spaced angular lever arms **61**, which arms project through suitable openings in the power plant wall **62** and are pivotally supported by shaft **63** in turn supported from the rear face of wall **62** by bearing brackets **64**. A tension spring **65** may be provided for each of the lever arms for yieldingly urging the hold down bar into clamping engagement with either the conveyor truck or attachment. Due to the independent mounting of each arm **61** and its separate spring means, the

opposite ends will have a certain amount of give or motion before affecting the other end thereof. This independent motion of the ends of the hold down bar will permit the attachment swing frame **46** to have a limited motion and also the pressure of the hold down spring to act through the hold down bar and swing frame to yieldingly urge the tape feeding roller **42** into driving engagement with the tape.

Control means

As is fully described in the Finfrock application, the machine is provided with means operable during the passage of each piece of mail matter through the machine for releasing the cyclic clutch into operation for driving the printing means. This control means **66** includes briefly a suitable trigger **67** having its free end located in the path of the mail matter as it moves into printing position. Each piece of mail matter passing through the machine will engage and thereby actuate the trigger. This actuation of the trigger will act through its rearward extension **68** (Fig. 3) to swing a stop lever **69** free from clutch arm **70**, thus releasing the cyclic clutch **21**. As will be remembered, the operation of the cyclic clutch will cause the conveyor clutch to be disengaged in the manner previously described. The envelope engaging trigger is not needed when printing upon gummed tape and, therefore, by means of friction lever **70***a* (Fig. 3) the free end of the trigger may be retracted before placing the attachment upon the machine.

As in the Finfrock application, the hold down bar **52** has two distinct control features, the first to automatically disengage the conveyor driving clutch each time it is lifted to free the conveyor truck and to free the clutch for engagement when the bar is lowered into truck holding position and, second, to render the hand tripping means inoperative while in truck engaging position and to free the hand tripping means when in its raised position. When the attachment is mounted upon the machine, it is important to maintain the conveyor continuously disconnected from the driving means and to release the manual tripping means. By making the tapered notch **56** and post **57** of sufficient height, they will act to retain the holding bar raised sufficiently to interrupt the conveyor drive and release the manual tripping means. These control features will be very briefly described as they are fully disclosed in the Finfrock application. The angular lever arms **61** have rearwardly extending arms **71** (Figs 2 and 10) interconnected by rod **72**. A conveyor clutch lever **73** is pivotally mounted on rod **72** intermediate arms **71** and is operatively connected to the clutch control means **24** whereby when the holding bar is raised above a predetermined point the clutch lever **73** will be depressed to in turn engage the conveyor clutch control means **24** to bring about a disengagement of the clutch.

The conveyor clutch with its control means **24** may include, as illustrated in detail in Figures 5 and 6, a driving clutch wheel **24***a*, a driven clutch wheel **24***b* and a small rubber tired control wheel **24***c*. The driving wheel is fastened upon and driven by the power plant driving shaft **24***d*, the driven wheel is fastened upon and drives the conveyor drive shaft **24***f* and the control wheel is journaled upon the stub shaft **24***g* of the stirrup **24***h*. The upper end of stirrup **24***h* is pivotally carried by the lever arm **24***j*, which lever arm is journaled upon shaft **24***k*. Fixed upon shaft **24***k* is a second lever arm **24***l*. These lever arms are yieldingly connected by means of pin **24***m* fastened to lever **24***j* and freely extending through the second lever arm. The upper end of the pin is provided with adjusting nuts and between these nuts and the second lever arm the pin is provided with a compression spring. A set screw **24***n*, screw threaded through the second lever arm, prevents these two arms from being swung closer together than illustrated in Figure 6 but will not act to prevent the arms from being swung apart.

By this mechanism the control wheel may be retained in driving engagement (Fig. 5) with the peripheries of wheels **24***a* and **24***b* to transmit the driving force from the power plant driving shaft **24***d* to the conveyor drive shaft **24***f*. The control wheel **24***c* may be lowered out of driving engagement with the clutch wheels as shown in Figure 6.

The control wheel **24***c* may be actuated by rod **72** of the hold down mechanism to place the conveyor clutch in or out of driving engagement. For this purpose, the clutch lever **73** connects rod **72** to a clutch pin **24***p*. When the clutch is in its normal driving condition, should the hold down bar **52** be lifted, the bar **72** will be depressed as it lies upon the opposite center of the hold down bar carrying lever arms **61**—**71**. Thus, the clutch lever **73** will be depressed, which will cause the clutch pin **24***p* to be moved downwardly. As the clutch pin engages the lever arm **24***j*, this arm will be swung in a clockwise direction, as viewed in Figure 6, and as a result thereof the clutch control wheel **24***c* will be moved out of driving engagement with the clutch wheels. When the hold down bar **52** is lowered to its normal position, the control wheel will be lifted, due to the action of its compression spring before referred to, to again render the conveyor clutch active.

The hand tripping means is controlled by the hold down bar **52** by operatively connecting one arm of the bell crank lever **74** to rod **72** of the hold down mechanism, as by means of link **75**, and by connecting the other arm of the bell crank lever to the forward end of locking member **76**, the rearward end of which slidably passes through the intermediate wall **77**. When the hold down bar **52** is in its truck holding position, as shown in Figure 2, the free end of locking member **76** will be projected through wall **77** into the path of travel of the tripping link **78** and will thereby render the hand tripping means inoperative. When the hold down bar **52** is retained in its elevated position by the attachment, the free end of the locking member will be retracted from the path of travel of the tripping link **78**, thus releasing the hand tripping means for operation.

The manual tripping means includes briefly the tripping link **78**, above referred to, having its free end slidably supported upon a stud **79** carried by wall **77** and its rear end pivotally connected to the free end of a crank arm **80** which is fixed to one end of rock shaft **81**. The tripping link **78** may be provided with a depending finger arranged to engage and swing the rear end **68** of trigger **67** (Fig. 4) during the actuation of the manual tripping means. The motion thus imparted to the trigger will be transmitted through a pivoted latch member **82** to the cyclic clutch stop lever **69** and to thereby place the cyclic clutch in operation.

The forward end of rock shaft 81 is provided with a lever arm 83 (Fig. 3) arranged to be actuated by the hand piece 84, which hand piece is journally mounted upon the front wall 55 of the power plant and in convenient location to be manually actuated.

The arc through which the hand piece may be turned for each actuation thereof is limited by any suitable means, not shown, and upon each actuation thereof the cyclic clutch will be tripped into operation.

The actuation of the hand piece is also utilized for advancing the envelope conveyor a predetermined distance and by fixedly mounting a rubber-tired wheel 85 on the attachment shaft 45 (Figs. 10 and 12) in position to ride upon the conveyor belt 86, the tape feeding roller 42 likewise fixed on shaft 45 will be rotated sufficiently to advance the tape a predetermined distance. The conveyor belt 86 plays about pulley 87 coaxially arranged with relation to the hand piece and connected thereto by any suitable form of ratchet driving means (not shown). The ratchet driving means is arranged to act during the rotation of the hand piece in a clockwise direction, as viewed in Figure 1, to correspondingly turn the conveyor pulley 87 and at substantially the end of its movement the hand piece will act to actuate the lever arm 83 of the tripping mechanism to place the cyclic clutch in operation. By this arrangement the tape will be advanced prior to the commencement of the cycle of operation of the postage printing meter 17. Due to the ratchet means, the return movement of the hand piece may be had without causing the conveyor to be operated.

After the required amount of postage has been printed upon a strip of tape, the tape may be advanced until the date circle has passed the tearing strip 44, whereupon the tape may be nicely torn off. Such a strip is illustrated in Figure 13. The hand wheel 48 may be turned in a counterclockwise direction, as viewed in Figures 1 and 12, to advance the tape from its last printing position to its tearing position.

It is desirable to print the first stamp relatively close to the torn end of the tape and to accomplish this the tape must be retracted after the tearing operation to a correct printing position. For this purpose, means are provided for predetermining the extent to which the tape may be retracted by the turning of hand wheel 48 in a clockwise direction, as viewed in Figure 1.

Tape retracting means

The tape retracting means may include a unidirectional clutch 90 (Figs. 11 and 12) combined with a lost motion device 91. The driving member 92 of the clutch may be formed integral with hand wheel 48 so as to be turned during the rotation of the tape feeding roller 42, while the driven member 93 may be connected to swing frame 46 through the lost motion device 91. This connection may be formed by mounting the inner side face of the driven member closely adjacent the related side face of swing frame 46 and providing the swing frame with a stop pin 94 having its projecting end playing in an arcuate limit groove 95 formed in the adjacent face of the driven member. By this construction the hand wheel 48 may be turned freely in a counterclockwise direction, as viewed in Figures 1 and 12, for advancing any length of tape desired. The unidirectional or over running clutch will permit this operation, however, when the hand wheel is rotated in a clockwise direction, as viewed in these figures, the rollers 96 of the clutch will traverse the inclined surfaces of the driven member under influence of their respective spring means 97 whereby the driven and driving member of the clutch will be locked together and, if it were not for the lost motion device, the clutch would prevent any appreciable rotation of the hand wheel in this direction. Due to the lost motion means, the hand wheel may be rotated in a clockwise direction until the end of the arcuate limit groove 95 engages the stop 94. This limited rotation of hand wheel 48 will turn the tape feeding wheel 42 to retract the cut end of the tape a predetermined distance from tearing edge 44.

To insure a positive feeding of the tape by wheel 42, it is advisable to provide a cooperating supporting roller 98, Figure 10, also rubber surfaced. The tape guideway 39 is provided with a suitable opening 99 to permit the periphery of roller 98 to engage the tape. The forward end of roller 98 may be provided with a suitable wheel 100 (Fig. 10) for supporting conveyor belt 86 directly below wheel 85, thus insuring a positive driving connection between the conveyor and the tape feeding wheel 42.

Moistening device

For convenience of operation, the attachment may be provided with a moistening device 101 (Figs. 1–15 and 16), operable for moistening the gummed surface of the tape as it is fed from the discharge of the guideway.

The moistening device may include a substantially rectangular water container 102 having an opening 103 through the top surface thereof through which may project the bristles of a suitable capillary brush 104. The brush projects sufficiently to engage the under surface of the tape and thereby wet the gummed surface thereof.

The moistening device clamp like arms 105, having spring pressed plungers 106 projecting from the inner surfaces thereof, are operable for yieldingly snapping into the depressions 107 (Figs. 14–15) formed in the grooved guideways 108 formed in the end of the attachment casting. For ease of attaching of the moistening device, the forward ends of these grooves may be downwardly tapered as at 109.

Operation

Assuming the machine to be in condition as shown in Figure 2, it will be necessary to first remove the envelope conveyor truck 51, this being easily and quickly done by raising the holding bar 52 in the manner previously described. Next, the secondary truck 110 may be removed by sliding it from its pivotal supporting pin 111, which pin is carried by bracket 112.

The attachment may now be mounted upon the power plant in the manner described. Before mounting the attachment, it will be well to be sure that the tape has first been fed through the guideway. The mounting of the attachment will retain the holding bar 52 sufficiently elevated to render the conveyor clutch inoperative and to release the manual tripping device. The machine is now ready to print stamps upon the gummed tape.

The power plant motor will be started in the usual way and before tripping the printing meter into operation the tape should be retracted in

the manner described. The tape will be advanced to its correct printing position during the operation of hand piece 84. At the end of the tape advancing stroke, the cyclic clutch will be tripped into action to bring the printing meter into operation to print the stamp.

Before starting the printing meter into operation, it should first be set to print a stamp of appropriate value. The printing meter shown is capable of printing any one of four different values, namely 1¢, 2¢, 3¢ or 10¢. The meter is adjusted to print the desired value of stamp by shifting the selector lever 114 adjacent to the appropriate figure calibrated upon the meter casing.

If a strip is to be printed for 12¢ postage, as illustrated in Figure 13, the selector lever 114 should be shifted to a position adjacent the figure 2. The date circle should be printed during this printing operation and this is accomplished by setting the date circle knob 115 to its "on" position. The printing meter may now be placed in operation by means of hand piece 84. During this cycle of operation the 2¢ stamp with the date circle will be printed upon the tape. For the printing of the 10¢ stamp, the selecting lever 114 should now be shifted adjacent the figure 10 and as the date circle has already been printed and only one date circle is necessary for each section of tape, the date circle knob should be moved to its "off" position. By actuating hand piece 84 again, the tape will be advanced sufficiently to nicely place the second stamp between the 2¢ stamp and the date circle, as illustrated in Fig. 13.

It will be understood that any number of stamps may be printed upon a strip of tape and that the date circle will be printed with the next to last or last stamp as desired. Should the date circle be printed with the last stamp, considerable space will be left between the last stamp and date circle. If the date circle is printed with the printing of the next to last stamp, the last two stamps and date circle will be as shown in Figure 13.

Except for the change of value to be printed and the date circle, the printing of each stamp upon the tape, irrespective of number, may be easily and quickly accomplished by the mere turning of the hand piece 84. This operation acts to correctly space the stamps and place the printing meter in operation.

After the required number of stamps, with the date circle, has been printed upon a strip, the tape may be advanced by means of hand wheel 48 until the date circle has cleared the tearing piece 44. The printed strip of tape may now be torn off and, if the moistening device is mounted upon the attachment so that the tape has been moistened as it moved past the moistening brush, it may be immediately applied to the piece of mail. If the moistening device is not attached, the gum of the tape must be first moistened before applying.

The printed tape having been torn off, the remaining end of the tape may now be retracted by means of the hand wheel 48 whereby, due to the unidirectional clutch and lost motion device, the hand wheel may be turned only enough to retract the tape in readiness for the next series of operations which may be carried out as described.

In some cases it has been found that a clearer impression will be printed upon the tape if the tape supporting surface of the guideway is provided with a yielding or cushioning means 120 (Figs. 17-18).

One manner of providing such a means is to glue or otherwise fix a resilient pad of rubber, felt, or other suitable material, in the bottom of the guideway 39.

The cushioning means 120, illustrated in Figures 17 and 18, may be provided by applying pieces of the common variety of medical adhesive tape in the bottom of the guideway. One piece 121 should be located at the date circle printing position; a second piece 122 at the stamp printing position. Each of these pieces of adhesive tape may be made slightly larger than its respective printing die. A third piece 123 of adhesive tape, wider than pieces 121 and 122, and long enough to extend along the guideway so as to completely overlie the smaller pieces, may be then applied to the guideway. As may be observed from Figure 16, the edges of the third piece of adhesive tape, which extends beyond the first and second pieces of tape, should be brought down and adhere to the bottom surface of the guideway and, likewise, the front and rear ends of this third piece of tape should be brought down and adhered to the guideway. The flanges 43 of the guideway are flared upwardly as at 124 for the length of the cushioning means to provide the proper space for the tape 31 to be propelled therealong.

Another feature of this invention is the rolling of the tape in roll 30 with the gummed surface thereof directed outwardly. As a result, each printed strip of tape dispensed from the machine will lie perfectly flat whereas, should the tape be rolled with the gummed surface directed inwardly, the dispensed tape will curl so stubbornly as to be extremely annoying when applying it to a piece of mail matter.

While I have illustrated the preferred form of my invention, it is to be understood that the foregoing descriptaion is for illustrative purposes only and I do not desire to be limited to any of the details shown or described, except as defined in the appended claims.

I claim:

1. In a tape handling device, a supporting frame, a tape guideway having tape treating and severing portions, a tape feeding roller operatively carried by the frame in tape engaging relation with said guideway, means for turning the roller for advancing or retracting the tape along said guideway, and means associated with the turning means operative only during the action of said turning means to retract the tape for predetermining the withdrawal of the tape end from its severing to its treating position in the guideway.

2. In a tape handling device, a tape guideway having tape treating and severing portions, a tape advancing and retracting mechanism, and means associated with said mechanism operative only during the action of the mechanism to retract the tape for predetermining the withdrawal of the tape end from its severing to its treating position in the guideway.

3. In a tape handling device, a supporting frame, a shaft journaled therein, a tape feeding roller fixedly mounted upon said shaft, a unidirectional clutch means including driving and driven members so arranged as to have its driving member fixedly mounted upon the shaft and its driven member journaled thereon and said driven member having a concentric groove of predetermined length formed in the side face

thereof, and a stop pin carried by the frame and operatively projecting into the concentric groove of the driven member for limiting the rotary motion thereof.

4. In a tape handling device, a supporting frame, a tape guideway carried thereby, a tape feeding roller operatively carried by the frame in tape engaging relation with said guideway, means for turning the roller, a unidirectional clutch means including driving and driven members so arranged as to have its driving member operatively connected to the tape feeding roller, and a lost motion device operatively connecting the driven member of said clutch with the frame.

5. In a tape handling device, a supporting frame, a tape advancing and retracting mechanism operatively carried thereby, a unidirectional clutch means including driving and driven members so arranged as to have its driving member operatively connected to said mechanism, and a lost motion device operatively connecting the driven member of said clutch with the frame for predetermining the length of tape which may be retracted by said mechanism.

6. In a printing machine, printing means, driving mechanism having a normally inactive cyclic clutch means operable for forming a driving connection with the printing means, cyclic clutch tripping means operable for rendering the cyclic clutch active to drive the printing means through a printing cycle, tape handling means, and a spacing and tripping device manually operable for actuating the tape handling means to feed a predetermined length of tape into printing position for each actuation of said device and for actuating the cyclic clutch tripping means.

7. In a printing machine, printing means, a feed conveyor operable for feeding objects thereto, a driving mechanism having clutch means forming a releasable driving connection with the conveyor and a normally inactive cyclic clutch means operable for forming a driving connection with the printing means, cyclic clutch tripping means operable for rendering the cyclic clutch active to drive the printing means through a printing cycle, a spacing and tripping device normally retained inactive, tape handling means attachable to the printing machine, and means operable upon the placing of the tape handling means into operative position for disengaging the conveyor clutch and for releasing the spacing and tripping means, and said spacing and tripping device after its release being manually operable for actuating the tape handling means to feed a predetermined length of tape into printing position and for actuating the cyclic clutch tripping means.

8. In a printing machine, printing means, a feed conveyor operable for feeding objects thereto, a driving mechanism having clutch means forming a releasable driving connection with the conveyor and a normally inactive cyclic clutch means operable for forming a driving connection with the printing means, cyclic clutch tripping means operable for rendering the cyclic clutch active to drive the printing means through a printing cycle, a spacing and tripping device normally retained inactive, tape handling means attachable to the printing machine in operative engagement with the conveyor, and means operable upon the placing of the tape handling means into operative position for disengaging the conveyor clutch and for releasing the spacing and tripping device, and said spacing and tripping device after its release being manually operable through the conveyor for actuating the tape handling means to feed a predetermined length of tape into printing position for each actuation thereof and operable at substantially the end of each actuation for actuating the cyclic clutch tripping means to render said clutch active for driving the printing means through a printing cycle.

9. In a printing machine, printing means, a feed conveyor operable for feeding objects thereto, a driving mechanism having clutch means forming a releasable driving connection with the conveyor and a normally inactive cyclic clutch means operable for forming a driving connection with the printing means, cyclic clutch tripping means operable for rendering the cyclic clutch active to drive the printing means through a printing cycle, a spacing and tripping device normally retained inactive, tape handling means attachable to the printing machine in operative engagement with the conveyor, and means operable upon the placing of the tape handling means into operative position for disengaging the conveyor clutch and for releasing the spacing and tripping device, said spacing and tripping device after its release being manually operable through the conveyor for actuating the tape handling means to feed a predetermined length of tape into printing position for each actuation thereof and for actuating the cyclic clutch tripping means to render said clutch active for driving the printing means through a printing cycle.

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