May 21, 1957 W. M. SCHLEGEL ET AL 2,792,778

TYPE SLUG CHANGING MEANS IN LABEL PRINTING MACHINES

Filed June 26, 1953 3 Sheets-Sheet 1

Fig. 1

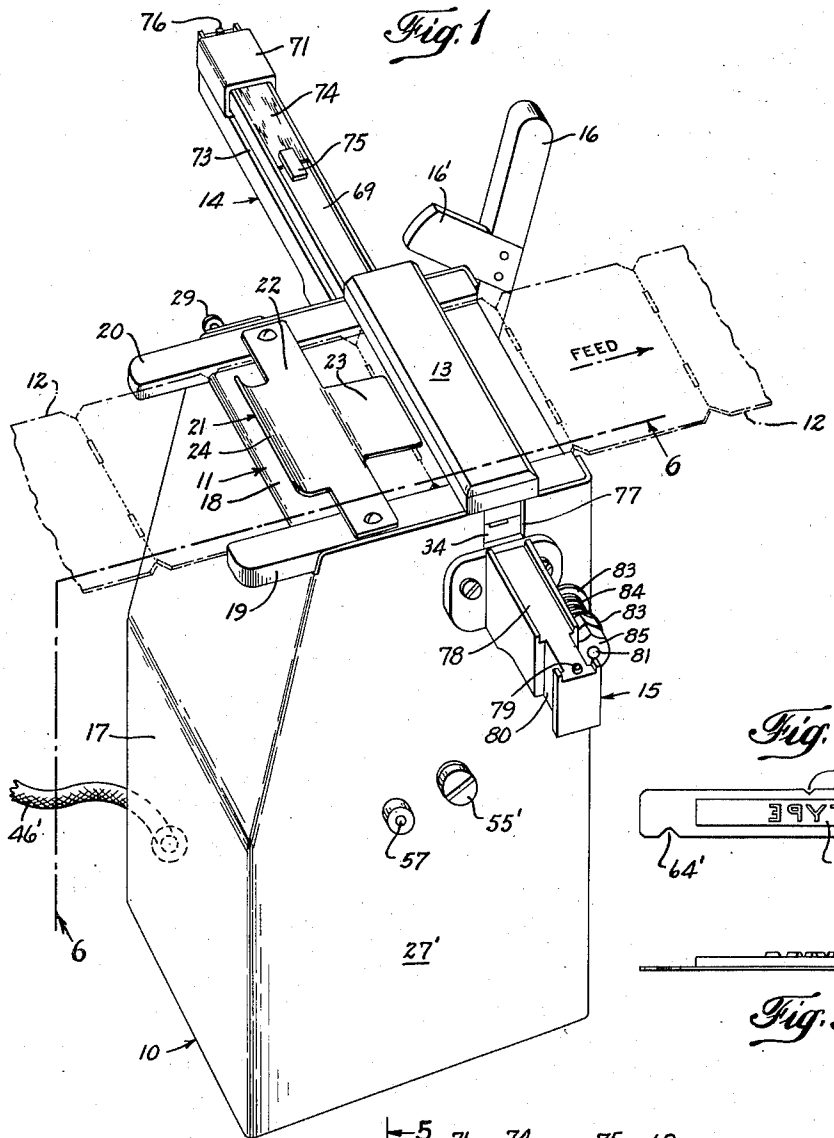


Fig. 2

Fig. 3

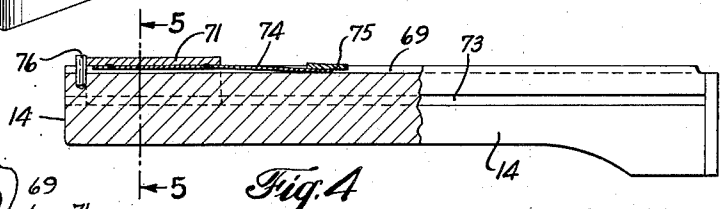
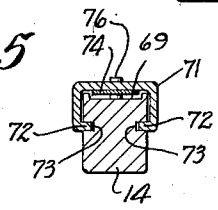


Fig. 4

Fig. 5



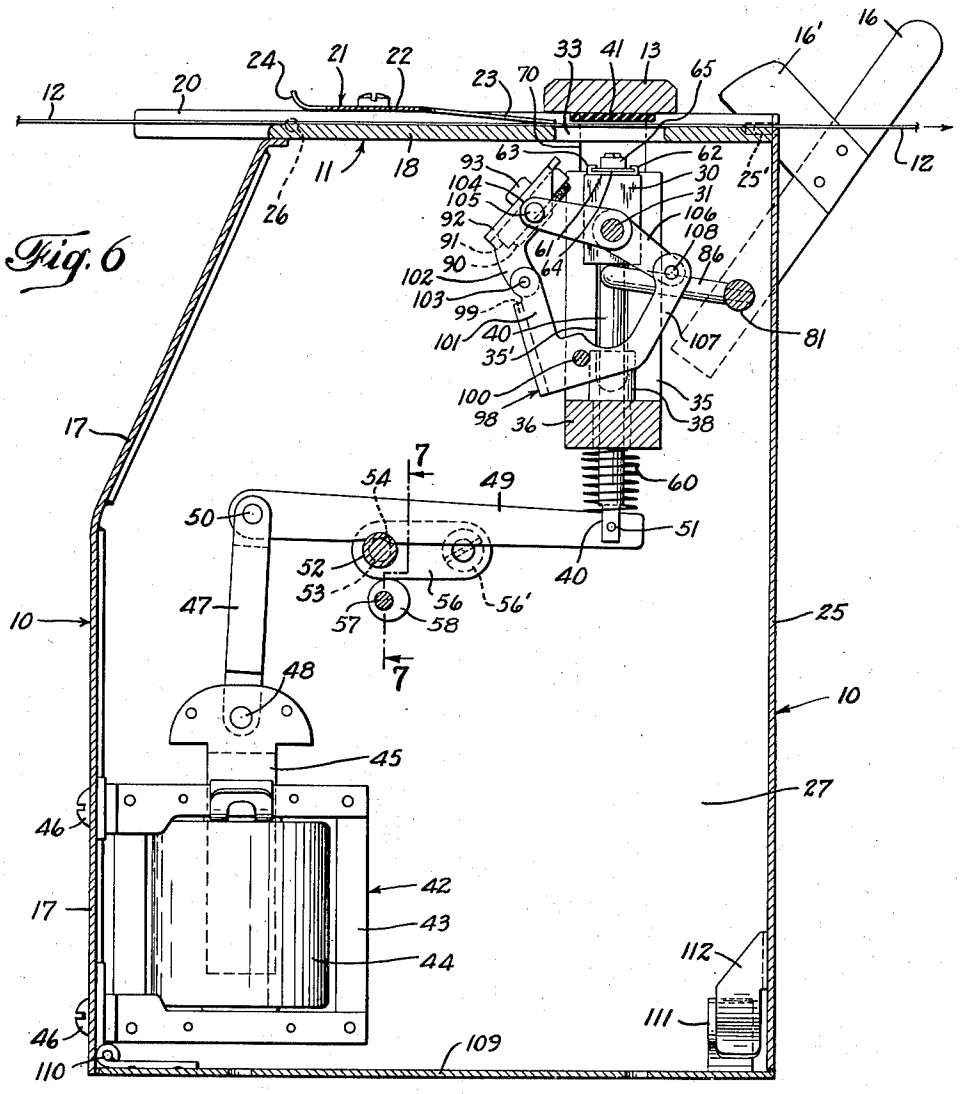
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TYPE SLUG CHANGING MEANS IN LABEL PRINTING MACHINES

Filed June 26, 1953 3 Sheets-Sheet 2

Fig. 6



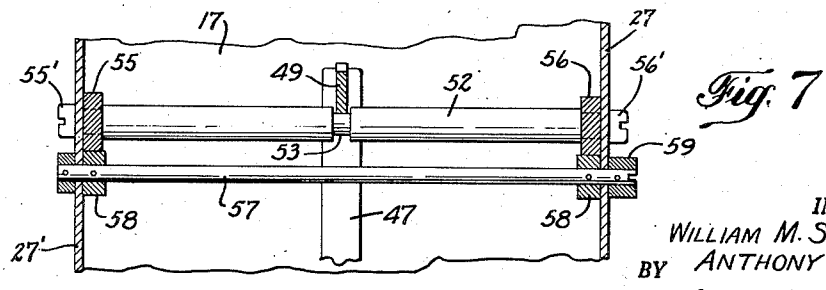


Fig. 7

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May 21, 1957 W. M. SCHLEGEL ET AL 2,792,778

TYPE SLUG CHANGING MEANS IN LABEL PRINTING MACHINES

Filed June 26, 1953 3 Sheets-Sheet 3

Fig. 8

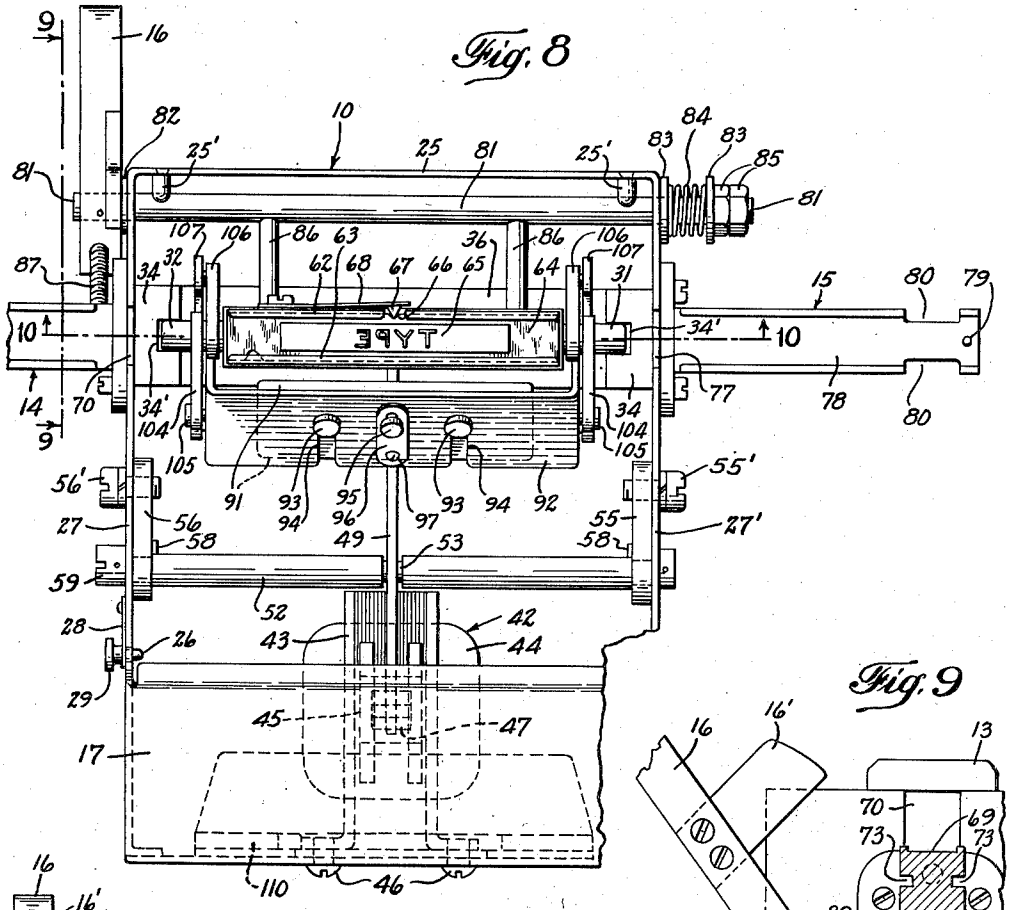


Fig. 9

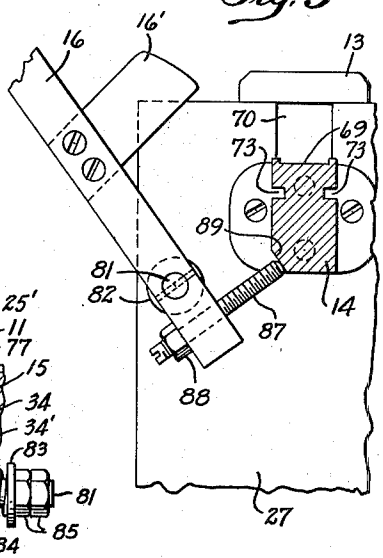
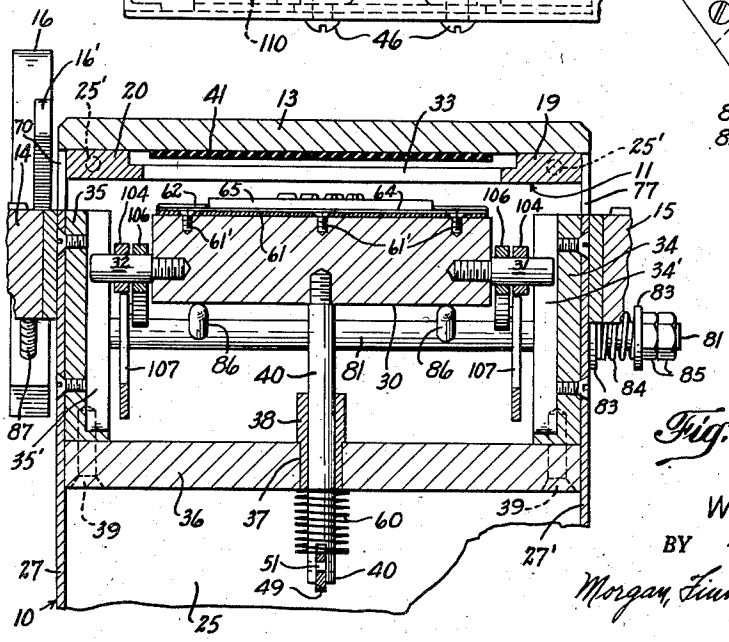


Fig. 10



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2,792,778

TYPE SLUG CHANGING MEANS IN LABEL PRINTING MACHINES

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Application June 26, 1953, Serial No. 364,331

15 Claims. (Cl. 101—69)

This invention relates to printing apparatus and more specifically to means for automatically printing indicia on strips of labels and the like.

The marking of products and particularly perishable goods usually necessitates the provision of means for printing different nomenclature or indicia on successive labels or groups of labels. In the case of large markets handling packaged meats for instance, weight and price information must be provided in addition to information indicating the nature of the cut. This invention, among other things, provides new and improved apparatus having quickly interchangeable type which may be readily coordinated with other printing apparatus to greatly facilitate the entire label printing operation.

Objects and advantages of the invention will be set forth in part hereinafter and in part will be obvious herefrom, or may be learned by practice with the invention, the same being realized and attained by means of the instrumentalities and combinations pointed out in the appended claims.

The invention consists in the novel parts, constructions, arrangements, combinations and improvements herein shown and described.

The apparatus in accordance with the invention may be operated manually or automatically in response to associated printing apparatus and embodies an improved structure that permits almost instantaneous change of type and includes improved type holding and aligning means which obviates the need for special adjustment or alignment of the type each time it is changed. Means are also provided which avoid the necessity for frequent replenishment of printing ink on the inking means so that the machine can function for long periods of time with little or no maintenance.

Another important object of the invention is its simplicity and complete dependability. It includes a minimum number of operating parts requiring infrequent lubrication and readily accessible adjusting means for controlling the printing pressure. The apparatus may be easily and quickly arranged to handle labels of different size and thickness and the color of the print can be readily changed if desired to meet the requirements of different types of labels.

The above and other objects and advantages of the invention will become more apparent from the accompanying drawings referred to herein and constituting a part hereof and which illustrate one embodiment of the invention. These drawings taken together with the following description will serve to explain the principles of the invention.

In the drawings.

Fig. 1 is a perspective view of one embodiment of the invention;

Fig. 2 is a plan view of the type and mounting therefor for use with the embodiment of Fig. 1;

Fig. 3 is a side elevation of the type and mount shown in Fig. 2;

Fig. 4 is a side elevation in partial section of type changing apparatus shown in Fig. 1;

Fig. 5 is a cross sectional view of Fig. 4 taken along the line 5—5 thereof;

Fig. 6 is a cross sectional view of Fig. 1 taken along the line 6—6 thereof;

Fig. 7 is a cross sectional view of Fig. 6 taken along the line 7—7 of that figure;

Fig. 8 is a top view of the apparatus of Fig. 1 with the top guide plate removed;

Fig. 9 is a cross sectional view of Fig. 8 taken along the line 9—9 thereof; and

Fig. 10 is a cross sectional view taken along the line 10—10 of Fig. 8.

The embodiment of the invention illustrated in the figures is intended to be operated with cooperating apparatus for feeding labels past the printing mechanism. This associated apparatus does not form part of the invention and as there are many forms of feeding devices all well known in the art, the illustration of a specific structure is deemed unnecessary.

This new and improved printing apparatus as shown in Fig. 1 broadly comprises an outer case 10 carrying a top plate 11 for guiding a strip of connected labels 12 past printing means disposed beneath the transverse member 13 and within the case 10. The type is changed by means of a loading device 14 extending outwardly from one side of the case 10 and a receiver 15 extending from the other side of the case. A type changing control arm 16 is provided for aligning the printing apparatus within the case 10 with the loading and receiving devices to facilitate the insertion of new type and automatic ejection of the old type. In this way almost instantaneous transfer of type can be effected.

More specifically the case 10 is generally rectangular in shape with the upper part of the rear wall 17 sloping inwardly toward the top to facilitate coordination of the apparatus with cooperating means for feeding the labels. It will become apparent however that the case can assume most any desired shape that may be required for a specific application. The guide plate 11 is removably held in position on top of the casing 10 and includes a bed 18, a pair of longitudinal guides 19 and 20 disposed along each edge of the bed 18 and a transverse member 13 secured to the guide rails 19 and 20 and spaced from the bed 18. This structure is perhaps more clearly shown in Figs. 1 and 10. In addition to the parallel guides 19 and 20 which may be formed integrally with the bed 18, is a label hold down spring 21 consisting of a relatively thin transverse part 22 secured at its ends to the guides by means of suitable screws or the like. Extending forwardly of this transverse part and formed integrally therewith is a broad spring finger 23 biased to exert a downward pressure on the labels 12 to hold them in sliding contact with the bed 18. The trailing edge of the spring 21 is curved upwardly as shown at 24 to prevent rubbing or scraping of the labels 12 as they pass beneath it.

This guide 11 held on the case 10 by a pair of pins 25′ fastened to the wall 25 of case 10 and extending inwardly thereof as shown in Fig. 8. These pins cooperate with corresponding openings in the forward edge of the guide 11. The guide is locked in place with the trailing edge resting on the top edge of wall 17 by means of a pin 26 carried by a spring 28 and passing through an opening in the top edge of wall 27 of case 10. This pin is provided with an extending knob part 29 to permit withdrawal of the pin from a corresponding opening in the side of guide 20. The guide 11 has been shown as being provided with fixed guideways 19 and 20 although it is apparent that they may be made

adjustable or provided with inserts to accommodate labels of different widths.

The label printing apparatus disposed within the case 10 comprises a printing head 30 having a pair of trunnions 31 and 32 threadably inserted in each end as shown in Fig. 10. This printing head is mounted for movement in a vertical plane beneath an opening 33 in the guide 11 which in turn is directly beneath the transverse member 13. The mounting comprises a pair of vertically disposed guides 34 and 35 having central channels 34' and 35' to receive the trunnions 31 and 32 respectively. These guides may be fastened to the side walls 27 and 27' of the case 10 in any suitable manner such as welding or by screws as illustrated in Fig. 10. Beneath the guides 34 and 35 is a transverse bracket 36 having a central opening 37 carrying a bushing 38 which extends through the opening and above the upper surface of the bracket 36. The bracket may be fastened to the lower end of the guides 34 and 35 by screws 39 or other suitable fastening means or the guides and bracket may be made in one piece.

The printing head 30 is held in an upright position as shown in the figures by a rod 40 threadably attached to the underside of the head and extending downwardly through the bushing 38. In this way vertical motion of the rod relative to bushing 38 will displace the head vertically and the trunnions 31 and 32 together with their cooperating guides will control the plane of this motion. The type for printing the labels 12 is carried on the top side of this head and cooperates with a platen 41 such as rubber or the like cemented or otherwise secured to the underside of the transverse member 13 of guide 11. The labels 12 in passing between the bed 18 and platen 41 are successively printed each time the head 30 is moved upwardly against the platen 41, it being important that the label feed be coordinated with the printing head so that each successive label is properly aligned with the head 30 for the printing operation and that the labels remain stationary during the short period embraced by that operation.

Vertical motion of the printing head 30 is effected by a plunger type magnet 42 having a closed core 43, a coil 44 and a central plunger 45. The coil 44 may be energized by either alternating or direct current fed thereto by means of an electric cable 46' connected with the coil and extending through the wall 27 of casing 10 as shown in Fig. 1. In the case of alternating current, however, suitable means should be provided to eliminate hum and it is preferable to provide both a laminated core and laminated plunger. The illustrated embodiment of the invention employs an alternating current magnet with the core 43 being fixedly secured to the wall 17 of case 10 by screws 46. The plunger 45 of the magnet 43 is coupled to the rod 40, carrying the head 30, by a vertical link 47 pivoted at 48 to the plunger 45 and a horizontal floating link 48 pivoted to link 47 at 50 and to the lower forked end of rod 40 as shown at 51.

The lever or link 49 is provided with a centrally disposed fulcrum in the form of a transverse rod 52 having a central notch 53 for cooperation with a shallow notch 54 in the link 49 (see Figs. 6 and 8). The fulcrum rod 52 is adjustably supported within the case 10 by a pair of links 55 and 56 fixedly secured to the ends of the rod 52 and pivoted to the walls 27 and 27' of the case 10 by screws 55' and 56'. With this arrangement the travel of the head 30 upwardly upon energization of the magnet 43 and movement of the plunger 45 downwardly is governed by the vertical position of the fulcrum rod 52. Movement of the fulcrum upwardly will displace the reciprocatory motion of the head upwardly and vice versa. Thus the pressure of the type carried by the head 30 against the labels 12 can be adjusted in this manner. One method of attaining this end consists of a rod 57 extending transversely

of the case 10 immediately below the fulcrum rod 52 and carrying a pair of excentric cams 58 for cooperation with the underside of levers 55 and 56. The rod 57 extends through the case 10 and is provided with a head 59 having a slot or other means for rotating the shaft 57 and consequently the cams 58. In this way the fulcrum rod can be raised or lowered to govern the printing pressure. While the magnet 43 functions to raise the head 30 to print a label, the head 30 is returned to its downward position by means of a spring 60 reacting between the transverse bracket 36 and horizontal link 49 at its pivotal connection with rod 40.

The type holding means carried by the printing head 30 comprises an elongated channel 61 having its longitudinal edges 62 and 63 bent upwardly and inwardly to hold a flat strip of metal 64 carrying the type 65 (see Figs. 2, 3 and 8) and is secured to the head by screws 61' or other suitable fastening means. The type 65 may have letters or figures formed on rubber or metal and cemented or otherwise fastened to the thin metal strip 64. In the case of meats, the type may carry such nomenclature "Roast Beef," "Pork Chops" or the like, and as the strips 64 are slidably carried by the holding means or channel 61 they may be easily and quickly interchanged. In order to effect substantially automatic alignment of the type 65 in the apparatus, each strip 64 is provided with a V shaped notch 66 for cooperation with a wedge shaped pin 67 carried by a spring 68 which in turn is secured to the printing head 30. The edge 62 of the type holder 61 is grooved as illustrated in Fig. 8 to receive the wedge 67 and permit firm engagement thereof with the groove 66 of strip 64. In this way the strip 64 is inserted until the wedge 67 engages notch 66 which insures accurate and precise alignment of the type 65. The strip 64 may be provided with a second notch 64' that may be used to cooperate with a rack for holding groups of strips to be used from time to time for printing labels.

The strips 64 carrying the type 65 are inserted in the printing head 30 by a loading device 14 and the ejected type is caught and held by a receiver 15. The loader 14 is secured to and extends from the wall 27 of case 10 and is provided with a central longitudinal recess 69 of a width adapted to receive and slidably hold the type holding strips 64. The wall 27 is provided with a cut out 70 extending to or below the top edge of the vertical guide 35 of the head 30. The base of recess 69 is adjusted to lie in a plane of the top side of guide 35 and in accurate axial alignment with the channel 61. The type feeding means consists of a U-shaped bracket 71 having inwardly formed flanges 72 for slidably cooperating with longitudinal grooves 73 in the body 14. This bracket 71 carries a metal strip 74 disposed within the groove or recess 69 and a short overhanging bracket part 75. The feeder is maintained in engagement with the body of the loader 14 by a pin or stop 76 mounted in the outer end of recess 69. To load a strip of type into the printing head, a strip 64 is deposited in recess 69 with the bracket part 75 overlying the trailing edge, and the V groove 66 forwardly or in the direction of motion of the labels as shown in Fig. 1. The channel 61 on the printing head is then brought into vertical alignment with the recess 69 of the loader 14 and the U-shaped bracket 71 is moved inwardly until the wedge 67 engages the groove 66 in the strip 64 which indicates that the operative position has been reached. This action simultaneously ejects type already in the apparatus through a slot 77 in the wall 27'. The type receiver 15 which holds the ejected type is similar to the loader 14 in that it is provided with a groove 78 corresponding to the groove 69 of the loader. The receiver is also provided with a stop pin 79 and a pair of vertical recesses 80 to facilitate removal of the ejected type from the receiver.

In order to quickly and accurately position the printing

head 30 for the interchange of type means in the form of a positioning lever 16 and transverse shaft 81 is provided. The shaft 81 is carried by the wall 27 and 27' of the case 10 and in turn carries the lever 16 on one end thereof as shown in Figs. 1, 8, 9 and 10. The lever 16 is spaced from the wall 27 by a spacer 82 and the shaft 81 is held in place by a pair of washers 83, an interposed spring 84 and a pair of nuts 85 on the outside of wall 27'. This arrangement frictionally loads the shaft 81 so that it can be moved only by the application of a positive force to the lever 16. The shaft 81 also carries a pair of inwardly extending arms 86 which in one position cooperates with the underside of the printing head 30 to engage and raise it to the loading position and in another position is completely out of engagement for the printing operation. When the shaft 81 is moved clockwise as seen in Fig. 6 the arms 86 engage the head 30 and raise it from the lower normal position to the loading position. This loading position is governed by an adjusting screw 87 threadably carried by the lower end of the lever 16 (Fig. 9) and cooperating with a beveled surface 89 on the loader 14. Adjustment of this screw relative to the lever 16 will determine its limit position and thus the degree of elevation of the head 30. Thus with proper adjustment of screw 87, which may then be locked in place by its cooperating nut 88, movement of the lever 16 outwardly will automatically align the head 30 with the loader 14 so that a new strip of type can be inserted. The disengaged or printing position of lever 16 is governed by a transverse lever 16' carried by lever 16 and adapted to overlie the loader 14 and close the opening 70 in the wall 27 of case 10. Thus it is not possible to change type in the printer until the lever 16 is moved to clear the opening 70 and this action automatically places the head 30 in position to receive a new set of type.

Inking of the type carried by the strip 65 is accomplished by an inking pad 90 arranged to contact the type each time the head 30 is retracted under the action of the spring 60. The pad is preferably formed of felt or other similar absorbent material and is retained within a shallow brass case 91 removably attached to a carriage 92 by a pair of studs 93 secured to the case 91 and having peripherial grooves for engagement with slots 94 in the carriage 92 (Figs. 6 and 10). The studs 93 are retained in position in the slots 94 by a centrally disposed pin 95 carried by a spring 96 which in turn is secured to the carriage by a screw 97. The pin 95 slidably engages corresponding openings in the carriage 92 and casing 91 to hold the latter in place. The pin of course is held in removable engagement with the casing 91 by the spring 96.

The linkage system for supporting the carriage 92 in operative position comprises a pair of U-shaped bell cranks or rocker arms 98 disposed on each end of the carriage and connected by a transverse plate 99 to insure their operation in unison. These cranks 98 are pivoted to the head guides 34 and 35 by a transverse shaft 100. The legs 101 of the cranks 98 are pivotally fastened at 103 to downwardly depending ears 102 that may be formed integrally with the carriage 92. Motion is imparted to the carriage by a pair of links 104 pivoted at 105 centrally of each end of the carriage and to the head 30 by engagement with the trunnions 31 and 32. A second pair of links 106 each rotatably engage the trunnions 31 and 32 by one end and are pivoted to the arms 107 of the bell cranks 98 at their other ends as shown at 108.

With this structure as the head 30 moves downwardly the carriage 92 will move over the top of the type 65 and deposit ink thereon. When the head is then moved upwardly under the action magnet 42 to print a label, the carriage 92 moves generally through an arc determined by the links 104 out of the path of the head so that the type may engage the label 12 immediately above the opening 33 in the guide plate 11 to effect the printing operation. If desired the type 65 may be of an ink impregnated construction and thereby avoid the need for the inking pad 90 and associated carriage.

If desired the bottom of housing or case 10 may be provided with a bottom 109 hinged at 110 to the wall 17 and having a snap catch 111, 112 for holding it in the closed position.

This new and improved apparatus embodies a positive and dependable structure that is characterized in one aspect by its simplicity and versatility. It may be coupled with other apparatus and automatically operated thereby or it can be operated at the instance of an attending operator by means of a local switch for energizing the magnet 42. The type is easily and quickly changed to accommodate the different requirements for successive labels and any type of label feeding and indexing means may be used to carry the connected labels over the guide 11.

While only one embodiment of the invention has been shown and described it is apparent that many changes, modifications and alterations may be made without departing from the scope and spirit thereof.

What is claimed is:

1. Apparatus for successively printing each label of a strip of connected labels comprising a label guide having an opening extending transversely thereof, spring means biased against said guide for holding the labels in sliding engagement therewith, a platen disposed above said opening in spaced relation to the guide and having an area approximately coextensive with said opening, a reciprocable printing head disposed beneath said opening, an elongated double open-ended channel on said head having inwardly formed wall parts for slidably retaining type therein, means cooperating with said wall parts for aligning type in said channel, and means relative to which said printing head is movable, for simultaneously ejecting and replacing type in said channel, said type ejecting and replacing means being separate and independent of said printing head.

2. Apparatus for printing labels comprising a label guide having an opening extending transversely thereof, spring means biased against said guide for holding the labels in sliding engagement therewith, a platen disposed above said opening and in spaced relation to the guide, a reciprocable printing head beneath said opening, an elongated channel having inwardly formed edges to slidably engage thin type-holding strips, a groove in one edge of said channel, spring loaded means for engaging said groove and a corresponding groove in said type holding strips to align each strip in said channel, and loading means relative to which said printing head is movable, for substantially simultaneously ejecting and replacing type in said channel, said loading means being separate and independent of said printing head.

3. Apparatus for printing labels comprising a label guide having an opening extending transversely thereof, spring means biased against said guide for holding the labels in slidable engagement therewith, a platen disposed above said opening and in spaced relation to the guide, a reciprocable printing head beneath said opening, an elongated channel having inwardly formed edges to slidably engage thin type-holding strips, a groove in one edge of said channel, spring loaded means for engaging said groove and a corresponding groove in said type holding strips to align each strip in said channel, loading means for substantially simultaneously ejecting and replacing strips in said channel, said loading means being separate and independent of said printing head, and means for moving said head for aligning said channel with said loading means in strip ejecting and replacing position.

4. In printing apparatus a printing head, an elongated channel on said head having inwardly formed wall parts and a notch in one of said wall parts, a spring loaded member engaging said notch and extending into said channel, a strip having at least one notch in a longitudinal edge thereof, a loading guide for slidably holding a strip of type to be inserted in said channel and means for mov-

ing said printing head, for aligning said channel and said loading guide in strip ejecting and replacing position whereby a strip to be inserted in said channel may be slidably transferred from the loading guide to said channel with said spring loaded member in engagement with the notch in said strip to align the strip in said channel, said insertion of one strip of type automatically effecting ejection of another strip of type in said channel.

5. In printing apparatus a platen, a printing head mounted for reciprocating movement toward and away from said platen, an elongated channel on said head having inwardly formed wall parts and a notch in one of said parts, a spring loaded member engaging said notch and extending into said channel, a strip having type thereon for slidable engagement with said channel, said strip having at least one notch in a longitudinal edge thereof, a loading guide having a longitudinal recess for slidably holding a strip of type to be inserted in said channel, an aligning lever for engaging said head and moving it into a position where the elongated channel in said head is in alignment with the longitudinal recess in said loading guide whereby a strip to be inserted in said channel may be slidably transferred from the loading guide to said channel with said spring loaded member in engagement with the notch in said strip, said insertion of one strip effecting ejection on any other strip in said channel.

6. In printing apparatus, a platen, a printing head mounted for reciprocating movement toward and away from said platen, an elongated double open-ended channel on said head having inwardly formed wall parts, a strip having type thereon for slidably engaging said channel, said strip having at least one notch in a longitudinal edge thereof, means associated with said channel for engaging the notch on said strip to align the latter in said channel, a loading guide having a longitudinal recess for slidably receiving a strip to be inserted in said channel, and means for moving said head into a position where said channel is in alignment with the recess in said loading guide for slidably transferring a strip from said loading guide into engagement with said channel and said associated means.

7. Apparatus for successively printing each label of a strip of connected labels comprising a label guide having an opening extending transversely thereof, a platen disposed above said opening and in spaced relation to said guide, a printing head mounted for reciprocating movement toward and away from said platen, an elongated double open-ended channel on said head having inwardly formed wall parts, a strip having type thereon for slidably engaging said channel, said strip having at least one notch in a longitudinal edge thereof, means associated with said channel for engaging the notch on said strip to align the latter in said channel, a loading guide having a longitudinal recess for slidably receiving a strip to be inserted in said channel, and means for moving said head into a position where said channel is in alignment with the recess in said loading guide for slidably transferring a strip from said loading guide into engagement with said channel and said associated means.

8. Apparatus for successively printing each label of a strip of connected labels comprising a label guide having an opening extending transversely thereof, a platen disposed above said opening and in spaced relation to said guide, a printing head mounted for reciprocating movement toward and away from said platen, an elongated double open-ended channel on said head having inwardly formed wall parts, a strip having type thereon for slidably engaging said channel, said strip having at least one notch in a longitudinal edge thereof, means associated with said channel for engaging the notch on said strip to align the latter in said channel, a loading guide having a longitudinal recess for slidably receiving a strip to be inserted in said channel, and means for moving said channel into alignment with said loading guide for slidably transferring a strip from said loading guide into engagement with said channel and said associated means, said moving means comprising a lever, at least one cam coupled to said lever for movement into and out of engagement with said printing head, and a gate carried by said lever, said lever being movable into one position to engage said cam and said head and move the channel into alignment with said loading guide and movable into another position with the cam out of engagement with said head and said gate blocking the recess in the loading guide.

9. Apparatus for printing labels comprising a label guide having an opening extending transversely thereof, spring means biased against said guide for holding the labels in engagement therewith, a platen disposed above said opening and in spaced relation to the guide, a printing head mounted for reciprocating movement toward and away from said platen, an elongated double open-ended channel on said head having inwardly formed wall parts, a strip having type thereon for slidably engaging said channel, said strip having at least one notch in a longitudinal edge thereof, means associated with said channel for engaging the notch on said strip to align the latter in said channel, a loading guide having a longitudinal recess for slidably receiving a strip to be inserted in said channel, and means for moving said head into a position where said channel is in alignment with the recess in said loading guide for slidably transferring a strip from said loading guide into engagement with said channel and said associated means.

10. Apparatus for printing labels comprising a label guide having an opening extending transversely thereof, spring means biased against said guide for holding the labels in engagement therewith, a platen disposed above said opening and in spaced relation to said guide, a reciprocable printing head beneath said opening and movable toward and away from said platen, means including an electromagnet and a spring for moving said head, an elongated channel on said head having inwardly formed wall parts, a strip having type thereon slidably engaging said channel, said strip including at least one notch in one edge thereof, means associated with said channel for engaging said notch to hold the strip in place in said channel, means for inking said type including an absorbent ink pad and means coupling said pad and said printing head to move the pad into pressure engagement with the type when the head is moved away from said platen and to move the pad out of engagement with the type when said head is moved toward said platen, a loading guide having a longitudinal recess for slidably receiving a strip to be inserted in said channel, and means for moving said head into a position where said channel is in alignment with the recess in said loading guide for slidably transferring a strip from said loading guide into engagement with said channel and said associated means.

11. Apparatus for printing labels comprising a label guide having an opening extending transversely thereof, spring means biased against said guide for holding the labels in engagement therewith, a platen disposed above said opening and in spaced relation to said guide, a reciprocable printing head beneath said opening and movable toward and away from said platen, means including an electromagnet and a spring for moving said head, an elongated channel on said head having inwardly formed wall parts, a strip having type thereon slidably engaging said channel, said strip including at least one notch in one edge thereof, means associated with said channel for engaging said notch to hold the strip in place in said channel, means for inking said type including an absorbent ink pad and means coupling said pad and said printing head to move the pad into pressure engagement with the type when the head is moved away from said platen and to move the pad out of engagement with the type when said head is moved toward said platen, a loading guide having a longitudinal recess for slidably receiving a strip to be inserted in said channel and means for moving said channel into and out of alignment with said load-

ing guide comprising a lever, at least one cam coupled to said lever for movement into and out of engagement with said printing head, and a gate carried by said lever, said lever being movable to one position to engage said cam and said head to move the latter toward said platen and into a position with said channel in alignment with said loading guide and movable to another position with the cam out of engagement with said head and said gate blocking the recess in the loading guide.

12. Apparatus for printing labels comprising a housing, a label guide removably closing one end of said housing and having an opening extending transversely thereof; a platen overlying said opening and in spaced relation to said label guide, a printing head mounted for reciprocating motion within said housing, the path of said motion being aligned with and substantially perpendicular to said platen, an elongated double open-ended channel on said head and having inwardly formed wall parts, a strip having type thereon slidably engaging said channel, a loading guide on one side of said housing and having a recess therein for slidably receiving a strip of type, strip receiving means extending from the other side of said housing and in approximate axial alignment with said loading guide, means for moving said head to bring the channel into the plane of said loading guide, and means for slidably transferring one strip from said loading means to said channel with said receiving means receiving another strip simultaneously ejected from said channel during the loading operation, and means within said housing for moving said head and channel toward and away from said platen.

13. Apparatus according to claim 12 wherein the last said moving means comprises a plunger type electromagnet, at least one lever interconnecting said magnet and said head and a fulcrum for said lever disposed between its ends, said fulcrum being adjustable to control the pressure of engagement of said type with said platen.

14. Apparatus according to claim 12 wherein the last said moving means includes an electromagnet, a source of energy therefor and means for periodically applying energy to said magnet.

15. In printing apparatus, a platen, a printing head mounted for reciprocating movement toward and away from said platen, an elongated, an elongated double open-ended channel on said head having inwardly formed wall parts, a strip having type thereon for slidably engaging said channel, said strip having at least one notch in a longitudinal edge thereof, means associated with said channel for engaging the notch on said strip to align the latter in said channel, a loading guide having a longitudinal recess for slidably receiving a strip to be inserted in said channel, and means for moving said head into a position where said channel is in alignment with the recess in said loading guide for slidably transferring a strip from said loading guide into engagement with said channel and said associated means, said head moving means comprising a lever, at least one cam coupled to said lever for movement into and out of engagement with said printing head, and a gate carried by said lever, said lever being movable to one position to engage said cam and said head to move the latter toward said platen and to a position with the channel in alignment with the recess in said loading guide and movable to another position with the cam out of engagement with said head and said gate blocking the recess in the loading guide.

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