PATENT SPECIFICATION (11) 1 580 379

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(21) Application No. 21651/77 (22) Filed 23 May 1977 (19)
(31) Convention Application Nos. 52/176 173U (32) Filed 30 Dec. 1976 in
51/176 175U
51/176 172U
(33) Japan (JP)
(44) Complete Specification published 3 Dec. 1980
(51) INT. CL.³ B65C 11/02
(52) Index at acceptance
B8F 12 1C 1E 1X
B6F CD
B8M 4B 6 A2

(54) HAND LABELLER

(71) We, JAPAN BANO'K CO. LTD., a Japanese Body Corporate, of 13, 2-chome, Nihonbashi-Kayabacho, Chuo-ku, Tokyo, Japan, do hereby declare the invention for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention relates to hand-held labellers suitable, for instance, for adhering labels carrying information such as the price onto goods.

In conventional hand-held labellers, a label blank having an adhesive is adhered to a substrate or carrier paper in the form of a rolled sheet adapted to be inserted into the labeller body. Typing is effected onto the labels, one by one, by the action of a lever. The labels carrying the typed information are then successively peeled off from the substrate and pressed onto the goods to be labelled, by means of a rubber roller provided at the end of the labeller.

A drawback inherent in the conventional hand labeller resides in a difficulty in attaching the label sheet along the predetermined path. In loading the labeller with the roll of label sheet, at first the roll is mounted on an upper rear portion of the hand labeller, with a lower cover of the labeller body removed or opened. Then, the leading end of the label sheet is passed through a gap between a sprocket and an anvil plate, and is pulled out of the labeller body through a lower portion thereof. Then, the leading end of the label sheet is fed onto the anvil plate and is made to go round the anvil plate to reach the back side thereof. The leading end of the sheet is then extended to reach the sprocket. This work of loading the labeller with the sheet is extremely troublesome and time-consuming for those who are not trained. In addition, the label blanks which are peeled off from the substrate plate are likely to accidently stick to the guide or rollers.

According to the present invention there is provided a hand-held labeller including means to support a label sheet roll having label blanks laminated on a carrier paper, an anvil plate, a movable typing device for engaging the label sheet when on the anvil plate and effecting typing thereon, a labelling means for applying a typed label to an object and comprising a rotatable member extending across a label feed path from the anvil plate, and an ink roller movable from an inking position in which it is between the typing device and the anvil plate to a non-inking position in which the typing device is free to move towards the anvil plate, wherein said label sheet roll supporting means includes a supporting member to pass through a bore in the roll and provided with at least one slit extending from one axial end towards the other and a retaining portion in the vicinity of said one axial end, said retaining position and slit being engageable with a wall of the body of the labeller to, respectively, hold the supporting member in a roll supporting position and allow movement of the roll supporting member from that position while preventing its disengagement from the wall.

The invention will be more clearly understood from the following description which is given by way of example only with reference to the accompanying drawings in which:—

Figure 1 is an illustration for explaining the operation of the typing section of a hand labeller;

Figure 2 is a fragmentary side elevational view of a hand labeller according to the present invention;

Figures 3 and 4 are front and back elevational views, respectively, of the hand labeller of Figure 2;

Figure 5 is a sectional side elevational view of the hand labeller of the invention, showing the internal structure;

Figure 6 is an illustration explaining the operation of the typing section of the hand labeller of the present invention;

Figures 7 and 8 are respectively a perspective view and a front elevational view of a labelling cam;

Figure 9 shows a dimensional relationship between a conventional labelling roller and a labelling cam of a labeller of the invention;

Figure 10A is a front elevational sectional view of another example of labelling cam, while Figure 10B is a sectional view taken along the line X–X' of Figure 10A;

Figure 11 is a partial illustration for explaining the detail of a rocking lever;

Figures 12 and 13 are side elevational views and a partially cut-out perspective view of a part of a typing device incorporated in a hand labeller of the invention;

Figure 14 is a sectional side elevational view of a roller of the typing device;

Figure 15 is an exploded perspective view of a roller supporting shaft;

Figure 16 is a front elevational view of the roller and the supporting shaft, showing the manner of mutual engagement thereof;

Figure 17 is a sectional view taken along the line A–A of Figure 16;

Figure 18 is a perspective view of a supporting member for supporting a label sheet roll used in hand labeller of the invention;

Figures 19A, 19B and 19C are a sectional view, a left-hand side elevational view and a right-hand side elevational view of a structure for supporting the label sheet roll;

Figure 20 is a perspective view showing a construction of a feeding roller and a guide plate incorporated in the hand labeller of the invention;

Figure 21 is an illustration for explaining the manner of operation of the feed roller of Figure 20; and

Figures 22 and 23 are illustrations for explaining the operation of the feed roller.

Referring at first to Figure 2, in a hand labeller embodying the present invention, a labeller body generally denoted by 10 has the form of a pistol for an easy handling, this having a grip portion 11 in which a lever 12 is provided for an opening and closing motion. A rocking lever 5 which plays also the role of a cover for closing the front opening of the body 10 is located forwardly of the body 10. A cover 13 is provided at the top of the body 10.

A supporting member 14 for a label sheet roll 15 (this label sheet roll consists of a carrier paper carrying a number of label blanks laminated thereto) is adapted to be partially extracted from the lateral side of the labeller body 10, for supporting the label sheet roll 15. A typing device 3 is provided under the cover 13, for free up and downward movement. Numerals 16, 17, 18 and 19 denote respectively, a shaft for a feed roller 23, a back or lower cover, a substrate paper cutter and a type selecting lever.

The manner of operation of the hand labeller will be described hereinafter with reference to Figure 5 showing the internal structure of the labeller.

The laminated sheet including the labels and carrier paper is passed from the label roll 15 to a position 15a, by a guide 20, and is then made to pass along the surface of a guide plate 22 provided to cover one third of the upper face of a sprocket 21. The sheet is then bent at the position of the aforementioned feed roller 23, and is made to pass over the surface of the anvil plate 1, whereupon the labels are typed. At the end of the anvil plate 1, the sheet is acutely bent to follow a path 15b. In this condition, the label L is peeled off from the carrier paper and is temporarily adhered to a label receiving claw 24. The carrier paper having released the label has perforations along its centre line, for engagement with the sprocket 21 so as to be intermittently withdrawn along a path 15c.

An auxiliary cutter 1a may be provided at the end of the anvil plate 1, having a downwardly directed cutting edge, so that the carrier paper after the removal of the label may be pressed by a finger nail onto the edge for severing the paper. This considerably facilitates the ejection of the used carrier paper from the labeller. At the same time, the replacement of the roll with a new one is much simplified and facilitated, in view of the severing of the carrier paper at a position downstream of the anvil plate 1.

A spring-like stopper 25 is provided around the surface of the sprocket 21. This stopper 25 has the double functions of allowing rotation of the sprocket 21 only clockwise as shown and ensuring the separation of the carrier paper from the surface of the sprocket 21 along the path 15c.

The typing and label feeding operations are performed in the following manner.

A lever arm 26 is supported by a shaft 27, and is disposed within the lever 12. The arm 26 is swingable, being biased clockwise, as viewed in Figure 5, by means of a spring 28. A feed cam 29 is supported by the lever arm 26, through a shaft 30, and experiences a counter-clockwise resilient torque 31 by the action of a spring 31. The feed cam 29 carries at its end a pin 32 for engagement with a ratchet 33 provided at a side of the sprocket 21. The arrangement is such that the feed cam 29 is retracted from the position shown in broken lines to the position shown in full lines, as the lever 12 is rotated in the direction of the arrow C (position of broken line to position of full line, Figure 5), so as to rotate the sprocket 21 in the clockwise direction thereby to feed

the carrier sheet by the length of one label for each operation of the lever 12.

The lever arm 26 is slightly bent at its intermediate portion to have a V-shaped profile and is forked at its end into two separate arms 26a between which is supported the typing device 3.

The typing device 3 performs a stroke from the position shown in full lines to the position shown in broken lines, as the lever 12 is rotated to the position shown in broken lines, so as to press a label blank on the anvil plate 1. During this movement of the typing device 3, the ink roller 4 is made to contact the type wheels to supply the latter with the ink, and then moves away from the wheels to the position shown in broken lines.

An explanation will be made hereinafter, as to a labelling cam which is an important preferred feature of the invention.

With reference to Figure 1, in conventional labellers, the delivery of the labels is apt to become unstable. because a rubber roller 2 is provided in front of the anvil plate 1 which constitutes the support during the typing. Thus the end of the label is likely to be turned above the roller 2, as denoted by L1, or to abut the roller 2 as denoted by L2, so as to disturb the continuous feed of labels. When the typing device is at its elevated position as shown in Figure 1, a typing body 3a is brought into contact with an ink roller 4 which is supported by a rocking lever 5 on a shaft 6. When the typing device is lowered as denoted by an arrow A after the application of the ink to the typing body 3a, the rocking lever 5 and the ink roller 4 are moved to positions denoted by numerals 5' and 4', respectively.

For ensuring that the roller 2 is not contacted by the ink roller 4, the roller 2 should have a small diameter. However, too small diameter of the roller 2 may cause a deterioration of the label adhesion. On the other hand, too large diameter of the roller 2 may cause the ink roller to be positioned far away from the anvil plate 1. The typing device provided above the ink roller 4 is then positioned further away from the anvil plate 1. The larger distance between the typing device and the anvil plate requires a larger stroke of the typing device 3 and, accordingly, a larger stroke of the lever, which results in difficulty in rapidly adhering the labels. However, if the diameter of the roller 2 is made too small, the adhesion of the label thereto is not so good.

Figure 6 is a side elevational view of a labelling cam C for a labeller of the invention for pressing the label onto an object, the ink roller 4 and of the anvil plate 1, showing the mutual relationship therebetween. Figures 7 and 8 are perspective and front elevational views of the labelling cam C, respectively.

The labelling cam C has a sector-shaped side elevation, and has a pressing surface 35 constituted by an arc of a radius larger than an arc centered at a shaft 36. The back side 37 of the cam C is of smaller radius. A side cam 38 is provided to project laterally from the cam C, for engaging a spring 39 to return the cam C to the position shown in full lines.

As will be seen from Figure 6, the laminated sheet consisting of a carrier paper carrying label blanks is guided at its side by a guide plate 40 and positioned on the anvil plate 1. The sheet 15a is pressed by the typing device 3 onto the anvil plate 1 so that typing is effected on the label blanks. Then, the label carrying the typed information is separated from the carrier sheet at the end of the anvil plate 1. The separated label is then slightly adhered to the label receiving claw 24 so as to be held by the latter.

Subsequently, the front portion of the hand labeller is directed against the object to be labelled. As the hand labeller is pulled, the labelling cam C is rotated to the position shown in broken lines, so that the label is adhered to the object at a position L'.

Referring to Figure 9 showing the dimensional relationship between a conventional labelling roller 2 and a preferred labelling cam C of the present invention, it will be seen that the cam C of the invention has a radius R2 which is much larger than that R1 of conventional roller 2. Supposing that they are arranged on a common shaft, there is a dimensional differential l formed between the upper ends of the roller 2 and the cam C. This differential has a substantial significance. Namely, the smaller height of the cam C allows the ink roller 4 to get correspondingly closer to the anvil plate 1, so as to contribute to shortening the stroke of the up and downward movement of the typing device 3.

At the same time, a differential l_1 is left between the lower surfaces, i.e. the pressing surfaces, of the conventional roller 2 of Figures 1 and 9 and the labelling cam C of the invention, which is of also a substantial importance. Namely, in case of the conventional roller 2, it often occurs that the label L comes to collide with the flank of the roller 2, as shown in Figures 1 and 9, which hinders the smooth delivery of the label or makes the label L stick to other members. However, in the case of cam C, the label is delivered tangentially, without colliding the flank of the cam C.

Referring to Figure 10, this shows another preferred labelling cam having a back cut deeply to form a recess, the pressing

segment portion 35 being constituted by a thin wall, while the back portion 41 is removed or cut out, so as to provide a large space for allowing the ink roller to pass therethrough. There are walls at each end by which the cam can be pivotably mounted and one of these has a side cam 38. The cam C of this type may be provided with increased stiffness, by enlarging the thickness to the position of the chain line of Figure 10B.

Figure 11 specifically shows details of the rocking lever 5 which, as will be seen also from Figures 3 and 5, plays the additional role of a cover for closing the front opening of the labeller body 10.

The rocking lever 5 is adapted to be swung or to rock around its support 5a on the labeller body 10, from the position of full line to the position of broken line, as the ink roller 4 provided at its end is pressed by the typing device 3.

The rocking lever 5 is provided with a projection 5b which extends from its upper end obliquely downwardly and has a curved surface engaged by the upper end of a spring S. The spring S is attached to the labeller body 10 at its lower end portion S1. The arrangement is such that the spring S is moved from the position of the full line to the position of the broken line, as the rocking lever 5 rocks.

As the pressing force on the ink roller 4 by the typing device 3 is reduced, the spring S acts to return the rocking lever 5 from the position of broken line to the position of full line, due to its resilient reactional force.

Thus, due to the preferred provision of the labelling cam having a back which is cut out or reduced as much as possible, swingably over a limited angular range in front of the anvil plate, the ink roller is allowed to pass close to the anvil, so that the stroke of the typing device is shortened.

In addition, by adopting a large radius of curvature of the pressing surface, as shown in Figure 9, the surface is conveniently flattened and made closer to the axis of the cam. Therefore, a label delivered from the anvil plate 1 is directed tangentially of the labelling cam C, so that the delivery of the label is much less likely to encounter difficulty.

At the same time, the stroke of the typing device 3 is conveniently shortened to facilitate the operation of the lever 12, ensuring a rapid and good labelling operation. Thus, the breakage of the typing device 3 and noise attributable to the large stroke of the typing device can be reduced.

Figures 12 to 17 illustrated a preferred formed of typing device wherein rubber type wheels or bands 45 are rotatable and stretched between a roller 42 having exterior protrusions 43 and a guiding member 44 spaced therefrom and fixed to the frame.

The type wheels carry on their peripheries a plurality of types projecting therefrom, of letters and symbols for typing. These types are correctly oriented when they in turn assume a use position on the guide member 44.

On the interior of the roller 42, there are provided a plurality of radial projections 47, as shown in Figures 12 to 14, and a bore 48 is formed at the centre of the roller for passing a shaft therethrough.

A wall 48 is formed to project radially of the roller 42 at the flank of the latter.

The wall 49 cooperates with the projections 47 in guiding the shaft 50, and acts to guide the type wheel 45.

Figure 15 is an exploded perspective view of a shaft 50 for supporting a plurality of rollers 42. The shaft 50 has a central bore 51 through which projects an engaging member 52 biased by a spring 53 disposed in a radial groove. The spring 53 is fixed at its end remote from the engaging member 52 by means of a cap 54 fixed to one end of the shaft. The other end of the shaft has engaging portions 55, 55′ and is fitted with another cap member 56.

Figure 16 is a sectional view of the shaft 50 carrying a roller 42, while the section taken along the line A–A is shown in Figure 17.

The manner of operation of this typing device will be described hereinafter, with specific reference to Figures 16 and 17.

For rotating a selected type wheel 45, the engaging piece 52 is positioned for engagement with the corresponding roller 42 carrying the selected type wheel. In this state, the engaging piece 52 carried by the shaft 50 can be brought into engagement with a projection 47. As the shaft 50 is rotated in the direction of the arrow D the engaging piece 52 comes to abut the projection 47a, so as to rotate the roller 42 in the direction of the arrow E. For rotating another type wheel, the shaft 50 is moved axially. When the roller 42 is brought to the position of the broken line relative to the shaft 50, the engaging piece is depressed into the groove by the wall 49a, so as to allow the axial movement of the shaft 50 in the direction of the arrow F.

After positioning the engaging piece 52 for engaging the desired roller 42, through optional axial movement of the shaft 50, the engaging piece 52 then abuts the projection 47a to rotate the type wheel 45, as shown in Figure 17, thereby to present the desired numeral or symbols on the supporting member 44.

The described construction of the typing device can be broadly applied to conven-

tional typing devices having a plurality of rotatable elastic endless belts carrying types.

According to the typing device of this example, the shaft suporting the type wheels is allowed to move axially, while example, the shaft supporting the type are provided with projections 47 for engaging with engaging member 52 retractably provided on the shaft 50, so that the desired type wheel can be rotated by selectively bringing the engaging piece 52 into engagement with the appropriate projections 47, with a compact structure of the whole typing device.

Since the shaft 50 plays the double roles of supporting the type wheel rollers 42 and selecting and rotating the type wheels 45, the structure of the typing device is much simplified, because of the minimised number of parts.

In addition, since the engagement is performed between the retractable engaging piece 52 on the shaft 50 and radially disposed projections 47 on the roller 42, the engagement can be made without fail to ensure a rapid rotation of the wheel 45 to present the desired type.

At the same time, the engaging piece 52 biased outwardly by the spring 53 is swung and retracted into the shaft, as shown by broken line in Figure 16, as the shaft 50 is axially moved. Since the swinging decreases the angle of inclination to the wall 49a of the roller, the axial movement of the shaft 50 is smoothened considerably.

This arrangement represents advantages over known arrangements in which drive wheels for the type wheels are provided for independent rotation. Unintentional disturbance of set type is quite likely and the construction is complicated and difficult particularly where the type wheels are narrow.

Figures 18 and 19 show an example of the label roll structure incorporated in the hand labeller, the label sheet roll 15 being detachably secured to an upper rear end portion of the labeller body 10, by means of a supporting member 14 as shown in Figure 18.

As will be seen from Figure 18, the supporting member 14 has a generally cylindrical form, having two diametrically opposed slits 57, 57′ which terminate short of a head 58. A flange-like annular projection or protrusion 59 is formed around the cylindrical body of the member 14, close to the end thereof opposite to the head 58. The protrusion 59 constitutes a retaining portion.

As shown in Figure 19A, the supporting member 14 is adapted to be received by a bore 60 formed in the labeller body 10, for movement in the direction of the arrow X. The labeller body 10 is of a split type consisting of two halves, so that they may be assembled into the body 10 after placing the supporting member 14 at the right place between the two halves.

As will be seen from Figure 19B, the left end of the bore 60 is rounded and has a reduced diameter for preventing the supporting member 14 from falling out, while the other end 60a is provided with two projections 61, 61′ for engaging the ends of the slits 57, 57′ of the member 14 so as to prevent the latter 14 from being moved axially in the direction X out of the bore.

The bore end 60a is further provided with an annular protrusion 62 for engagement with the protrusion 59 when the supporting member 14 is moved to the position shown by the full line in Figure 19A, thereby to locate the head 58 in contact with the tapered portion 63 of the labeller body 10. (The supporting member 14 itself can be resiliently deformed so as to allow the protrusion 59 to ride over the protrusion 62, when the member 14 is moved axially).

In use, the supporting member 14 is moved in the direction of arrow X to the position as shown by a broken line of Figure 19A, so that the label sheet roll 15 may be inserted into the labeller body 10 as denoted by the arrow Y. Then, the supporting member 14 is moved axially in the opposite direction to bring the protrusion 59 inwardly of the protrusion 62, so that the supporting member 14 may be resiliently seated within the labeller body 10 at the right position, thereby to secure the label sheet roll 15.

For detaching the core 15′ of the roll 15 from the labeller, fingers are inserted through a bore 66 formed at the lower rear portion of the labeller body 10 (Figure 2) to support the core 15′. A subsequent pushing of the supporting member 14 to the position of broken line in Figure 19A allows the separation of the core 15′ from the supporting member.

In this example, bores 60, 60a are formed in the rear portion of the labeller body 10. for receiving the supporting member 14 in such a manner that the member 14 may be extracted and retracted laterally of the labeller body 10. This construction facilitates the attaching and detaching of the label roll sheet 15, contributing greatly to simplifying the structure for supporting the label sheet roll 15. In addition, the construction of this example well suits the pistol-shaped configuration of the hand labeller, presenting an attractive appearance.

Figures 20 to 23 show details of the construction of the feed roller section of the hand labeller in accordance with the invention. The feed roller 23 has at its peripheral surface a plurality of fine trans-

verse grooves or knurls for ensuring the trapping of the label sheet 15. The shaft 16 which is shown also in Figure 2 has one end portion 16a for engagement with a pressing member 64. The portion 16a is received by an elongated bore formed in the labeller body 10, and is movable in the direction of the arrow G on being pressed by the pressing member 64. The shaft 16 has the other end projecting through another elongated bore in the labeller body 10.

Finger retaining knurls are formed on the other end of the shaft 16, which facilitates the operation of rotating the shaft in the direction of the arrow H and moving it to and from a curved portion 22a of the guide plate 22.

Therefore, the label sheet 15a can be pressed onto the curved section 22a, by pinching the shaft ends 16, 16a to move them in the direction of arrows G, G', thereby to correct the bending tendency of the label sheet. Rotation of the shaft 16 causes feed of the label sheet.

Before the above stated operation is made, the back cover 17 of Figure 5 will have been opened to the position of the broken line 17'.

The label sheet 15a having been pressed by the feed roller 23 onto the curved section 22a of the guide plate 22 is then passed on the anvil plate 1. As it further passes the end of the anvil plate 1, the label sheet is acutely bent to separate the label L from the carrier paper. The carrier paper is then moved along its path 15b, while the label L separated from the carrier is slightly and temporarily adhered to the label receiving claw 24, preparing for labelling onto the object.

Figure 21 shows the feed roller 23 pressing the label sheet 15a onto the guide plate 22, while Figure 22 shows a pulling of the pressing member 64 by a right-hand finger in the direction of the arrow G.

Figure 23 illustrates the operation of the shaft 16 by left-hand fingers.

In this arrangement for the feeding roller, a guiding plate 22 having a curved section is provided to extend between the surface of the sprocket 21 and the end of the anvil plate 1. The feed roller 23 is positioned confronting the curved section 22a of the guide plate. The feed roller 23 is carried by the shaft 16, 16a which can be operated from the outside of the labeller body 10, so that the label sheet 15a can be pressed onto the curved section by the feed roller for correcting undue bending of the sheet. At the same time, normal feed of the sheet can be performed by the feed roller 23.

A guide plate 65 is provided above the aforementioned guide plate 22. The arrangement is such that the label sheet 15a is fed through an opening provided in the extension of the lever core 26 and is suitably guided into the gap between the guide plates 22 and 65 to automatically reach the curved section 22a, so as to allow the further feed by the feed roller 23.

In conventional arrangements without the feature of the guide plate 22 and roller 23, it is necessary to pull out the label sheet 15a out of the labeller, as shown by a chain line in Figure 5, and then direct the leading end of the sheet along the anvil plate toward the lower surface of the labelling roller. This manual loading of the conventional labeller with the label sheet is extremely difficult, because the sheet which has been wound in a roll has a tendency to naturally curve, so as to direct its leading end toward the ink roller.

WHAT WE CLAIM IS:—

1. A hand held labeller including means to support a label sheet roll having label blanks laminated on a carrier paper, an anvil plate, a movable typing device for engaging the label sheet when on the anvil plate and effecting typing thereon, a labelling means for applying a typed label to an object and comprising a rotatable member extending across a label feed path from the anvil plate, and an ink roller movable from an inking position in which it is between the typing device and the anvil plate to a non-inking position in which the typing device is free to move towards the anvil plate, wherein said label sheet roll supporting means includes a supporting member to pass through a bore in the roll and provided with at least one slit extending from one axial end towards the other and a retaining portion in the vicinity of said one axial end, said retaining portion and slit being engageable with a wall of the body of the labeller to, respectively, hold the supporting member in a roll supporting position and allow movement of the roll supporting member from that position while preventing its disengagement from the wall.

2. A hand held labeller according to claim 1, wherein said retaining portion is cooperate with a retaining portion formed on the wall of the body to be located by the latter, and the slit is engaged by a projection formed on said wall and movable in the slit as the retaining portion is moved.

3. A hand held labeller as claimed in claim 1 or 2, wherein two slits are formed at opposite sides of a cylindrical body of said supporting member, diametrically opposite to each other.

4. A hand held labeller according to claim 1, 2 or 3 including a guide plate which defines at least a part of the path for the laminate of label blanks and carrier paper between the label sheet roll and the anvil

plate, such guide plate having a curved portion with a feed roll located on the inside of the curve to press the laminate thereagainst.

5. A hand held labeller according to claim 4, wherein the feed roll has a shaft projecting from the housing of the labeller by which the roll can be rotated.

6. A hand held labeller according to claim 4 or 5, wherein the feed roll is movable towards and away from the curved portion, and means are provided on the exterior of the labeller housing for effecting such movement.

7. A hand held labeller according to any preceding claim, wherein the rotatable member has a first, sector shaped portion with a curved surface of relatively large radius of curvature, a part of which intersects the label path from the anvil plate so that in use labels pass over said first portion, and a portion of relatively small radius which is at the side of the member past which the inking roller is movable to and from the inking position.

8. A hand held labeller as claimed in claim 7, wherein the said first portion of the rotatable member has a radius larger than the distance between the center of a shaft or pin supporting said member and the surface of the first portion.

9. A hand held labeller as claimed in any one of claims 1 to 6, wherein said rotatable member has a sector shaped portion a part of which intersects the label path from the anvil plate so that in use labels pass over said portion, and side walls by which it is rotatably supported and between which the inking roller is movable to and from the inking position.

10. A hand held labeller as claimed in any one of the preceding claims, wherein said typing device has type-wheel-supporting rollers each of which has projections directed toward a supporting shaft thereof, an engaging piece being disposed in a bore formed in said supporting shaft and resiliently biased to project out of said supporting shaft, said engaging piece being adapted to be brought into engagement with a selected said projection when in axial alignment therewith as said supporting shaft is rotated.

11. A hand held labeller as claimed in claim 10, wherein each roller has a wall at one axial end connected to ends of said projections, said wall being adapted to be abutted by said engaging piece, when said supporting shaft is moved axially, to depress said engaging piece.

12. A hand held labeller according to claim 1 and substantially as hereinbefore described with reference to and as shown by the accompanying drawings.

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Printed for Her Majesty's Stationery Office by Burgess & Son (Abingdon), Ltd.—1980.
Published at The Patent Office, 25 Southampton Buildings, London, WC2A 1AY,
from which copies may be obtained.

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7 SHEETS *This drawing is a reproduction of the Original on a reduced scale*
Sheet 1

Fig. 2

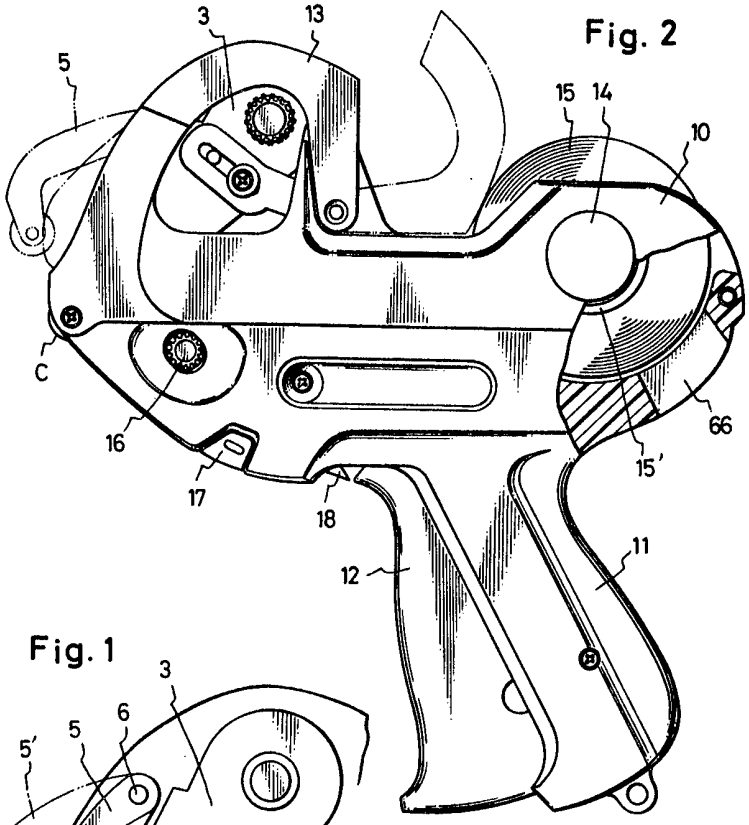
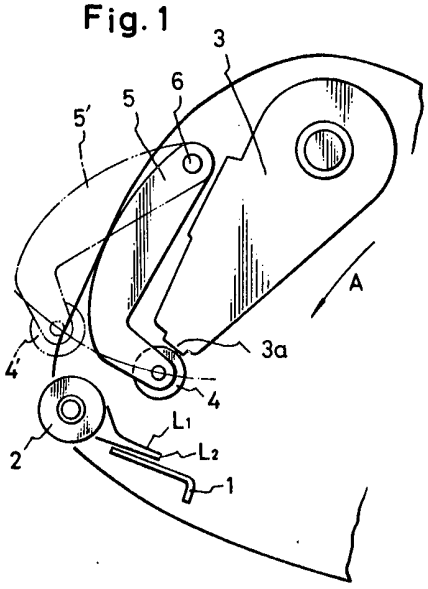


Fig. 1



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Sheet 2

Fig. 3

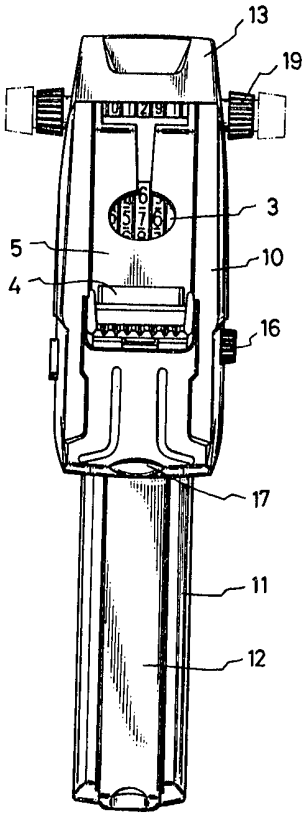
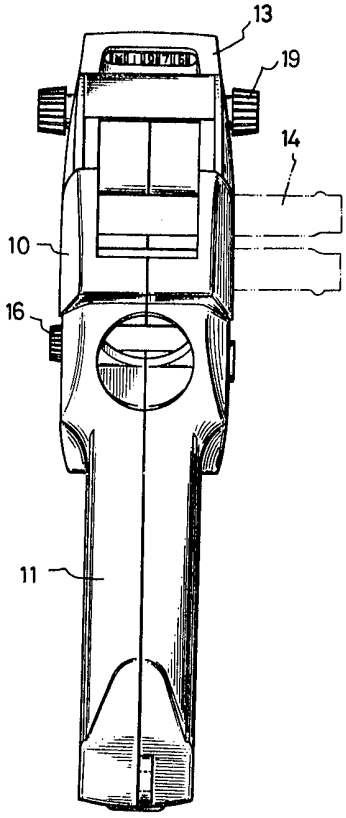
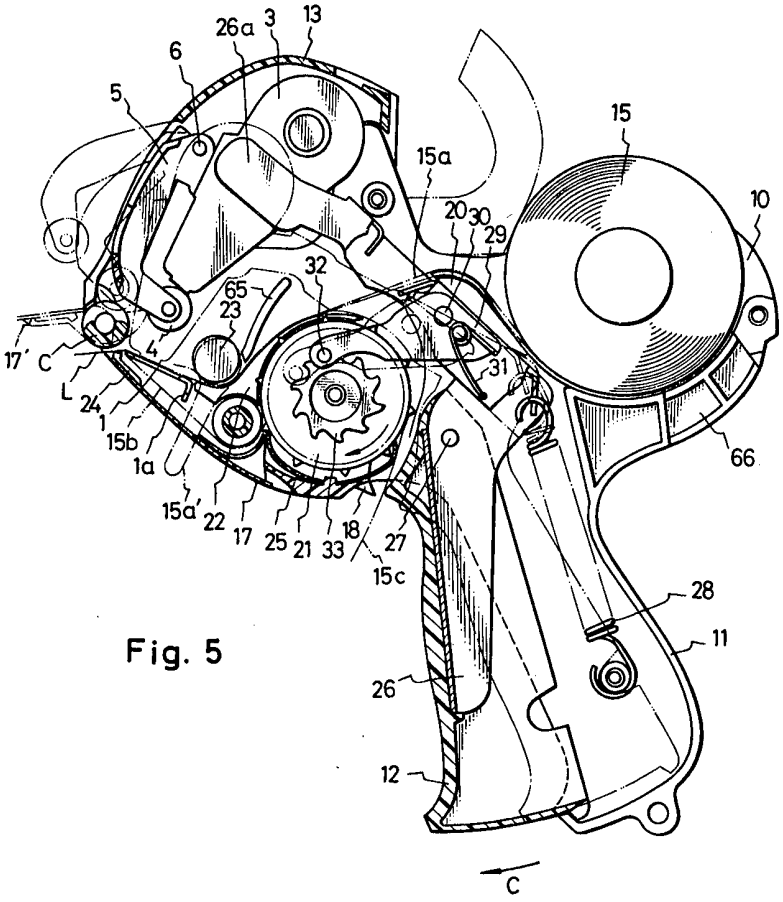


Fig. 4

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4
17'
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15b
1a
15a'
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17
25
21
33
18
27
15c
31
66
28
11
26
12
C

Fig. 5

Fig. 6

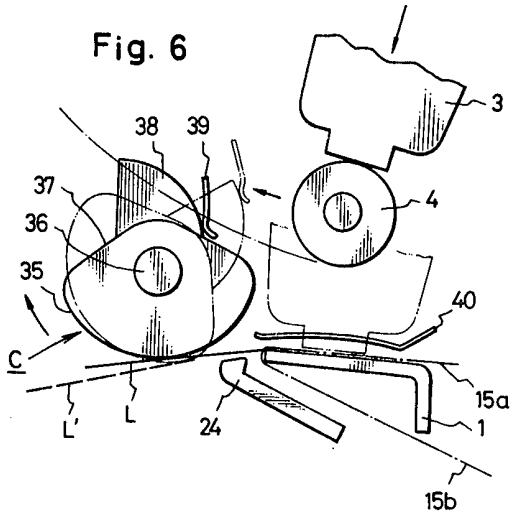


Fig. 7

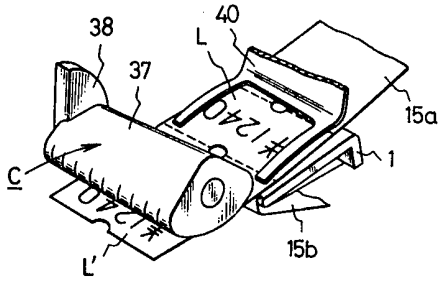


Fig. 8

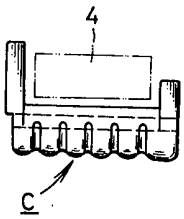


Fig. 9

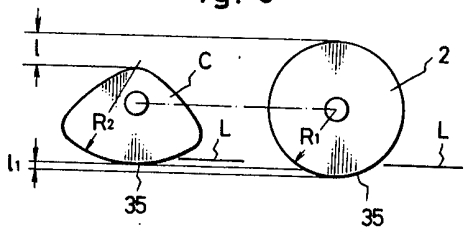


Fig. 10

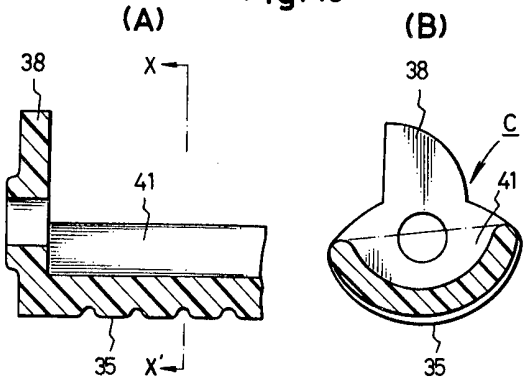


Fig. 11

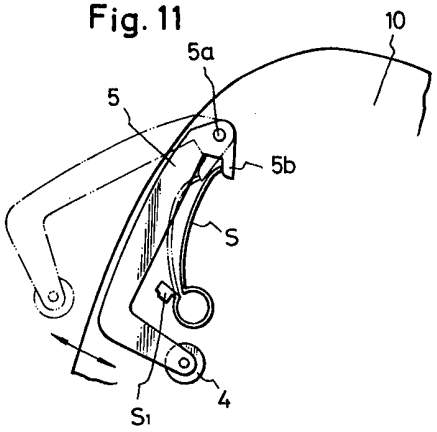


Fig. 12

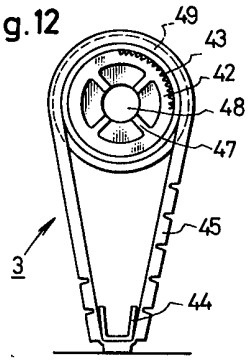


Fig. 13

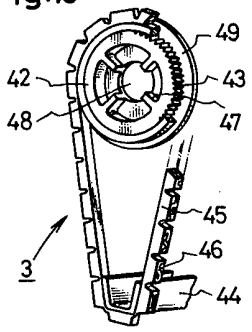


Fig. 14

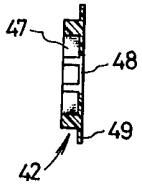


Fig.15

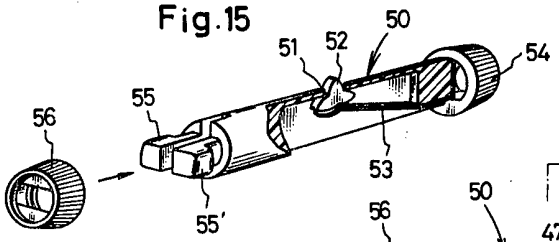


Fig.16

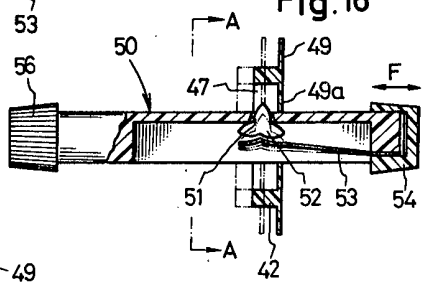


Fig.17

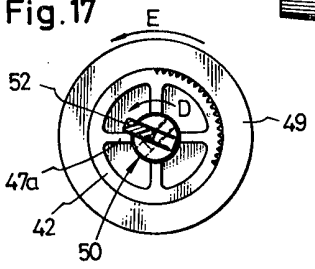


Fig.18

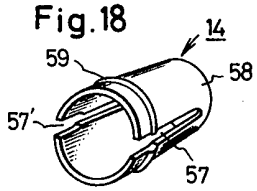
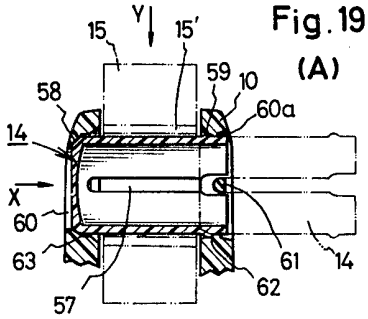


Fig.19



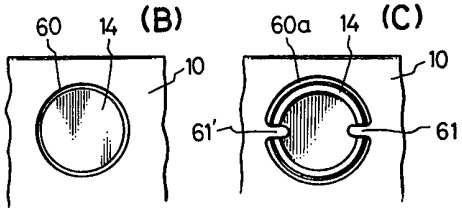


Fig. 20

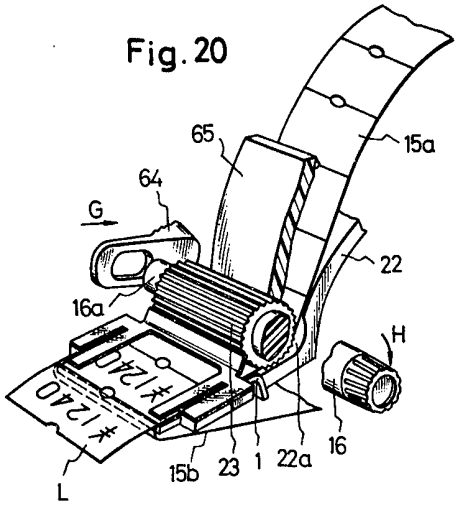


Fig. 21

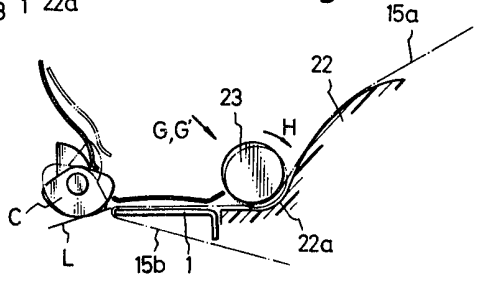


Fig. 22

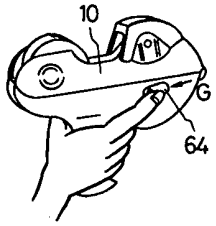


Fig. 23