

Dec. 26, 1944.

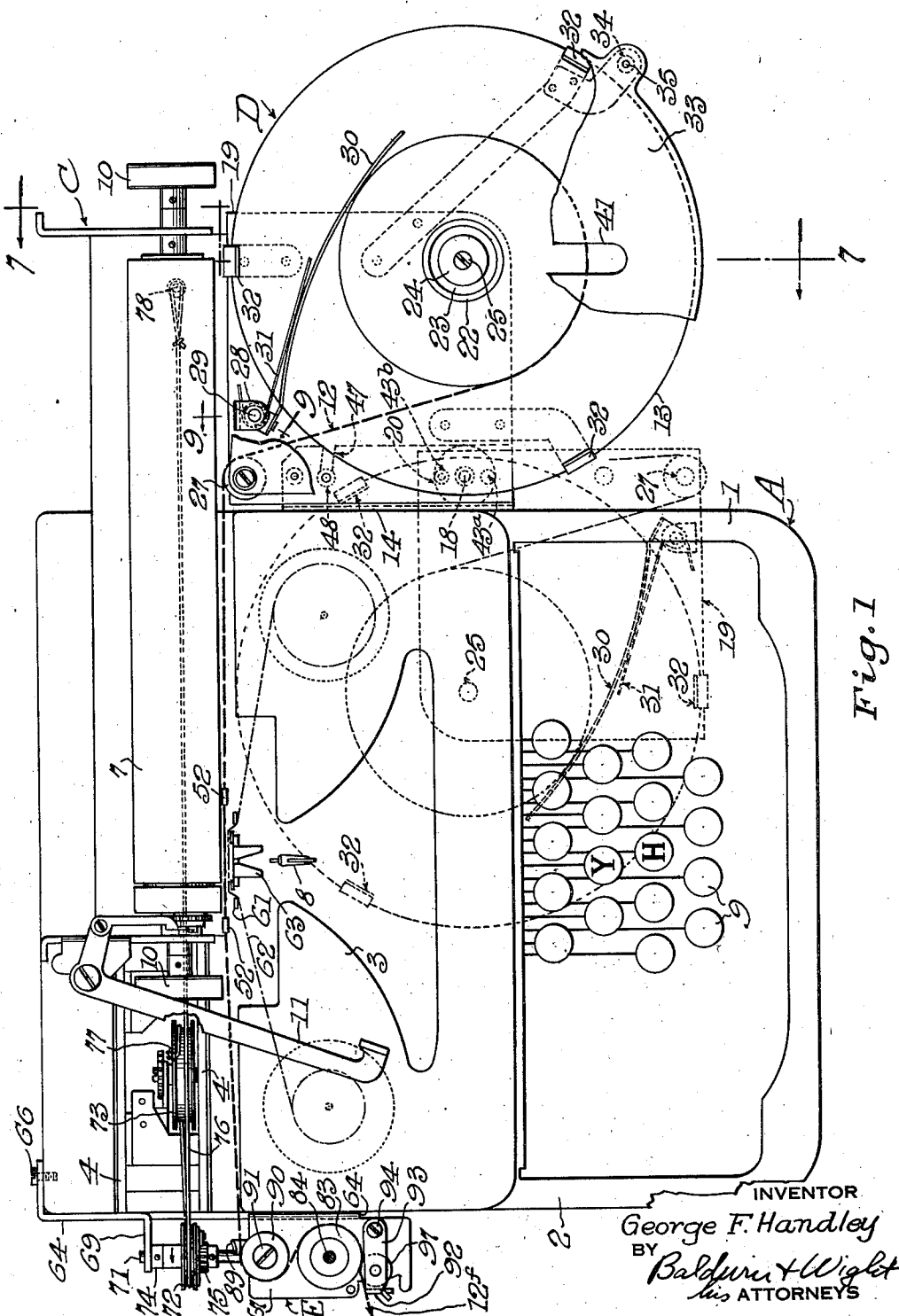
G. F. HANDLEY

2,366,022

TYPEWRITING MACHINE

Filed June 19, 1942

5 Sheets-Sheet 1



Dec. 26, 1944.

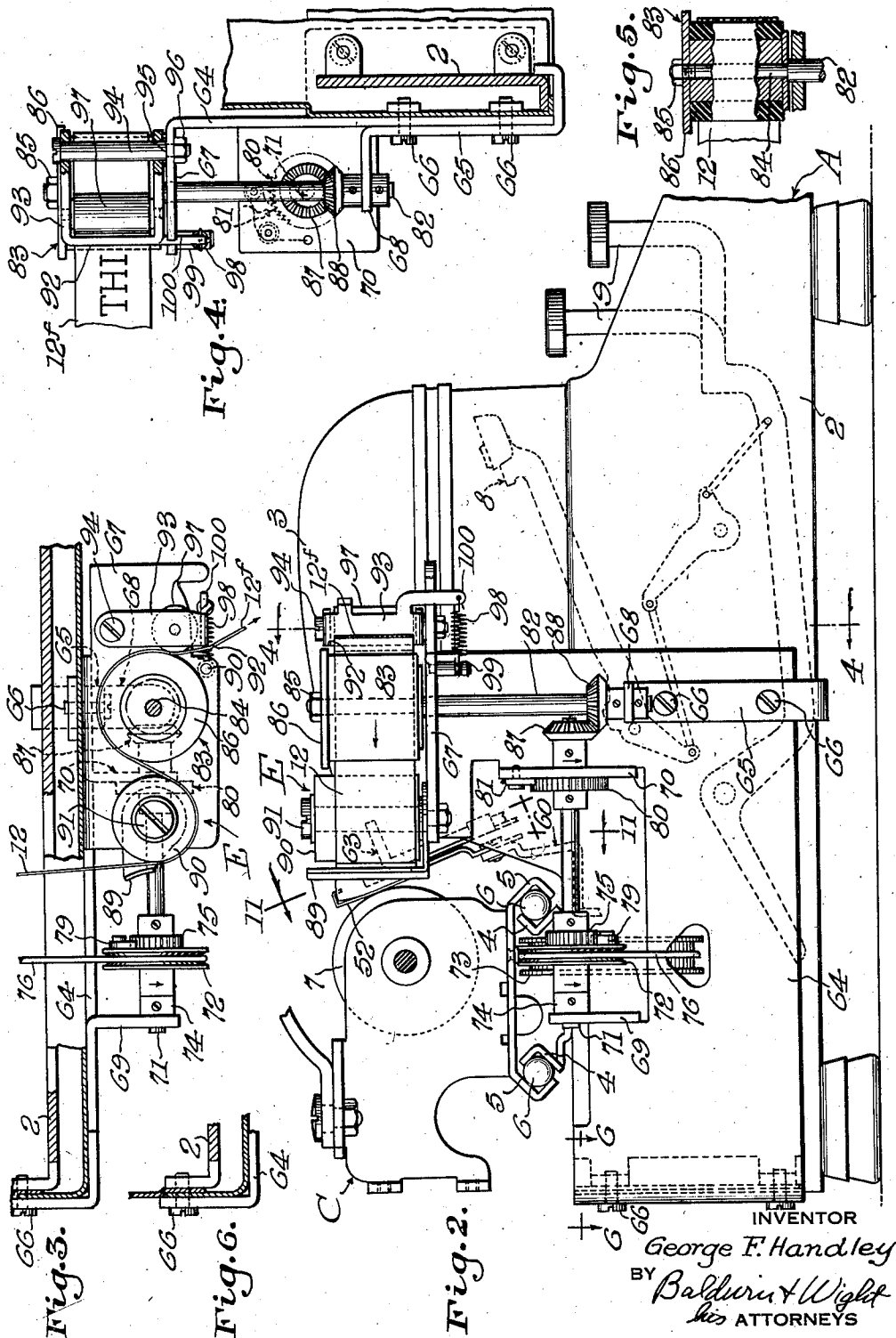
G. F. HANDLEY

2,366,022

TYPEWRITING MACHINE

Filed June 19, 1942

5 Sheets-Sheet 2



Dec. 26, 1944.

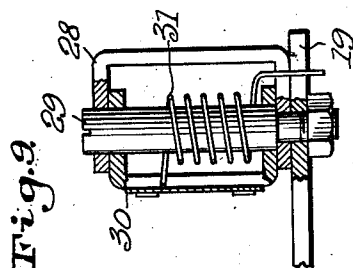
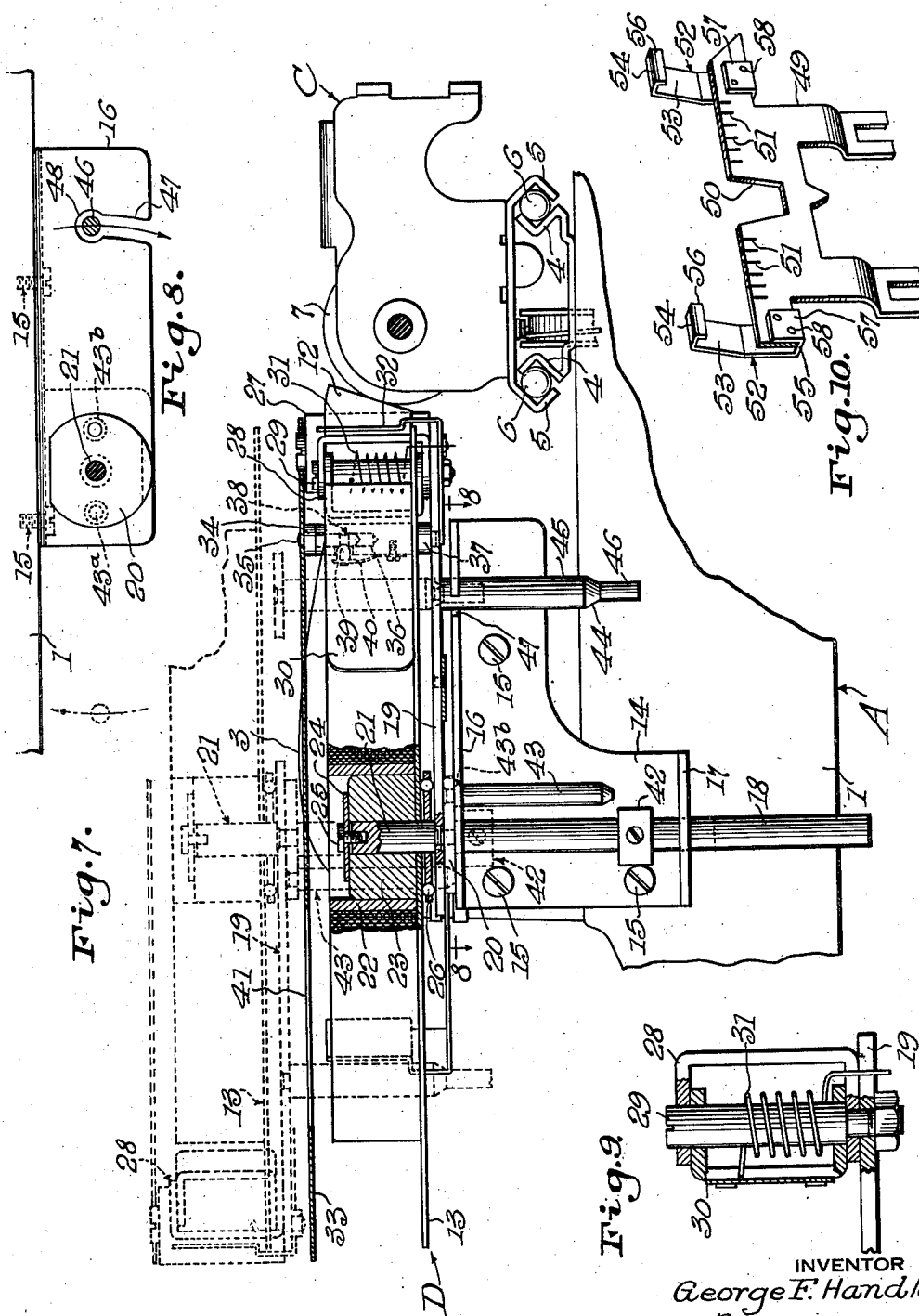
G. F. HANDLEY

2,366,022

TYPEWRITING MACHINE

Filed June 19, 1942

5 Sheets-Sheet 3



INVENTOR
George F. Handley
BY *Baldern & Wight*
his ATTORNEYS

Dec. 26, 1944.

G. F. HANDLEY

2,366,022

TYPEWRITING MACHINE

Filed June 19, 1942

5 Sheets-Sheet 4

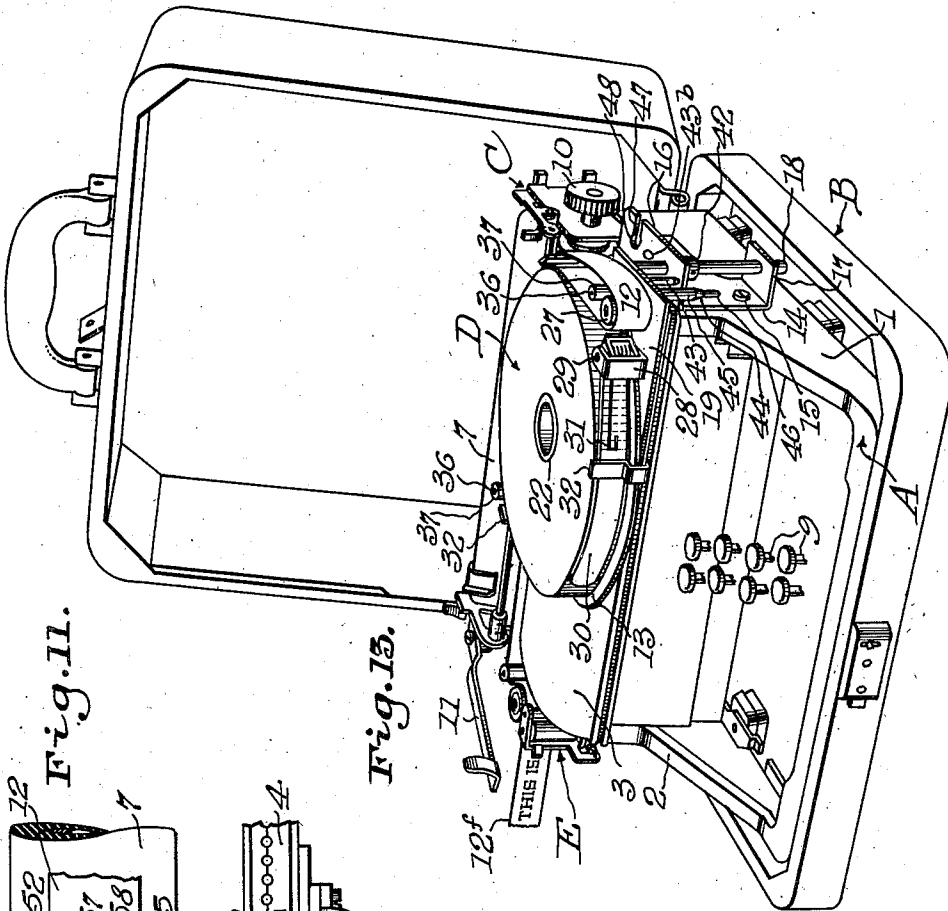


Fig. 11.

Fig. 13.

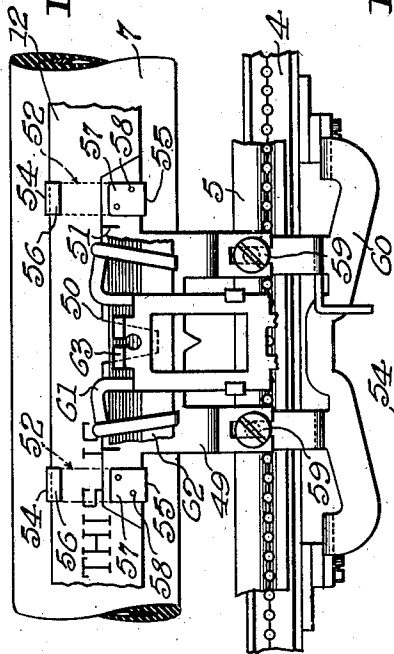
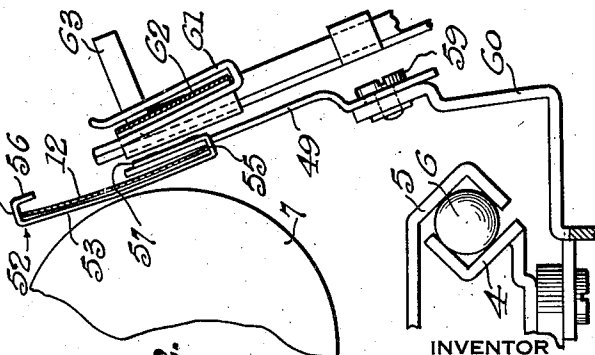


Fig. 12.



INVENTOR
George F. Handley
BY *Baldwin & Wright*
his ATTORNEYS

Dec. 26, 1944.

G. F. HANDLEY

2,366,022

TYPEWRITING MACHINE

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5 Sheets-Sheet 5

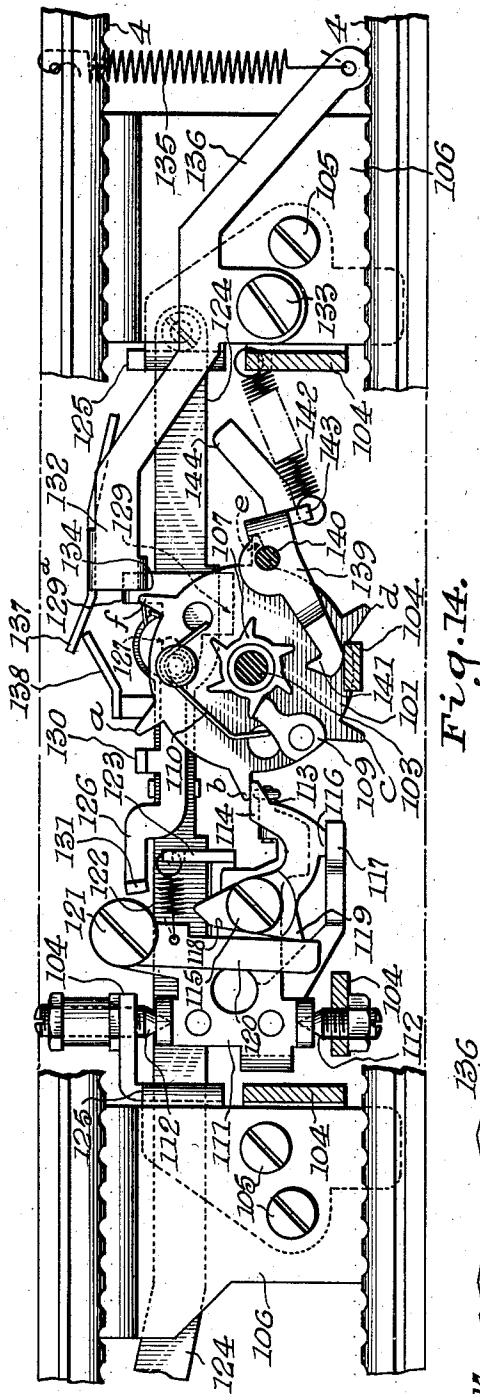


Fig. 14.

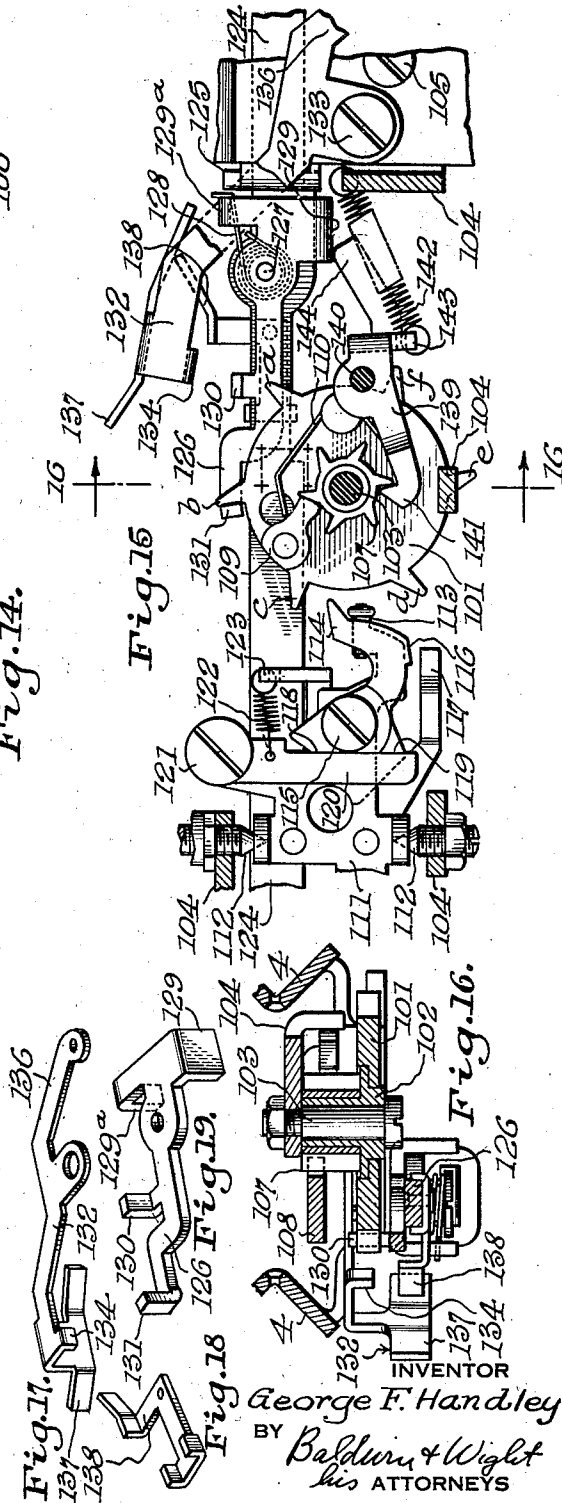
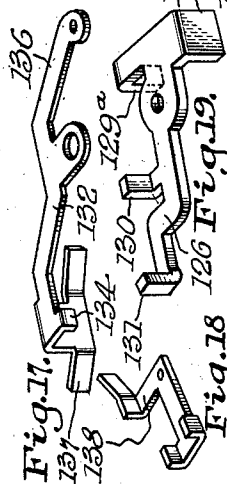


Fig. 15.



UNITED STATES PATENT OFFICE

2,366,022

TYPEWRITING MACHINE

George F. Handley, Glendale, N. Y., assignor to
Royal Typewriter Company, Inc., New York,
N. Y., a corporation of New York

Application June 19, 1942, Serial No. 447,701

10 Claims. (Cl. 197—133)

This invention relates to typewriting machines and more particularly to typewriting machines equipped or adapted for writing on ribbons or tapes, as is commonly done in the sending or receiving of telegrams.

An object of the invention is to provide an improved arrangement for mounting a supply of type-impression-receiving tape or ribbon on typewriting machines.

Another object is to provide a tape or ribbon mounting of the character stated and which is adapted to be positioned at or preferably somewhat beyond one end of the typewriter when in use and in folded or stored position compactly over the typewriter when the latter is not in use so as to facilitate enclosing of the whole assembly in a housing such as a portable typewriter carrying case.

Another object is to provide a new and improved removable tape or ribbon spool cover.

Another object is to provide new, simple, and improved means for guiding a tape or ribbon to and away from the typing or printing point.

Another object is to provide a new and improved device for severing from the tape or ribbon a portion thereof which has been typed or printed upon.

Telegraphic messages usually are typed with wider than usual type faces and the step-by-step carriage movements consequently are longer than in standard or portable typewriters. In adapting a portable typewriter for writing with large type faces and relatively large feed movement steps there has been difficulty in properly positioning the carriage at its line starting position because of a tendency of the carriage to move back a step to the left after having been brought up against the center stop and then released. One way of overcoming this difficulty is to provide a check pawl for preventing reverse rotation of the escapement wheel, but such a pawl will interfere with the operation of back spacing mechanism of the kind in which the back spacing is effected by rotating the escapement wheel reversely. An object of the present invention is to provide mechanism including a back check pawl for preventing the undesirable leftward step movement of the carriage from its line starting position in combination with means responsive to actuation of the back spacing mechanism actuator for disabling the pawl so as to permit back spacing movement of the escapement wheel. Such mechanism is disclosed herein and is disclosed and claimed in divisional application Serial Number 480,368 filed March 24, 1943.

Other objects will become apparent from a reading of the following description, the appended claims, and the accompanying drawings, in which:

5 Figure 1 is a top plan view of a typewriter embodying the invention, with some conventional typewriter parts omitted and with a movable tape supply device shown in extended or operative position;

10 Figure 2 is an end view mainly in elevation but with some parts shown in section, this view being on a larger scale than Figure 1;

Figure 3 is a top view partly in section and partly in elevation showing ribbon feeding mechanism as viewed from above in Figure 2;

15 Figure 4 is a fragmentary sectional view on the line 4—4 of Figure 2;

Figure 5 is a vertical sectional view through a feed roller showing how it is mounted on a feed roller drive shaft;

20 Figure 6 is a fragmentary sectional view on the line 6—6 of Figure 2;

Figure 7 is a fragmentary sectional view on the irregular lines 7—7 of Figure 1, drawn on an enlarged scale;

25 Figure 8 is a fragmentary view mainly in elevation but with some parts shown in section on the line 8—8 of Figure 7;

Figure 9 is a detail view in vertical section on the line 9—9 of Figure 1 showing an arrangement for applying a drag or frictional resistance to the rotation of a tape supply roll;

Figure 10 is a perspective view partly in section showing the mounting of tape finger guides on a card guide scale;

30 Figure 11 is a fragmentary view looking substantially at right angles to the irregular line 11—11 in Figure 2;

Figure 12 is a view partly in end elevation and partly in section showing on an enlarged scale the relative positions of a platen, a type impression receiving tape, and ink ribbon mechanism;

Figure 13 is a perspective view of a typewriter carrying case and typewriter embodying the invention in place in the case and conditioned to permit closing of the case cover;

Figure 14 is a fragmentary top view mainly in elevation but with some parts shown in section, illustrating escapement mechanism and back spacing mechanism associated therewith, the parts being shown in their inactive positions as when the typewriter carriage is at rest;

Figure 15 is a view similar to Figure 14 but with the parts shown in the positions they oc-

copy at the conclusion of a back spacing operation;

Figure 16 is a section on the line 16—16 of Figure 15;

Figure 17 is a perspective view of a back spacer check pawl;

Figure 18 is a perspective view of a part engageable with the back spacing check pawl for disabling the latter; and

Figure 19 is a perspective view of a back spacing pawl.

Mechanism embodying the invention may be incorporated in typewriting or like machines of various kinds. For the purposes of illustration the invention is disclosed as being embodied in a typewriter having the general organization of parts and features of the Royal Portable machine. The typewriter includes a main frame A which is adapted to be housed with the mechanism supported thereon in a carrying case B as indicated in Figure 13. The frame A comprises end walls 1 and 2 and a mask or cover 3 all of known construction. A pair of bottom rails 4—4 supported on the main frame mounts a carriage C through the medium of carriage rails 5—5 and ball bearings 6 interposed between the respective pairs of rails 4 and 5, the carriage being thus mounted for letter spacing and return movements endwise of the frame. Mounted in the usual manner on the carriage C is a cylinder or platen 7 so positioned that the writing line is behind the cover 3 and somewhat below the top of the cover as shown in Figures 2 and 7. The usual complement of type bars is provided, one type bar being shown at 8 in Figures 1 and 2. The type bars may be operated by any suitable mechanism including key levers 9. The platen is equipped with finger knobs 10—10 and the usual combined line spacing and carriage return lever is shown at 11. The parts referred to thus far are usual or conventional equipment in machines of the character referred to. Other conventional parts will be referred to as the description proceeds and still others not referred to specifically in the description will be recognized as being shown in the drawings.

In its general nature the mechanism for supplying and feeding type impression receiving tape along the platen preferably includes a tape supply means generally designated D mounted adjacent the right hand end of the main frame A, means for training or guiding tape from the supply D along the writing line, and mechanism generally designated E mounted on the left hand end wall 2 of the frame A and being adapted to pull or draw the tape from the supply means D in response to letter spacing movement of the carriage, the arrangement being such that the tape is fed at exactly the same speed as the carriage travel.

The type impression receiving tape is relatively thick as compared to carbon paper ribbon often used in roll form in connection with manifold work. Consequently in order to provide a tape supply which will last for a substantial time without requiring frequent replenishment, the supply necessarily is somewhat bulky. One feature of the present invention is to provide for the mounting of a large and somewhat bulky tape supply so that it may be properly positioned with respect to the typewriter for convenient feeding, and it also is adapted to be positioned compactly with respect to the typewriter so as to permit the typewriter and the tape supply to be readily housed or enclosed in the carrying

case B or other case the size of commonly used typewriter cases. In its general nature this feature of the invention is based upon the provision of a means for supporting a tape supply selectively in two positions, in the first of which the supply is positioned beyond one end of a typewriter frame entirely clear of the keys and other operating mechanism, and in the other of which positions the supply is located compactly above the cover 3 and between the ends 1 and 2 of the main frame so as not to obstruct or interfere with the closing of the lid or cover of the carrying case B.

In the illustrated embodiment, a supply of tape 12 is wound upon a spool 13 and the spool is so supported that it may be positioned selectively as shown in Figure 1 for operation, or as shown in Figure 13 for compactness. For thus mounting the spool 13 a bracket 14 secured by screws 15 to the frame A is formed with upper and lower flanges 16 and 17 which mount a vertical shaft 18 for combined pivotal and sliding movement. The shaft 18 is secured to and depends from a plate 19. A bearing disc 20 on the bottom of the plate 19 is adapted to rest upon the flange 16 when the parts are in the position shown in full lines in Figures 1 and 7 wherein the parts are conditioned for supplying tape to be fed along the writing line. A stud 21 secured to the plate 19 at a point offset from or eccentric to the shaft 18 extends upwardly for journalling the spool 13. The spool is provided with a core 22 and is formed with a central opening which fits snugly but with operating clearance over the stud 21. A sleeve 23 fitted within the core 22 and bored to receive the stud 21 is held in place by a washer 24 and screw 25 threaded into the top of the stud 21. A ball bearing assembly 26 interposed between the top of the plate 19 and the bottom of the spool 13 anti-frictionally supports the spool for rotation about the stud 21. When the machine is conditioned for operation with the plate 19 swung outwardly to the position shown in full lines in Figures 1 and 7, the spool will be positioned at a level generally below the top of the cover 3 and the tape 12 as it comes off the spool will be generally at the level of the printing line on the platen, the tape extending behind the cover 3 and below the top of the cover. After leaving the spool 13 the tape passes in contact with a guide roller 27 and thence along the printing line without substantial deviation from the level of the spool. A bracket 28 and pintle 29 mounted on the plate 19 pivotally support a pressure finger 30 urged into contact with the rolled tape by a spring 31, so as frictionally to retard rotation of the spool and prevent accidental unwinding of the tape when the machine is not in use. Guard fingers 32 may be provided for preventing the spool 13 from tipping.

A cover 33 adapted to be positioned removably on the plate 19 and above the spool 13 is provided with spacer blocks 34 and pins 35 adapted to project into bores 36 in studs 37 extending upwardly from the plate 19. The pins 35 are formed with circumferential grooves 38 adapted to receive detent buttons 39 urged into the grooves 38 by springs 40. The lower ends of the pins 35 are rounded or somewhat pointed so that when the pins are moved down into the bores in the studs 37, the detent buttons 39 will be cammed outwardly and then will move into the grooves 38 for releasably holding the cover 33 in place. Preferably the cover 33 is formed with a sight opening 41 to permit the operator to observe at

a glance the amount of tape remaining on the spool at any time.

When it is desired to store the entire machine in the carrying case B, the plate 19 and the spool 13 carried thereon are raised to the position shown in dotted lines in Figure 7, the raising movement being limited by engagement of a collar 42 on the shaft 18 with the bottom of the frame flange 16. Then the plate and spool are swung inwardly about the axis of the shaft 18 to the position shown in Figure 13 wherein the plate 19 and spool 13 are located directly above the typewriter between the end walls 1 and 2 and generally within the horizontal margins of the main frame. In order to prevent the plate 19 from resting upon the cover 3, a projection 43 is secured to the plate 19 and extends downwardly so that its lower end may engage the flange 16 when the plate is in its Figure 13 position, thereby holding plate 19 above the cover 3. When the plate 19 is so positioned, the projection 43 will be located as indicated in dotted lines at 43^a in Figure 8. When the plate 19 and spool 13 are moved toward their positions beyond the end wall 1, the projection 43 will ride over the flange 16 until it arrives over an opening 43^b in the flange 16. The projection 43 is then free to move downwardly through the opening 43^b so as to permit the plate 19 and spool 13 to be lowered to their operative positions.

It is desirable that the plate 19 and spool 13 be maintained against accidental displacement from their operative positions. In accordance with the invention, the plate 19 is equipped with a locking pin 44 having a large diameter portion 45 adjacent the plate and a smaller diameter portion 46 at its lower end. The flange 16 is formed with an arcuate entrance opening 47 terminating in an aperture 48 of greater width than the entrance opening 47. In operation, when the plate 19 is moved from its Figure 13 position toward its operative position, the reduced end portion 46 of the locking pin 45 will move horizontally through the entrance opening 47 until the enlarged diameter portion 45 of the locking pin is positioned over the aperture 48. The plate 19 may then be lowered so as to project the enlarged locking pin 45 into the aperture 48. The pin portion 45 is wider than the entrance opening 47 so that the pin cannot move out of the aperture 48 without first being lifted. Thus the parts are held releasably in their operative positions and cannot be displaced by accident or by the pull incident to the feeding of the tape 12.

Guides for positioning the tape 12 accurately at the printing point may be carried upon the letter spacing guide scale member 49. As usual, the member 49 is formed with the clearance opening 50 for accommodating type heads and is marked with scale divisions 51. The tape guides shown at 52 are supported on the member 49 at both sides of the clearance opening 50 so that there is only a short unsupported length of tape at and immediately adjacent the printing point. The guides 52 are of general channel shape and each includes a web 53 and top and bottom flange portions 54 and 55 having respectively intumed ends 56 and 57. The intumed end portions 57 are secured to the scale member 49 by rivets 58. As shown in Figures 11 and 12 the scale member 49 is secured by screws 59 to a frame bracket 60. The usual vibrator 61 is provided for the ink ribbon 62 and a type bar guide 63 is positioned in front of the clearance opening 50.

After being moved to the left and beyond the guides 52 the tape is led to the feeding mechanism E which is adapted to pull or draw the tape along the writing line only during letter spacing movement of the carriage and at a rate exactly equal to the letter carriage space travel. The mechanism E may be constructed to operate on the same principle as the mechanism disclosed and claimed in United States Letters Patent to Handley No. 2,280,702 granted April 21, 1942. It includes a bracket assembly comprising sections 64 and 65 secured to the main frame A by screws 66. The bracket section 64 is formed at its top with an upper shelf 67 which overlies a lower shelf 68 formed at the top of the bracket section 65. The section 64 moreover is formed with two spaced vertical wings 69 and 70. A shaft 71 journaled on the wings 69 and 70 supports for free rotation a pulley 72 loose on the shaft. The pulley is mounted substantially in the same vertical plane as the spring barrel 73 which provides power for drawing the carriage to the left during letter spacing travel. The pulley is held against movement axially of the shaft by a collar 74 and ratchet wheel 75 both secured to the shaft and positioned respectively on opposite sides of the pulley. A carriage draw band 76 secured to the spring barrel 73 as at 77 and secured to the carriage as at 78 passes around the pulley 72 so that as the carriage is moved the draw band 76 will rotate the pulley. A ratchet pawl 79 pivoted on the pulley 72 is engageable with the ratchet wheel 75 for driving the latter and the shaft 71 when the carriage moves in the letter spacing direction. During return movement of the carriage and reverse rotation of the pulley 72 the pawl 79 rides idly over the ratchet wheel 75, the latter being held against reverse rotation by a pawl 81 pivoted on the wing 70 and being engageable with a ratchet wheel 80 secured to the shaft 71. A vertical shaft 82 journaled on the shelf portions 67 and 68 is equipped at its upper end with a rubber covered feed roll 83 which fits over a reduced part 84 on the shaft 82 and is held in place by a nut 85 bearing against a disc 86 which presses the feed roll 83 against the shoulder formed at the juncture of the larger and the smaller portions of the shaft 82. A bevel gear 87 secured to the shaft 71 meshes with a bevel gear 88 fixed to the shaft 82 so that during rotation of the shaft 71, the feed roll 83 will be driven. Tape fed to the mechanism E passes between a guide finger 89 and an idler guide roller 90 rotatable on a stud 91 fixed to the shelf portion 67. As shown in Figure 3 the tape passes about half way around the idler roller 90 and thence behind and in contact with the feed roll 86, the free end 12^f of the ribbon then extending outwardly to the left of the typewriter.

In order to facilitate removal of the tape free end portion 12^f, a severing device is mounted in cooperative and convenient association with the feed roller 86. In the form shown this device includes a cutting edge 92 carried by a bail 93 pivotally supported on a pin 94 carried by the shelf 67. As shown, the pin 94 may be formed with a shoulder 95 adapted to be drawn down against the shelf by a nut 96. The bail 93 mounts a pressure roller 97 adapted to be held releasably against the tape 12 on the feed roller 86 by a spring 98 interposed between a fixed post 99 and an arm 100 extending downwardly from the bail.

In operation when the carriage is moved to the left in the letter spacing direction the draw band 76 will rotate the pulley 72 to drive the shafts 71 and 82 and the feed roll 83. The tape 12 will be pulled along by its frictional contact with the feed roll 83 and discharged beyond the cutting edge 92. The diameters of the pulleys 72 and the feeding roll 83 are so related to the diameter of the spring barrel 73 that the tape 12 will be fed in unison with movement of the platen 7, thus assuring that a fresh unused portion of the tape will be presented for receiving each type impression and all the type impressions will be uniformly spaced. When typed matter of a length which may be removed as a unit has passed beyond the severing edge 92, it may be detached readily by simply drawing the free end portion 12' of the tape forwardly against the edge 92. It will be seen that the spring 98 will yield to permit the bail 93 to be moved selectively to its normal operating position or to a position for facilitating threading of the tape between the feed roll 83 and pressure roll 97 when preparing the machine for operation.

Escapement mechanism, back spacing mechanism, and associated controlling parts are shown in Figures 14 to 19 inclusive. Because of the large width of the type faces and the resultant increased length of letter spacing step movements, the escapement wheel 101 is provided with only six teeth *a, b, c, d, e, and f*. The escapement wheel 101 is fast with a bushing 102 which is freely rotatable on a stud shaft 103 secured to a bracket 104 which is attached by screws 105 to plates 106 connecting the bottom rails 4. A pinion 107 is mounted to rotate freely on the bushing 102 and meshes with the usual carriage feed rack 108. A pawl 109 pivoted on the escapement wheel 101 is urged into engagement with the pinion 107 by a spring 110. The arrangement is such that the rack 108 tends to rotate the pinion 107 counterclockwise as viewed in Figures 14 and 15, rotation of the pinion, however, being normally restrained by the pawl 109 carried by the escapement wheel 101 which normally is held stationary by escapement dog mechanism which may be similar to that disclosed in the patent to Handley No. 1,792,012 granted February 10, 1931. It includes an escapement frame 111 pivotally mounted on the bracket 104 as at 112—112. The frame 111 carries a relatively fixed dog 113. A movable dog 114 is pivoted as at 115 on the frame 111 and is formed with a stop 116 engageable with a stop arm 117 on the frame 111 when the parts are in their positions of rest as shown in Figure 14. In this position the escapement pinion 107 and wheel 101 are being urged counterclockwise but rotation is prevented by engagement of the escapement wheel tooth *b* with the dog 114, the stop 116 of which is pressed against the frame stop 117. The dog 114 is formed with heels 118 and 119 adapted to be engaged by a lever 120 pivoted at 121 on the frame 111 and urged against the heels by a spring 122 anchored on a frame ear 123. The operation of this class of escapement dog mechanism is well known and it is believed unnecessary to describe it in detail.

The back spacing mechanism per se is fundamentally similar to that disclosed in the Handley Patent No. 1,792,012 previously referred to. It includes an actuator slide 124 mounted to reciprocate in ears 125 formed on the bracket 104. A back spacing pawl 126 pivoted on the slide member 124 as at 127 is urged counterclockwise as viewed in Figure 14 by a spring 128. Movement

of the pawl by the spring is limited by engagement of a pawl ear 129 with the bottom of the actuator slide 124, and movement of the pawl in the opposite direction is limited by engagement of a pawl ear 129^a with the top of the slide 124. The pawl 126 is formed with two teeth or noses 130 and 131 spaced longitudinally of the direction of movement of the slide 124.

In operation, mechanism including a key lever or the like (not shown) is actuated to move the slide 124 toward the right from its Figure 14 position. The pawl nose 130 will engage the escapement wheel tooth *a* and rotate the escapement wheel 101 reversely, thus also driving the escapement pinion 107 reversely so as to move the carriage rack 108 and carriage in the return direction. Because of the wide circumferential spacing of the escapement teeth, the pawl nose 130 would slip off the tooth *a* before back spacing equivalent to a full letter space increment could be effected. However, before the nose 130 can slip off the tooth *a*, the trailing pawl nose 131 will move in behind the tooth *b* and continue to move the escapement wheel reversely until the tooth *c* has moved above the escapement dogs 113 and 114 as shown in Figure 15. In this way the completion of a back spacing movement equivalent to a letter spacing increment is assured.

It has been found that due to the very great circumferential spacing of the escapement wheel teeth, manual sweep movement of the carriage in the return direction and up against the center stop (not shown) followed by release of the carriage may result in movement of the carriage in the letter spacing direction, permitting the escapement wheel to move about one tooth thus feeding the tape almost a complete letter space. This of course would result in an uneven spacing at the beginning of typing after the carriage had been returned. To overcome this difficulty means are provided for preventing reverse rotation of the escapement wheel 101 when the carriage is returned manually and for automatically permitting the escapement wheel to be rotated reversely when the back spacing mechanism is operated. In the form shown a check pawl 132 pivoted as at 133 on the right hand track plate 106 has a nose 134 normally positioned as shown in Figure 14 just behind an escapement wheel tooth two removed from the tooth held by the escapement dog 114. A spring 135 interposed between the rearmost rail 4 and a tail 136 on the pawl 132 yieldably holds the pawl 132 in this position. During carriage letter spacing travel when the escapement wheel rotates counterclockwise as shown in Figure 14, the pawl 132 will be lifted by escapement wheel teeth so that they may pass freely under the pawl. However, during carriage return sweep movement the pawl 132 will hold the escapement wheel 101 against reverse rotation, movement of the carriage being permitted by the freedom of the escapement pinion 107 to move reversely while the escapement wheel is held stationary.

When the back spacing mechanism is operated, the check pawl 132 must be disabled or rendered ineffective so as to permit the escapement wheel 101 to rotate reversely (clockwise as viewed in Figure 14). The check pawl 132 is formed with a cam 137 which is engageable with a part 138 carried by the back spacing pawl 126. Normally the part 138 simply supports the cam 137 and back check pawl 132 in the position shown in Figure 14, but when the actuator 124 is moved to the right, the part 138 will slide under the

cam 137 and lift the pawl 132 out of the path of the escapement wheel teeth as shown in Figure 15, thus permitting the back spacing pawl 126 to rotate the escapement wheel 101 reversely in the manner previously described. The pawl 132 serves the dual purpose of avoiding back lash or overthrow movement of the escapement wheel 101 and also preventing uneven letter spacing following the manual return of the carriage to a new line starting position.

The escapement and back spacing mechanism may be provided with a back space pinion lock comprising a lever 139 pivoted on the bracket 104 as at 140 and being provided with a hooked end 141 engageable with the escapement pinion 107. A spring 142 interposed between the bracket 104 and an ear 143 on the lever 139 normally holds the lever in its inoperative position as shown in Figure 14, wherein the hooked end 141 is held against a portion of the bracket 104. Toward the end of a back spacing movement the ear 129 on the back spacing pawl 126 engages a tail 144 on the lever 139 so as to rock the lever against the urge of the spring 142 and bring the hooked end 141 into locking engagement with the escapement pinion 107.

The mechanism disclosed herein embodies the invention in the form now preferred, but it will be understood that changes may be made without departing from the invention as defined in the appended claims.

I claim:

1. In a tape or ribbon supply mounting for typewriting or like machines, a frame part at one end of the machine main frame, a tape or ribbon supply spool; a journal for said spool; and means mounting said journal on said frame part for movement selectively to a position in which the spool is journalled generally beyond said end of said main frame and to a position over said main frame and generally within the horizontal margins of said main frame.

2. In a typewriter or like machine, a main frame; a cover thereon, a carriage and platen mounted on said main frame to travel behind said cover; a tape or ribbon supply spool; a journal for said spool; and means mounting said journal on said main frame for movement selectively to a position in which the spool is located generally beyond one end of the main frame and at a level such that tape or ribbon fed from said spool will, without substantial vertical deviation from the level of the spool, pass along the printing line of the platen below the top of said cover, and to another position in which the spool is located at a higher level and is positioned over said cover and between the ends of said main frame.

3. In a tape or ribbon supply mounting for typewriting or like machines, a frame part at one end of the machine main frame, a tape or ribbon supply spool; a journal for said spool; a plate on which said journal is carried; and means pivotally mounting said plate on said frame part to swing selectively to two positions, one generally beyond said end of the main frame, and the other over the main frame and generally within the horizontal margins thereof.

4. In a tape or ribbon supply mounting for typewriting or like machines, a frame part at one end of the machine main frame, a tape or ribbon supply spool; a journal for said spool; a plate on which said journal is carried; means pivotally mounting said plate on said frame part to swing selectively to two positions, one gener-

ally beyond said end of the main frame, and the other generally over the main frame and between the ends thereof; an aperture in said frame part; and a pin depending from said plate and being adapted to be received in said aperture for holding said plate in said one position.

5. In a tape or ribbon supply mounting for typewriting or like machines, a frame part at one end of the machine main frame, a tape or ribbon supply spool; a journal for said spool; a plate on which said journal is carried; and means mounting said plate on said frame part for pivotal movement about an axis eccentric to the journal axis and for independent straight line shifting movement along said eccentric axis.

6. In a tape or ribbon supply mounting for typewriting or like machines, a frame part at one end of the machine main frame, a tape or ribbon supply spool; a journal for said spool; a plate on which said journal is carried; means mounting said plate on said frame part for pivotal movement about a vertical axis eccentric to the journal axis and for independent straight line shifting movement along said vertical axis; and means for supporting said plate selectively at two levels with respect to said frame part.

7. In a tape or ribbon supply mounting for typewriting or like machines, a frame part at one end of the machine main frame, a tape or ribbon supply spool; a journal for said spool; a plate on which said journal is carried; means mounting said plate on said frame part for vertical movement and for pivotal movement about an axis eccentric to the journal axis; an opening in said frame part; and a projection depending from said plate and adapted to extend down through said opening to permit said plate to be supported at a relatively low level on said frame part, said projection being adapted to be lifted with said plate clear of said opening and then removed laterally and away from said opening to engage the frame part and support the plate at a relatively high level.

8. In a tape or ribbon supply mounting for typewriting or like machines, a frame part at one end of the machine main frame, a tape or ribbon supply spool; a journal for said spool; a plate on which said journal is carried; a vertical shaft mounted for both rotary and sliding movement on said frame part; a plate supported on said shaft; and means for fixing selectively two different levels of the shaft and plate with respect to said frame part.

9. In a tape or ribbon supply mounting for typewriting or like machines, a frame part at one end of the machine main frame, a tape or ribbon supply spool; a journal for said spool; a plate on which said journal is carried; a vertical shaft mounted for both rotary and sliding movement on said frame part; a plate supported on said shaft; an opening in said frame part; and a depending projection on said plate adapted to be received in said opening when the plate is in one angular position with respect to the frame part to permit said plate to descend to a relatively low level, the projection being adapted to rest upon said frame part when the plate is in another angular position to hold the plate up at a relatively high level.

10. In a tape or ribbon supply mounting for typewriting or like machines, a horizontal frame part; a vertical shaft mounted for sliding and rotary movements on said frame part; a horizontal plate supported on said shaft above said frame

part; an aperture in said frame part; a pin depending from said plate and having a locking portion of such size as to be insertable by vertical movement into said aperture, an entrance opening extending from an edge of said frame part horizontally in to said aperture and being of less width than said pin locking portion; a reduced

portion on the lower end of said pin of such small size as to permit said reduced portion to move horizontally through said entrance opening to position said locking portion above said aperture; and means for supporting a ribbon or tape supply on said plate.

GEORGE F. HANDLEY.