Aug. 10, 1926. 1,595,153

G. F. HANDLEY

TYPEWRITING MACHINE

Filed Jan. 19, 1926 2 Sheets-Sheet 1

Fig. 1.

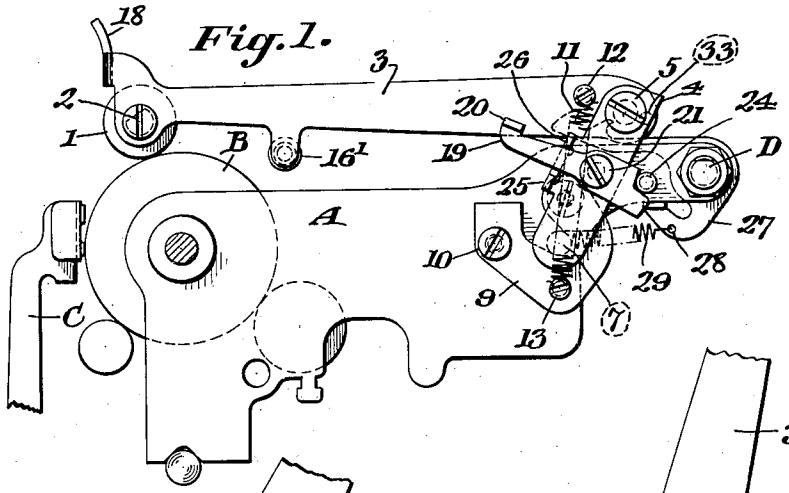


Fig. 6.

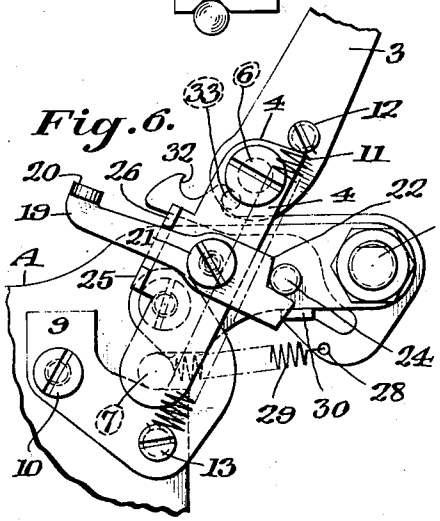


Fig. 5.

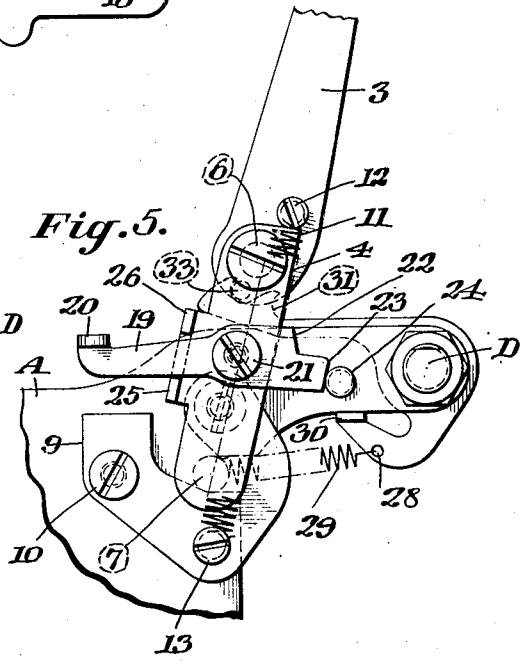


Fig. 10.

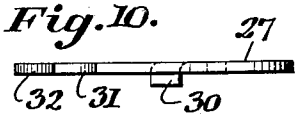
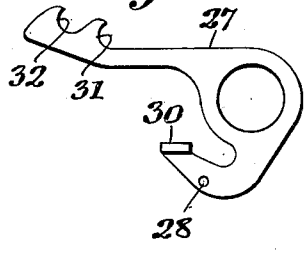


Fig. 11.



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Fig. 2.

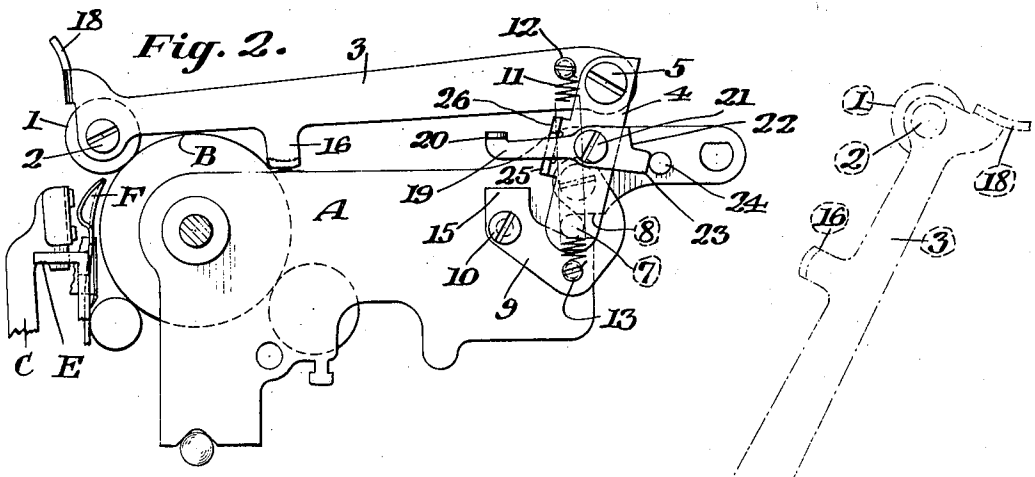


Fig. 4.

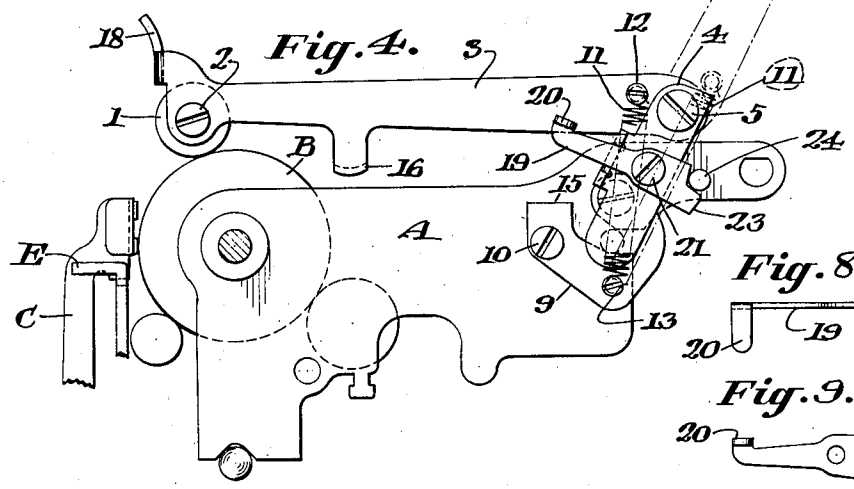


Fig. 8.

Fig. 9.

Fig. 3.

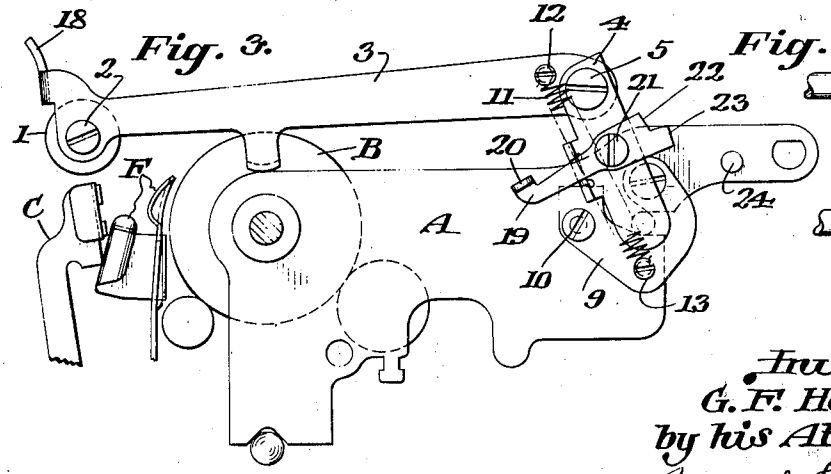
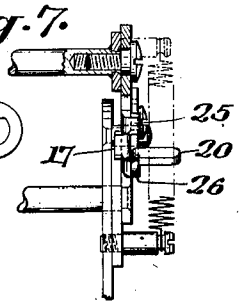


Fig. 7.



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Patented Aug. 10, 1926. 1,595,153

UNITED STATES PATENT OFFICE.

GEORGE F. HANDLEY, OF GLENDALE, NEW YORK, ASSIGNOR TO ROYAL TYPEWRITER COMPANY, INC., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

TYPEWRITING MACHINE.

Application filed January 19, 1926. Serial No. 82,352.

This invention relates to paper feeding and guiding mechanism of typewriting machines and is in the nature of an improvement upon the mechanism shown in the patent to Dowd, 1,547,305. In the construction shown in said patent there is a movable frame pivoted to the typewriter carriage frame and a roll carrying bail is pivoted to said movable frame. This permits the bail and frame to be moved forward from an operative position in which the rolls bear against the platen to a position in which the rolls are in front of the platen, thus permitting the easy insertion or adjustment of paper or cards. At the same time, the roll carrying bail may be moved about its pivotal connection with the frame to a rearward inoperative position in which the sides of the bail and frame are substantially in a direct line and are spring held in this position.

When it is desired to write upon small cards or labels it is found desirable to have the rolls engage the platen considerably closer to the printing line than is the case when usual sheets of paper are being written upon. Previously it has been necessary to manufacture bails of two different sizes and to equip the machines with whichever one is desired.

An object of this invention is to provide means by which the roll carrying bail may be moved to two operative positions in one of which the rolls engage the platen much nearer the printing line than in the other. The bail is maintained against accidental displacement from either of these positions. It may also be moved to its rearward inoperative position regardless of which operative position it may be occupying.

Moreover in the patented construction, above referred to, whenever the bail and frame are in their rear inoperative position and it is desired to move the bail to operative position, the bail and frame will turn as a unit and the feed rolls will therefore take up the position in front of the platen from which the operator must push the frame and rolls to their operative position with the rolls engaging the platen.

This invention has for a further object the provision of means whereby when the roll carrying bail is in its rear inoperative position and is moved forward it will move directly to its operative position with the rolls engaging the platen. Furthermore it will move to that one of the two operative positions from which it has previously been moved to the inoperative position.

Particularly stated, this means for causing movement directly to the operative position is disclosed and claimed in an application of Gilbert M. Scherer, Serial No. 82,343 filed Jan. 19, 1926 and this application is limited to mechanism for attaining this result in cooperation particularly with the other features of the invention herein disclosed and claimed.

In the drawings:

Figure 1 is a side elevation of the right side of the machine showing the rolls in one of their operative positions.

Figure 2 is a similar view showing the rolls in their other operative position.

Figure 3 is a similar view showing the bail moved to bring the rolls to a position in front of the platen.

Figure 4 is a view similar to Figure 1 but showing in dotted lines the rear inoperative position of the bail.

Figure 5 is a fragmentary view of the bail and the means which determines one of the operative positions of the rolls.

Figure 6 is a similar view showing the parts in the position which determines the other operative position.

Figure 7 is a top plan view partly in section of the mechanism shown in Figures 5 and 6.

Figure 8 is an edge view of a stop lever determining the two positions.

Figure 9 is a side elevation of the same lever.

Figure 10 is an edge view of a latch mechanism which causes the movement from inoperative directly to the operative position of the rolls.

Figure 11 is a side elevation of the same latch.

The invention is independent of any particular type of typewriting machines and accordingly there is shown in the drawings merely the side frame A of the carriage, the platen B mounted therein, type bar C in its printing position, a rod D which is or may be the usual stop carrying rod for tabulating and margin stops, a type guide E, and card holder F. These parts may be of any old or desired construction and as illustrated

disclose the structure of the well known Royal machine.

It is further to be understood that the reference to typewriting machines is intended to cover combined typewriting and adding machines, computing machines, or similar machines to which the invention may be applicable.

Rotatable rolls 1 are carried by a rod 2 which is supported on the front end of arms 3, which arms are pivoted at their rear ends to links 4 by means of screws 5 which pass through said arms and links and thread into the ends of a rod 6. The rod 2, side arms 3, and rod 6, form a rectangular frame of light but strong construction which is referred to throughout as a roll carrying bail.

The links 4 are connected at their lower ends by a rod 7 which is mounted in a cut out 8 in the rear of the carriage side frame and is held positioned by means of yokes 9 which are attached to the side frame by means of screws or similar fastenings 10. Springs 11 are attached at one end to pins 12 on the side arms 3 and at their other ends to pins 13 carried by the yokes 9. The position of these springs is such relative to the pivot points of the side arms 3 that it tends to hold the rolls 1 in engagement with the platen when in the operative position of either Figure 1 or Figure 2 and also holds the bail and links in the inoperative position shown in dotted line in Figure 4. An ear 17, offset from the side arms or links 4, contacts with the upper end 15 of the yoke 19 to limit the forward movement of the links and bail when the parts are moved to the Figure 3 position. At the time the bail is in the second operative position as shown in Figure 2, the downward projection 16 having an offset bend, clears the upper edge of the side frame A of the carriage. In the form shown in Figure 1 this downward projection is provided with a roller 16'. The bail frame may be provided with a finger piece 18 for convenience in moving the bail.

A short lever 19 provided with a finger piece 20 is pivoted by a screw 21 to the side of one of the links 4. The rear end of this lever is stepped forming two stop portions 22 and 23 which are adapted to coact with a stop 24 carried by the carriage frame. In front of the pivot of this lever the link 4 is provided with two offset ears 25 and 26 which limit the movement of the lever in either direction about its pivot. When the lever is in the position shown in Figure 6, so that the stop portion 22 coacts with the stop 24 and the bail is swung forward, it will move to the Figure 1 position. If, however, the lever 19 has been moved to the position shown in Figure 5, in which the stop portion 23 coacts with the stop 24, the forward movement of the bail will bring the rolls to the position shown in Figure 2. The friction of the lever 19 on its pivot is sufficient to hold it in either position to which it may have been adjusted. It is obvious that the two positions of the links 4 have no effect whatever upon the swinging movement of the bail, which can be moved rearwardly to inoperative position from either of its operative positions. Also the bail may be moved forward to the position shown in Figure 3 from either the position shown in Figure 5 or that of Figure 6 and upon being returned will return to the position from which it was moved.

As above stated, in the prior construction assuming the parts to be in the dotted line position of Figure 4, if the bail were moved forwardly it would move at once to the position shown in Figure 3 and to bring the same to operative position the operator is obliged to give the bail a rearward movement about the pivots of the links 4. In the construction herein disclosed, means are provided which will compel the bail to move from its rear inoperative position directly to its operative position with the rolls in contact with the platen and moreover will cause it to move to whichever of the operative positions it had occupied immediately preceding its rearward movement.

This mechanism comprises a detent member 27 pivotally mounted on the stop rod D immediately inside the carriage side frame A. It has a lower depending portion to which is fastened at 28 one end of the spring 29, the other end of which is attached to the rod 7. This spring tends to pull the member 27 around its pivotal axis and to raise the upper part of said member, its motion in this direction being limited by an offset ear 30 which comes in contact with the under edge of a portion of the carriage frame. The upper and forward part of the detent member 27 is provided with two hooks 31 and 32. The side member 3 at this side of the machine is provided with a pin 33 adapted to coact with either of said hooks.

Comparison of Figures 5 and 6 will show that when the lever 19 is positioned so that its stop portion 22 contacts with the pin 24 and the bail has been moved to its rearward position, then the pin 33 will be in engagement with the hook 31. At this time if the bail is moved forwardly the engagement of the pin and hook will prevent the bail and links 4 from moving as a unit and will cause the bail to turn about its pivotal axis with the links 4 and thereby move directly to the Figure 1 position. After the bail has completed the greater portion of its forward movement the pin 33 will be disengaged from the hook 31 but the spring 11 will complete the downward movement of the bail to the Figure 1 position. Similarly, if the parts are in the position shown in Figure 5 in which the stop portion 23 of the lever 19

is in engagement with the stop 24, then the pin 33 cooperates with the hook 32 to produce the same result when the bail is moved forward from its rear position. At this time the bail moves directly to the position shown in Figure 2. If at any time when the parts are in the position shown in either Figures 1, 2 or 3, the bail should be moved about its pivotal axis so that the side arms 3 are substantially parallel with the links 4, before the links are moved about their pivotal axis, then during the rearward movement of the bail and links the pin 33 will contact with the curved upper portion of the hook 32 or 31 or both, and will cam the latch member 27 downwardly against the tension of the spring 29 until the pin has passed the hooks 32 and 31.

It will be apparent that the objects of the invention before set forth have been attained by the mechanism described in a simple and efficient manner. There is disclosed a roll carrying bail which is mounted to turn about two axes and which can take up two operative positions in which the rolls engage the platen, a position in which the rolls lie in front of the platen, and an inoperative position in which the bail and rolls are in the rear of the platen. When the mechanism for determining which operative position the bail is to occupy, is once set it requires no further attention until it is desired to change the same. When set the bail may be moved to and from either of the three positions which it is capable of occupying at that time without any particular attention on the part of the operator.

It is apparent that various detail changes may be made without in any way departing from the spirit of the invention which is to be regarded as limited only by the scope of the appended claims.

I claim:

1. In a typewriting machine having a carriage and a platen mounted therein, a roll carrying bail movably mounted on said carriage, and means determining two operative positions of said bail, in which the rolls engage the platen at different distances from the printing line.

2. In a typewriting machine having a carriage and a platen mounted therein, a roll carrying bail movably mounted on said carriage, and means determining two operative positions of said bail, in which the rolls engage the platen at different distances from the printing line, said bail being so mounted that it may be moved to a position in front of the platen.

3. In a typewriting machine having a carriage and a platen mounted therein, a roll carrying bail movably mounted on said carriage, and means determining two operative positions of said bail, in which the rolls engage the platen at different distances from the printing line, said bail being so mounted that it may be moved to an inoperative position in the rear of the platen.

4. In a typewriting machine having a carriage and a platen mounted therein, a roll carrying bail movably mounted on said carriage, and means determining two operative positions of said bail, in which the rolls engage the platen at different distances from the printing line, said bail being so mounted that it may be moved to a position in front of the platen and to an inoperative position in the rear thereof.

5. In a typewriting machine having a carriage and a platen mounted therein, a roll carrying bail movably mounted on said carriage, means determining two operative positions of said bail, in which the rolls engage the platen at different distances from the printing line, said bail being so mounted that it may be moved to a position in front of the platen and to an inoperative position in the rear thereof, and means tending to maintain said bail in any of said positions.

6. In a typewriting machine having a carriage and a platen mounted therein, a roll carrying bail movably mounted on the carriage, means determining two operative positions of said bail in which the rolls engage the platen at different distances from the printing line, means determining a rear inoperative position of said bail, and means which cause the bail when moved forward from said inoperative position to take one of said operative positions.

7. In a typewriting machine having a carriage and a platen mounted therein, a roll carrying bail movably mounted on the carriage, means determining two operative positions of said bail in which the rolls engage the platen at different distances from the printing line, means determining a rear inoperative position of said bail, and means which cause the bail when moved forward from said inoperative position to take a predetermined one of said operative positions.

8. In a typewriting machine having a carriage and a platen mounted therein, a roll carrying bail movably mounted on the carriage, manually operable stop means determining two operative positions of said bail in which the rolls engage the platen at different distances from the printing line, means determining a rear inoperative position of said bail, and means which cause the bail when moved forward from said inoperative position to take one of said operative positions.

9. In a typewriting machine having a carriage and a platen mounted therein, a roll carrying bail movably mounted on the carriage, manually operable stop means determining two operative positions of said bail in which the rolls engage the platen at different distances from the printing line,

means determining a rear inoperative position of said bail, and means which cause the bail when moved forward from said inoperative position to take a predetermined one of said operative positions.

10. In a typewriting machine having a carriage and a platen mounted therein, a roll carrying bail mounted therein to turn about two axes, and means determining two operative positions of said bail about one axis, in which the rolls engage the platen at different distances from the printing line.

11. In a typewriting machine having a carriage and a platen mounted therein, a roll carrying bail mounted therein to turn about two axes, means determining two operative positions of said bail about one axis, in which the rolls engage the platen at different distances from the printing line, and means determining a rear inoperative position about the other axis.

12. In a typewriting machine having a carriage and a platen mounted therein, a roll carrying bail mounted therein to turn about two axes, means determining two operative positions of said bail about one axis, in which the rolls engage the platen at different distances from the printing line, and means determining a forward position about the same axis with the rolls out of engagement with the platen.

13. In a typewriting machine having a carriage and a platen mounted therein, a roll carrying bail mounted therein to turn about two axes, means determining two operative positions of said bail about one axis, in which the rolls engage the platen at different distances from the printing line, means for determining a forward position about the same axis with the rolls out of engagement with the platen, and means determining a rear inoperative position about the other axis.

14. In a typewriting machine having a carriage and a platen mounted therein, a roll carrying bail mounted to move about one axis to an inoperative position in the rear of the platen and about another axis to two operative positions in which the rolls engage the platen at different distances from the printing line, and means which cause the bail when moved forward from said inoperative position to take directly one of the operative positions.

15. In a typewriting machine having a carriage and a platen mounted therein, a roll carrying bail mounted to move about one axis to an inoperative position in the rear of the platen and about another axis to two operative positions in which the rolls engage the platen at different distances from the printing line, and means which cause the bail when moved forward from said inoperative position to take directly a predetermined one of said operative positions.

16. In a typewriting machine having a carriage and a platen mounted therein, a roll carrying bail mounted to move about one axis to an inoperative position in the rear of the platen and about another axis to two operative positions in which the rolls engage the platen at different distances from the printing line, and latch mechanism which compels the bail to move about one of said axes when moved forward from inoperative to operative position.

17. In a typewriting machine having a carriage and a platen mounted therein, a roll carrying bail mounted to move about one axis to an inoperative position in the rear of the platen and about another axis to two operative positions in which the rolls engage the platen at different distances from the printing line, and means which causes the bail to return to the operative position from which it has previously moved when it is returned from inoperative position.

18. In a typewriting machine having a carriage and a platen mounted therein, a rocking frame pivoted to said carriage, a roll carrying bail pivoted to said frame, and means determining two positions of said frame in which the rolls engage the platen but at different distances from the printing line.

19. In a typewriting machine having a carriage and a platen mounted therein, a rocking frame pivoted to said carriage, a roll carrying bail pivoted to said frame, and adjustable means on said frame for determining two positions of said frame in which the rolls engage the platen but at different distances from the printing line.

20. In a typewriting or similar machine having a carriage and a platen mounted therein, a rocking frame pivoted to said carriage, a roll carrying bail pivoted to said frame, and a pivoted member having two stop portions on said frame for determining two positions of said frame in which the rolls engage the platen but at different distances from the printing line.

21. In a typewriting machine having a carriage and a platen mounted therein, a rocking frame pivoted to said carriage, a roll carrying bail pivoted to said frame, means determining two operative positions of the frame, means determining an inoperative position of the bail relative to the frame, and means causing the bail to move directly to an operative position when swung forward from inoperative position.

22. In a typewriting machine having a carriage and a platen mounted therein, a rocking frame pivoted to said carriage, a roll carrying bail pivoted to said frame, means determining two operative positions of the frame, means determining an inoperative position of the bail relative to the frame, and a latch mechanism on the car-

riage causing the bail to move directly to an operative position when swung forward from inoperative position.

23. In a typewriting machine having a carriage and a platen mounted therein, a rocking frame pivoted to said carriage, a roll carrying bail pivoted to said frame, means determining two operative positions of the frame, means determining an inoperative position of the bail relative to the frame, and a double latch mechanism causing the bail to move directly to the predetermined one of said operative positions when swung forward from inoperative position.

In testimony whereof, I have hereunto subscribed my name.

GEORGE F. HANDLEY.