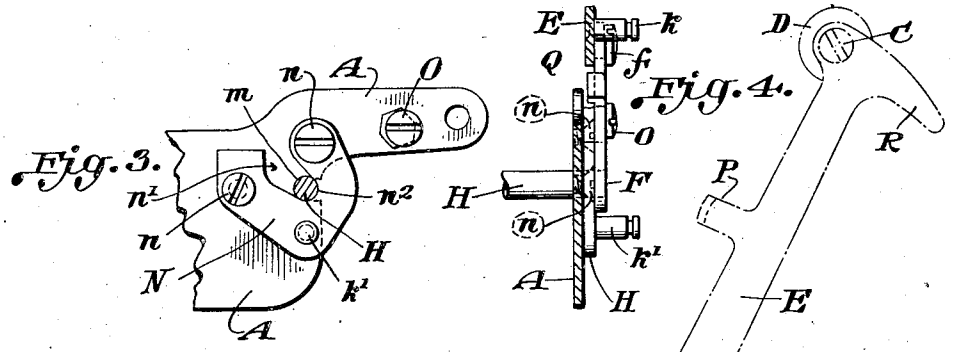
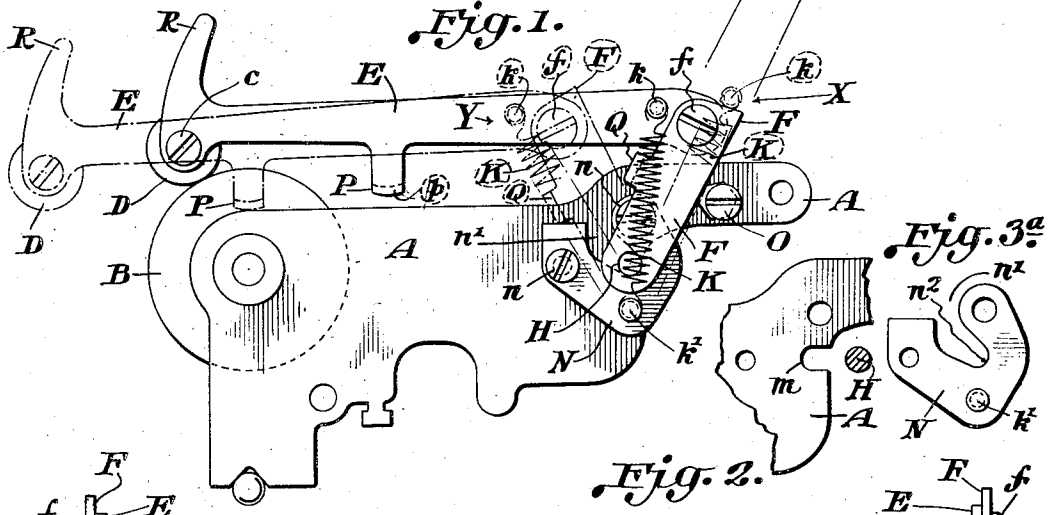
July 28, 1925. 1,547,305

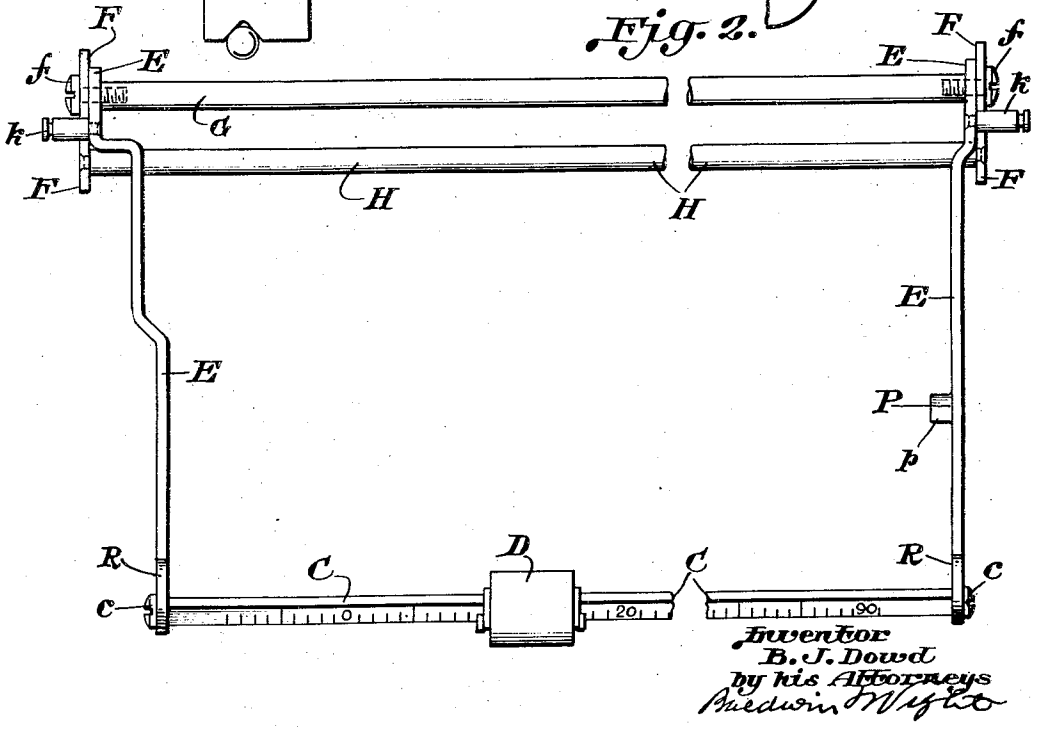
B. J. DOWD

TYPEWRITING MACHINE

Filed Nov. 1. 1924







Inventor
B. J. Dowd
by his Attorneys
Baldwin Wight & Co

Patented July 28, 1925. 1,547,305

UNITED STATES PATENT OFFICE.

BERNARD J. DOWD, OF HARTFORD, CONNECTICUT, ASSIGNOR TO ROYAL TYPEWRITER COMPANY, INC., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

TYPEWRITING MACHINE.

Application filed November 1, 1924. Serial No. 747,249.

To all whom it may concern:

Be it known that I, BERNARD J. DOWD, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Typewriting Machines, of which the following is a specification.

This invention relates to the paper feeding and guiding mechanism of typewriting machines. In the Royal Standard machine as heretofore marketed the paper is fed under the platen and held in yielding contact therewith by a group of rolls mounted in frames which can be adjusted to withdraw the rolls from the platen when it is desired to arrange the paper on the platen. These combined feeding, guiding and pressure rolls cooperate with pressure rolls which normally hold the paper, after passing around the front of the platen, with yielding pressure on the upper portion of the platen. Means has heretofore been provided, and as shown in prior patents issued to the Royal Typewriting Company, Inc., for so mounting these upper pressure and guide rolls that they may be moved from their normal or working position to a position above and in rear of the platen and in rear of the paper table, or to a position a short distance above the platen, and in such mechanism as heretofore used, provision has also been made for withdrawing the lower rolls from the platen and simultaneously elevating the upper rolls.

It has heretofore been proposed to so mount the upper pressure rolls that they may be moved from their normal position on top of the platen to a position a considerable distance in front thereof so as to leave a clear space between the pressure rolls and the platen for the insertion and the adjustment of the paper. In one such instance the frame or bail which carries the upper pressure rolls was pivotally connected at its rear end to links which were in turn pivotally connected with the side frame of the carriage in such manner that normally the pressure rolls were held on the top of the platen but which permitted the frame carrying the rolls to be moved forward horizontally to such an extent as to hold the rolls the desired distance from the platen. In such prior construction suitable springs were employed to hold the roll-carrying frame in either of its adjusted positions.

According to my invention, I so mount the mechanism that the roll-carrying frame is made stronger and more stable and the adjustments may be made with greater facility.

In carrying out my invention, I mount the upper pressure rolls on a rod which is carried by the front ends of the side pieces or arms of a roll-carrying frame or bail. The rear ends of these side pieces are firmly connected with each other by a horizontally arranged rod extending from one side of the machine to the other and the rear ends of the bail are pivotally connected with the upper ends of links which are firmly connected at their lower ends by a horizontally arranged rod mounted to rock in bearings in the carriage frame. Springs are associated with the roll-carrying frame which hold the rolls with a yielding pressure on the platen when the rolls are in working position and which also hold these rolls in an adjusted position in front of the platen. These features of the invention together with others will be hereinafter more fully described.

In the accompanying drawings:—

Figure 1 is a side elevation of a portion of a typewriter carriage with my improvements applied, showing the normal or working position of the upper pressure rolls by full lines and adjusted positions by dotted lines.

Figure 2 is a plan view of the bail or roll-carrying frame showing how it is connected with its supporting links and how these links are cross connected.

Figure 3 is a detail view, showing the devices employed for supporting the rod which connects the bail-supporting links on opposite sides of the machine.

Figure 3ª illustrates the devices for supporting the links in the carriage frame.

Figure 4 is a detail view, in section, illustrating the connections between the bail, the links and the carriage frame.

Parts of a typewriter carriage are indicated at A and B indicates a platen.

As heretofore, the upper pressure rolls are mounted to slide longitudinally on a graduated rod C. One of these rolls is indicated at D and it is mounted to revolve freely on said rod. The rod C is secured by suitable devices *c* to the front ends of two side pieces E of the bail or roll-carrying frame and these side pieces or arms extend from a plane above the platen rearwardly

to the rear part of the carriage where they are pivotally connected with the upper ends of links F. Preferably this connection is made, as shown, by screws *f* which extend through the links and enter the opposite ends of a rod G which fits accurately between the arms E and rigidly holds them in place at their rear ends. It will be observed that the rear ends of the arms E are disposed above the top of the carriage frame.

The lower ends of the links F are connected by a rod or cross bar H which maintains a proper alinement of the links with each other and with other parts of the mechanism.

It will be observed that the bail comprises four elements, viz, two side pieces, a front connecting rod C and a rear connecting rod G. In this way the bail is made rigid and bending or distortion of the parts is avoided. This is accomplished without placing the rear ends of the bail in contact with the carriage frame as the mechanism is so constructed that the bail or roll-carrying frame has a fore and aft movement.

In order to support the links on the carriage frame, their connecting rod H is mounted in recesses *m* formed in the rear edges of the side frame pieces of the carriage and the rod is held in these recesses by yokes N, which are attached to the carriage frame by screws *n*. These yokes have open parts *n'* to receive the rod H and curved seats n^2 which fit the rod and thus in connection with the recesses *m* afford a closed bearing in which the rod may turn when the links F are shifted.

In order to hold the pressure rolls on the platen with a yielding pressure when in working position, I employ springs K the upper ends of which are connected to studs *k* on the arms E in front of their pivotal connections with the links and the lower ends of which are connected to studs *k'* projecting laterally from the yokes N. These springs are what are known as overthrow springs. Normally, as before stated, the springs hold the pressure rolls with a yielding pressure on the platen, as indicated by full lines in Figure 1. When the bail is raised and thrown back out of working position the springs are disposed as indicated by dotted lines at X. When the bail is moved forwardly to the desired position with the rolls in front of the platen, the springs K assume the position shown by dotted lines indicated at Y. The springs are so disposed that these adjusted positions may be easily given to the roll-carrying frame and this frame is provided with a handle R for convenient use.

When the bail is in normal working position, as shown by full lines in Figure 1, both of the links rest against stops one of which is an adjustable stop O. This stop limits the rearward movement of the bail and ensures that the pressure rolls shall rest properly on the platen.

When the bail is moved upwardly and rearwardly, in the manner indicated at X, the studs *k* rest on the tops of the links F, the upper edges of which are properly shaped to permit the studs to pass over them and to rest thereon in such manner as to hold the bail at the proper angle.

One of the arms E of the bail is provided with a support P, having a lateral projection *p* which normally stands above the edge of the carriage frame, but when the bail is moved forwards the support P rides on the edge of the carriage frame and supports the front portion of the bail, thus preventing the bail from dropping too far and avoiding undue strain on the bail should the hands of the operator bear on the bail when erasing or at other times.

One of the links F is provided with a stop Q which comes in contact with the upper front end of the associated yoke N and thus limits the forward and downward movement of the links.

While my improvements are designed especially for use in connection with visible front strike typewriting machines of the Royal type, they may be embodied, so far as some features of my invention are concerned, in machines of other kinds.

I claim as my invention:—

1. In a typewriting machine having a carriage and a platen mounted therein, a bail or roll-carrying frame having a fore and aft movement, with its rear ends pivotally connected above the carriage frame with links which are pivotally connected at their lower ends to the carriage and which are braced at their upper ends by a rod which connects them.

2. In a typewriting machine having a carriage and a platen mounted therein, a bail or roll-carrying frame having a fore and aft movement, comprising side arms, a rod connecting their front ends and a rod connecting their rear ends, links pivotally connected with the rear ends of the bail above the top of the carriage frame and pivotally connected with the side frame pieces of the carriage.

3. In a typewriting machine having a carriage and a platen supported therein, a bail having side arms the rear ends of which are braced by a horizontally arranged rod and which are disposed above the carriage frame and are pivotally connected with a rocking frame supported by the carriage.

4. In a typewriting machine having a carriage and a platen supported therein, a bail or roll-carrying frame mounted to move fore and aft of the carriage and to swing upwardly and rearwardly relative thereto, and

means carried by the bail normally out of contact with the carriage frame for supporting the bail when it is moved to its forward position.

5. In a typewriting machine having a carriage and a platen supported therein, a bail or roll-carrying frame mounted to move fore and aft of the carriage having side arms connected and braced at their rear ends above the carriage, links pivotally connected with the bail and with the carriage frame, and springs for holding the rolls in contact with the platen.

6. In a typewriting machine having a carriage and a platen supported therein, a bail or roll-carrying frame comprising side pieces braced at front and rear and arranged wholly above the top of the carriage, links pivotally connected with the braced rear ends of the side pieces and pivotally connected at their lower ends with the carriage frame.

7. In a typewriting machine having a platen and a carriage in which it is mounted formed with recesses or seats at its rear end, a bail or roll-carrying frame mounted to move fore and aft of the machine and pivotally connected at its rear end with links which are connected at their lower ends to a pivot rod seated in the recesses in the carriage frame, and means for holding said pivot rod in its seats.

8. In a typewriting machine having a platen and a carriage in which it is mounted formed with recesses in its rear edge, a bail mounted to move fore and aft of the machine which is pivotally connected to the upper ends of the links which at their lower ends are connected by a rod seated in the recesses of the carriage, and yokes attached to the carriage frame which hold said rod in place.

9. In a typewriting machine having a platen and a carriage in which it is mounted, a bail or roll-carrying frame having a fore and aft movement and connected at its rear ends with the upper ends of links which are cross-connected by a rod seated in the rear edge of the carriage and held therein by yokes which are detachably connected with the carriage.

In testimony whereof, I have hereunto subscribed my name.

BERNARD J. DOWD.