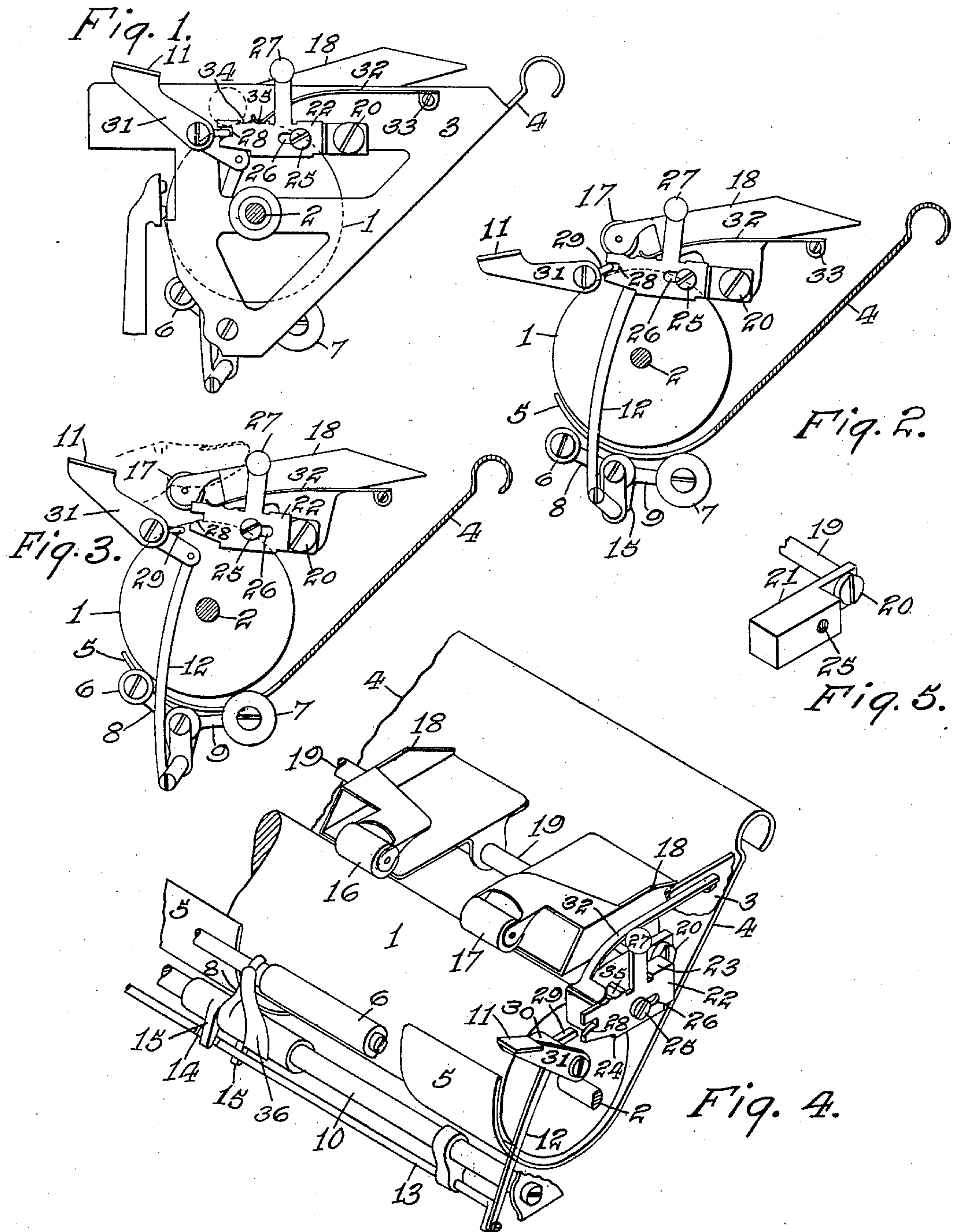


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PATENTED MAR. 26, 1907.

J. C. McLAUGHLIN.  
TYPE WRITING MACHINE.  
APPLICATION FILED JULY 13, 1906.



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# UNITED STATES PATENT OFFICE.

JOHN C. McLAUGHLIN, OF NEW YORK, N. Y., ASSIGNOR TO UNDERWOOD  
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## TYPE-WRITING MACHINE.

No. 848,316.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed July 13, 1906. Serial No. 325,991.

*To all whom it may concern:*

Be it known that I, JOHN C. McLAUGHLIN, a citizen of the United States, residing in Manhattan borough, city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to the devices of type-writing machines which feed the paper in line-space direction, and particularly to the means which release the paper from the bite of the pressure-rolls and platen.

In the "Underwood" front-strike type-writing machine it is customary to provide rolls beneath the platen for feeding the paper forwardly around and up in front of the platen and also to provide rolls to run upon the top of the platen, the latter rolls being independently adjustable along the platen and also releasable independently of each other. The lower rolls are releasable by means of a special key. For some classes of work it is frequently desired to release all of the rolls, which is usually done by first depressing the key to release the bottom rolls and then lifting the top rolls one at a time from the platen.

The object of my invention is to simplify the operation of the rolls, and to this end I connect the top rolls to said release-key so as to be releasable thereby at the same time as the bottom rolls; but such connection I make shiftable, so that the top rolls may at any time be disconnected from said release-key, so that the bottom rolls may be released independently of the top rolls. I also make provision for releasing the top rolls simultaneously by means of a finger-piece connected thereto, said finger-piece being preferably the same one that is used for connecting the top rolls to the main release-key.

In the accompanying drawings, Figure 1 is a side elevation of one end of the platen-frame of an Underwood type-writing machine provided with my improvements, the top rolls being connected to the main release-key, all the parts being shown in normal positions. Fig. 2 is a view similar to Fig. 1, but showing the main release-key depressed so as to throw off the bottom rolls together with the top rolls. Fig. 3 shows the top rolls disconnected from the main release-key, but

released from the platen by means of another finger-piece, while the bottom rolls remain in normal positions against the platen. Fig. 4 is a perspective showing the rolls all pressing against the platen, but with the top rolls disconnected from the main release-key. Fig. 5 is a perspective of a rock shaft and arm forming part of the mechanism for releasing the top rolls.

The cylindrical platen 1 is revolubly mounted, by means of an axle 2, in a platen-frame comprising ends 3, united by an inclined rear plate or paper-shelf 4. The latter slopes downwardly and forwardly in rear of the platen and curves up around the same, at 5, to form a guide for the paper-sheets. Beneath the platen are forward and rear rolls 6 7, controlled by arms 8 9, projecting from a shaft 10. Upon the platen-frame is mounted the main release-key 11, connected by a link 12 to a rock-shaft 13, having cams 14 to act upon arms 15, which control said arms 8 9 in such a manner that when the key 11 is depressed the arms 8 9 are forced away from the platen to release the rolls 6 7, Fig. 2. Upon the top of the platen run rolls 16 17, mounted upon frames 18, adjustable along a rock-shaft 19, mounted in the ends 3 of the platen-frame. Each of the frames 18 may be turned up and back to throw the rolls 16 17 off the platen independently of the other frame.

As so far described, the parts are in common use on said Underwood type-writing machine. Upon the end of the rock-shaft 19 is secured, by means of a screw 20, a forwardly-extending arm 21, so that by lifting said arm the shaft is rocked and both rolls 16 and 17 are lifted from the platen. Upon said arm I mount a slide 22, having top and bottom clips 23 24 to catch upon the top and bottom edges of said arm 21. The slide is held in position by the head of a screw 25, threaded into said arm 21 and passing through a slot 26 in the slide, the ends of said slot limiting the shifting movements of the slide upon the arm 21. Extending upwardly from the slide is a finger-piece 27, whereby it may be shifted. When the finger-piece 27 is pulled forward, a notch 28, formed upon the front end of the slide 22, is engaged with an arm 29, which projects from a hub 30 of the lever 31, which carries the release-key 11. When



said key 11 is depressed, the arm 29, owing to its engagement with the notch 28, lifts the front end of the slide and forces the same, together with the arm 21, to rock upwardly, thus rocking the shaft 19 and lifting the rolls 16 and 17 from the platen at the same time the rolls 6 and 7 are forced down from the platen, so that all the rolls are simultaneously released. At the Fig. 2 position the cam-shaft 13 operates as usual to detain the arms 8 9 in their release positions, thereby leaving the hands of the operator free to manipulate the paper, and it will be understood that owing to the connection between the top rolls and the main release-key 11 said top rolls are likewise mechanically detained in release positions. When the finger-piece 27 is pressed back, the slide 22 becomes disconnected from the main release-key 11, Figs. 3 and 4, so that the bottom rolls may be released independently of the top rolls, while the latter may, of course, at any time be released independently of each other in the usual manner by turning the frames 18 independently around the rod 19.

The slide 22 is detained in each of its shifted positions by means of a leaf-spring 32, which is fastened by a screw 33 to the end 3 of the platen-frame and bears down in either of two notches or seats 34 and 35, formed upon the top of the slide. This spring also serves to press down the arm 21 and cause the rolls 16 and 17 to bear against the platen, and it will be understood that the finger-piece 27 may be pressed backwardly, as shown at Fig. 3, to rock the shaft 19, and thereby lift both rolls 16 and 17. The bottom rolls 6 and 7 are pressed against the platen by the usual springs 36.

Variations may be resorted to within the scope of the invention.

Having thus described my invention, I claim—

1. In a type-writing machine, the combination with a platen, of rolls mounted to press separately upon the platen, a finger-piece connected to means to release one of said rolls, and means for connecting the other of said rolls to said releasing means and disconnecting it therefrom at will, to enable said finger-piece either to release the rolls together or to release one roll while the other remains in normal position against the platen.

2. In a type-writing machine, the combination with a platen, of rolls bearing separately upon the platen, a key for releasing one of said rolls, a release-arm for the other of said rolls, and means for connecting said arm to said key, and disconnecting it therefrom at will, to enable said key either to release the rolls together or to release one roll while the other remains in normal position against the platen.

3. In a type-writing machine, the combination with a platen and rolls mounted to

bear separately thereon, of a key having means to release one of said rolls, the other of said rolls being releasable independently of said key, and a connecting device movable to a position to connect the last-mentioned roll to said key at will to be released thereby, and also movable to a position to disconnect the last-mentioned roll from said key, to enable the latter to be operated while the last-mentioned roll remains in normal position against the platen.

4. In a type-writing machine, the combination with a platen, of rolls mounted to bear separately against the platen, a key for releasing one of said rolls, an arm for releasing the other of said rolls, and a sliding device movable upon said arm from a position to connect said arm to said key, to a position to disconnect the arm from the key.

5. In a type-writing machine, the combination with a platen, of rolls mounted to bear separately against the platen, a key for releasing one of said rolls, an arm for releasing the other of said rolls, a sliding device upon said arm for connecting said arm to said key, or disconnecting it therefrom at will, a finger-piece upon said sliding device for shifting the same, and a yielding detent for retaining said slide in different positions.

6. In a type-writing machine, the combination with a platen, of rolls mounted to bear separately against the platen, a key for releasing one of said rolls, an arm for releasing the other of said rolls, a sliding device upon said arm for connecting said arm to said key, or disconnecting it therefrom at will, and a yielding detent for retaining said slide in different positions, said detent being constructed to bear upon said slide in a direction to press the roll against the platen.

7. In a type-writing machine, the combination with a platen, of rolls mounted to bear separately against the platen, a key for releasing one of said rolls, an arm for releasing the other of said rolls, a sliding device upon said arm for connecting said arm to said key, or disconnecting it therefrom at will, a finger-piece upon said sliding device for shifting the same, and a yielding detent for retaining said slide in different positions, said detent being constructed to bear upon said slide in a direction to press the roll against the platen; said finger-piece being movable to release its roll when disconnected from the first-mentioned release-key.

8. In a type-writing machine, the combination with a platen, and a roll pressing against the same, of a key for releasing said roll, a rock-shaft, rolls mounted upon the rock-shaft and adjustable therealong, an arm upon said rock-shaft, a slide upon said arm movable into and out of engagement with said release-key, a spring for retaining said slide in different positions to which it is shifted, said spring bearing upon said slide



in a direction to press said adjustable rolls against the platen, and a finger-piece for shifting said slide.

9. In a type-writing machine, the combination with a platen, and a roll pressing against the same, of a key for releasing said roll, a rock-shaft, rolls mounted upon the rock-shaft and adjustable therealong, an arm upon said rock-shaft, a slide upon said arm  
10 movable into and out of engagement with said release-key, a spring for retaining said slide in different positions to which it is

shifted, said spring bearing upon said slide in a direction to press said adjustable rolls against the platen, and a finger-piece projecting from said slide for shifting the same, and also for rocking said shaft in opposition to the tension of said spring for lifting said adjustable rolls from the platen. 15

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