No. 811,481. PATENTED JAN. 30, 1906.

G. W. CAMPBELL.

TYPE WRITING MACHINE.

APPLICATION FILED FEB. 4, 1904.

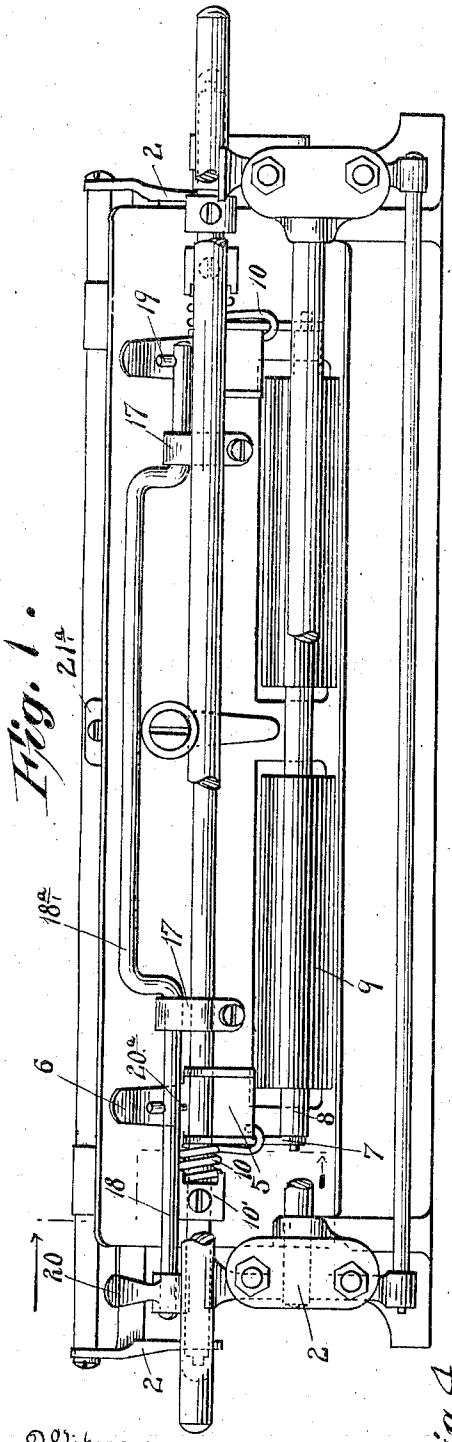


Fig. 1.

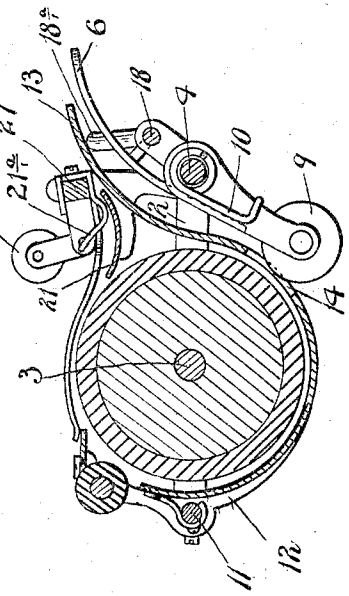


Fig. 3.

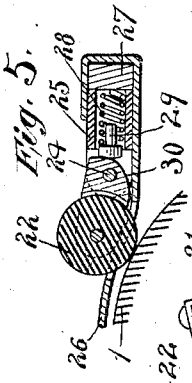


Fig. 5.

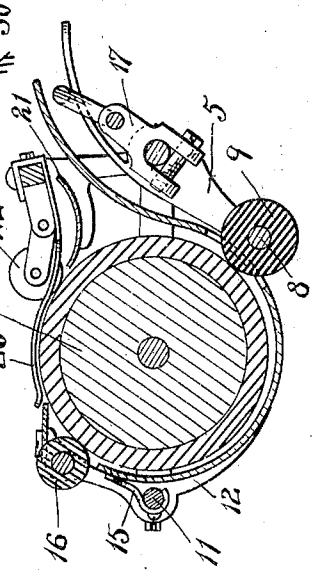


Fig. 2.

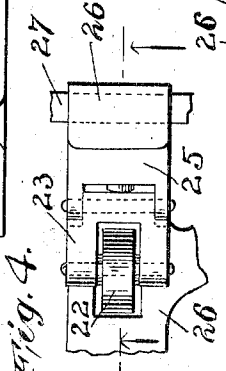


Fig. 4.

Witnesses
C. W. Benjamin
S. J. Hunter

George W. Campbell
Inventor

By his Attorneys Knight Bros
Attys

UNITED STATES PATENT OFFICE.

GEORGE W. CAMPBELL, OF NEW YORK, N. Y.

TYPE-WRITING MACHINE.

No. 811,481. Specification of Letters Patent. Patented Jan. 30, 1906.

Application filed February 4, 1904. Serial No. 192,025.

To all whom it may concern:

Be it known that I, GEORGE W. CAMPBELL, a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My present invention relates to type-writing machines, and has particularly for its object to provide an improved means for clamping, unclamping, and guiding the paper carried by the printing-platen.

My invention more specifically relates to a means for releasing the paper-feed rolls from their engagement with the platen through the manipulation of a single lever or release device and to means for preventing automatic displacement of the upper paper-clamping rolls and guide-plates.

My invention furthermore relates to many improved details of structure fully shown and described in the accompanying drawings, in which like reference-numerals refer to like parts, and in which—

Figure 1 is a rear view of a platen-carriage frame embodying my improvements. Fig. 2 is a transverse section through the platen, platen-frame, and the feed-rollers in their clamping position. Fig. 3 is a similar view showing all of the feed-rollers held out of clamping position, the rear feed-rollers being shown in side elevation and held in opposition to their springs, which normally hold them in contact with the platen. Fig. 4 is a top plan view of one of the upper feed-rollers and a portion of the guide-plate and rear bar on the platen-frame. Fig. 5 is a longitudinal section through the same, showing said rollers in contact with the platen.

Referring now in detail to the drawings, 1 represents the platen; 2, the platen-frame, in which the platen 1 is mounted on its rod 3. Connecting the two sides of the platen-frame 2 in the rear is a rod 4, upon which is pivotally mounted a pair of feed-roll brackets 5, having upwardly-extending fingers 6 and downwardly-projecting eye-lugs 7, in which is journaled the feed-roll axle or bar 8, carrying the feed-rolls 9. Brackets 5 are engaged by one end of coil-springs 10, coiled about rod 4 and secured at their other ends to an adjustable collar 10′, mounted on said rod 4.

Connecting the platen-frame 2 at the front of the platen 1 is a pivot-bar 11, upon which is pivoted, through means of brackets 12, (one only being shown,) the apron 13, curved to conform to the shape of the platen 1 and projecting out from the rear of the platen-frame at the top thereof as a guide to the paper. Apron 13, surrounding the under side of the platen 1, is provided at the rear of the platen 1 with perforations 14, through which rear feed-rolls 9 project normally to bear against the surface of the platen 1. Brackets 12 are extended upwardly above the bar 11 and support at their upper ends the scale-bar and front feed roller or rollers 16, resting normally against the upper surface of the platen 1. At its rear end the apron 13 is free, being sustained only by pressure of the roller 16 upon the surface of the platen 1, said roller being held against the platen by a spring or springs 15, rigidly secured at one end to the bar 11, their free ends bearing against apron 13.

17 designates a pair of brackets straddle-mounted on rod 4 and having fulcrumed therein at their upper ends a paper-release bar 18, having a bent central bearing portion 18^a and carrying pins or projections 19, adapted to engage fingers 6 on the brackets 5. At one end the paper-release bar 18 carries a hand-lever or handle 20. Release-bar 18 also carries on its under side a stop-pin 20^a, adapted to engage the bar 4 to limit the turning of the said release-bar by the handle 20. 21 is a curved guard-plate connecting the two sides of the platen-frame 2, serving to guide the paper to the rear of the platen-frame and prevent the same recurving on the platen as the same is fed therefrom. 21^a is a curved guide-finger adapted to guide the paper down onto plate 21.

Positioned above the platen at the rear of the platen-frame 2 is a pair of upper feed or guide rollers 22, pivotally mounted in jaws 23, pivoted to a pin 24, carried by a spring-housing 25, secured to the rear part of the paper-guide plate 26, bent about the rear bar 27 of the platen-frame. Spring-housing 25 carries a coil-spring 28, one end of which bears against the rear bar 27 of the platen-frame, the forward end of the said spring carrying a plunger or cam-pin 29, bearing against the cam-surface 30 on the rear of the jaws 23, for the purposes hereinafter described. Guide-plates 26 are provided with suitable perforations to allow the rolls 22 to be held in engagement with the surface of the platen 1.

In operation the forward pressure of the handle 20 will oscillate the bar 18 until

stopped by the stop-pin 20ª, forcing the bent bearing portion 18ª of the bar 18 against the apron 13, elevating the apron 13, which turns on its pivot-rod 11 in opposition to springs 15, and throwing the roller 16 away from the platen 1, as shown clearly in Fig. 3. The feed-rolls 9, as stated before, are held normally against the platen 1 by their springs 10. When the handle 20 is operated, pins 19 on the bar 18, pressing against the upwardly-projecting fingers 6 on the brackets 5, partially rotate the said brackets 5 on the rods 4 in opposition to the said springs 10 and carry the rollers 9 away from the platen. The parts are held in this position by the handle or lever 20 being held depressed until the paper is properly adjusted by the operator. The stop-pin 20ª is provided to prevent excess movement of the bar 18, which would have the effect of elevating the apron 13 to too great an extent, so that the bottom of the apron 13 would rest against the surface of the platen and hold the paper against adjustment. The guide-roll 22 is thrown out of operative position through elevating by hand, the same being held against automatic return by friction between the cam-surface 30 and the pin 29.

In order to prevent lateral displacement of the guide-plate 26 on the rear bar 27 of the platen-frame, the spring 28 is so arranged that the same impinges directly against the said bar, thereby providing sufficient friction to hold the said parts against lateral movement on the said bar, and yet allowing the same to be freely moved by the hand of the operator when it is desired to adjust the same.

I do not desire to be limited to the exact details of structure herein shown and described, inasmuch as the same may be varied without departing from the spirit of my invention.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In a paper-feed device for type-writing machines, the combination with the platen, the platen-frame, the apron pivoted to said frame, the feed-roll carried by said apron, a pivot-bar mounted in said frame, the feed-roll brackets pivotally mounted on said bar and having upwardly-projecting fingers, the feed-roll carried by said brackets, the spring means connected to said brackets, of the release-bar mounted above said brackets and suitably bent to engage said apron, and having projections thereon engaging the fingers on said brackets.

2. In a paper-feed device for type-writing machines, the combination with the platen and the platen-frame, of an apron surrounding the under side of said platen and having a suitable perforation therein and pivoted at one end to the said frame, the feed-roll mounted on said apron in position to rest normally on the upper face of the platen, a feed-roll bracket mounted independently of said apron, a feed-roll carried by said bracket in position to normally project through the said perforation in engagement with the under surface of the platen, and means for elevating the free end of said apron and for engaging the said bracket to move the feed-rolls away from the surface of the platen.

3. In a paper-feed device for type-writing machines, the combination with the platen and the platen-frame, of an apron pivoted near one end to the platen-frame at one side of the platen surrounding the under side of the platen and projecting upwardly and rearwardly at the other side of the platen, a feed-roll carried by the apron at the end adjacent its pivot and normally resting against the surface of the platen, and means independent of said apron for elevating the rear end thereof to turn the apron on its pivot to carry said feed-roll away from the surface of the platen.

4. In a paper-feed device for type-writing machines the combination with the platen and the platen-frame, of an apron surrounding the under side of the said platen pivoted near one end to the said frame and free at its opposite end, a feed-roll mounted on the end of the apron adjacent its pivot and resting normally against the surface of the platen, and means independent of said apron for elevating the free end thereof to turn the apron on its pivot to carry the feed-roll away from the surface of the platen.

5. In a paper-feed device for type-writing machines, the combination with the platen and the platen-frame, of an apron pivoted at one side of the platen surrounding the under side of the platen extending upwardly and to the rear of the platen and free at its rear end, a feed-roll mounted on the pivot end of the apron and resting normally against the surface of the platen, means independent of said apron for elevating the same to carry said feed-roll away from the surface of the platen, and a paper-feed roll normally in engagement with the platen and diametrically opposite to the feed-roll mounted on the apron.

6. In a paper-feed device for type-writing machines, the combination with the platen and the platen-frame, of an apron pivotally mounted near one end on said frame, and a paper-feed roll mounted on the end of said apron adjacent its pivot resting normally against the surface of the platen, and means independent of said apron for causing a pivotal movement of the apron to move said feed-roll away from the surface of the platen.

7. In a paper-feed device for type-writing machines, the combination with the platen and the platen-frame, of an apron pivotally mounted at one end and free at its other end,

a feed-roll mounted on the pivot end of the apron and normally held against the surface of the platen by the weight of said apron, and means independent of said apron for elevating the apron to carry the feed-roll away from the surface of the platen.

8. In a paper-feed device for type-writing machines, the combination with the platen and the platen-frame, of an apron pivoted at one side of the platen surrounding the under side of the platen extending upwardly and rearwardly at the other side of the platen and free at its rear end, a feed-roll mounted on the pivot end of the apron and held normally against the surface of the platen by the weight of the said apron, and means independent of said apron for elevating the apron to carry the feed-roll away from the surface of the platen.

9. In a paper-feed device for type-writing machines, the combination with the platen and the platen-frame, of an apron having a feed-roll perforation pivoted at one side of the platen surrounding the under side of the platen extending upwardly and rearwardly at the other side of the platen and free at its rear end, a feed-roll mounted at the pivot end of the apron and held normally against the surface of the platen by the weight of the apron, a spring-pressed feed-roll projecting normally through the perforation in the apron and engaging the surface of the apron diametrically opposite to the feed-roll mounted on the apron, and means for elevating the apron and engaging the spring-pressed feed-roll to carry said rolls away from the surface of the platen.

10. In a writing-machine the combination with the platen and the platen-frame, of a guide-plate slidably mounted on said frame, a shank pivotally mounted on said guide-plate, a feed-roll mounted on said shank a spring in engagement with said shank and in slidable engagement with said frame to hold the feed-roll in adjusted position and to hold the guide-plate against accidental displacement.

11. In a paper-feed device for type-writing machines, the combination with the platen and the platen-frame, of a guide-plate slidably mounted on said frame, a tubular housing mounted on said guide-plate, a feed-roll having a wedge-shaped shank pivotally mounted on said housing and movable into and out of engagement with the surface of the platen, and a spring mounted in said housing bearing against said shank and slidably engaging said frame to hold the guide-plate against automatic displacement of said frame and to hold the feed-roll in elevated position.

12. In a paper-feed device for type-writing machines, the combination with the platen and the platen-frame; of an apron pivotally mounted at one end and free at its other end, a feed-roll mounted on the pivot end of the apron and normally held against the surface of the platen by the weight of said apron, auxiliary means for holding said feed-roll against the surface of the platen, and means independent of said apron to elevate the apron to carry the feed-roll away from the surface of the platen.

GEORGE W. CAMPBELL.

Witnesses:
SUSAN E. CARINE,
HARRY A. KNIGHT.