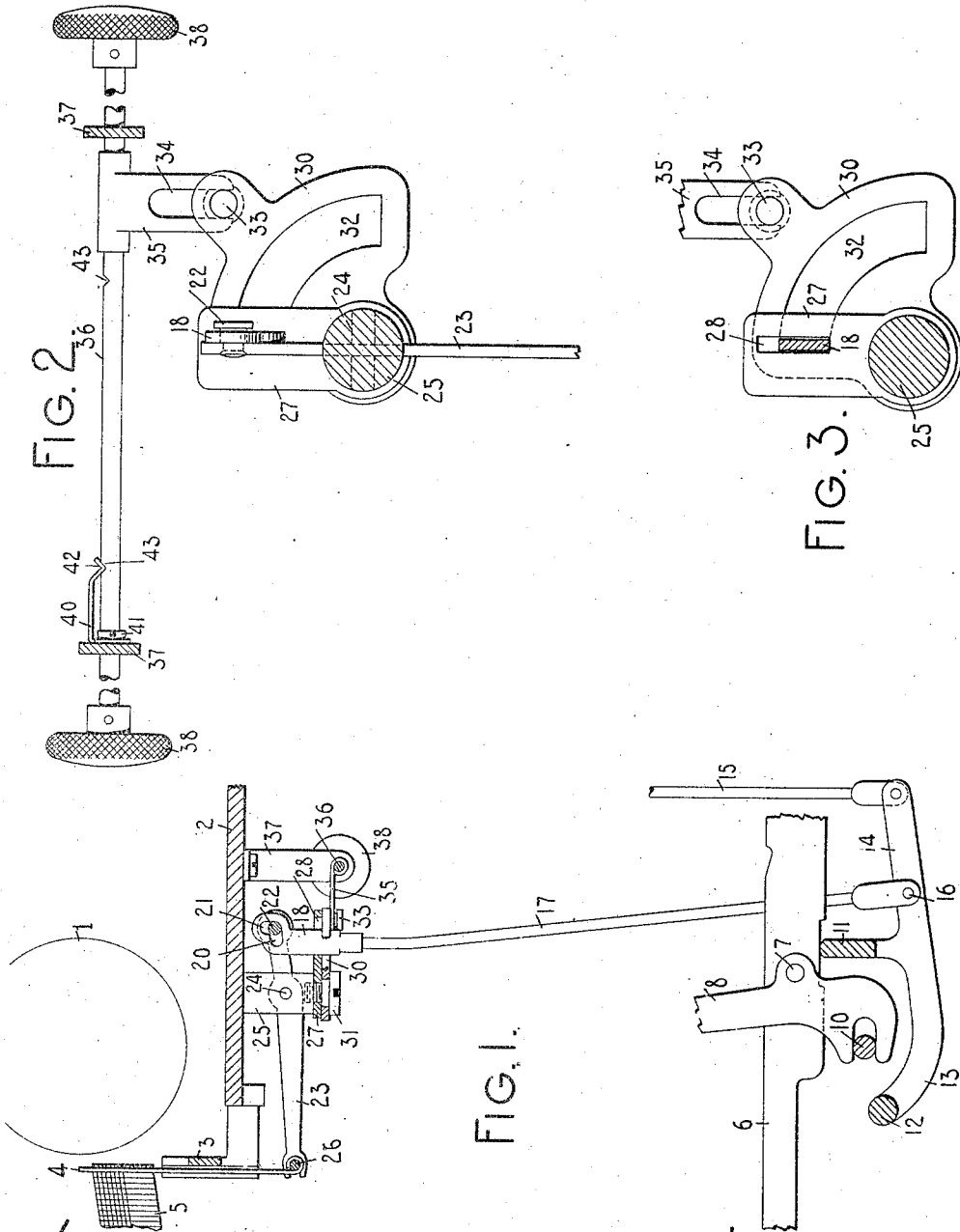


E. E. BARNEY.
TYPE WRITING MACHINE.
APPLICATION FILED APR. 25, 1910.

1,025,669.

Patented May 7, 1912,



WITNESSES:

E. M. Kelly
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FIG. 1.

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UNITED STATES PATENT OFFICE.

EDWIN E. BARNEY, OF SYRACUSE, NEW YORK, ASSIGNOR TO THE MONARCH TYPE-WRITER COMPANY, OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

1,025,669.

Specification of Letters Patent.

Patented May 7, 1912.

Application filed April 25, 1910. Serial No. 557,508.

To all whom it may concern:

Be it known that I, EDWIN E. BARNEY, citizen of the United States and resident of Syracuse, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates to typewriting machines and more particularly to ribbon vibrator mechanism of such machines.

The object of the invention is to provide improved means for varying the extent of throw imparted to the vibrator and to do this by mechanism of extreme simplicity. In the present instance the variation in the throw of the vibrator is for the purpose of utilizing either one of two longitudinal stripes of the ribbon.

My invention consists in certain features of construction and combinations and arrangements of parts, all of which will be fully set forth herein and particularly pointed out in the claims.

In the accompanying drawings:—Figure 1 is a side elevation of the invention, partly in section and with some of the associated parts of the typewriting machine shown fragmentarily. Fig. 2 is a top plan view, partly in section and partly broken away. Fig. 3 is a view similar to part of Fig. 2 but with the section taken on a lower plan.

The invention is applicable to various styles of visible typewriters and it is here shown applied to a Monarch machine. This machine comprises a platen 1 and type bars carrying types which are adapted to strike against the front face of the platen. The machine also comprises a top plate 2 which supports the guide 3 of a ribbon vibrator 4, through which is threaded a ribbon 5, which ribbon is here shown made with an upper and a lower stripe with different kinds of ink, such for example, as blue ink and red ink, respectively. The machine also comprises a series of printing key levers 6, to each of which at 7 is pivoted a sub-lever 8 having in its lower end a slot that engages a fulcrum rod 10, the upper arm of each of the sub-levers being suitably connected with one of the type bars. A universal bar 11, lying beneath the key levers, forms part of a rocking frame which also comprises a rock shaft 12 pivoted in the base of the machine and having arms 13 projecting therefrom

and supporting the universal bar 11. One of these arms is prolonged at 14 and has a link 15 connected therewith and with the carriage escapement of the machine. The arm or extension 14 also has pivoted thereto at 16 the lower end of a link 17 which operates the ribbon vibrator. The link 17 comprises at its upper end a sheet metal section 18 which is formed with a slot having an approximately horizontal branch 20 and an approximately vertical branch 21. Into this slot a pin 22 projects from a vibrator operating lever 23, said pin 22 being riveted into the lever 23 and formed with a head as shown in Fig. 2. The lever 23 is pivoted at 24 in a lug or bracket 25 depending from the top plate 2, and the forward end of the lever is formed with a open slot that embraces a pin 26 in the lower end of the vibrator 4.

The construction is such that if the link 17 be swung slightly toward the rear at its upper end so that the pin 22 lies in the horizontal part 20 of the slot, then the ordinary operation of the universal bar will throw the vibrator to its full height so as to cause the lower stripe of the ribbon to cover the printing point; and if the link 17 be moved forward to the position shown in Fig. 1, where the pin 22 is under the vertical branch 21 of the slot, then the first part of the stroke of the universal bar will merely take up the lost motion between said pin and the upper end of the slot and the lever will be operated only during the latter part of the motion of the universal bar, with the result that the vibrator will be thrown only high enough to cover the printing point with the upper stripe of the ribbon.

On the lower end of the bracket 25 there is mounted a plate or bracket 27 having in its rear end a slot 28, Fig. 3, in which the section 18 of the link 17 is guided. This slot is of such a length as to admit of the extent of front and back swinging of the link 17, above described.

A sector-shaped guide or controlling device 30 is also mounted on the lower end of the bracket 25, said controlling device being rotatable in a horizontal plane. Both the bracket 27 and the guide 30 are secured to the bracket 25 by means of a shouldered and headed screw 31, which is threaded into the lower end of said bracket, the shoulder of the screw clamping the plate 27 tightly.

against the bracket 25 and the guide 30 being pivoted on the shouldered part of the screw and held in place by the head of the screw. The guide or controller 30 is formed with an arc-shaped slot 32 which is eccentric to the screw 31, the end of the slot occupying the upper part of Fig. 3 being closer to the axis of the screw than the end of the slot at the lower part of said figure.

The link section 18 passes through said slot and the construction is such that when the sector 30 stands in the position shown in Figs. 2 and 3 the link section 18 is held in its forward position and if the sector be turned to the left as far as it will go the eccentric slot 32 will cam the link to its rear position. In the drawings the parts are shown set to write from the upper or blue stripe of the ribbon but if the sector 30 be swung to the left they will be set to write from the lower or red stripe of the ribbon. In order to swing said sector conveniently a headed pin 33 projecting therefrom is engaged by a slot 34 formed in an arm 35 projecting from a rod 36 which is mounted in brackets 37 depending from the top plate 2, said rod being capable of sliding lengthwise and being provided at its ends with finger buttons 38 for sliding it. The rod is prevented from turning in its bearings by the sector 30 and the head of the pin 33. In order to retain this rod in either of its two set positions, a spring 40 is mounted on one of the brackets 37 by means of a screw 41 and said spring is bent into a V-shape at its end 42, which engages notches 43 suitably located on the rod 36. It will of course be understood that various other devices can be employed for performing the functions of the sector 30.

It will also be understood that various other changes can be made in the details of construction without departing from my invention.

What I claim as new and desire to secure by Letters Patent, is:—

1. In a typewriting machine, the combination of a ribbon vibrator, a horizontally disposed operating lever for said vibrator, said lever having a pin, a universal bar, a vertically disposed link extending upward

from said universal bar and having at its upper end an angled slot which embraces said pin, one part of said slot affording, by reason of lost motion between the link and pin, a stroke less than a full stroke of said vibrator, a guide for the upper end of said link, and means for shifting said guide to cause different parts of said slot to engage said pin.

2. In a typewriting machine, the combination of a ribbon vibrator, a horizontally disposed operating lever for said vibrator, said lever having a pin, a universal bar, a vertically disposed link extending upward from said universal bar and having at its upper end an angled slot which embraces said pin, one part of said slot affording, by reason of lost motion between the link and pin, a stroke less than a full stroke of said vibrator, a guide plate having a cam slot therein for guiding the upper end of said link, and hand operated means for shifting said plate to cause said cam slot to shift said link to bring different parts of said angled slot into cooperation with said pin.

3. In a typewriting machine, the combination of a ribbon vibrator, an operating lever for said vibrator, a universal bar, a link connecting said universal bar with said lever, means for shifting said link, said shifting means comprising a pivoted plate having an eccentric slot therein which engages said link and means for turning said plate about its pivot, and a fixed guide-plate for said link, said guide plate being arranged adjacent said pivoted plate and having an elongated slot through which said link passes, the arrangement being such that the link is guided in an opening, the side walls of which consist of the side walls of the slot in the fixed plate, and the end walls of which consist of the side walls of the slot in the pivoted plate.

Signed at Syracuse, in the county of Onondaga, and State of New York, this 22d day of April, A. D. 1910.

EDWIN E. BARNEY.

Witnesses:

DEAN CLARK,
S. F. COGGESHALL.