

G. B. WEBB.
TYPE WRITING MACHINE.

Patented May 18, 1897.

Fig. 1. A schematic diagram of a mechanical assembly, likely a pump or engine component, showing a cross-section of a cylinder with internal components labeled 1 through 15. The diagram includes a piston rod, connecting rod, and various valves and seals. The assembly is housed within a rectangular frame.

This technical drawing illustrates a mechanical assembly, possibly a pump or engine component. The central feature is a large gear (6) with a central shaft (17). A smaller gear (8) is connected to the main gear via a belt (9). The entire mechanism is mounted on a base (10). Various adjustment points and components are labeled with numbers: 7 (handle), 13 (adjustment screw), 14 (adjustment screw), 15 (adjustment screw), 16 (adjustment screw), 18 (adjustment screw), 19 (adjustment screw), 20 (adjustment screw), 21 (adjustment screw), and 22 (adjustment screw). The drawing also shows a cross-section of the gear (6) and the belt (9).

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TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 582,707, dated May 18, 1897.

Application filed June 1, 1896. Serial No. 593,752. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. WEBB, a citizen of the United States, and a resident of New York city, 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 that kind of card-holding devices made the subject-matter of other applications filed by me May 16, 1896, Serial Nos. 591,787 and 591,788, and which applications have eventuated in Letters Patent Nos. 575,916 and 575,917, respectively, dated January 26, 1897.

My invention has for its main object to provide simple and effective means for holding cards, envelops, stiff paper, or the like to or upon the surface of a cylindrical platen in such a manner that the card or the like may be caused to conform to the surface of the platen and lie closely thereagainst, especially in the printing plane and in the immediate vicinity thereof, in order that the types may strike firmly and squarely and deliver practically as good impressions as when printing upon thin or ordinary writing-paper; and my invention has for a further object to provide means for effecting a relative adjustment between the card-holder and the line-spacing ratchet-wheel. The purpose of this adjustment is to enable the printing to be begun at any desired point on the card. Cards sometimes have an initial line printed or ruled thereupon and on which it is desired to begin the first line of printing. To bring this line to its place relatively to the striking-point of the types, it is necessary to adjust the card. The detent of the platen ratchet-wheel always maintains the platen at certain points in its revolution, and it is therefore, also, necessary to effect an adjustment between the card-holder and the teeth of the ratchet-wheel. If the platen could be turned to any point and left at rest, it would not be necessary to adjust the card-holder, but the platen always moves one tooth-space and remains at rest only when the detent has fallen to the bottom of the ratchet-notch. Unless some such provision is made for adjusting the parts it would be impossible to begin the work at a given point or upon a

printed or ruled line without turning the platen back and holding the detent out of working position for the first line of print.

My invention consists in certain features of construction and combinations of devices, all as will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a bottom plan view of a type-writer carriage having my improvements applied thereto. Fig. 2 is a vertical section taken at the line *x x* of Fig. 1, and Fig. 3 is a partial longitudinal section taken on the line *y y* of Fig. 2.

In the several views the same parts will be found designated by the same numerals of reference.

1 designates a paper-carriage or platen-frame which may be of any desired design or construction. 2 is a cylindrical platen mounted to rotate within said carriage or frame; 3, the platen-axle; 4, the platen core or support, and 5 its rubber sheath or cover of the usual construction. At the right-hand end of the platen is the usual ratchet-wheel 6, forming a part of the line-spacing mechanism, and with which engages a spring-acting detent 7, either of roller or V-shaped form, as customary.

8 designates the usual feed-roller, hung in pivoted arms or brackets 9 and forced against the platen by means of a spring or springs 10.

11 designates the card-holder, which is a permanent part of the platen, being held against the surface thereof by means of ordinary wood-screws 12, which pass through perforations in the card-holder and through the sheath or cover and into the core or support, which is preferably made of wood.

The card-holder is made of a comparatively thin metallic plate or bar and of a length preferably equal to that of the platen. The outer and inner surfaces of the card-holder are concentric with the platen, and the card-holder in practice is about five-eighths of an inch wide, although, of course, variations in its length and width may be made without departing from my invention. At one longitudinal edge of the card-holder is formed an undercut or groove 13 and an outstanding ledge-lip or flange 14 for holding the leading edge of the card 15.

The platen and card-holder are made adjustable circumferentially or axially with reference to the relatively-fixed ratchet-wheel, or, in other words, the platen bearing the fixed card-holder may be turned slightly, while the ratchet-wheel is held so that the desired point or line on the card may be brought to the printing-point. For this purpose the ratchet-wheel is provided with a hub 16, which surrounds an inner hub 17, projecting outwardly from a platen-disk 18, which is secured at the end of the platen by means of three wood-screws 19, which pass through perforations in the disk and longitudinally into the wooden core or support 4. The axle or shaft 3 passes through the disk and hub 17 and preferably takes a bearing in the end of the carriage-frame. The screws 19 are preferably countersunk, so that the inner side of the vertically-arranged ratchet-wheel may lie flush and in contact with the outer side of the disk 18. The platen may be turned independently within the hub 16 for the purpose of obtaining the desired adjustment, and then may be securely fastened by means of the radial binding-screw 20.

In the use or operation of the contrivance the leading edge of a card 15 is inserted under the ledge and into the space or pocket formed between the surface of the platen and the under side of said ledge, and the platen is then rotated to bring the card to the impression-point. In the "bottom-strike" construction or machine shown the platen, card-holder, and the card are rotated down to bring the card to the under side of the platen for printing. At Fig. 2 the card is in printing position, at which time it will be observed that the leading edge of the card is held by the said flange and by the said feed-roller, so that the card conforms accurately to the surface of the platen. During the rotative feeding-in movement referred to the feed-roller acts to bend the card about the platen as the leading edge of the card leaves or passes by said feed-roller. Of course a feed-clamp, pressure-blade, deflector, or other well-known substitute for a feed-roller may be used instead of the latter or in conjunction therewith.

I have shown at 22, Fig. 2, the usual pressure-blade or scale-bar, which assists in holding the card in curved form. The card is held against or close to the platen along two or more lines of contact, one at the ledge and the other at the feed-roller or other analogous device. The card is held firmly under the ledge and against the same by the inherent spring or tension in the card due to its being wrapped or wound around the surface of the platen by the feed-roller, &c. When the card has been brought to the desired position, the types may be actuated in the usual way to effect the printing.

The invention is of course equally adapted for both "top-strike" and "front-strike" machines.

To adjust the parts, the screw 20 is loosened and the platen is shifted or turned the required extent.

If it be desired to begin the printing on a card at a certain point or upon a previously-ruled line, the card may be placed against the platen with its leading edge under the ledge, whereupon the ratchet-wheel may be loosened, so that the platen, and hence the card, may be turned to bring the ruled line to the printing-point, after which the parts are again secured together. After the adjustment has once been made any number of like cards may then be introduced without further adjustment, but when a new card or set of cards having ruled lines which extend more or less back from the leading edge of the card is used then a readjustment should be made.

As far as the construction relating to the adjustment between the ratchet-wheel and the platen is concerned, the said construction may be advantageously employed for changing the striking-points upon the platen after the latter has become more or less worn in lines longitudinally corresponding with the distance apart of the ratchet spaces or teeth. Thus the whole surface of the platen may be utilized, and hence the platen will last for a very much longer time.

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

1. In a type-writing machine, the combination of a platen, a plate screwed upon the surface thereof and provided with an undercut and a ledge, and a ratchet-wheel connected to the end of said platen in a manner such that the platen and card-holder may be turned for adjustment independently of the ratchet-wheel.

2. In a type-writing machine, the combination of a platen, a card-holder attached thereto so as to rotate therewith, a disk attached to the end of said platen and provided with a hub, and a ratchet-wheel adjustable on said hub and provided with a retaining means.

3. In a type-writing machine, the combination of a platen provided at one end with a disk having a hub, a ratchet-wheel having a hub which takes a bearing on the disk-hub and which is circumferentially adjustable thereon, and means for securing the two hubs together.

4. In a type-writing machine, the combination of a platen, a platen-axle, a disk having a hub, a ratchet-wheel having a hub which is mounted for circumferential adjustment on the disk-hub, and a set-screw passing through the ratchet-wheel hub and bearing against the disk-hub.

Signed at New York city, in the county of New York and State of New York, this 28th day of May, A. D. 1896.

GEORGE B. WEBB.

Witnesses:

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