(No Model.)

G. W. N. YOST.

TYPE WRITING MACHINE.

No. 447,859. Patented Mar. 10, 1891.

Fig. 1.

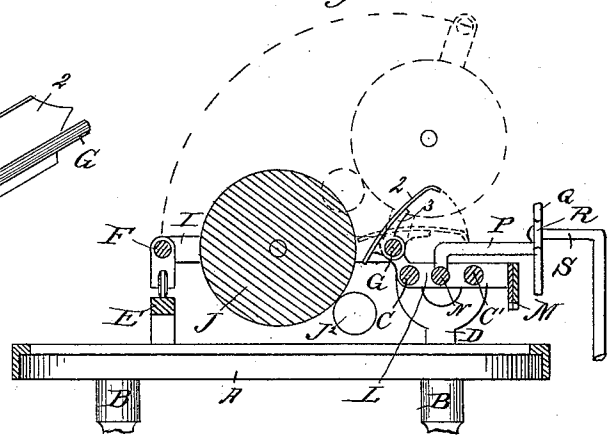


Fig. 4.

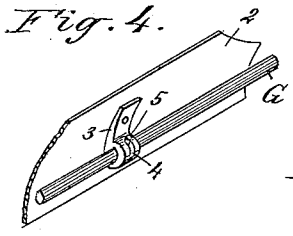


Fig. 2.

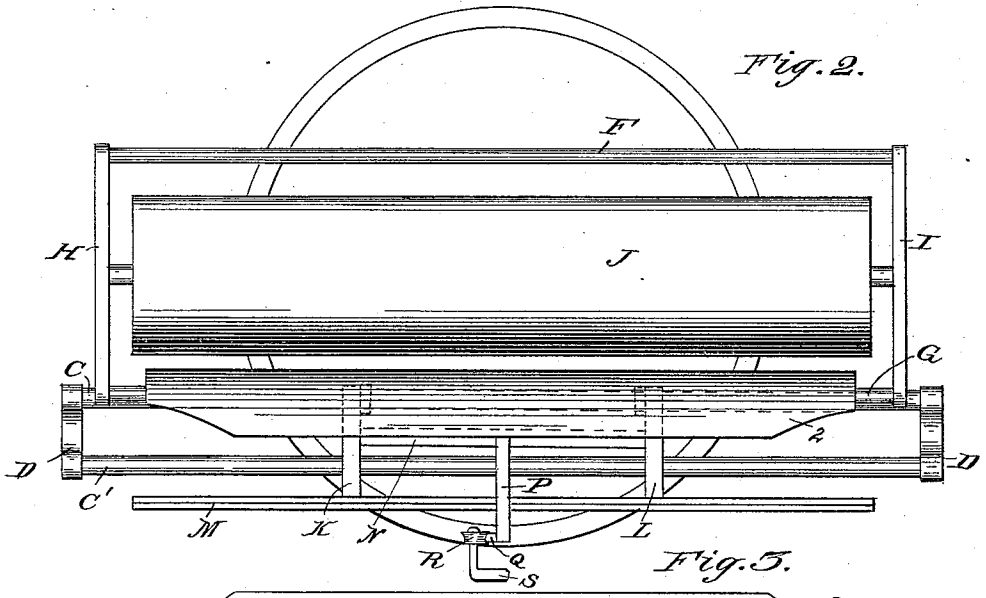
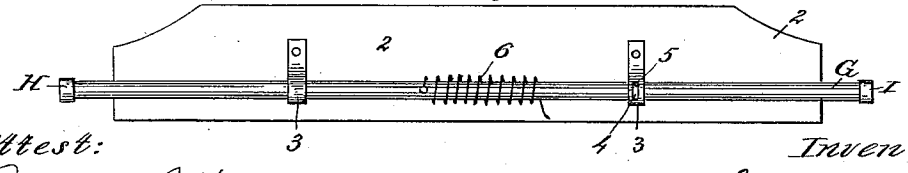


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE W. N. YOST, OF NEW YORK, N. Y., ASSIGNOR TO THE YOST WRITING MACHINE COMPANY, OF SAME PLACE.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 447,859, dated March 10, 1891.

Application filed March 31, 1888. Serial No. 269,064. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. N. YOST, 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.

My invention relates more particularly to the paper-tables of type-writing machines, which heretofore have been rigidly attached to the hinged paper-carriage and maintained always in a given position with relation thereto. In some constructions of machines paper-tables so secured answer well enough; but in others they cannot be used at all. Type-writing machines now being made by me are so constructed with respect to the carriage-guide and hinge-rails and the driving mechanism that a paper-table mounted in the usual manner would not permit of the carriage being turned up into a vertical position for inspection of the work upon the platen, for correction of errors therein, and for cleaning of the type.

My invention has for its main object to so connect the paper-table to the paper-carriage (in machines like those I am now making and in other machines, which preclude the employment of paper-tables as at present constructed and arranged) that the paper-carriage may be turned up to the required vertical or upright position as readily as in those machines now in common and extensive use and hereinbefore referred to.

To this main end my invention consists, primarily, in combining with a paper-carriage a hinged paper-table, and, secondarily, in certain features of construction and combinations of parts, all as will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the drawings which accompany this specification, Figure 1 is a vertical section of the upper portion of a type-writing machine embodying my present improvement. Fig. 2 is a top or plan view of the same. Fig. 3 is a rear elevation of the paper-carriage, hinge-rail, and the paper-table. Fig. 4 is a fragmentary perspective view of the same.

In the several views the same part will be found designated by the same letter or numeral of reference.

A represents the type-ring or top plate, supported upon exteriorly-arranged posts or pillars B B, forming part of the frame-work of the machine.

C C′ represent the carriage-guide rails, which are rigidly attached by brackets D to the frame of the machine and support the rear end of the carriage.

E is the carriage track or way, which supports the front end of the carriage.

The carriage, as usual, is composed of a front bar F, a rear bar G, and side bars H and I, and within this frame of bars is journaled the cylindrical platen or impression-roller J. The rear bar G of the carriage-frame preferably occupies a plane above and at an angle to the front guide-rail C, and this bar is hinged in two yokes or couplings K and L, which are bent and extended rearwardly, as shown, and perforated to receive both of the guide-rails C and C′. To the rear ends of these yokes is secured any suitable letter-space feed-rack, as M, for engagement with any suitable letter-spacing dog or ratchets. (Not shown.) Between said yokes and secured thereto parallel with the guide-rails is a bar N, to which is connected the inner end of an arm P, that extends rearwardly and is provided at its outer end with a vertical track Q for a roller R on the end of a carriage-driving arm S, such as made the subject-matter of an application filed by me May 16, 1887, Serial No. 238,351.

2 represents a paper-table of about the usual shape, provided on its rear side with two perforated lugs or journal-bearings 3 3, which surround the rear carriage-bar G in a manner to form a hinge-like connection between the paper-table and the paper-carriage. One of the perforated lugs 3 is provided with a longitudinal slot 4, in which works a pin 5, projecting from the bar G. A coiled spring 6 is secured at one end to the rod G and presses at its other end against the rear side of the paper-table below the line of its pivotal support, so that in the normal position of the paper-carriage and paper-table the latter is maintained in its proper relationship to the paper-carriage, as illustrated by the full lines

at Figs. 1 and 2. When the carriage is down in working position, the pin 5 occupies a place at the upper end of the slot, and as the carriage is turned up travels along said slot to its lower end, as will be understood from the drawings and from the following description of the mode of operation of the carriage and paper-table.

The paper to be written upon is passed down in front of the paper-table, as usual, and between the platen and the pressure-roller J^2 and is directed around the under side of the platen by paper-guides (not shown) in the customary manner, and during the process of writing the carriage and paper-table travel to the left, all as well understood by those skilled in the art. If it be desired at any time to raise the carriage for the purpose of inspecting the work, for making corrections, or for cleaning the type, &c., the same may be accomplished as easily and as freely as in machines made heretofore. The front rail or rod F may be grasped and the carriage turned about the axis G to the upright position indicated by the dotted lines at Fig. 1. During the initial ascent of the carriage the paper-table moves with it until the upper edge of the table meets the arm P, which offers an obstruction to any further movement of the paper-table. When this shall have occurred, the carriage will have moved about half-way up, and as the ascent of the carriage is continued the table remains stationary and in the dotted position illustrated. During the continued movement of the carriage the pin 5 travels toward the lower end of the slot and the spring is wound tighter upon the rod G. In turning down the carriage the pin 5 first travels back to the top of the slot 4 and the tension of the spring is lessened again. As the descent of the carriage is continued the pin, acting at the upper end of the slot, operates to draw the paper-table along forward with the carriage, and when the carriage has been brought back to its first position the paper-table will have been returned to the position shown in full lines at Fig. 1. The spring is constantly tending to turn the paper-table into the position indicated by the dotted lines at Fig. 1; but when the carriage is down the pin and slot prevent the spring from thus turning the paper-table. As the carriage is turned up the spring acts to turn the paper-table into the position illustrated by the said dotted lines. The pin-and-slot connection also serves to prevent the paper-table moving longitudinally on the bar G.

So far as the main feature of my invention is concerned many changes in detail construction may be made without departing from the essence thereof.

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

1. In a type-writing machine, the combination, with a hinged paper-carriage, of a paper-table hinged to said paper-carriage in rear thereof, substantially as and for the purpose set forth.

2. In a type-writing machine, the combination of a hinged paper-carriage, a paper-table hinged to said paper-carriage in rear thereof, and a spring for turning said paper-table independently of the paper-carriage when the latter is moved about its axis of motion, substantially as set forth.

3. In a type-writing machine, the combination of a hinged paper-carriage, a paper-table hinged to said paper-carriage in rear thereof, and a pin-and-slot connection between the paper-carriage and the paper-table, substantially as set forth.

4. In a type-writing machine, the combination of a hinged paper-carriage, the hinge-rail of which is provided with a pin or stud, a paper-table hinged to said hinge-rail and having a slot for said pin or stud, and a spring for turning said paper-table, substantially as set forth.

5. In a type-writing machine, the combination of a guided sliding yoke, a paper-carriage hinged to said yoke, a paper-table hinged to the hinge-rail of the paper-carriage, and a spring for turning said paper-table, substantially as set forth.

Signed at New York city, in the county of New York and State of New York, this 30th day of March, A. D. 1888.

G. W. N. YOST.

Witnesses:
GEORGE FENN,
JACOB FELBEL.