

(No Model.)

2 Sheets—Sheet 1.

J. B. PRICE.
TYPE WRITING MACHINE.

No. 580,953.

Patented Apr. 20, 1897.

Fig. 1.

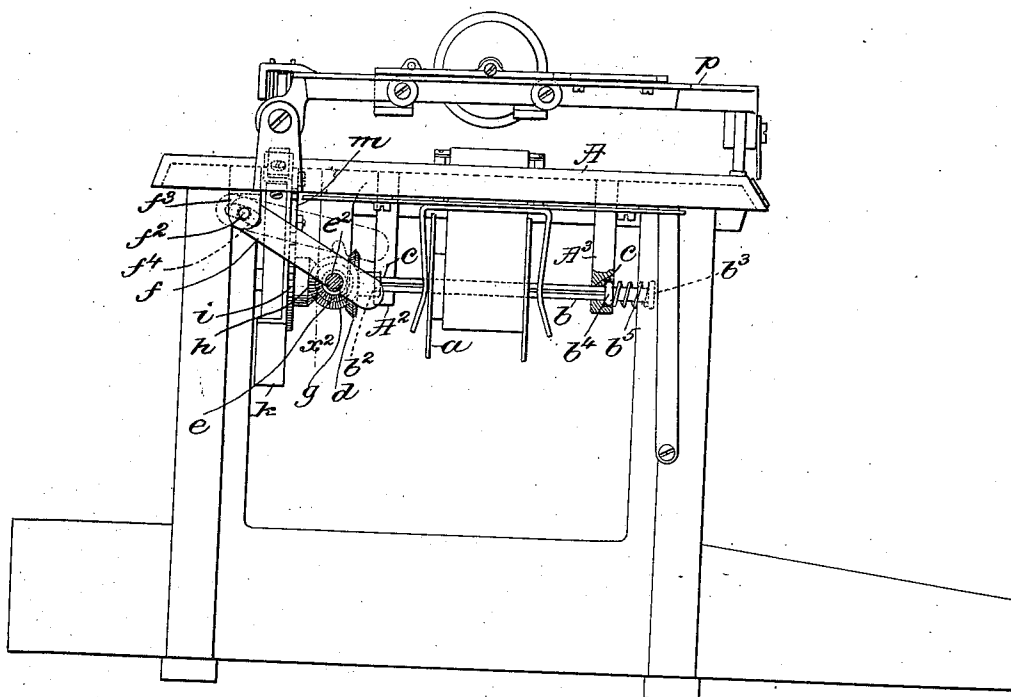


Fig. 2.

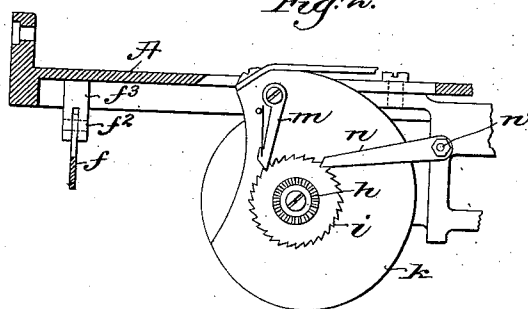
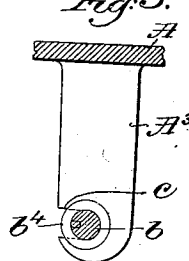


Fig. 3.



Witnesses:
John F. L. Prentiss
Jas. J. Maloney.

Inventor:
John B. Price.
by Jos. P. Linnmore
att'y.

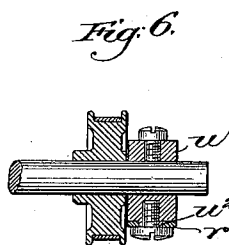
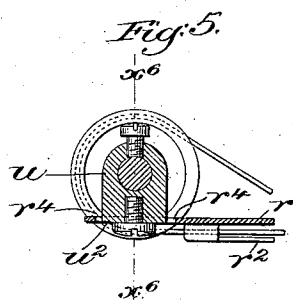
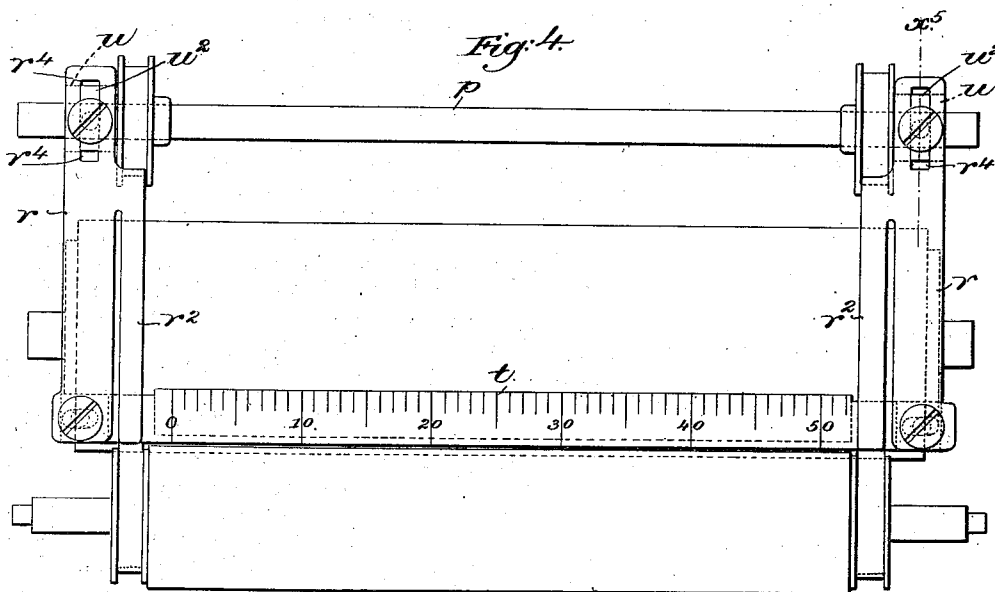
(No Model.)

2 Sheets—Sheet 2.

J. B. PRICE.
TYPE WRITING MACHINE.

No. 580,953.

Patented Apr. 20, 1897.



Witnesses:
John P. C. Printz
Jas. J. Maloney.

Inventor:
John B. Price.
by J. P. Lummie atty.

UNITED STATES PATENT OFFICE.

JOHN B. PRICE, OF WOLLASTON, MASSACHUSETTS, ASSIGNOR TO THE MANHATTAN TYPEWRITER COMPANY, OF NEW JERSEY.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 580,953, dated April 20, 1897.

Application filed November 20, 1896. Serial No. 612,819. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. PRICE, of Wollaston, county of Norfolk, and State of Massachusetts, have invented an Improvement in Type-Writing Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention is embodied in a type-writing machine, and relates especially to the mechanism for supporting and controlling the ink-ribbon, being applicable to machines of the well-known Remington type.

The invention consists mainly in a novel construction of the bearing for the ink-ribbon spools and in details of construction of the mechanism for operating the ink-ribbon spools and of the guards below the paper-carriage for supporting the letter-gage and protecting the platen and paper thereon from the ink-ribbon.

Figure 1 is an end elevation of a sufficient portion of a type-writing machine to illustrate a portion of the improvements forming the subject of this invention; Fig. 2, a sectional elevation on the line x^2 of Fig. 1; Fig. 3, an end elevation of one of the hangers or bearings for the shaft of the ink-ribbon spool; Fig. 4, an underneath plan of a portion of the paper-carriage; and Figs. 5 and 6, sectional details thereof on lines x^5 , Fig. 4, and x^6 , Fig. 5, to be referred to.

The general construction and arrangement of the working parts of the machine may be and are shown as substantially the same as in the well-known Remington machines, and do not therefore require to be illustrated or described for an understanding of the present invention.

The ink-ribbon spools a are each connected by a spline with its shaft b , which is supported in bearings formed in lugs A^2 A^3 on the under side of the top frame-plate A of the machine.

In order to securely support the spool-shafts b in their bearings and at the same time permit of their ready detachment therefrom without the use of tools of any kind, the said bearing-lugs A^2 are provided with slotted recesses or notches c of proper size to receive

and support the spool-shaft b without confining the same against lateral displacement.

In order to retain the said shaft in its bearings, it is provided at one end with a collar or enlargement b^2 , fixed thereon, and the bearing-lug A^2 is correspondingly counterbored, as shown, so that when the collar b^2 is seated in said counterbores the shaft is restrained from lateral movement, but is free to rotate in its bearing in the lug A^2 .

The opposite end of the spool-shaft b is extended beyond its corresponding bearing-lug and provided with a head or enlargement b^3 , between which and a collar b^4 , loose on said shaft, is interposed a spring b^5 . The bearing-lug A^3 is counterbored like the one A^2 , and when in working position the spring b^5 tends to retain the collars b^2 b^4 in their corresponding counterbore, and thus retains the spool securely in its bearing. When, however, it is desired to remove the spool or spool-shaft from the machine, it is necessary only to press the end b^3 of the shaft against the stress of the spring b^5 sufficiently to carry the collar b^2 , at the opposite end of the shaft, out from the counterbore, when the said end of the shaft can be removed laterally from its bearing-notch in the lug A^2 , and the other end may then be readily withdrawn from the bearing A^3 .

The spring b^5 may be made to press the collars against their bearing-surfaces in the lugs A^2 A^3 sufficiently to afford a slight frictional resistance to the rotation of the spool-shaft and spool, so as to maintain the ink-ribbon in the desired state of tension. The spool-shafts are provided with the usual beveled gears d to enable one or the other of them to be intermittingly rotated to advance the ink-ribbon, as the writing proceeds, in the usual manner, one of said gears being engaged by a corresponding beveled gear e on the longitudinal shaft e^2 when it is desired to feed the ink-ribbon in one direction, while the gear on the other spool is engaged by the corresponding beveled gear on said shaft e^2 when it is to feed the ink-ribbon in the opposite direction in the usual manner. The said shaft e is longitudinally movable to engage a gear at one end thereof with that of the corresponding spool-shaft and at the same time disengage the gear at the other end, and it is controlled as

to its engagement by means of a key f , pivotally supported at f^2 in a lug f^3 , depending from the under surface of the main frame-plate A. Said key is slotted where it engages with its pivot, as shown at f^4 , so that when its notched end is lifted out of engagement with the shaft e^2 said key may be slipped back on its pivot and engaged with its supporting-lug, so as to retain it out of engagement with the said shaft, as shown in dotted lines, Fig. 1.

The shaft e is rotated in the usual manner by means of a beveled gear g , splined thereon and meshing with a beveled gear h , connected with the ratchet-wheel i , loose on the shaft of the spring-actuated carriage-feed disk k . The said ratchet i is rotated in one direction only (namely, the direction of movement of the disk k in feeding the carriage as the writing proceeds) by means of a pawl m , pivoted on said feed-disk and engaging with the teeth of said ratchet i .

In order to prevent reverse rotation of the ratchet i and consequent slackening of the ink-ribbon when the disk k is turned in the opposite direction, as when the carriage is moved back for the beginning of a new line, a retaining-pawl n is provided, engaging with the teeth of said ratchet i and pivotally supported upon a bearing n^2 , projecting from the framework at the rear of the feed-disk k .

The paper-carriage p , a portion only of which is shown, is provided with the usual supports r for the letter-gage t , said supports r having the usual projections or guards r^2 for preventing contact between the paper over the platen and the ink-ribbon except at the point struck by the type. Said gage-supports and ink-ribbon guards as heretofore constructed have been adjustably fastened upon lugs u , connected with the paper-carriage, by means of clamping-screws, and much annoyance is frequently caused by the lateral or pivotal movement of said supports r at their point of support, such movement throwing the letter-gage out of proper position. In order to avoid this difficulty, the lugs u are in accordance with the present invention provided with tongues u^2 , which fit

closely in and have a long bearing engagement with the sides of slots r^4 in the gage-supports r , (see Figs. 5 and 6,) thus preventing possibility of lateral or angular displacement of the latter.

When it is desired to remove either ink-ribbon spool, the actuating-shaft e must be in such position as to disengage its gear from the gear of the spool-shaft to be removed, and the spool-shaft can then be easily removed from its bearings, as before described.

I claim—

1. In a type-writing machine, the combination of the ink-ribbon spool-shaft having at one end a fixed collar and at the other end a longitudinally-movable spring-pressed collar, with bearing-lugs slotted to admit of lateral insertion and removal of said shaft, and counter-bored to receive said collars thereof, substantially as and for the purpose described.

2. The combination of the ink-ribbon spool-shafts, each provided with a beveled gear, of a longitudinally-movable actuating-shaft provided with beveled gears to cooperate with those of the ink-ribbon shafts one at a time, and a pivotally-supported key having its free end notched for engagement with grooves in said driving-shaft, said key being slotted at its point of connection with its pivot whereby said key may be thrown out of engagement with the grooved actuating-shaft and supported by engagement with the frame, substantially as and for the purpose described.

3. The combination of the supporting-arms r for the letter-gage and ink-ribbon guards provided at one end with a parallel walled slot, of the supporting-lugs for said arms provided with a tongue entering said slot to prevent lateral or angular displacement of said arms, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN B. PRICE.

Witnesses:

JOS. P. LIVERMORE,
JAS. J. MALONEY.