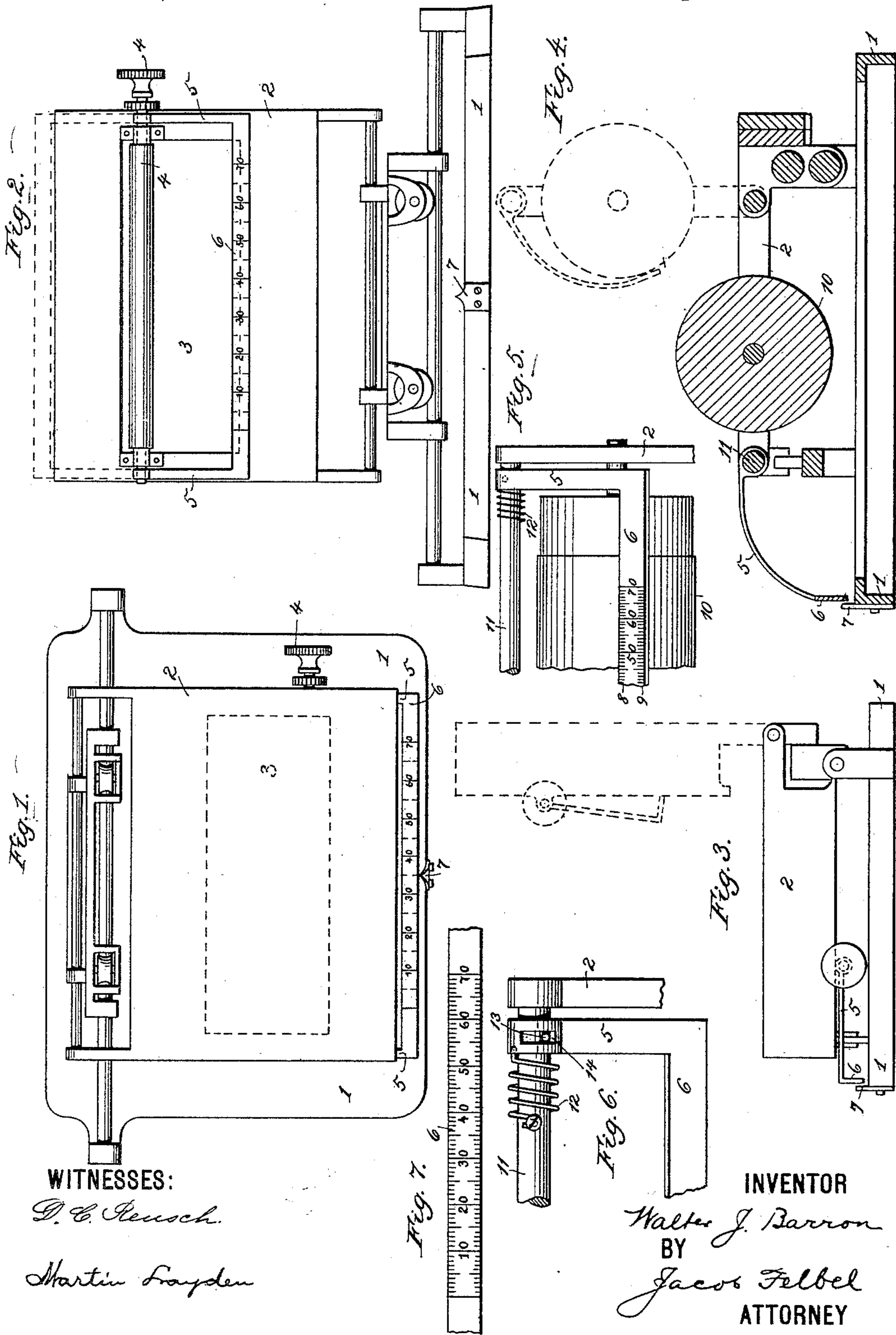


W. J. BARRON.  
TYPE WRITING MACHINE.

No. 450,880.

Patented Apr. 21, 1891.





# UNITED STATES PATENT OFFICE.

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## TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 450,880, dated April 21, 1891.

Application filed April 24, 1890. Serial No. 349,242. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER J. BARRON, a citizen of the United States, and a resident of Brooklyn, in the county of Kings 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 the scales of type-writing machines, and has for its main object to provide a construction whereby a single scale bar or plate and pointer or index may be employed to serve all of the functions of the two scales and pointer heretofore patented to me January 22, 1878, No. 199,494, and now in daily use.

To this main end and object my present invention consists, primarily, in combining with the paper-carriage a hinged or vibratory scale adapted with the aid of a pointer or index to show the progress of the writing and the paper-carriage when the latter is down and the machine is being operated, and adapted also to be swung or moved underneath the carriage to or in proximity to the line of print when the carriage is turned up, in order that any portion of the line of print may be definitely ascertained and readily brought to the printing or impression point when the carriage is again turned down into working position.

My invention consists, secondarily, 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 represents in top view a portion of a type-writing machine embodying my invention, the paper-carriage being turned down in working position. Fig. 2 is a front elevation of the same with the paper-carriage turned up to permit of inspection or correction of the line being written. Fig. 3 is a side elevation, the paper-carriage being represented as down in full lines and as up in dotted lines. Fig. 4 is a vertical section of another form or construction of type-writing machine embodying my improvements, the paper-carriage being shown in its two positions by the full and dotted lines. Fig. 5 is a partial front elevation of a machine with the carriage turned up. Fig. 6 is a detail view enlarged

to show the mode of mounting the scale illustrated at Fig. 5. Fig. 7 is a plan of the duplex scale.

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

1 represents a top plate or type-ring of a type-writing machine, and 2 the paper-carriage thereof. The construction of paper-carriage shown at Figs. 1, 2, and 3 consists of a box-like structure adapted to contain a pile of telegraph-blanks or separate sheets of paper and provided at its under side with a large rectangular opening 3, through which the type may pass to the lowermost sheet of paper. In this form of carriage the usual cylindrical platen is dispensed with and the pile of paper, suitably held in place, is itself made to constitute the platen. As each sheet or blank is filled or finished, it is fed forward out of the box by a feed or friction roller 4, journaled in hangers or bearings on the under side of carriage. Inasmuch as this construction of paper-carriage will form the subject of a separate application, and is shown herein only to exhibit one of the several ways in which my present invention may be carried out, no further detail description thereof, it is thought, will be necessary.

Preferably upon and near the ends of the axle or shaft of the feed-roller are pivotally hung two arms 5 5, to the outer free ends of which is connected a bar or plate 6, marked or provided with a scale or series of graduations. The scale plate or bar shown at Figs. 1 and 2 travels in a horizontal plane when the carriage is down and the writing is being performed, while the scale-plate shown at Fig. 3 occupies a vertical plane when the carriage is down in working position.

At the front of the machine and in line with the printing or impression point is arranged, preferably upon the type-ring or top plate, an index, pointer, or indicating means 7 for use in connection with the scale-plate, which, as seen, is graduated or marked to read from left to right, the carriage, as usual, being arranged to travel step by step from right to left.

By means of the traveling scale and stationary pointer the progress or position of the carriage and the work at any time may be instantly ascertained. In case a mistake has



been made in the writing the carriage may be turned up or swung back, as illustrated at Fig. 2, in which view the scale-plate is shown in dotted lines in its normal position. In order to definitely ascertain the precise locality at which the mistake has occurred, so that the correction in type may be made, the scale-plate is moved or vibrated through about a half-circle (its center of rotation being about the axis of the feed-roller) to the position shown in full lines at Fig. 2 in proximity to the line of writing. As soon as this is done, the numerical position of each letter, numeral, or other character and space may be determined at once. If the error (say of omission) occurred at "50" on the scale, that particular portion of the line may be brought with certainty to the impression-point by permitting the scale-plate to resume its normal position, turning down the carriage and moving the same along until the "50" on the scale is brought into alignment or register with the stationary or fixed pointer or index. The proper type-bar may then be actuated and the omitted character supplied.

The scale-plate is preferably marked with two sets of graduations 8 and 9, one at each edge, and both arranged to read from the same direction. The inner scale 8 may be used to facilitate the location of the characters and the spaces in the line being written when the carriage is turned up, and the outer scale 9 may be conveniently employed in conjunction with the index or pointer when the carriage is down in working position. Instead of the duplex scale shown, a single scale may, however, be used without departing from the spirit of my invention.

In the vertical arrangement of scale-plate shown at Fig. 3 a single set of graduations only may be employed, or one set on each side of the plate may be used.

At Figs. 4, 5, and 6 the "Caligraph" form of carriage is shown, 10 designating the cylindrical platen upon which the paper is held during the operation of printing. In this construction of carriage the scale-supporting arms 5 5 are hung or journaled upon the front carriage-rod 11, and are curved, preferably, so as to bring the scale-plate in a vertical position. In this arrangement of the scale-plate but one series of graduations is necessary, though two may be employed, as illustrated at Fig. 5. However the plate or bar may be marked, it is adapted to be used in connection with the pointer or index in the manner hereinbefore referred to.

Some means may be provided to hold the scale-plate normally in the position shown in full lines at Figs. 1, 3, and 4. For this purpose I employ a spiral spring 12, one end of which is connected to the arm 5 and the other end to the front carriage-rod 11, which is provided with a fixed pin 13, that is embraced by an elongated slot 14 in the eye or bearing of the arm 5. The tension of said

spring operates to throw the scale-plate outwardly close to the stationary pointer or index and the pin-and-slot connection to limit the movement or vibration of the arms and the scale-plate.

The arms and the scale-plate are preferably made of a single piece of material.

The indicating means arranged permanently opposite the printing-point may be in the form of a pointer or finger or in the form of a mark or line.

If desired, the spring 12 may be arranged to hold the scale-plate normally in proximity to the line being printed. I prefer, however, the arrangement shown, whereby when the scale has been brought to the line of print and released it will automatically swing outwardly, so as to be in sight of the type-writer when the carriage is down in working position; but so far as one part of my invention is concerned the spring may be dispensed with entirely and the operator made to move the scale by hand in both directions.

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

1. In a type-writing machine, the combination of a fixed or stationary pointer or index arranged opposite the printing-point, a paper-carriage, a scale connected to said carriage and constructed and arranged to have a movement from the pointer or index to the line of print, whereby the scale is adapted to show the progress of the carriage when down and also the numerical position of the line of print when the carriage is up, as and for the purposes set forth.

2. In a type-writing machine, the combination, with a hinged paper-carriage, of a hinged or vibratory scale connected at the front of the carriage to travel therewith and show the progress of the carriage when down in a working position and arranged to be swung underneath the carriage to the line of print when the carriage is turned up and exhibit the numerical position of each character and space in the line being written, as set forth.

3. In a type-writing machine, the combination of a fixed pointer or index, a hinged paper-carriage, a scale hinged to the front of the paper-carriage to travel in sight of the operator when the carriage is down and writing is being done and constructed to be swung underneath the carriage to the line of print when the carriage is turned up, and a returning-spring for said scale, as set forth.

4. The combination, in a type-writing machine, of a fixed or stationary pointer or index, a paper-carriage, and a hinged or vibratory duplex scale to perform the two functions herein described.

Signed at New York, in the county of New York and State of New York, this 23d day of April, A. D. 1890.

WALTER J. BARRON.

Witnesses:

JACOB FELBEL,  
MARTIN LAYDEN.