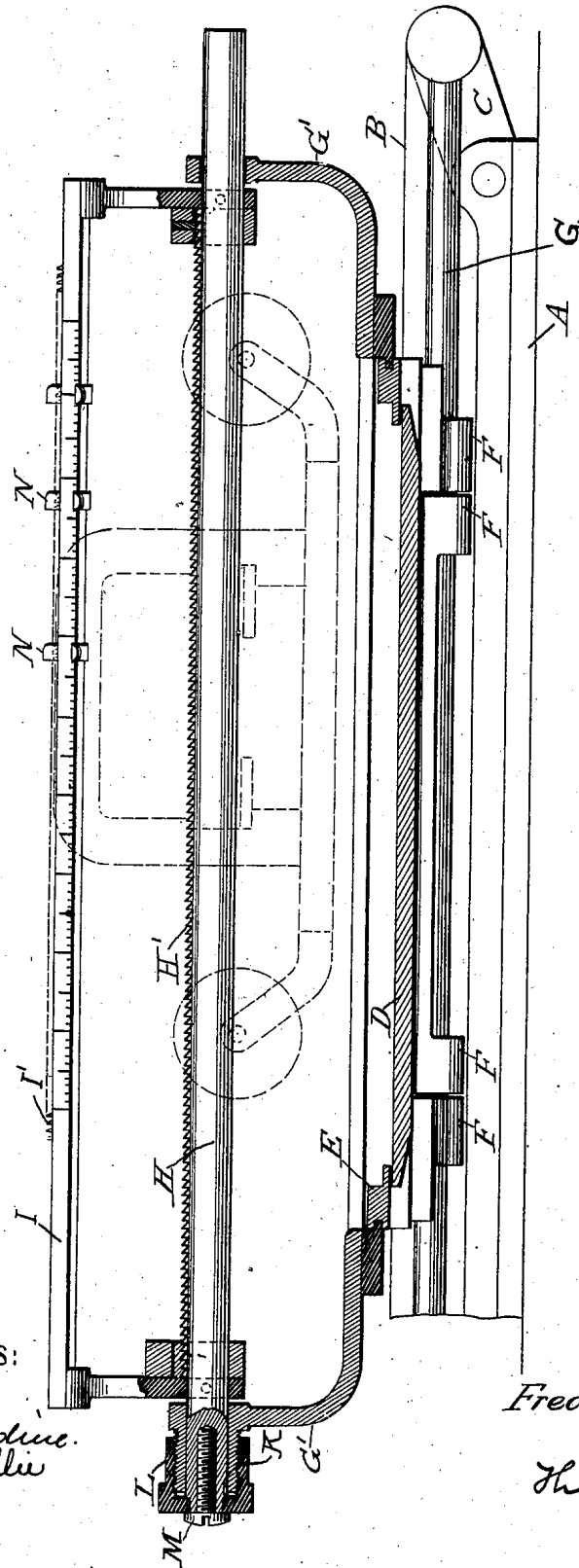


No. 720,520.

PATENTED FEB. 10, 1903.

F. W. HILLARD.  
TYPE WRITING MACHINE.  
APPLICATION FILED AUG. 22, 1900.

NO MODEL.



WITNESSES:

*Chas. Brudine.*  
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# UNITED STATES PATENT OFFICE.

FREDERIC W. HILLARD, OF TOTTENVILLE, NEW YORK, ASSIGNOR TO THE ELLIOTT & HATCH BOOK TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

## TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 720,520, dated February 10, 1903.

Application filed August 22, 1900. Serial No. 27,681. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERIC W. HILLARD, a resident of Tottenville, in the county of Richmond and city 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 is particularly applicable to type-writers of the general style illustrated and described in United States Letters Patent No. 620,125, granted to the Elliott & Hatch Book Typewriter Company as assignee of Walter P. Hatch and Frederic W. Hillard, dated February 28, 1899.

The invention consists in a bar or bars provided with means for adjustment, as hereinafter described.

In the style of type-writers used for writing in bound books it is desirable that the spacing-rack be adjustable along its length, so that it shall be possible in undertaking to put a book in place on the machine to make a fine adjustment of the machine itself to secure a proper margin or to properly position a word or letter.

In the accompanying sheet of drawing, which forms a part of this specification, the drawing represents a view of the machine in cross-section looking from the front, the rack and some of the other parts being shown in elevation and the adjustment of the rack being shown mainly in cross-section.

At the bottom of the drawing is shown the base of a lift-frame A, a cross-bar B, connected thereto by links C, of which only one is shown, a platen D, and base-frame E, both provided at their rear ends with lugs F, which fit over the back rod G in front of and parallel to cross-bar B on the lift-frame. The base-frame is provided with standards G', which support a bar H, on which is the rack H' for letter and word spacing. The bar H is called the "letter-spacing bar," and the rack H' upon it is called the "letter-spacing rack," for brevity. To the bar H is pinned, so as to move with it, another bar I, called a "tabulator-bar," also provided with a spacing-rack I', called a "tabulator-rack." The bars H and I are pinned together, as shown, so that the two move together.

The letter-spacing bar H is mounted at its ends in the two standards G'. The bar is fitted so that it can slide through its bearings in the standards and at one end is provided with a shoulder K and is internally threaded. The bearing in the standard G' at this end is elongated and externally threaded, and a cap L is screwed over the bearing. This cap is bored out and internally threaded, and when screwed on the bearing fits over the end of the bar H and bears against the shoulder K thereon. The screw M fits into the interior boring in the end of the bar H and holds the cap L in place against the shoulder K thereon. The head of the cap L is milled, so that it can be easily adjusted upon standard G'. Tabulator-bar I is fitted upon the letter-spacing bar H in the standards G', so as to allow a small movement of the two bars along their length. By turning the cap L in either direction the letter-spacing bar H can be adjusted in either direction along its length through a small distance. This also effects an adjustment of the tabulator-bar I and of the writing-machine. The teeth of the tabulator-rack I' are alined with the teeth of the spacing-rack H'. Upon the rack I' tabulator-stops N may be set at any desired points and may be moved from point to point as desired. Release-keys are provided for freeing the carriage from control of the escapement and throwing a stop on the carriage into the path of the tabulator-stops N, so that the writing-machine may be quickly brought to any one of the tabulator-stops. This tabulator is fully described and claimed in my other application filed the 18th day of August, 1900, Serial No. 27,320, to which reference may be had. The adjustment of the racks H' and I' is in the direction in which the spaced member moves. In the machine illustrated in the aforesaid Letters Patent the spaced member is the type-carriage, the letter-spacing rack being stationary. In the No. 2 Remington machine the spaced member is the paper-carriage and the letter-spacing rack is spaced therewith.

It will be clear that both the tabulator bar and rack and the spacing bar and rack are spacing-bars and spacing-racks, one for spac-

ing the writing mechanism the distance between letters and between words and the other for spacing the writing mechanism the distance between columns or other divisions across the page. Both bars are preferably provided with racks, because it is essential that the tabulator-stops should be set in positions which correspond exactly with the teeth of the letter-spacing rack, and the most convenient way to effect this is to make a rack on the tabulator-bar which is a duplicate of the letter-spacing rack. It is obvious that pins or other equivalents can be used in place of the rack. I shall therefore use the expression "spacing member" to cover both the spacing-bar and its rack and the tabulator-bar and its rack or equivalents thereof.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a type-writing machine, the combination of a carriage, a letter-spacing member by which the carriage is guided and controlled for letter-spacing and means for adjusting said letter-spacing member longitudinally and for thereby positioning a word or letter in the type-written line, substantially as described.

2. In a type-writing machine, a pair of spacing-bars adjustable together lengthwise, substantially as described.

3. In a type-writing machine, a pair of spac-

ing-bars parallel to each other and rigidly connected and adjustable lengthwise, substantially as described.

4. In a type-writing machine, a spacing-bar and a tabulator-bar adjusted together lengthwise, substantially as described.

5. In a type-writing machine, a spacing-bar and a tabulator-bar parallel to each other and rigidly connected and adjustable together lengthwise, substantially as described.

6. In a type-writing machine, a pair of racks adjustable together lengthwise, substantially as described.

7. In a type-writing machine, a pair of racks parallel to each other and rigidly connected and adjustable lengthwise, substantially as described.

8. In a type-writing machine, a spacing-rack and a tabulator-rack adjustable together lengthwise, substantially as described.

9. In a type-writing machine, a spacing-rack and a tabulator-rack parallel to each other and rigidly connected and adjustable together lengthwise, substantially as described.

Signed by me in New York city this 21st day of August, 1900.

FREDERIC W. HILLARD.

Witnesses:

SAMUEL W. BALCH,  
HAMPTON D. EWING.