

**No. 713,468.**

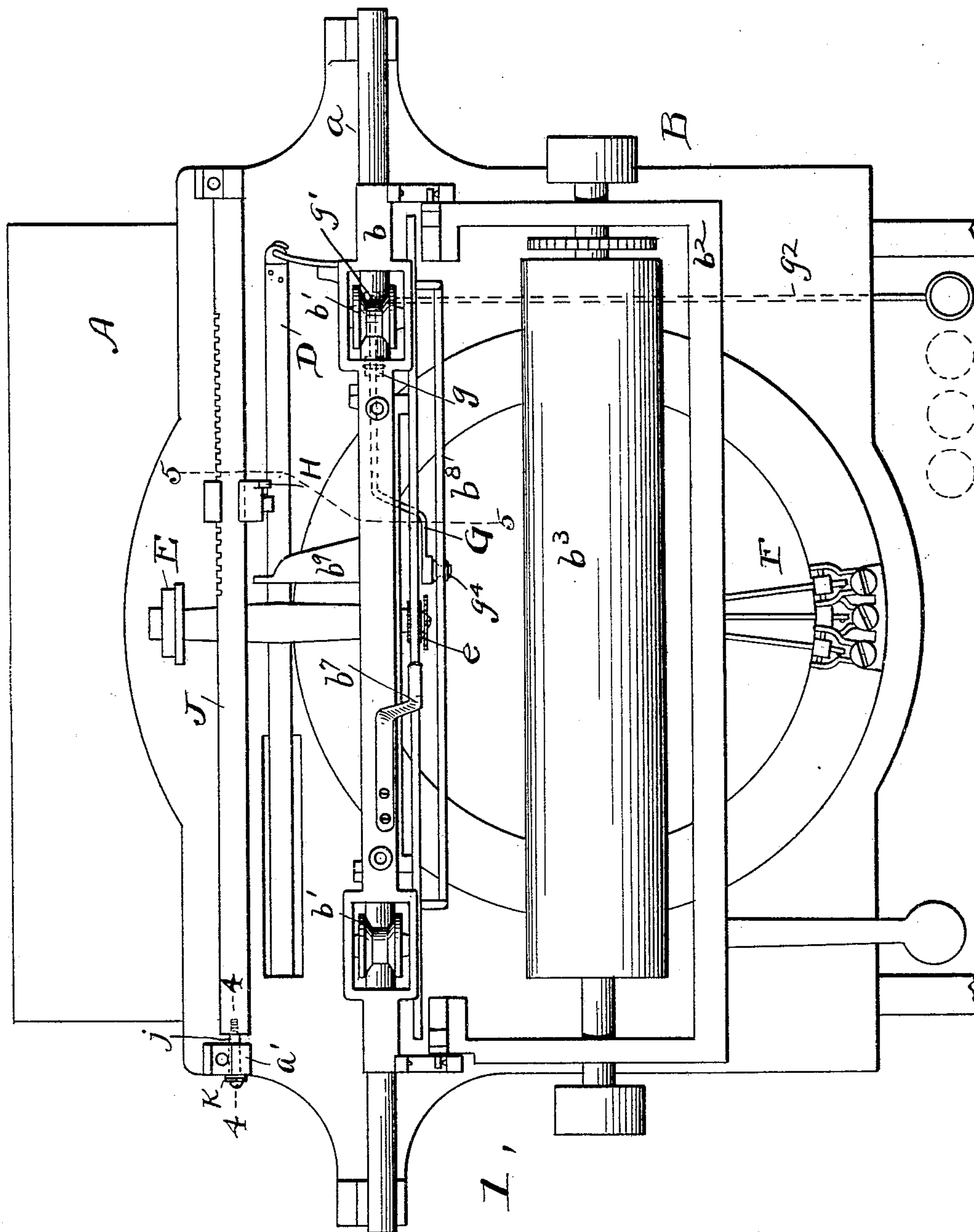
Patented Nov. 11, 1902.

H. MARSHALL.  
TYPE WRITER.

(Application filed May 10, 1900.)

(No Model.)

**2 Sheets—Sheet 1.**



Witnesses.  
E. B. Gilchrist  
F. D. Ammer

Fig. 1.

Inventor,  
Holmes Marshall,  
By his Attorneys,  
Thurston & Bates.

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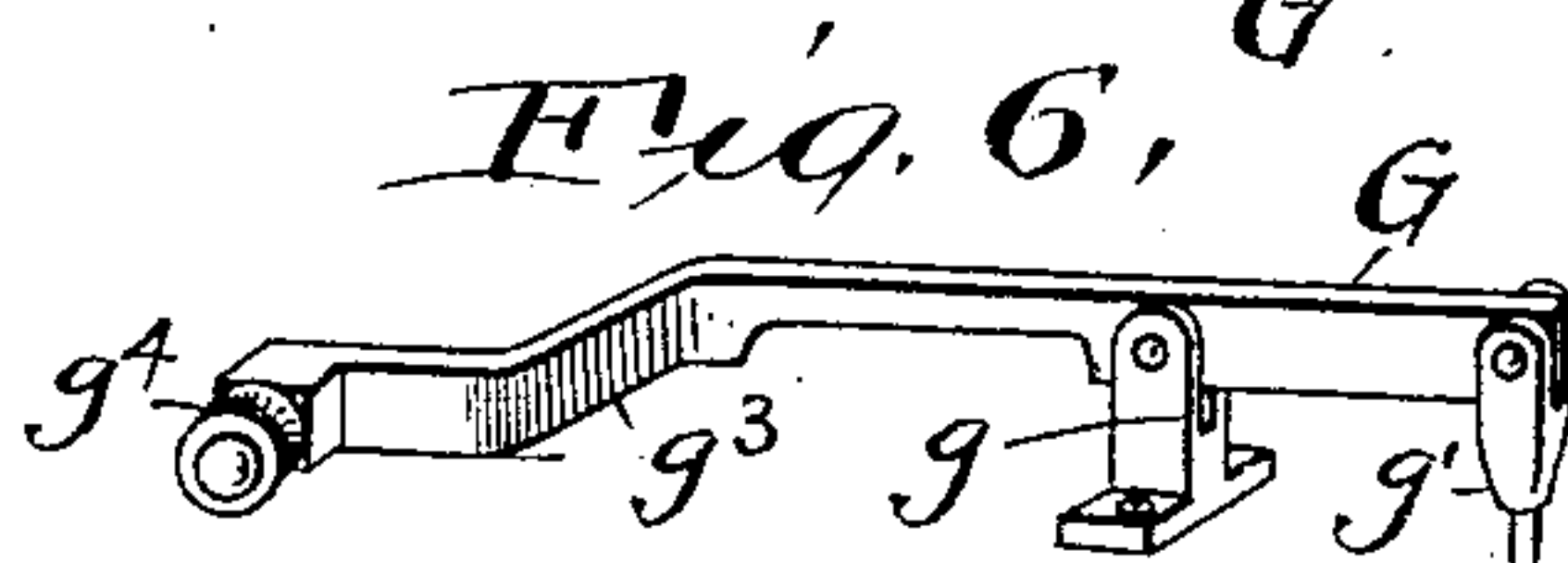
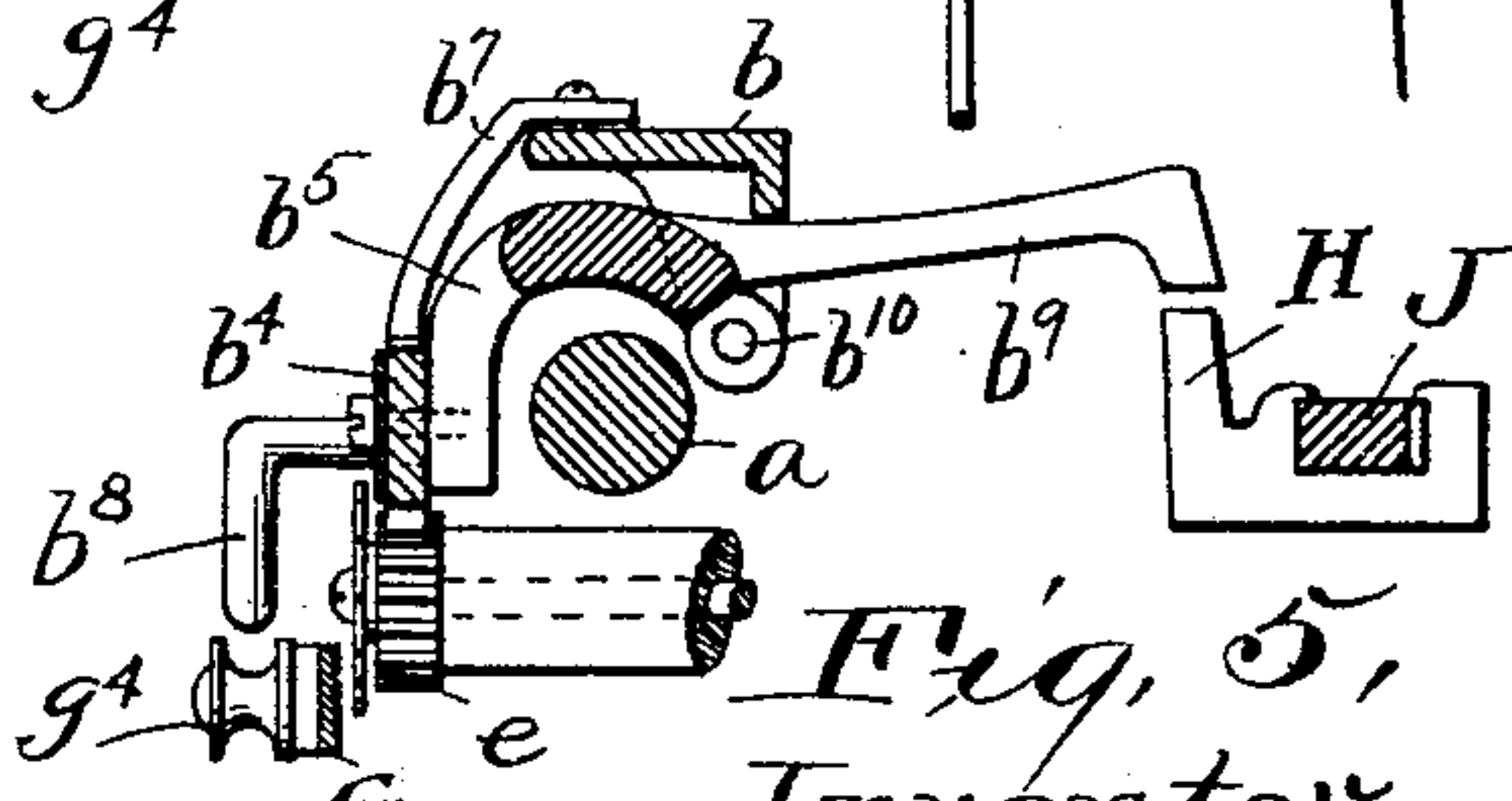
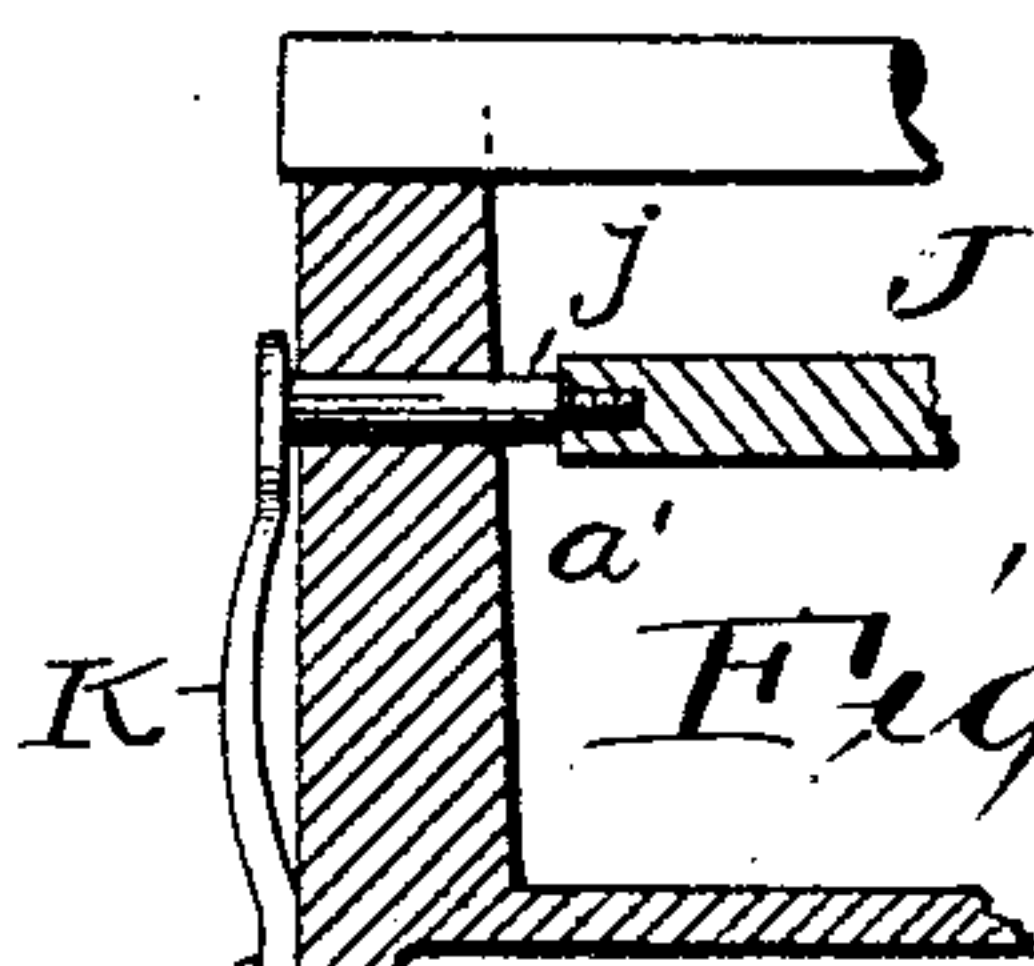
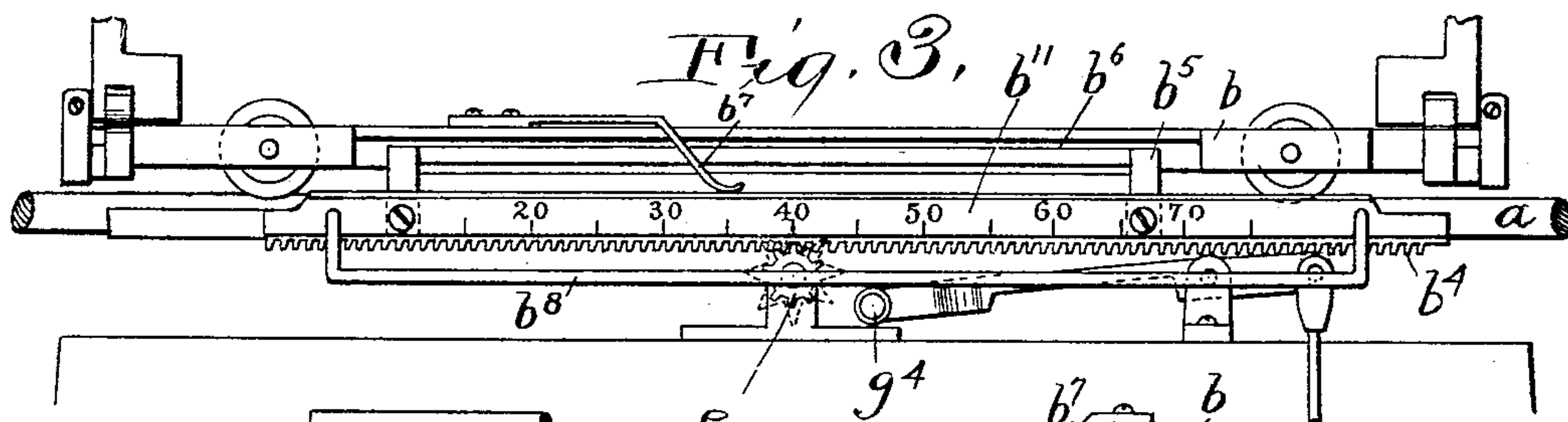
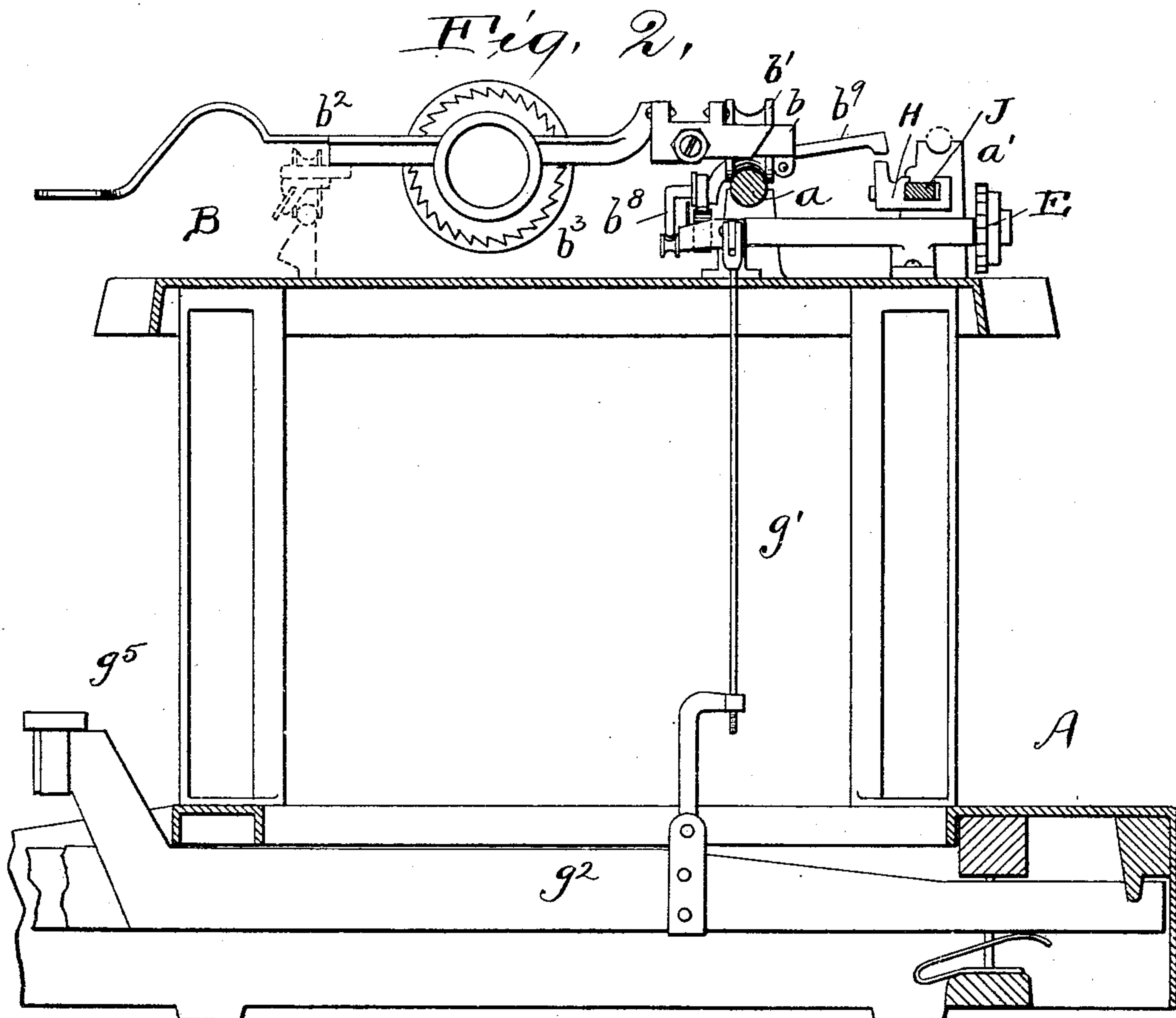
H. MARSHALL.

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2 Sheets—Sheet 2.



Witnesses  
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Holmes Marshall,  
By his Attorneys,  
Thurston & Bates.



# UNITED STATES PATENT OFFICE.

HOLMES MARSHALL, OF CLEVELAND, OHIO, ASSIGNOR TO THE NATIONAL ADDOGRAPH COMPANY, OF JERSEY CITY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

## TYPE-WRITER.

SPECIFICATION forming part of Letters Patent No. 713,468, dated November 11, 1902.

Application filed May 10, 1900. Serial No. 16,168. (No model.)

*To all whom it may concern:*

Be it known that I, HOLMES MARSHALL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Type-Writers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

10 The object of this invention is to provide a type-writer with simple and efficient means operated by a key in the keyboard for causing the carriage to skip from any point to a certain desired predetermined position and then to resume its normal operation. This "jumper," as I call the mechanism, is very convenient in tabulating and similar work—as, for example, in writing bills—where the explanatory matter ends at different points, but the figures must be in vertical alinement.

20 The means I employ for attaining the above end is shown in the drawings and hereinafter fully explained. They are specifically designed for use with a type-writer of the Remington type, requiring the addition thereto of but few parts and parts easily applied. The invention may be summarized as consisting of the combinations of parts hereinafter described and claimed.

30 The drawings show my invention as applied to a type-writer of the Remington type.

Figure 1 is a plan of such type-writer, omitting many of the parts which do not contribute to the present invention. Fig. 2 is an end elevation of the type-writer, being sectional substantially parallel with the key-levers. Fig. 3 is a front elevation of the carriage-rack and coöperating parts, the carriage being supposed to be turned up, but being broken away at its hinges. Figs. 4 and 5 are vertical sections, respectively, on the lines 4 4 and 5 5 of Fig. 1. Fig. 6 is a perspective view of the jumper-lever.

45 The same reference character designates the same part of each figure.

The type-writer shown includes the frame A, the carriage B, the strap D, to which tension is applied to move the carriage to the left,

an escapement E for governing such movement, and the type-levers and their operating mechanism designated F. The carriage includes a frame *b*, which has wheels *b'* riding upon a bar *a*, carried by the type-writer frame, and hinged to this carriage-frame *b* is a yoke *b<sup>2</sup>*, which carries the impression-roller or platen *b<sup>3</sup>*. Carried by the frame *b* is the rack-bar *b<sup>4</sup>*, which meshes with the pinion *e* on the forward end of the shaft operated by the escapement E. This rack-bar *b<sup>4</sup>* is pivoted to the carriage-frame *b* by ears *b<sup>5</sup>*, formed on the ends of a brace *b<sup>6</sup>* and journaled on a rod *b<sup>10</sup>*, carried by the frame *b*, the forward ends of the ears being secured to the rear side of the rack-bar. The rack is normally held in continuous engagement with the wheel *e* by the spring *b<sup>7</sup>* pressing it toward that wheel.

From the construction described it will be seen that should the rack-bar *b<sup>4</sup>* be elevated out of engagement with the wheel *e* the carriage would be drawn to the left by a pull on the strap D. My jumper causes such elevation with this result. This is accomplished as follows: Carried by the rack-bar is a suitable guide *b<sup>8</sup>*, made preferably in the form of a round wire set into the bar near its ends and extending forward and then downward and then along horizontally parallel with the rack-bar below it and in front of it, so as not to obstruct the view of the scale *b<sup>11</sup>*, carried by the rack-bar. This shape and position is shown clearly in Figs. 3 and 5. Secured to the upper side of the top plate of the frame is a small standard *g*, in which is pivoted the jumper-lever G. This lever has one end secured to the link *g'*, which adjustably connects it with the key-lever *g<sup>2</sup>*, while its other end is offset forward, as at *g<sup>3</sup>*, and near its extreme end carries a roller *g<sup>4</sup>*, which lies directly beneath the longitudinal portion of the rod *b<sup>8</sup>*. Thus when the key *g<sup>5</sup>* on the forward end of the lever *g<sup>2</sup>* is depressed the operative end of the jumper-lever G through the roller *g<sup>4</sup>* engages the rod *b<sup>8</sup>*, elevating it and moving the rack out of engagement with the escapement-pinion *e* without in any way locking the carriage, wherefore the tension on the



strap D draws the carriage to the left until stopped by the other mechanism.

Rigid with the rack-bar by projecting rearward from the brace-bar  $b^6$  is the arm  $b^9$ . In the normal use of the type-writer this arm passes idly over a block H, adjustably carried by the bar J, supported by the frame of the machine. When, however, the rack-bar is elevated by the jumper, as described, the extreme end of the arm  $b^9$  is swung downward into the path of the stop H, whereby the arm comes into engagement therewith and the carriage is stopped at a desired point. As soon as this takes place a release of the pressure on the key  $g^5$  allows the rack-bar to descend into engagement with the pinion  $e$ , thereby releasing the hold of the arm  $b^9$  on the stop H and retaining the carriage by means of the escapement, allowing its subsequent use as before. It will thus be seen that no matter where the written explanation ends a simple holding down of the key  $g^5$  allows the carriage to travel to the same point in each instance, (adjustably governed by the position of the stop H,) whereby figures may be alined in columns.

In order to prevent the stopping of the carriage by the engagement of the arm  $b^9$  and the stop H from unduly jarring the type-writer, I cushion the bar J, which carries the stop, by a suitable spring. This is shown in Figs. 1 and 4, where the bar is seen to carry a stud  $j$ , extending loosely through a supporting-lug  $a'$  of the frame and bearing at its end against a leaf-spring K, carried by the frame. This spring is of stronger tension than the carriage-advancing spring drawing on the strap D, wherefore when the engagement of the arm  $b^9$  with the stop H takes place the spring K receives the thrust and as the blow ceases returns the bar J to the right. By this excess of force of the spring K a considerable play may be allowed to the bar J without interfering with the accuracy of the position of the carriage when thus stopped.

I am aware that it is common to disengage the escapement by a lever carried by the carriage itself; but such lever cannot be operated with the desired rapidity, for, being carried by a movable part, it occupies various positions, and an appreciable delay is experienced each time it is used, not only from the time employed by the operator in moving her hand from the keyboard to the lever, but also in performing the mental act of determining the point to which her hand is to be moved. In my device the key is always in the same position and constitutes part of the keyboard itself—that is, it is included in the bank of usual keys or adjacent thereto. It is as convenient as any of the other keys and necessitates no delay in its use. Other means have been proposed whereby the carriage may be moved into various positions; but such mech-

anisms have not, so far as I am aware, had operating-keys in the keyboard freely releasing the escapement on the simple principle of my jumper, nor have they had the cushion preventing jar in stopping, as hereinbefore described.

Having described my invention, I claim—

1. In a type-writer, in combination, a carriage, a movable rack-bar carried thereby, an escapement with which the rack-bar normally engages, means tending to move said carriage, a smooth rod carried by the rack-bar, a lever supported by the type-writer frame and extending beneath said smooth rod, a finger-key, a connection between the same and said lever whereby the actuation of the key moves the lever to raise the smooth rod and hold the rack out of engagement with the escapement without restraining the movement of the carriage, a stop-bar carried by the machine, an adjustably-placed stop thereon and a cooperating stop therefor movable with the rack-bar, substantially as described.

2. A type-writer of the Remington type having a frame, a movable carriage, a rack-bar and escapement, and a stop-bar adapted to carry marginal stops combined with a smooth rod carried by the rack-bar, an adjustable stop on the stop-bar, a cooperating stop movable with the rack-bar, and means for raising the said smooth rod without interfering with its movement, whereby the carriage is released until said stops engage, substantially as described.

3. In a type-writer, in combination, a carriage, a rack-bar carried thereby, an escapement mechanism with which the rack-bar is adapted to engage, means for moving the carriage when released from the escapement, a key-lever, and mechanism operated thereby to move the rack-bar out of such engagement with the escapement without restraining the carriage, an arm movable by the rack-bar, a stop normally out of the path of said arm but standing in its path when the rack-bar is disengaged, said stop being movable substantially in the direction of movement of the carriage, and a spring of stronger tension than the means which move the carriage opposing the movement of said stop, substantially as described.

4. In a type-writer, in combination; a carriage, a rack-bar movable therewith, an escapement mechanism adapted to engage said rack-bar, means for moving the carriage longitudinally when released from the escapement mechanism, a guide carried by said rack-bar, a pivoted lever having one end adapted to engage said guide and thereby move the rack-bar out of engagement without restraining the carriage, a finger-key, a connection between it and said pivoted lever whereby the actuation of the key causes such disengagement of the rack-bar and the free



travel of the carriage, a bar supported parallel with the travel of the carriage there being provision for longitudinal movement of said bar, a spring tending to hold said bar against  
5 said movement, a stop carried by said bar, an arm movable with the rack-bar and normally traveling out of the range of said stop but in the range thereof when the rack-bar is

separated from engagement with the escapement, substantially as described. 10

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

HOLMES MARSHALL.

Witnesses:

ALBERT H. BATES,  
H. M. WISE.