

(No Model.)

A. B. REID.
TYPE WRITING MACHINE.

No. 452,984.

Patented May 26, 1891.

Fig. 1.

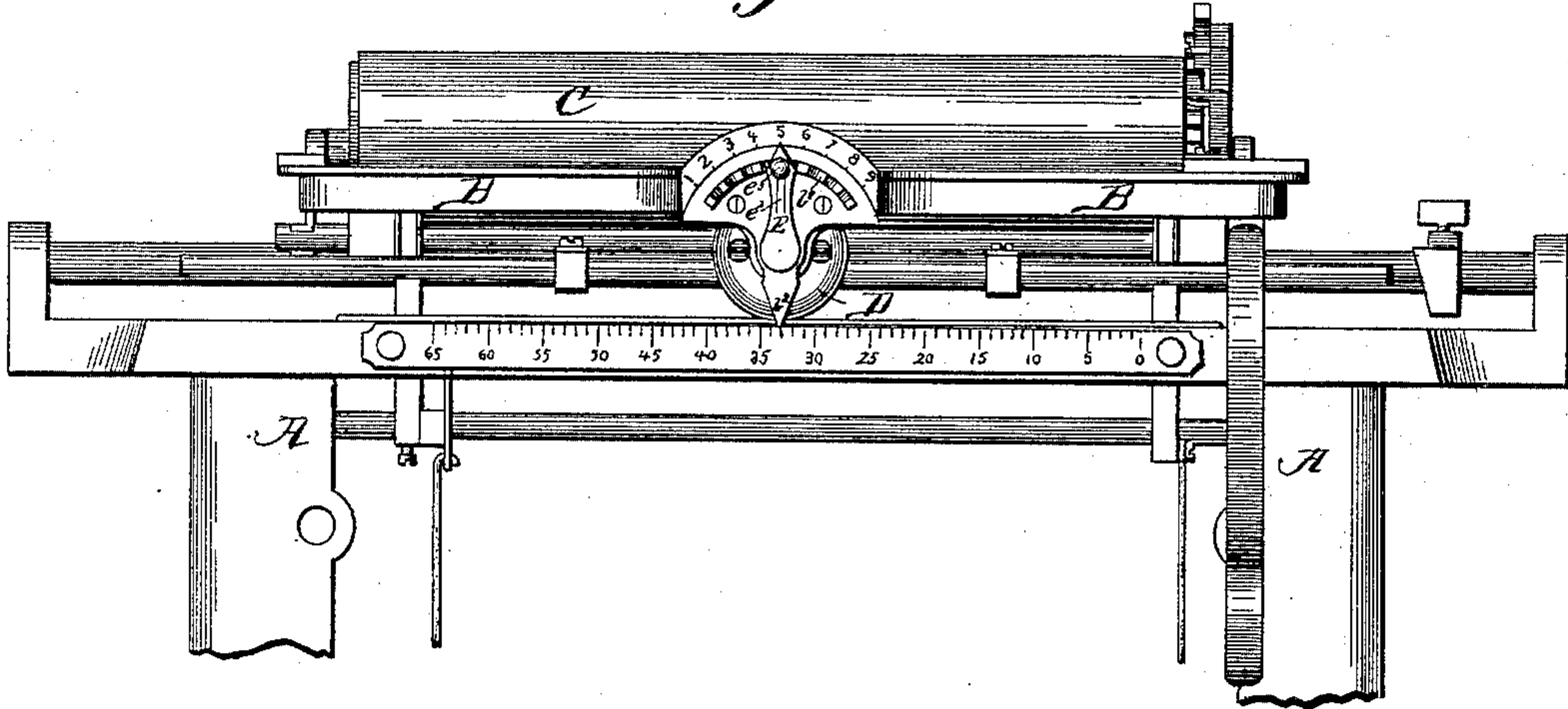


Fig. 2.

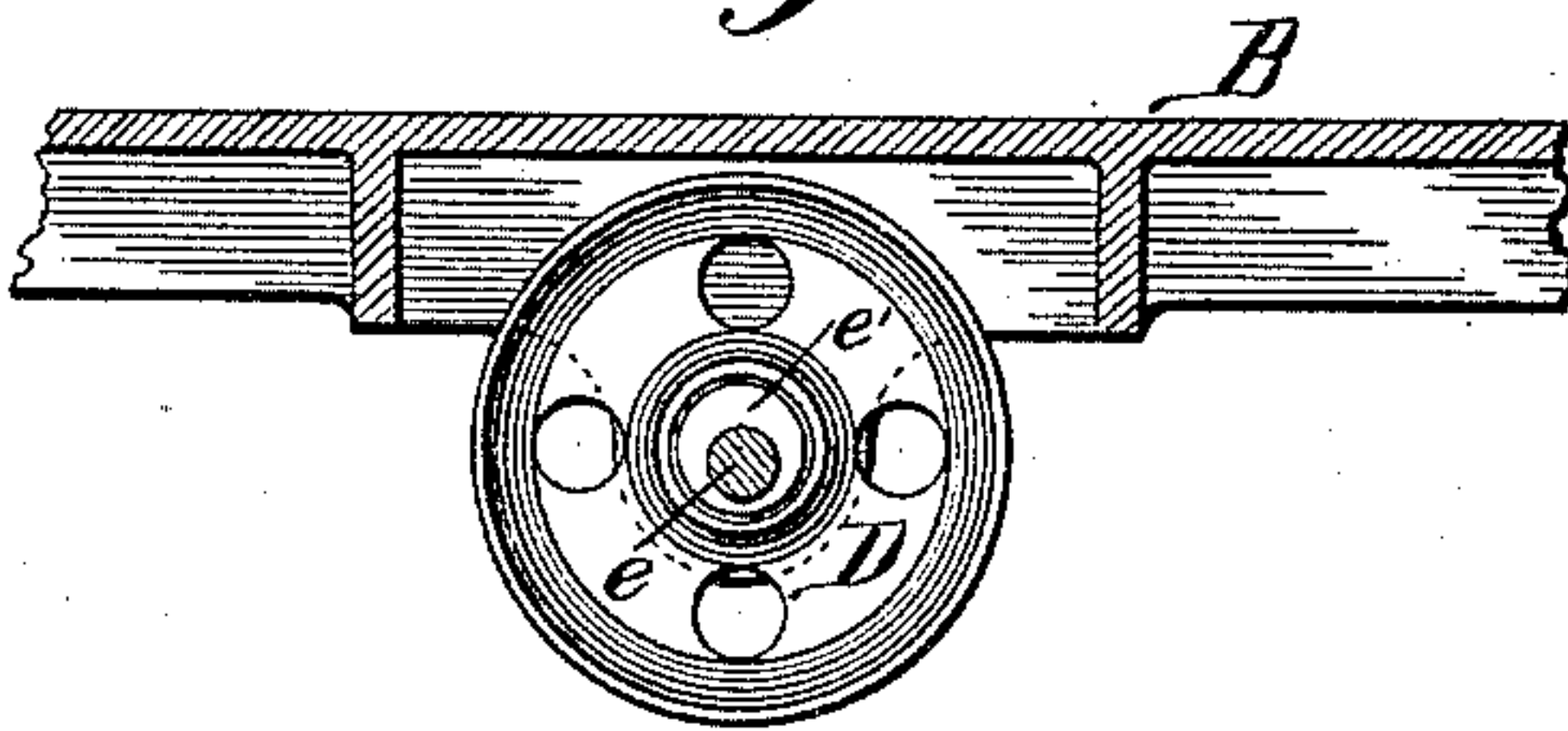


Fig. 4.

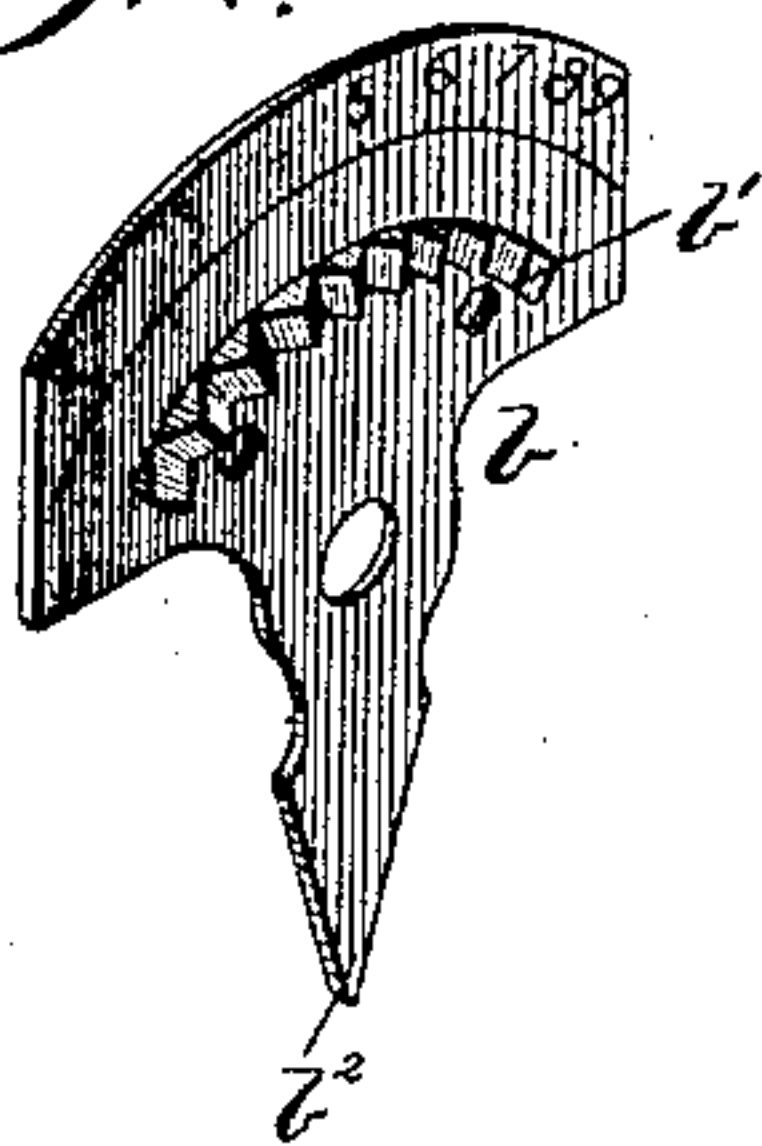



Fig. 5.  e_1
 e_2

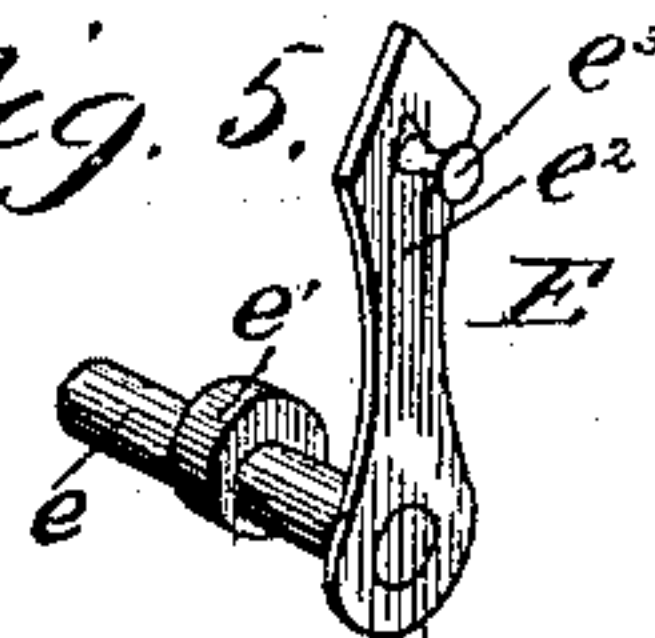
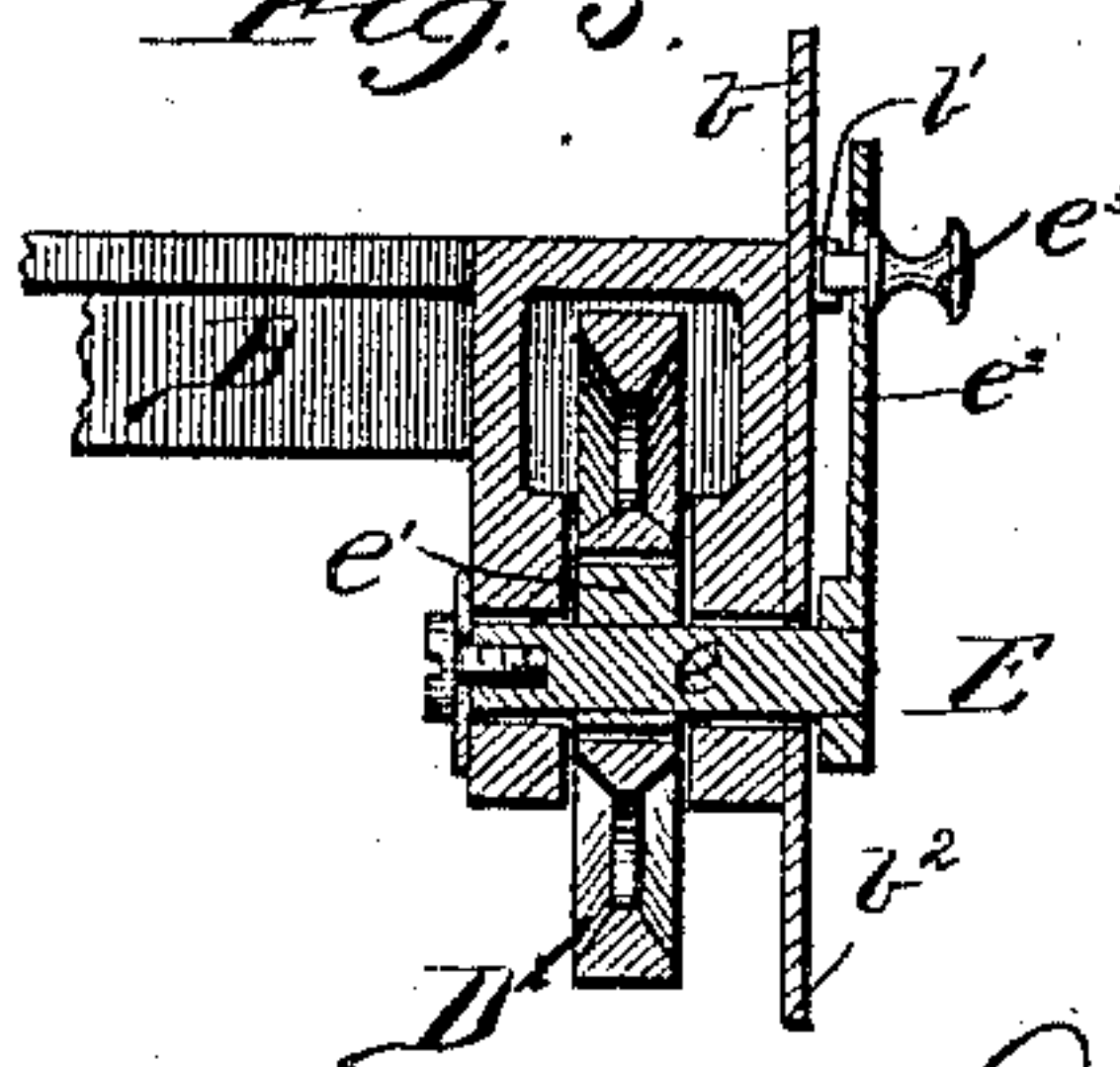


Fig. 3.



Inventor.

Arthur B Reid

By Wm Knox Jaynes

Atty.

Witnesses.

Fredk. H. Mills.

George J. Emel.

UNITED STATES PATENT OFFICE.

ARTHUR B. REID, OF CHICAGO, ILLINOIS.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 452,984, dated May 26, 1891.

Application filed October 4, 1890. Serial No. 367,120½. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR B. REID, a citizen of the Dominion of Canada, and a resident of Chicago, in Cook county, and State of Illinois, have invented a certain new and useful Improvement in Type-Writing Machines, of which I declare the following to be a full, complete, and accurate specification.

My invention relates to that class of type-writing machines upon which a paper-carriage supporting a roller is placed and upon which the types are actuated by levers to engage and print upon the paper on the under side of the roller.

It appears in the construction of type-writers of the kind above mentioned that the types are actuated by levers in such manner that their full face may strike fairly upon the bottom of the roller—that is, upon the under side of the roller. It further appears that in the process of “manifolding,” so called—that is, a process whereby several sheets of paper are placed over the roller, with carbon sheets between them, for the purpose of printing upon the several sheets at one time—the thickness of the several sheets of paper causes the outermost sheet, which receives the stroke of the types, to lie a considerable distance lower than the actual place at which the types would strike if only one sheet were placed upon the roller to print upon. This results in the types striking the paper at a slight angle instead of striking with their full face, as they would if allowed to come up to the proper striking-point.

The object of my invention is to regulate the position of this paper-roller, so that it may be elevated in a more or less degree, according to the number of sheets of paper which are placed upon it for manifolding purposes, to the end that the striking-point at which the types engage the paper may in all cases be uniform and fixed. The mechanism whereby I attain this result may be better explained by reference to the several figures upon the accompanying sheet of drawings.

Figure 1 represents a front elevation of the upper part of a type-writer frame, the paper-carriage thereon, and my improvement affixed thereto. Fig. 2 shows the wheel or truck upon which the front part of the paper-carriage travels. Fig. 3 is a sectional side elevation

of my improvement. Fig. 4 shows a small plate which forms a part of my invention, which is affixed to the frame of the paper-carriage directly over the front wheel upon which the paper-carriage travels. Fig. 5 is a perspective view of a shaft, eccentric, and indicator forming a part of my improvement.

In the several figures like letters of reference indicate like parts.

A and A represent the side posts of a type-writing machine.

B is the front of the paper-carriage frame.

C is the paper-roller.

D is a wheel attached to frame B, its circumference traveling upon the top rail of the type-writer frame.

E is a finger or indicator forming part of my improvement.

b is a plate of thin sheet metal, bearing a scale at its upper edge and having below the scale a curved rack. Near its center is a circular hole and its lower extremity pointed to form an indicator. This part is screwed to the frame B at a point directly over the wheel D, the hole near the center receiving the shaft upon which the wheel D operates.

b' is a curved rack attached to part b.

b² is the lower point of part b, forming a line-indicator similar in character to the line-indicator regularly used upon type-writing machines.

e is a shaft with an eccentric-slug at about its center.

e' is an eccentric-slug at the center of shaft e, and forms the bearing upon which said wheel D operates.

e² is a flat spring upon the face of indicator E.

e³ is a thumb-piece attached to spring e² and passing through indicator E, its extremity engaging the rack b'.

It is already apparent that the elevation of the paper-carriage and paper-roller is fixed in accordance with the diameter of the wheel D, which supports it, and it is also readily apparent that if the wheel D operated upon the exact center of its shaft the elevation of the paper-carriage would always be fixed and absolute.

In the construction of my invention the wheel D operates upon an eccentric-slug e', and not from the exact center of the shaft e. Therefore when the heavy side of the slug e'

is uppermost a less part of the diameter of wheel D intervenes between the suspending shaft *e* and the rail upon which the wheel D travels, and the paper-carriage must be correspondingly depressed. I construct my improvement in such manner that when the slug *e'* is in this position—that is to say, with its heaviest part uppermost—the paper-roller will then be in the proper position to receive the stroke of the types with a single sheet of paper upon it.

The indicator E is affixed to the outer end of the shaft *e*, and by moving indicator E the position of the eccentric-slug *e'* may be changed at will, and the various parts are constructed in such proportion as to size that the movement of the indicator E upon the scale at the top of part *b* may shift the position of the eccentric-slug *e'*, and thereby regulate the elevation of the paper-roller to conform to the number of sheets of paper upon its under surface which the indicator registers upon the scale. Thus, for example, when the slug *e'* is in such position that the indicator E points to "1" upon the curved scale the paper-roller will be at the proper elevation to enable the types to strike squarely upon one sheet of paper. If the indicator E be then moved opposite "5" on the curved scale, the slug *e'* will be turned sufficiently in its bearings in wheel D that the roller shall be elevated to the proper position to enable the types to squarely strike upon the lower of five sheets and intervening carbons placed on the lower side of the roller.

Some slight variations in construction may be had, if desired. For instance, the indicator E may be made of spring metal with a nib on its under surface, and the spring *e²* thereby dispensed with.

Having thus described, set forth, and shown the construction, operation, and utility of my said improvement, I claim as my invention—

1. In the paper-carriage of a type-writing machine, the traveling wheel D, in combination with the shaft *e* and the eccentric-slug *e'* thereon, the latter forming the bearing or axle of wheel D.

2. In the paper-carriage of a type-writing machine, the combination of the wheel D, shaft *e*, eccentric-slug *e'* thereon, indicator E, attached to the shaft *e*, and curved scale, all combined substantially as shown and specified.

3. The combination of the plate *b*, constructed with scale and rack *b'*, shaft *e*, eccentric-slug *e'*, applied thereto, and the wheel D, substantially in manner and form and for the purpose specified and shown.

In witness of the above I have affixed my signature, in the presence of two subscribing witnesses, this 30th day of September, A. D. 1890.

ARTHUR B. REID.

In presence of—

GEORGE J. ERNST,
W. KNOX HAYNES.