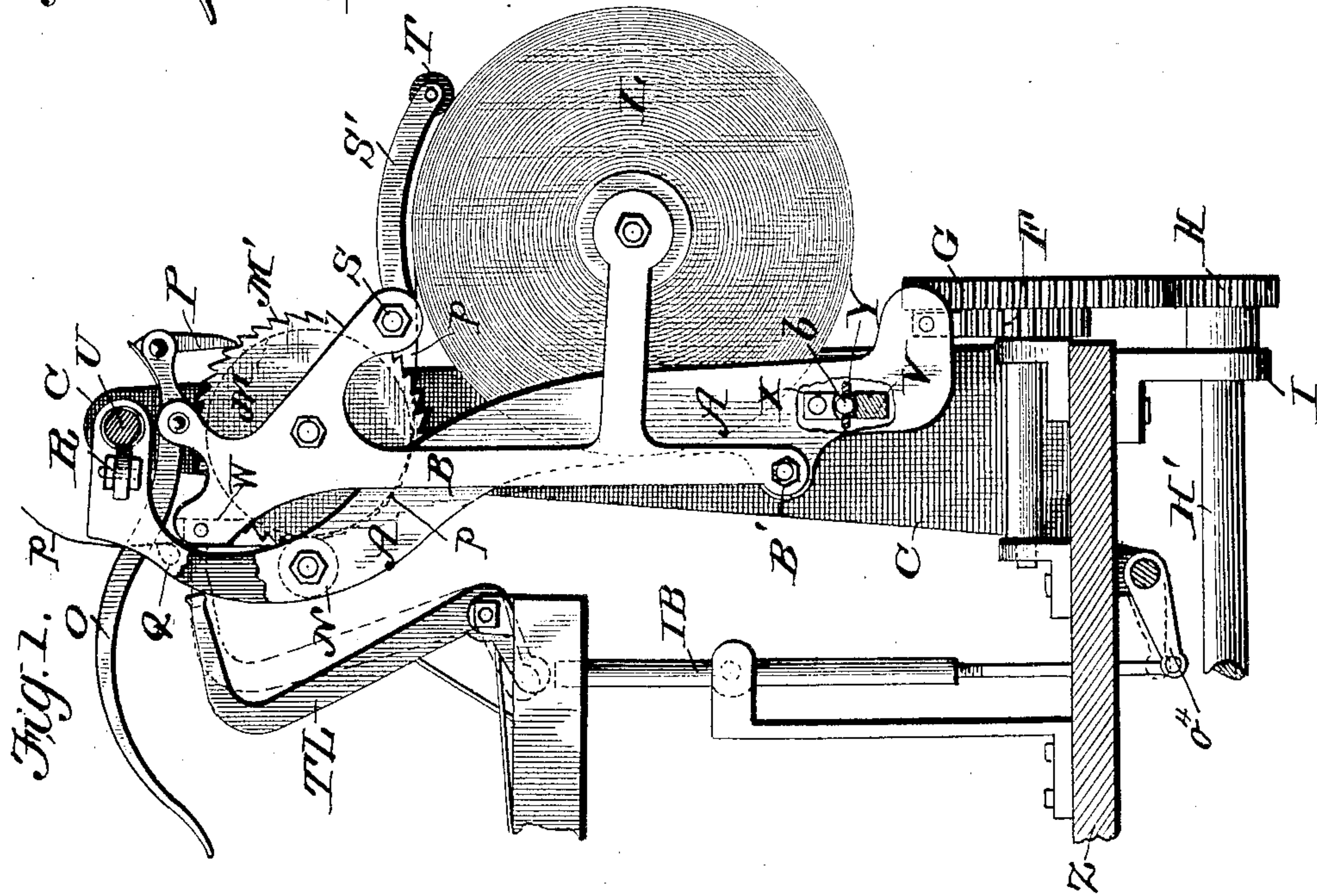


2 Sheets—Sheet 1.

TYPE WRITING ATTACHMENT FOR ADDING MACHINES.

Patented Mar. 16, 1897.



INVENTOR

BY *Munn & Co.*

ATTORNEYS.

Jos. A. Ryan
 Edw. A. Ryan.

(No Model.)

2 Sheets—Sheet 2.

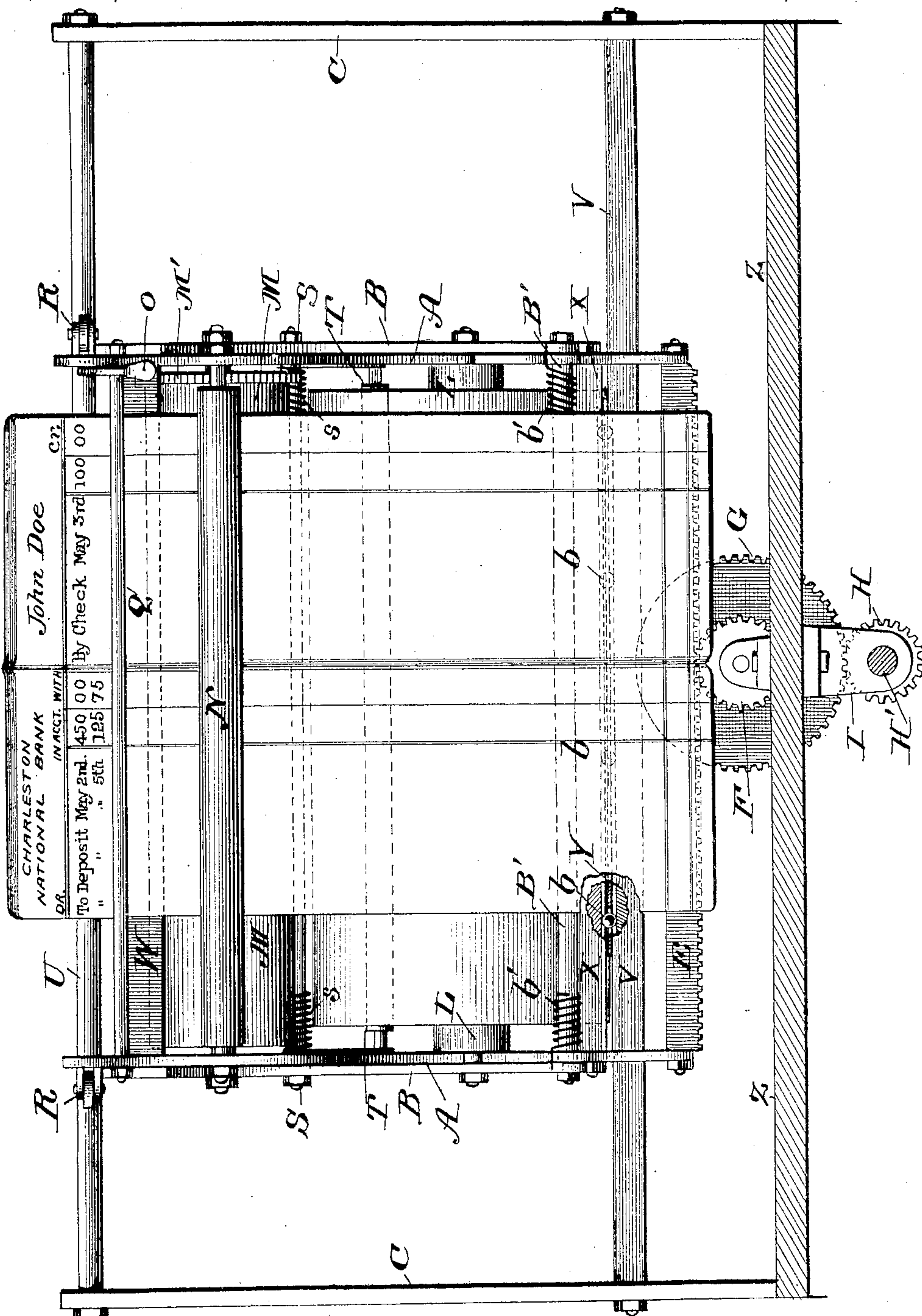
G. W. DUDLEY.

TYPE WRITING ATTACHMENT FOR ADDING MACHINES.

No. 579,048.

Patented Mar. 16, 1897.

Fig. 3



WITNESSES:

Jos. A. Ryan
Edw. W. Ryan

INVENTOR

George W. Dudley.

BY

Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE W. DUDLEY, OF CHARLESTON, WEST VIRGINIA, ASSIGNOR TO THE
NUMEROGRAPH MANUFACTURING COMPANY, OF SAME PLACE.

TYPE-WRITING ATTACHMENT FOR ADDING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 579,048, dated March 16, 1897.

Application filed May 19, 1896. Serial No. 592,116. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. DUDLEY, of Charleston, in the county of Kanawha and State of West Virginia, have invented a new and useful Improvement in Type-Writing Attachments for Adding-Machines, of which the following is a specification.

My invention is in the nature of a type-writing attachment to the combined adding and printing machine which was patented by me February 18, 1896, No. 554,993. Its object is to enable the combined adding and printing machine to operate upon and print directly on blank-books, such as bank-books, pass-books, &c.; and it consists in such re-organization of the printing-carriage and its associated parts as will enable a blank-book to be conveniently and quickly inserted into the machine and the extensions and totals printed directly on the pages of the same, as will be hereinafter more fully described with reference to the drawings, in which—

Figure 1 is an end elevation of the carriage and printing devices, showing the parts in the position which they occupy in printing upon a roll of paper, the rear standard C being removed. Fig. 2 is a similar view showing the parts in the position which they occupy when printing upon a blank-book, and Fig. 3 is a front elevation of Fig. 2.

In the drawings, Z represents the base-plate or deck, from the opposite ends of which rise vertical standards C C, connected at the top by horizontal rod U.

A is the laterally-adjustable carriage-frame, having a ball-bearing support X Y V below and a pair of rollers R at the top, which bear against the side of rod U. In said ball-bearing support Y is a thin and slotted metal bar running horizontally across the carriage and occupying a position between the subjacent track-bar V and the superposed track-bar X. The track-bar V is stationary and fixed in the standards C, and the slotted bar Y and track-bar X are connected to and laterally adjustable with the carriage-frame A. The adjacent edges of the track-bars V and X are concaved or grooved to receive and retain the balls b, which are spaced by and retained within the slots of the bar Y, which is fixed to and moves with the frame A.

To move the carriage-frame A laterally on this roller-bearing track, a rack-bar E is attached to the lower end of frame A and meshes with a pinion F on the same shaft with and rigidly attached to the gear-wheel G. This gear-wheel meshes with a smaller gear-wheel H on a shaft H', journaled in the hanger I below the deck-plate. This shaft H' is the same shaft as the shaft C' shown in my previous patents, Nos. 554,993 and 555,039, and the means for rotating it to effect the feed being fully described therein are not shown here and need not be further described. It is sufficient to say that the rotation of shaft H' through the gears H, G, F, and E feeds the frame A intermittently along in horizontal direction as each letter is printed upon the paper or book carried by the frame A.

At L is shown the paper roll carried in offsetting arms projecting to the rear from frame B, which latter is hung upon a transverse shaft B', whose ends are flattened and held rigidly in frame A. The weight of the paper roll L being in the rear of the ball-bearing support unbalances frames A and B and throws from its own gravity the top of frame A rearwardly and causes its rollers R to bear against and travel upon the guiding track-bar U above. For this action the two frames A and B, although hinged together, act as one frame by reason of a spring connection consisting of coil-springs b', which are wound about shaft B' and strain the frame B forwardly against A to pinch and hold the book, as hereinafter described.

T is an idle-roller journaled in the arms S', which are hinged upon the rod S, connecting the side frames B. On the rod S is a coil-spring s for the purpose of holding the arms S' and roller T in contact with the paper roll L and following it up as the paper is exhausted. It also serves as a brake and also prevents the loosening of the end of the paper when it is run back for the insertion of a book or card.

The frame B carries a platen W and a rubber-faced feed-roller M, to the shaft of which latter is attached rigidly a ratchet-wheel M', which is operated with a step-by-step movement by pawl P and lever O.

N is a small roller lying in front of feed-roller M and journaled in the frame A, and Q

is a rod whose upper edge is brought to a knife-edge. The strip of paper passes between the rollers M and N and then upwardly between the platen W and knife-bar Q, the latter permitting the paper to be torn off with a straight line when the work is finished.

In front of the platen W lie the type-levers T L, whose upper ends are projected against the paper in front of the platen by an impact-bar I B, operated by crank o^4 and operating-shaft, which impact-bar, rising, strikes the elbow of the type-lever and throws it forward. The means for operating this impact-bar and crank o^4 I do not show, as it is fully described and shown in Fig. 5 of my previous patent, No. 554,993, and forms no part of this invention.

In Fig. 1 the line $p p$ represents the course of the paper as it is unwound from the roll, but the construction of carriage described permits of the use of a blank-book in the place of the paper, so as to enable the machine to print in bank deposit-books, pass-books, and the like. For this purpose (see Fig. 2) the frame B is tilted back on its axial bar B', but is strained forward by coil-springs on shaft B with a tension sufficient to overcome the weight of roll L, and an open blank-book, with its face to the type-lever T L, is inserted between the roller N and bar Q in front and the platen W and feed-roll M behind, and is then held by the forward tension of the frame B, being fed vertically through the lever O by hand and horizontally through the rack-bar E and gears F G H.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A type-writer carriage made in two main parts, the rear part having a platen and a feed-

roll, and the front part having two bearings arranged in a vertical plane one above the other, the said two parts being hinged and provided with a spring for pressing them together to accommodate the reception and vertical feed of a blank-book substantially as and for the purpose described.

2. A type-writer carriage made in two main parts, the front part having two bearing-points for a book arranged vertically one above another, and the rear part carrying the platen and feed-roll, and jointed to the front part, and having a spring connection therewith to press it forwardly to the type-levers but allow it to yield backwardly therefrom to permit the insertion of a book substantially as and for the purpose described.

3. The combination with the stationary standards C having track-bar U of the laterally-adjustable carriage-frame A, having ball-bearings X Y V, rollers R at the top arranged to bear against the front side of the track-bar, and a paper roll projecting rearwardly to hold the roller R against its track-bar substantially as and for the purpose described.

4. The combination with the frame A bearing roller N and knife-bar Q; of the yielding frame B bearing platen, feed-roll, and paper roll, substantially as and for the purpose described.

5. The combination with the frame A bearing roller N and knife-bar Q; of the yielding frame B, bearing platen, feed-roll, and paper roll, and spring-pressed arms S with idle-roll T bearing upon the paper roll substantially as and for the purpose described.

GEORGE W. DUDLEY.

Witnesses:

SOLON C. KEMON,
EDW. W. BYRN.