

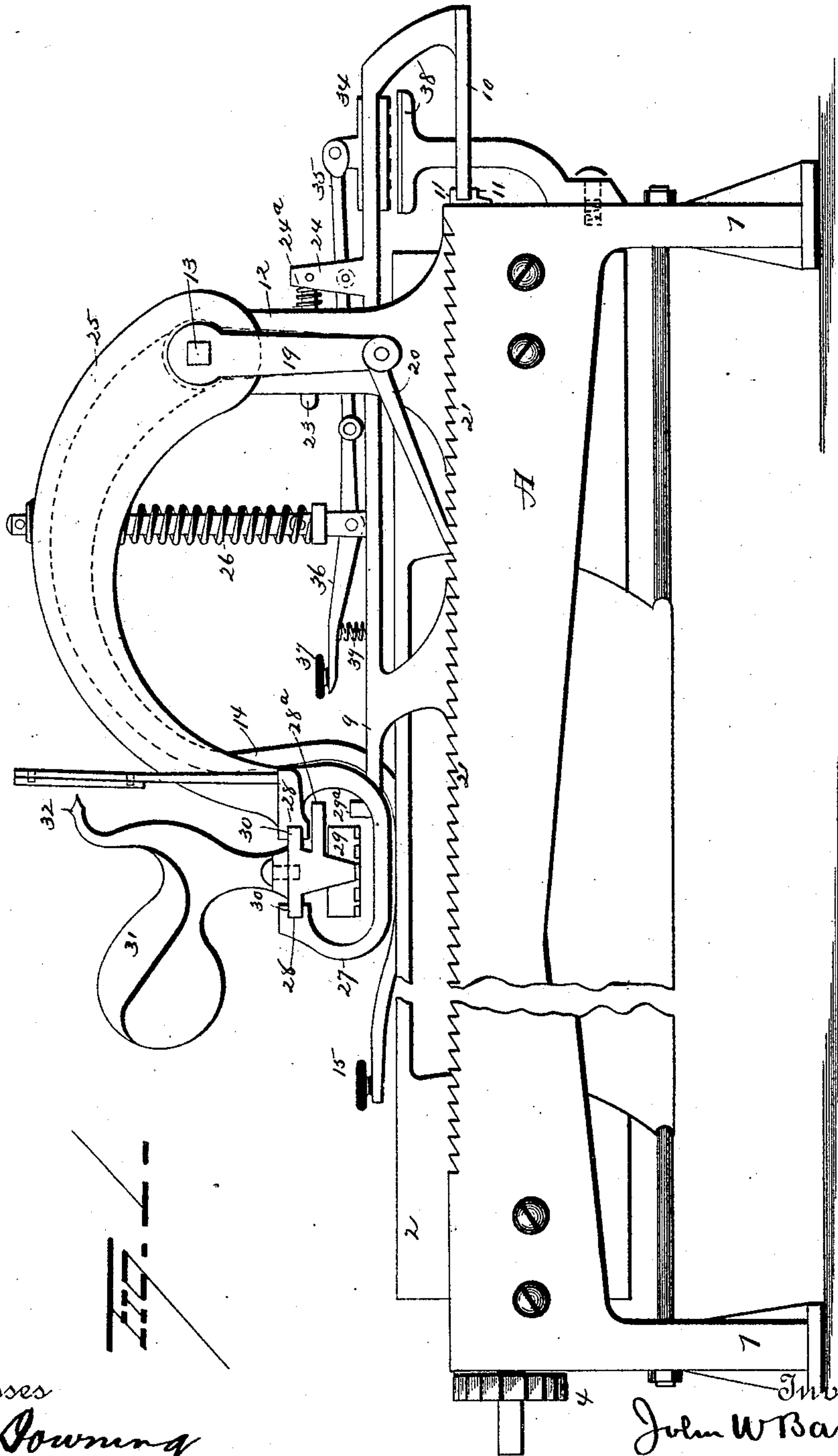
(No Model.)

3 Sheets—Sheet 1.

J. W. BARTLETT.
TYPE WRITING MACHINE.

No. 437,473.

Patented Sept. 30, 1890.



Witnesses
G. F. Downing
V. E. Hodges

Inventor
John W. Bartlett
By his Attorneys
Singatt & Singatt

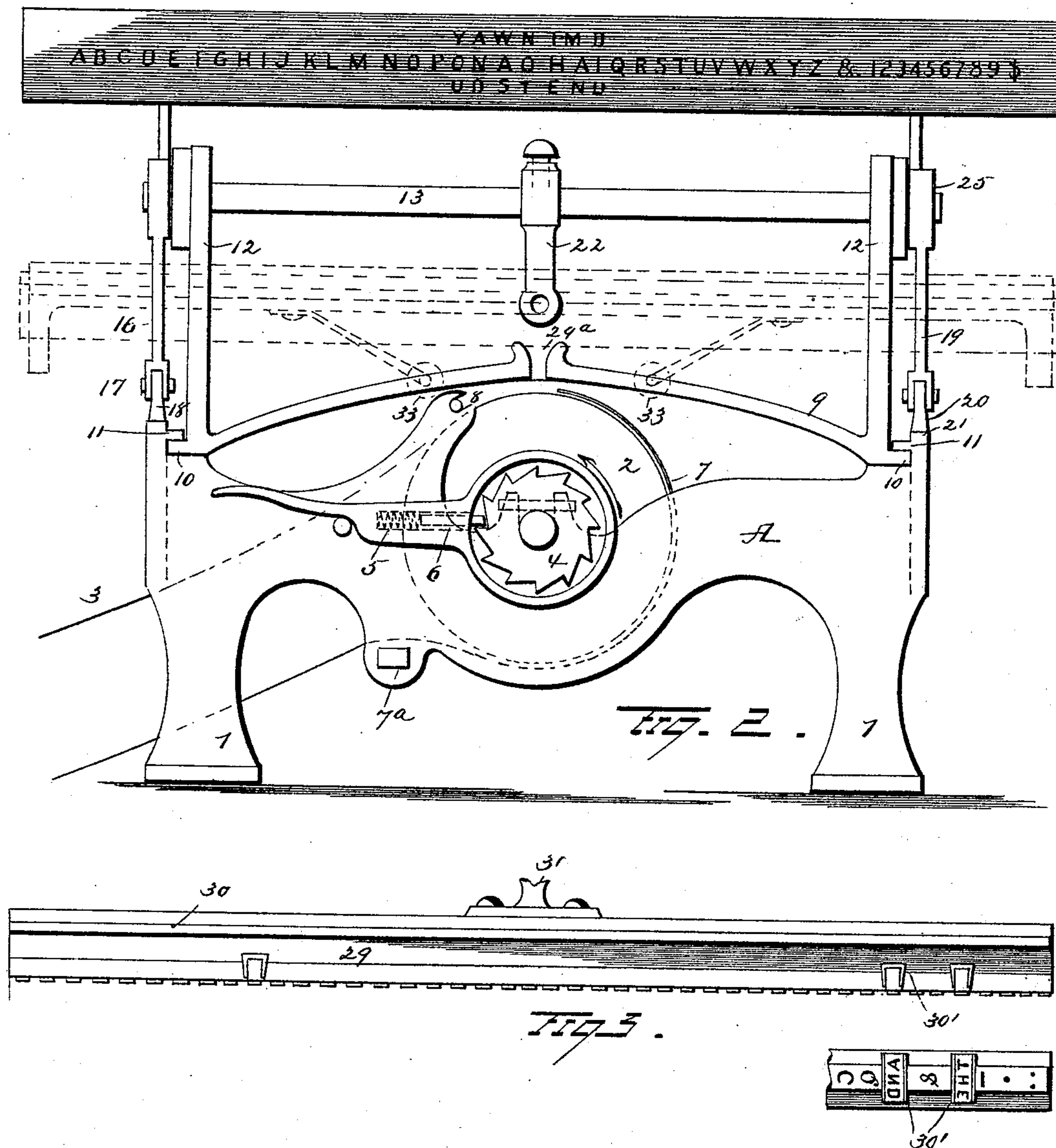
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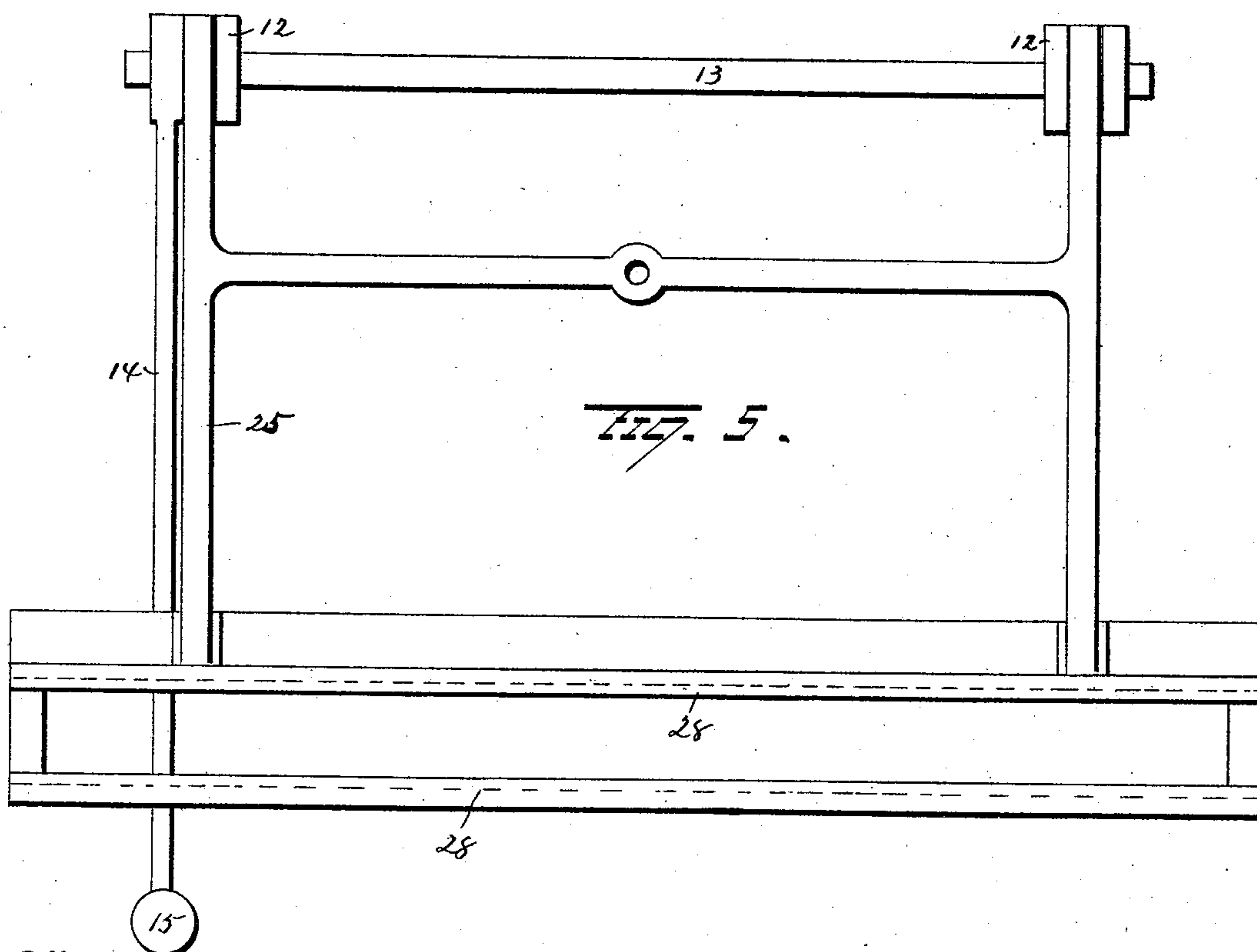
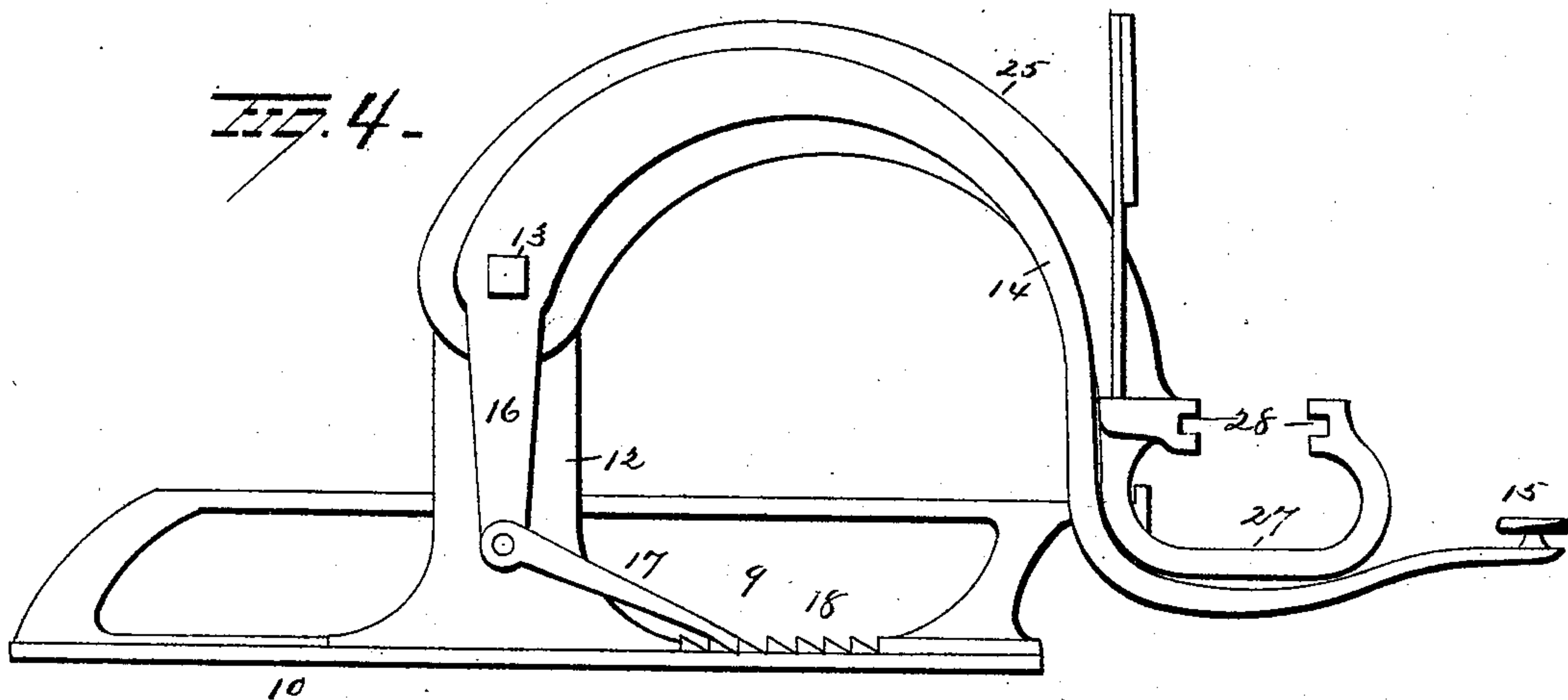
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UNITED STATES PATENT OFFICE.

JOHN W. BARTLETT, OF MOLINE, ILLINOIS.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 437,473, dated September 30, 1890.

Application filed July 26, 1889. Serial No. 318,714. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. BARTLETT, of Moline, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Type-Writers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in type-writers, the object being to provide a machine of increased efficiency, capable of quick, easy, and accurate operation, and one which shall be light, small, neat in appearance, and of comparatively slight cost.

With this end in view my invention consists in certain novel features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved machine. Fig. 2 is a front elevation. Fig. 3 is a detached view of the type-bar. Fig. 4 is a detail, and Fig. 5 is a plan view, of a portion of the machine.

A represents the type-writer bed or frame, resting, preferably, on legs 1 1 or similar supports. The bed is usually located rather low and the other parts of the machine are held thereon.

The roller 2, on which the paper 3 is carried in the direction indicated by the arrow, and upon which the printing is done, extends lengthwise of the bed and is journaled about midway between the sides. This roller is provided at one end with a ratchet-toothed wheel 4, and a spacing-lever 5 is pivoted in proximity to this wheel and furnished with a spring-actuated pawl 6, which engages the teeth. When a line is finished, this lever is raised, the pawl slipping over one tooth. This gives the lever a new hold, and by depressing it once the roller is turned one space or in position for the next line. A shield 7 extends from the rod 7^a part way around the roller to retain the sheet of paper in position and guide it over the roller, and thence the paper passes beneath the rod 8 and out of the machine, where every line may be seen by the operator. Thus it is seen that the roller 2, while journaled in the bed, does not move endwise or otherwise in any manner relative to it.

The numeral 9 represents the carriage. The lower portion of the carriage is conveniently arched and provided at each side with horizontal flanges 10 10, which are fitted nicely into corresponding grooves or tracks 11 11 in the sides of the frame or bed, wherein the carriage is guided in its travels endwise over the roller and across the paper in the operation of printing each line.

A pair of arms 12 12 project upwardly—one at each side—from the carriage, and the rock-shaft 13, extending across the carriage, is journaled in the upper ends of the arms. A lever 14 is fixed to one end of this shaft, and the knob 15 extends forward in position to be tripped by a touch of the operator's finger to move the carriage back a space or a corresponding number of spaces with the touches or depression of the lever. An arm 16 depends from this lever, and a gravity-pawl 17 is pivoted to the lower end of the arm, and this pawl engages teeth 18 on the upper edge of the bed. A similar arm 19 depends from the opposite end of the rock-shaft, and this arm is likewise furnished with a gravity-pawl 20, which engages teeth 21, corresponding with the teeth 18 on the opposite side.

Rigidly secured to the rock-shaft 13 near its middle is a depending arm 22. Rod 23, pivoted to the post 24 on the carriage and having the spiral spring 24^a mounted thereon, extends loosely through a hole in the lower end of arm 22. The object of this construction is to move the carriage back with each movement of the lever, and besides moving the carriage in this way independently of the other parts there is a frame 25 loosely mounted on the shaft at its edge. This frame extends across the machine and, preferably, slightly beyond, so that one end reaches over the adjusting-lever 14, so that the latter is struck either directly by the frame or a pin thereon and depressed when the pivoted frame is forced down, so that each downward motion shifts the carriage back one space. A spiral spring 26, extending upward between the carriage and the pivoted frame, always holds the latter slightly elevated or sufficiently elevated to subserve all purposes. In the forward end of this pivoted frame the yokes 27 27 are located, and the parallel guide grooves or tracks 28 28 extend between these

yokes. The type-bar 29 has flanges 30 30 on its sides, which correspond with and fit in these grooves or tracks 28 28, where they are adapted to slide back and forth with the printing of the various letters or words. The bar has the letters of the alphabet thereon arranged as found most convenient, and also the numerals and punctuation-marks and such signs as are required in the particular business in which the machine is used. In addition to this, one of the essential features of the invention consists in carrying words on the bar. These words are usually those of frequent occurrence—such as “and,” “the,” “in,” “to,” and other prepositions of two or more letters—as well as the name of the place—such as “Moline”—and any other words of frequent occurrence in the business in which the machine is employed. Words with as many as ten and twelve letters have been carried with perfect ease, and perfect work can be done with them, and the bar is so formed with notches therein for these words that they may be changed and others substituted, or the bar may be made to suit the user, and as many as twenty words of different lengths have been used.

Located in line with each letter or word on type-bar is a finger or guide 28^a, which when the type-bar is depressed enters between the walls of guide 29^a and keeps the type in alignment.

The general plan adopted has been to place the type in stocks or holders 30^a—such as shown in Fig. 3—and then slide the stock or holder into the type-bar. The type-bar can have a dovetailed slot therein for the reception of the stocks or holders, or other suitable means can be employed for securing the stocks or holders to the type-bar.

The type-bar has a thumb-piece or handle 31 attached thereto, by means of which the bar is easily manipulated. This thumb-piece has a pointer 32 on its end, and there is a letter-board extending across the front of the frame, upon which the letters are properly arranged so that when the pointer is slid to a point opposite a letter and the pivoted frame depressed that letter on the bar is over the paper and printed.

The type are inked by running over the inking-rollers 33 33 in their sliding movement.

A small type-stock 34, very similar to the one shown in Fig. 4, is pivoted to the end of lever 35, and another lever 36, connected to the opposite end of lever 35, is furnished with a handle 37, by which it is operated and the type-stock is lowered. The latter is located over or in proximity to an inking-pad 38, and a small spring 39 normally holds the stock elevated. This stock is employed principally for writing the month and date.

In operation the paper is put in in the usual manner, and the thumb-piece is taken between the thumb and finger, and the bar is slid back and forth and depressed. This prints the words or letters, and each time the

pivoted frame rises carries the gravity pawls over one tooth. By again depressing the pivoted frame the carriage is moved one space. To print a word or make a space, the lever alone is depressed as many times as there are letters in the word or as many spaces as desired. Thus the operation is greatly shortened, as from two to twelve motions are concentrated into one. Equally good work, if not better work, is done than in other machines. Besides this, the machines are very small and inexpensive and within the means of every one requiring the use of a machine.

It is evident that slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the particular construction herein set forth; but,

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

1. In a type-writer, the combination, with a main frame and a roller journaled therein, of a carriage adapted to slide in the main frame, a rock-shaft supported in the carriage, arms secured on said shaft, pawls pivoted to the free ends of the arms and engaging teeth on the main frame, and a type-carrying frame loosely mounted on the shaft and adapted with each up and down movement to move the carriage one space, substantially as set forth.

2. The combination, with the main frame, of a carriage adapted to slide thereon, a type-carrying frame hinged to the carriage, a spring or equivalent device connected with the carriage and type-carrying frame, keeping the latter normally elevated, and a lever fulcrumed on the carriage and having a gravity-pawl pivoted at one end, adapted to engage teeth on the main frame, the other end of said lever extending under the type-carrying frame in position to be depressed with the type-carrying frame, whereby the carriage is moved a space with each depression of the said type-carrying frame, substantially as set forth.

3. The combination, with a main frame, a roller journaled therein, and a carriage adapted to slide in the main frame, of a rock-shaft supported in the carriage, a lever secured to this shaft at one end and an arm at the opposite end, and gravity-pawls pivoted to said arm and lever and in engagement with teeth on the main frame, and a type-carrying frame pivotally supported on the rock-shaft and adapted when depressed to operate the lever, whereby the carriage is moved a notch, substantially as set forth.

4. The combination, with a main frame, a roller journaled therein and having a ratchet-toothed wheel thereon, and a spacing-lever connected therewith, of a carriage adapted to slide in the main frame, a rock-shaft carried by said frame, a type-carrying frame secured to said shaft, pawls carried by arms de-

pending from said shaft, and a type-bar adapted to slide endwise in the pivoted type-carrying frame, substantially as set forth.

5 5. The combination, with a main frame, a roller, and a carriage, of a shaft loosely mounted in the carriage, an arm rigidly secured to the shaft, a rod pivoted to the carriage and extending loosely through the arm, a spiral spring mounted on the rod between the carriage and the rigid arm, a spring-cushioned type-carrying frame pivoted on the shaft, and a type-bar sliding in the pivoted frame, substantially as set forth.

15 6. The combination, with a main frame, a roller, a shield extending partly over the roller, and a spacing-lever connected with the roller, of a carriage having upwardly-projecting arms, a rock-shaft supported therein, a lever connected with the shaft and having a gravity-pawl adapted to engage teeth on the main frame, an arm connected with the oppo-

site end of the shaft and having a gravity-pawl which also engages teeth on the main frame, a type-carrying frame pivoted on the shaft, a spring for keeping the frame normally elevated, a rigid arm, a rod pivoted to a post on the carriage and having a spring thereon and extending loosely through the rigid arm, a letter-board, a type-bar, thumb-piece, and pointer, substantially as set forth. 25 30

7. A bar having the letters of the alphabet thereon, a type stock or holder carried by the bar and arranged at right angles thereto, and a block of two or more type removably secured to said stock or holder. 35

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOHN W. BARTLETT.

Witnesses:

SOL. HIRSCH,
C. F. HEMENWAY.