No. 826,616.

PATENTED JULY 24, 1906.

G. W. SHERIN.

TYPE WRITING MACHINE.

APPLICATION FILED MAR. 21, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

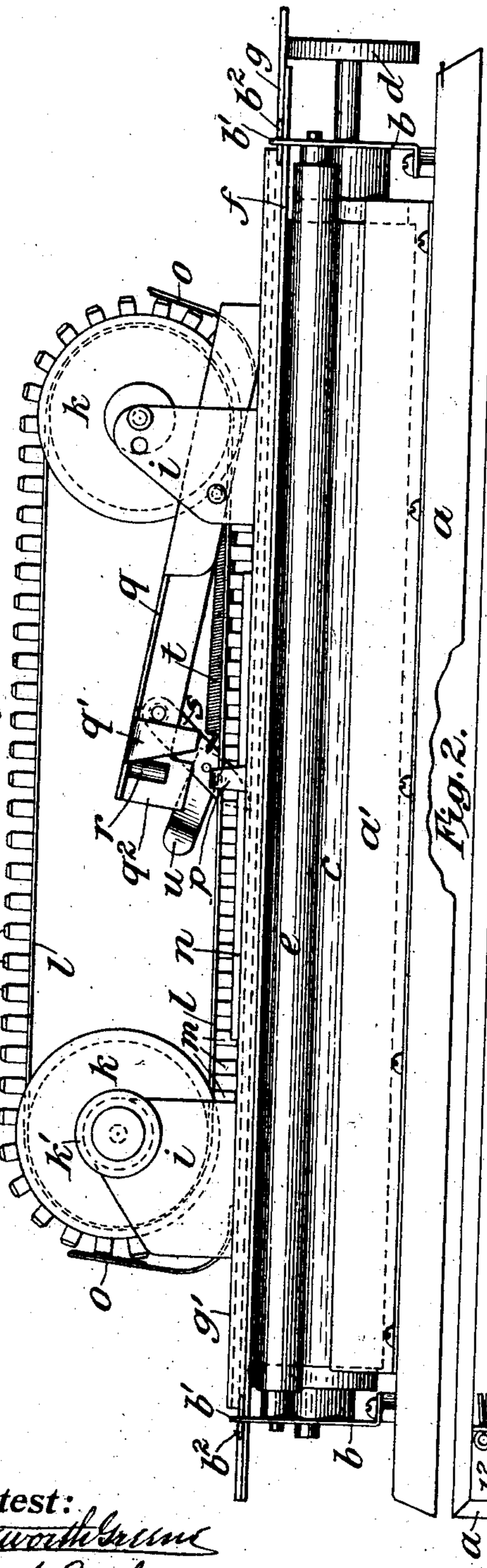
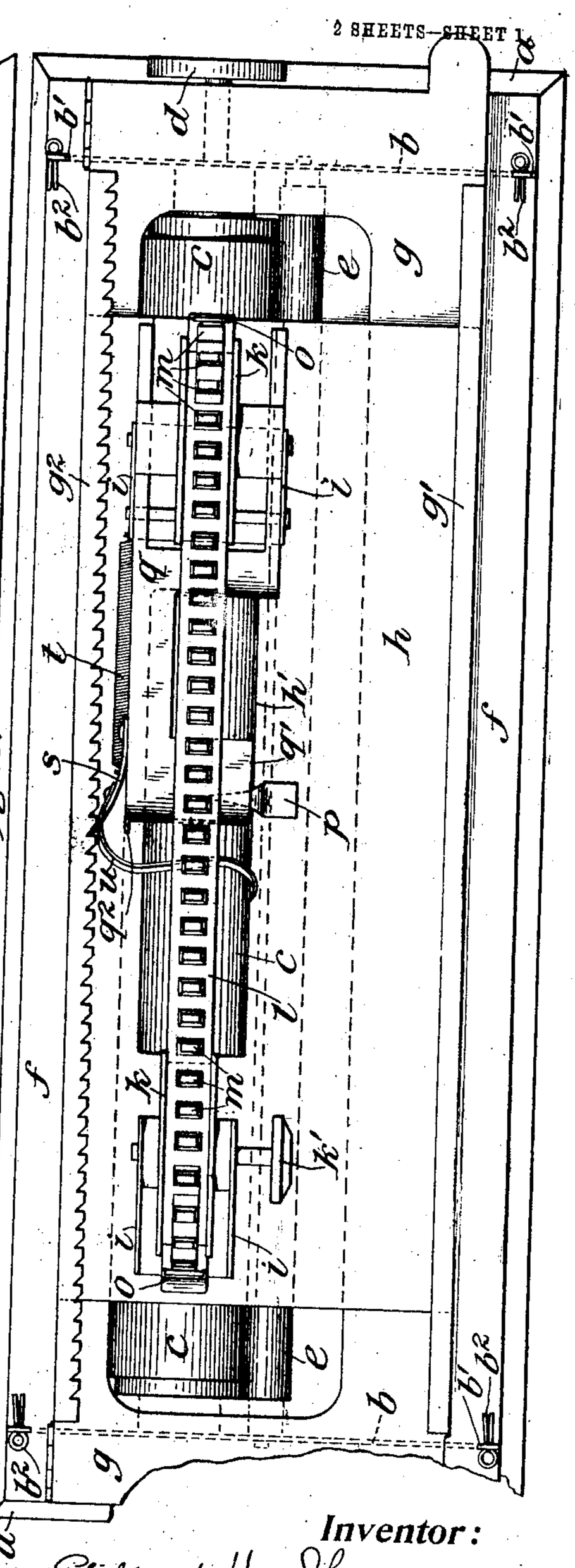



Fig. 2.

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2 SHEETS—SHEET 2.

Fig. 3.

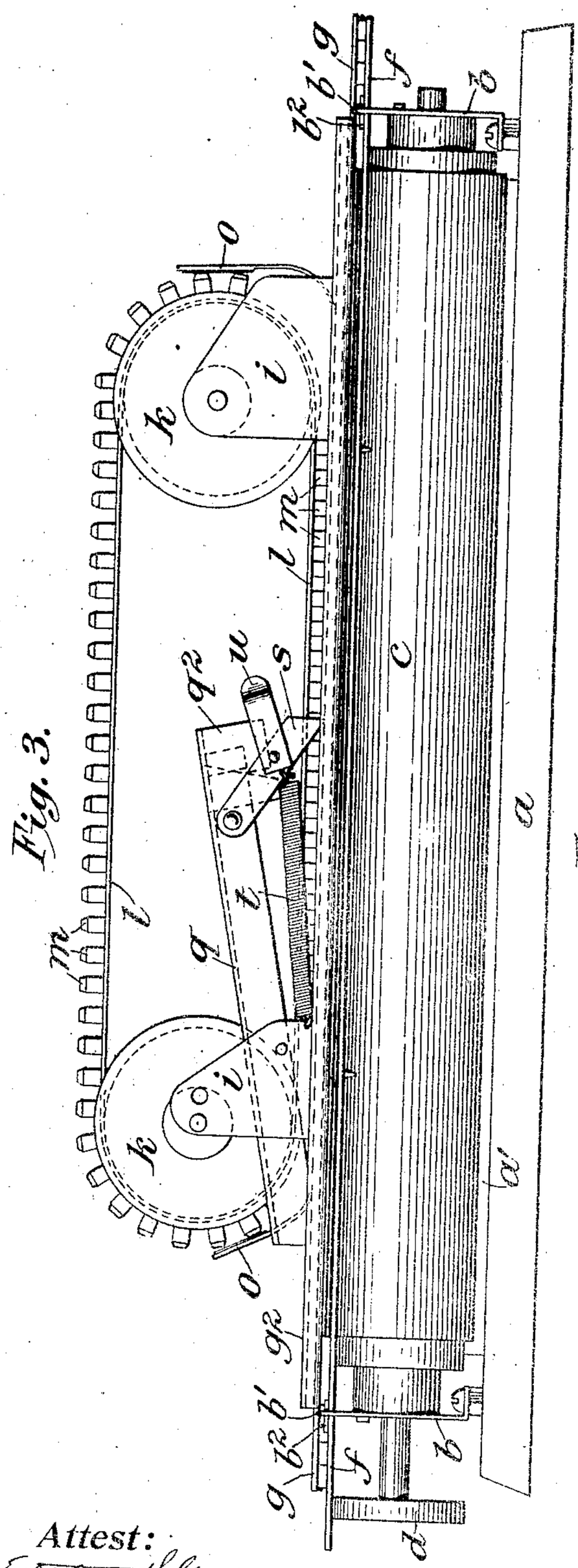
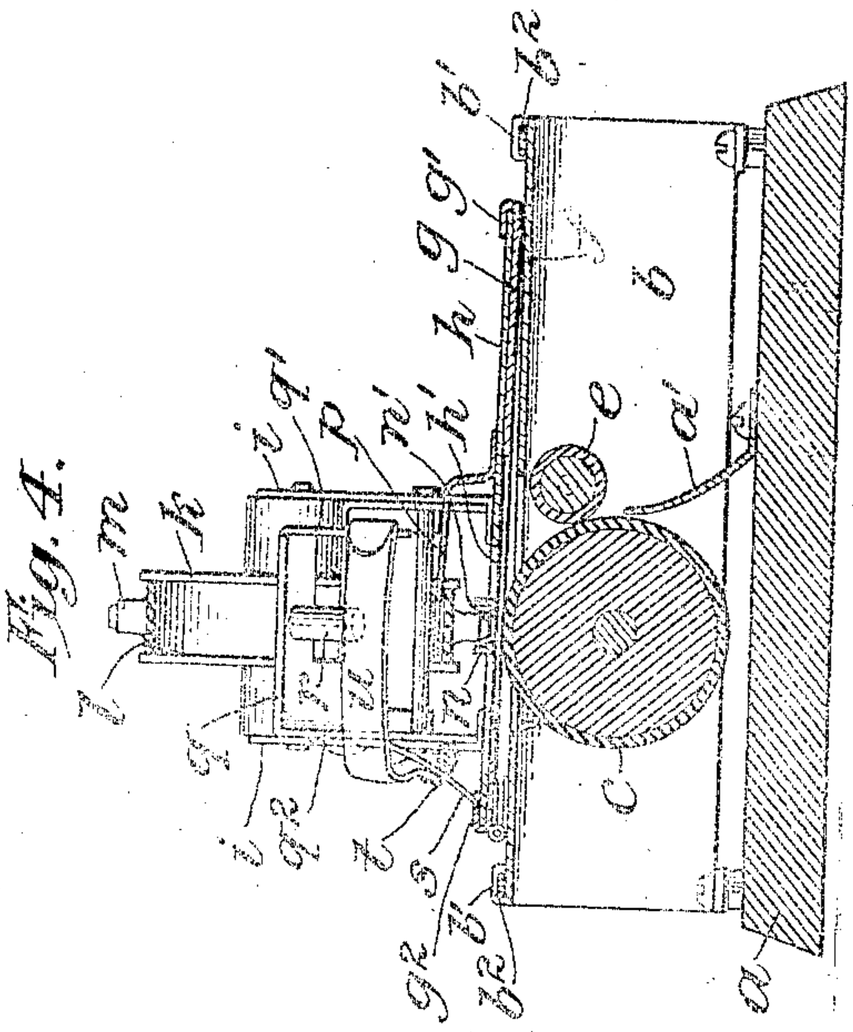



Fig. 4.

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# UNITED STATES PATENT OFFICE

GILBERT W. SHERIN, OF NEW YORK, N. Y., ASSIGNOR TO ELIZABETH H. MOWERY, OF MORRISTOWN, NEW JERSEY.

## TYPE-WRITING MACHINE.

No. 826,616. Specification of Letters Patent. Patented July 24, 1906.

Application filed March 21, 1905. Serial No. 251,190.

*To all whom it may concern:*

Be it known that I, GILBERT W. SHERIN, a citizen of the United States, residing in the borough of Manhattan, in the city of New York, in the State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

This invention relates to type-writing machines such as are sometimes used for the amusement and instruction of children and are also sometimes used for practical purposes when great speed in writing is not required.

The object of the invention is to produce a type-writing machine of this character which shall be simple in construction and yet well adapted for accurate and fairly rapid work, and shall also be readily convertible from a platen-machine to a machine of the book type-writer variety, or vice versa.

The invention will be more fully explained hereinafter with reference to the accompanying drawings, in which it is illustrated as embodied in a convenient and practical construction, and in which—

Figure 1 is a view in front elevation of a type-writing machine constructed in accordance with the invention. Fig. 2 is a plan view thereof. Fig. 3 is a rear elevation thereof. Fig. 4 is a view in transverse section at the left of the hammer and feeding devices in Fig. 1 looking toward the right.

In the machine shown in the drawings, a suitable base *a* supports, near the ends thereof, standards *b*, in which is mounted for rotation the usual cylinder-platen *c*, provided at one end with a suitable operating-wheel or handle *d*. A coöperating presser-roll *e* is also mounted in the standards *b*, and upon the base *a* may be secured a guard-plate *a'*. Removably secured upon the standards *b* is a bed-plate *f*, which supports the printing devices and is made removable in order that the printing devices may be used in the manner of a book type-writing machine. As a convenient means of securing the bed-plate *f* removably upon the standards *b* the latter are provided with upwardly-projecting lugs *b'*, which are extended through suitable slots in the edges of the bed-plate *f* and are engaged by retaining-pins $b^2$.

Upon the bed-plate *f* is hinged at the rear edge thereof a carrying-plate *g*, upon which the printing devices are mounted, said plate *g* being hinged so that it can be turned back at any time with the printing devices to expose the platen or the surface of the paper written upon. The front and rear edges of the carrier-plate *g* are turned over, as at *g'* and $g^2$, to form guides for the traveling plate *h*, upon which the printing devices are directly mounted. As shown in the drawings, suitable standards *i* are erected upon the traveling plate *h*, near the ends thereof, and in such standards are mounted for rotation the spools *k*, the shaft of one of said spools being provided with a wheel or handle *k'*, by which it may be rotated. An endless type-belt *l* is supported by the spools *k*, bearing the type *m* upon its outer surface, while upon its inner surface may be marked indications of the type. The traveling plate *h* is preferably cut away, as at *h'*, to expose the platen *c* or the surface to be printed upon; but extending longitudinally of the opening *h'* is a flanged type-guideway *n*, to hold the type from accidental displacement, such guideway being formed with an opening *n'* at the point of printing of the proper size to permit one of the type to be forced through the opening into contact with the paper to be printed upon. Inking-pads *o* may be secured to the traveling plate *h* near the spools *k* for contact with the faces of the type, as the belt is moved by the hand of the operator. A pointer *p*, secured to the traveling plate, indicates to the operator the correct position of the type which is to be brought in contact with the printing-surface.

To effect the proper pressure upon each type as it is brought by the operator to the printing-point and also to effect the proper movement of the carrier-plate for the spacing of successive letters, there is pivoted upon the standards *i* at the right-hand end of the traveling plate *h* a lever or frame *q*, which carries at its forward end on its under surface a stud *r* to serve as a type hammer or plun-

ger, it being properly placed with relation to the opening $n'$ in the type-guide, so that upon depression of the lever the type which is then in line with the opening $n'$ is pressed through the opening by pressure upon the inner surface of the belt into contact with the printing-surface to make an impression thereon. The lever or frame may be provided with legs $q'$ $q^2$ for contact with the traveling plate $h$ to prevent excessive pressure on the type. Pivoted to the lever $q$ is a feed-pawl $s$, adapted to engage the notches formed in the edge of the flange $g^2$, which thus constitutes a feed-rack. A spring $t$ draws the pawl $s$ back after each operation, and as the end of the pawl rests upon the traveling plate $h$ the spring also serves, acting through the pawl, to raise the type-lever $q$ after each operation. In this manner the pawl after each operation is brought into engagement with the next successive tooth of the rack $g^2$, and upon depression of the type-lever through the pawl $s$ the traveling plate bearing the printing devices is moved one step farther toward the right. A handle $u$ is secured to the pawl $s$ and is brought to the front of the printing mechanism, so that it can be readily grasped by the operator and the pawl $s$ pulled out of engagement with the rack $g^2$ whenever it is desired to move the printing devices in either direction without actuating the type-lever. The extent of upward movement of the forward end of the lever $q$, and consequently the forward movement of the pawl $s$, are limited by contact of the rear end thereof with the traveling plate $h$.

It will be observed that the improved machine while simple and inexpensive in construction is nevertheless certain and accurate in operation and is capable of yielding excellent results when great speed is not required. Furthermore, while for ordinary purposes the machine will be used with the cylinder-platen, as shown in the drawings, nevertheless the printing mechanism, with the bed-plate, can be readily detached from the rest of the machine and used as a book type-writer. It will be understood, of course, that various changes in details may be made as may be desired and that the invention is not restricted to the precise construction and arrangement of parts shown and described herein.

I claim as my invention—

1. In a type-writing machine, the combination of a base, standards secured thereon at the ends thereof, a cylinder-platen mounted in said standards, a pressure-roll mounted in said standard for coöperation with said platen, a bed-plate removably secured upon said standards, a traveling plate mounted on said bed-plate, printing devices mounted on said traveling plate, and means for producing a step-by-step movement of the traveling plate with respect to the bed-plate for letter-spacing, substantially as described.

2. In a type-writing machine, the combination of a base, a cylinder-platen supported by said base, a bed-plate removably supported upon said base above the platen, a carrier-plate hinged to said bed-plate, a traveling plate mounted on said carrier-plate, printing devices mounted on said traveling plate, and means for producing a step-by-step movement of the traveling plate with respect to the carrier-plate for letter-spacing, substantially as described.

3. In a type-writing machine, the combination of a base, a cylinder-platen supported by said base, a bed-plate removably supported upon said base above the platen, a traveling plate mounted on the bed-plate, a type-carrier mounted on the traveling plate, a printing-lever, and means actuated by the printing-lever for producing a step-by-step movement of the traveling plate with respect to the bed-plate for letter-spacing, substantially as described.

4. In a type-writing machine, the combination of a carrier-plate, a traveling plate mounted thereon, a rack supported by said carrier-plate, spools mounted on said traveling plate, an endless type-belt supported by said spools, a printing-lever mounted in the spool-standards at one end of the plate and in line with said belt, a feed-pawl carried by said lever and engaging said rack, and means to retract the feed-pawl and raise the printing-lever, substantially as described.

5. In a type-writing machine, the combination of a carrier-plate, a traveling plate mounted thereon, a rack supported by said carrier-plate, spools mounted on said traveling plate, an endless type-belt supported by said spools, a printing-lever mounted in the spool-standards at one end of the plate and in line with said belt, a feed-pawl pivoted on said lever, engaging said rack and bearing on said traveling plate, and a spring connected to said pawl to retract the same and raise the printing-lever, substantially as described.

6. In a type-writing machine, the combination of a carrier-plate, a traveling plate mounted thereon, spools mounted on said traveling plate, an endless type-belt supported by said spools, a printing-lever mounted in the spool-standards at one end of the plate and in line with said belt, a rack supported by said carrier-plate, a feed-pawl pivoted on said printing-lever and engaging said rack, and a handle secured to said feed-pawl and carried to the front of the printing mechanism to effect the disengagement of the pawl from the rack, substantially as described.

7. In a type-writing machine, the combination of a supporting-plate, a traveling plate mounted therein, a rack supported by the first-named plate, standards erected on said

traveling plate, spools mounted in said standards, an endless type-belt carried by said spools, a printing-lever mounted on said plate, a feed-pawl pivoted on said lever and engaging said rack, and means to retract said pawl and elevate said lever, substantially as described.

This specification signed and witnessed this 20th day of March, A. D. 1905.

GILBERT W. SHERIN.

In presence of—
H. S. SHERIN,
A. MEYERHOFF.