

(No Model.)

2 Sheets—Sheet 1.

P. T. DODGE.
TYPE WRITING MACHINE.

No. 322,810.

Patented July 21, 1885.

Fig. 1.

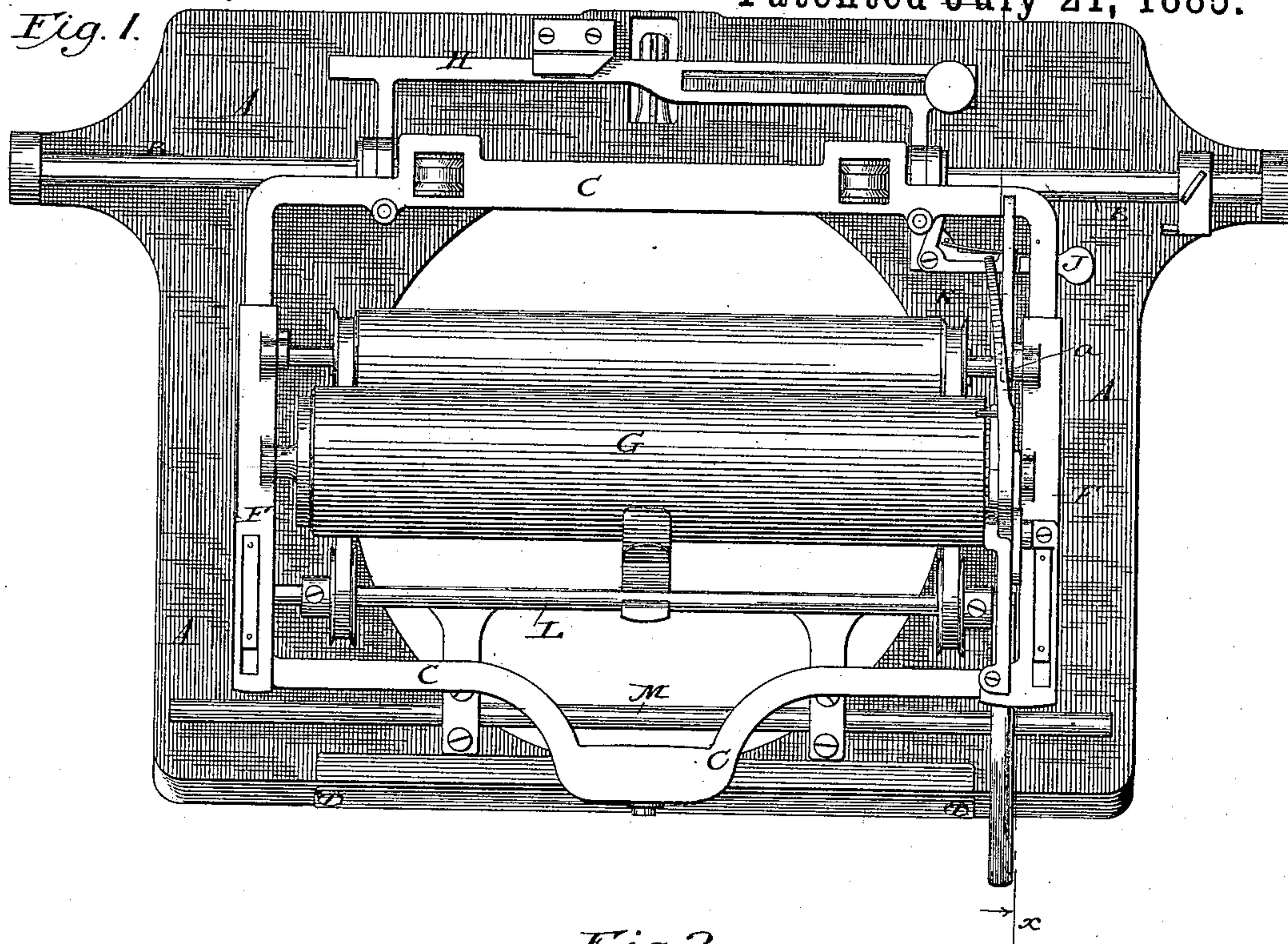


Fig. 2
on line x-x

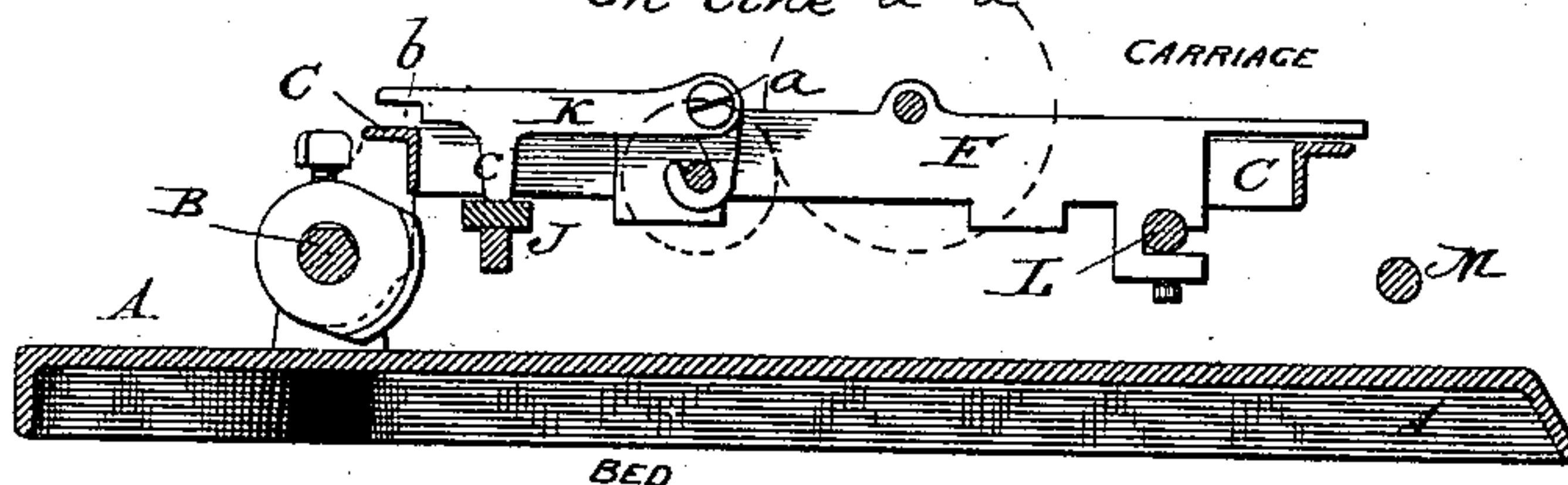
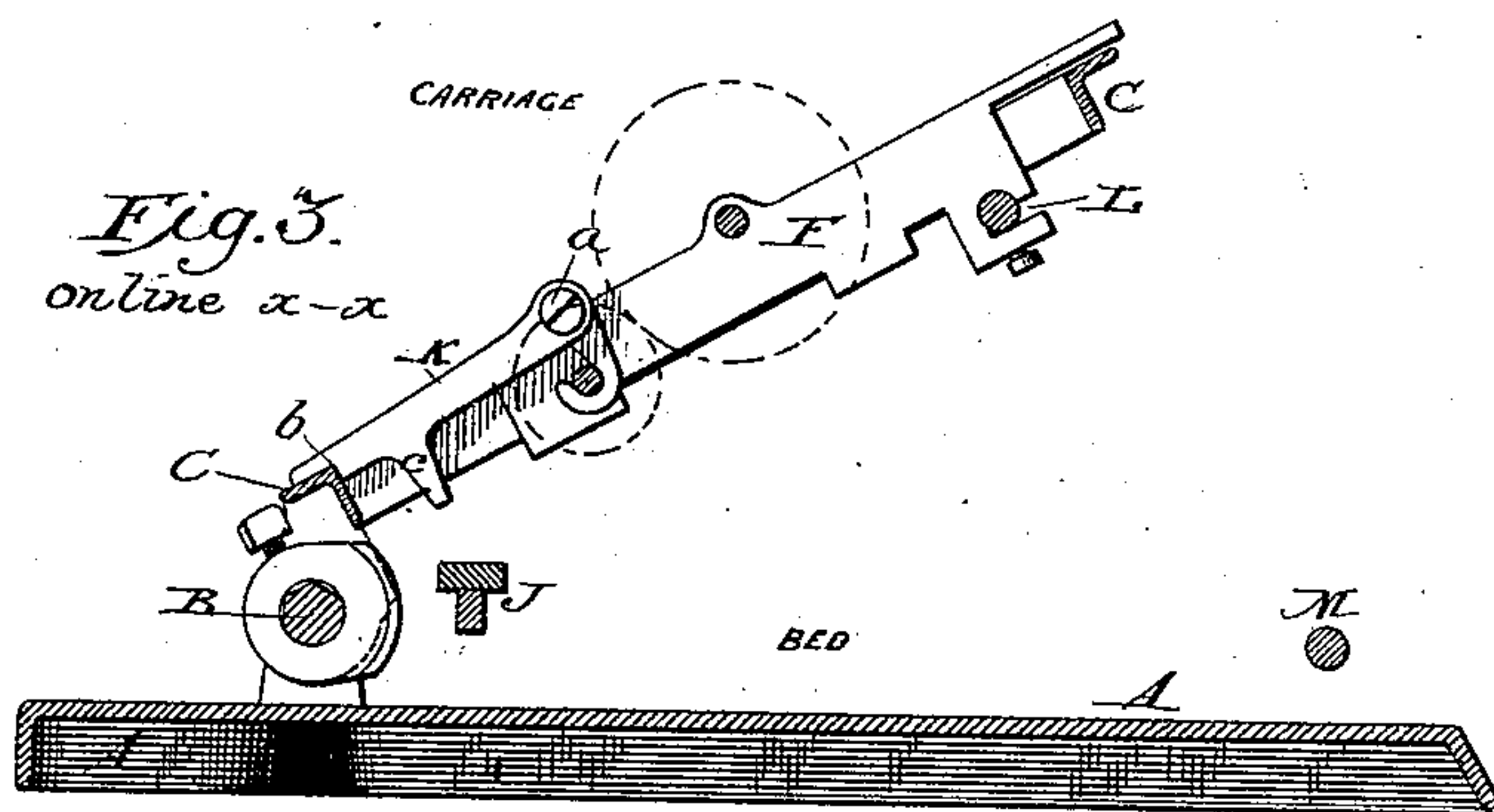


Fig. 3.
on line x-x



WITNESSES

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Philip T. Dodge.

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Fig. 4.

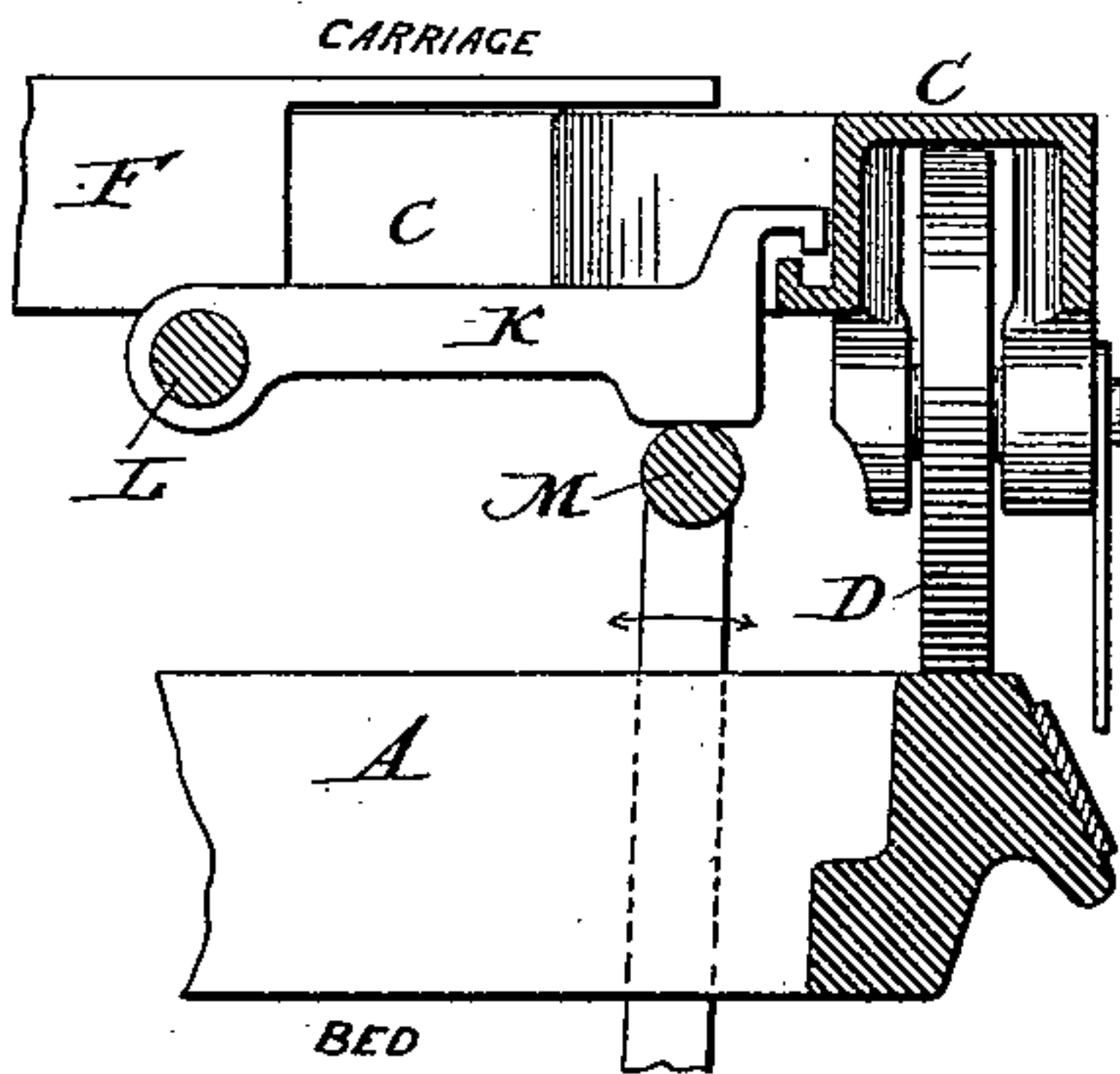


Fig. 6.

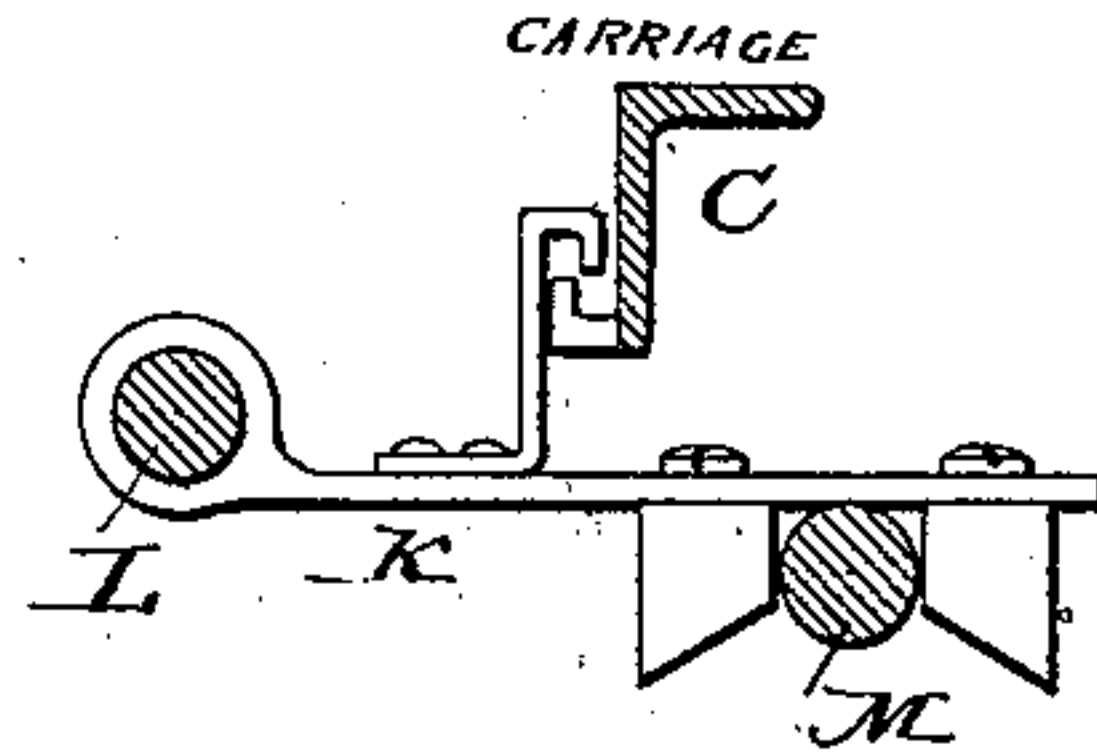


Fig. 5.

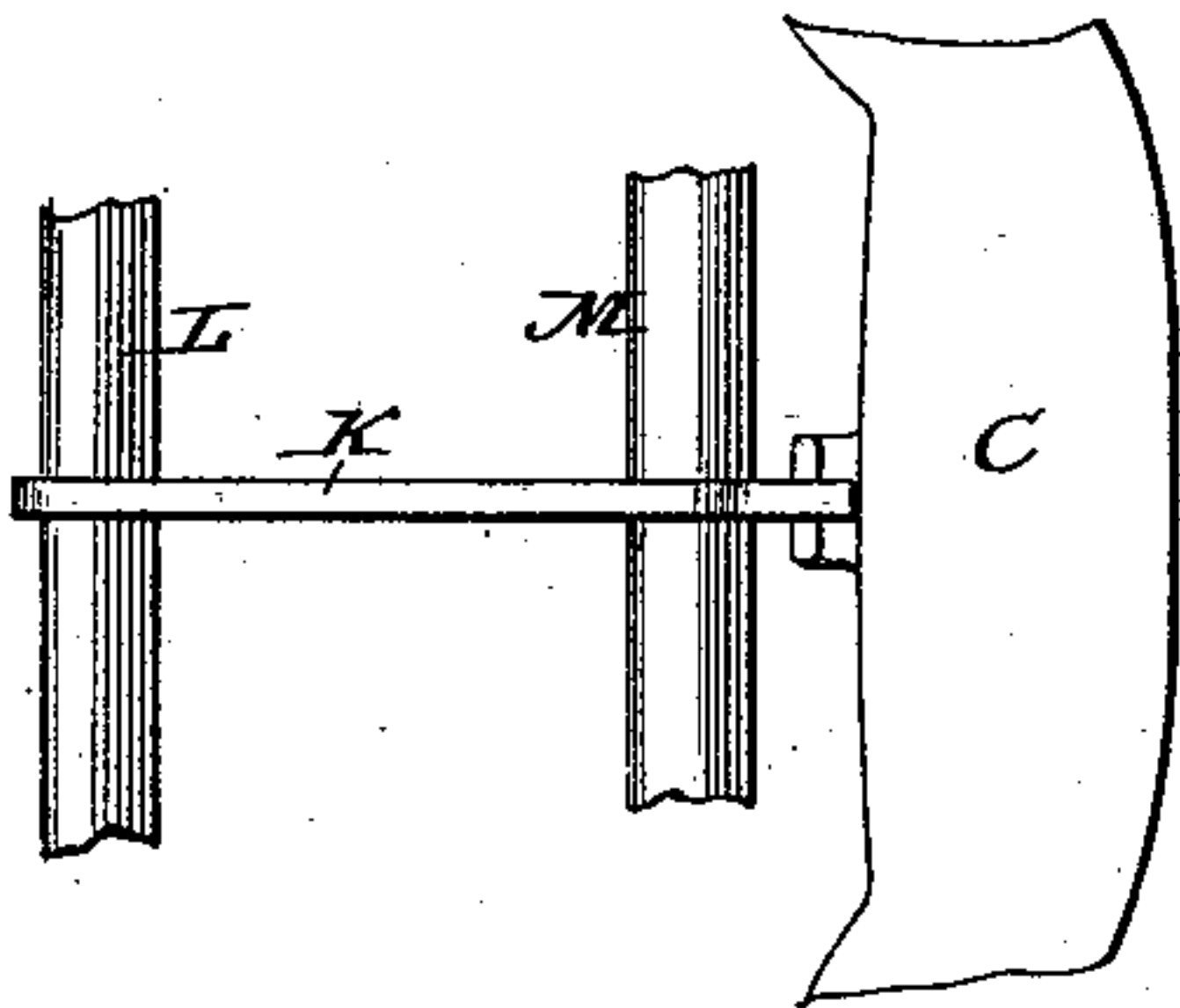


Fig. 7.

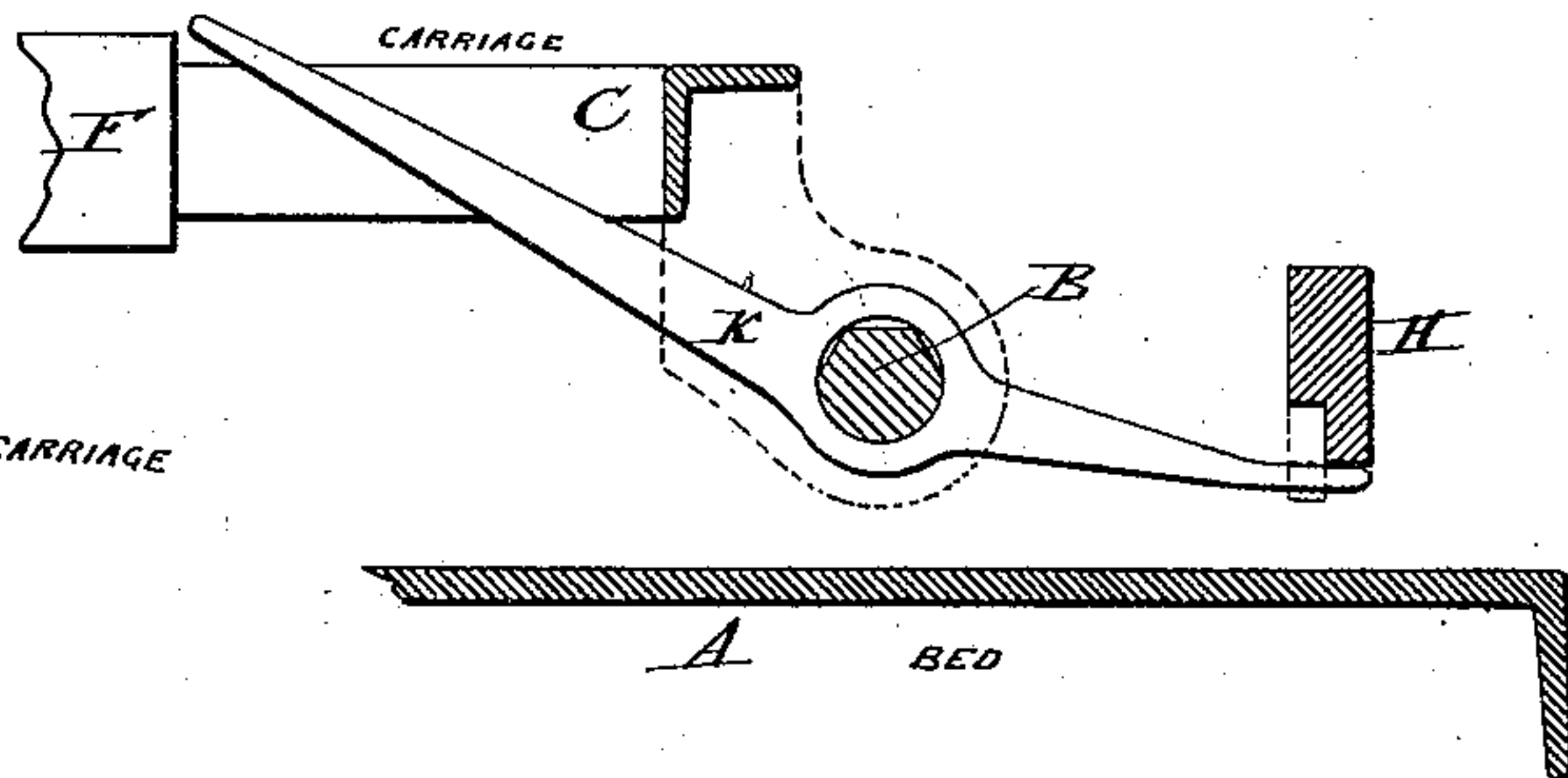


Fig. 9.

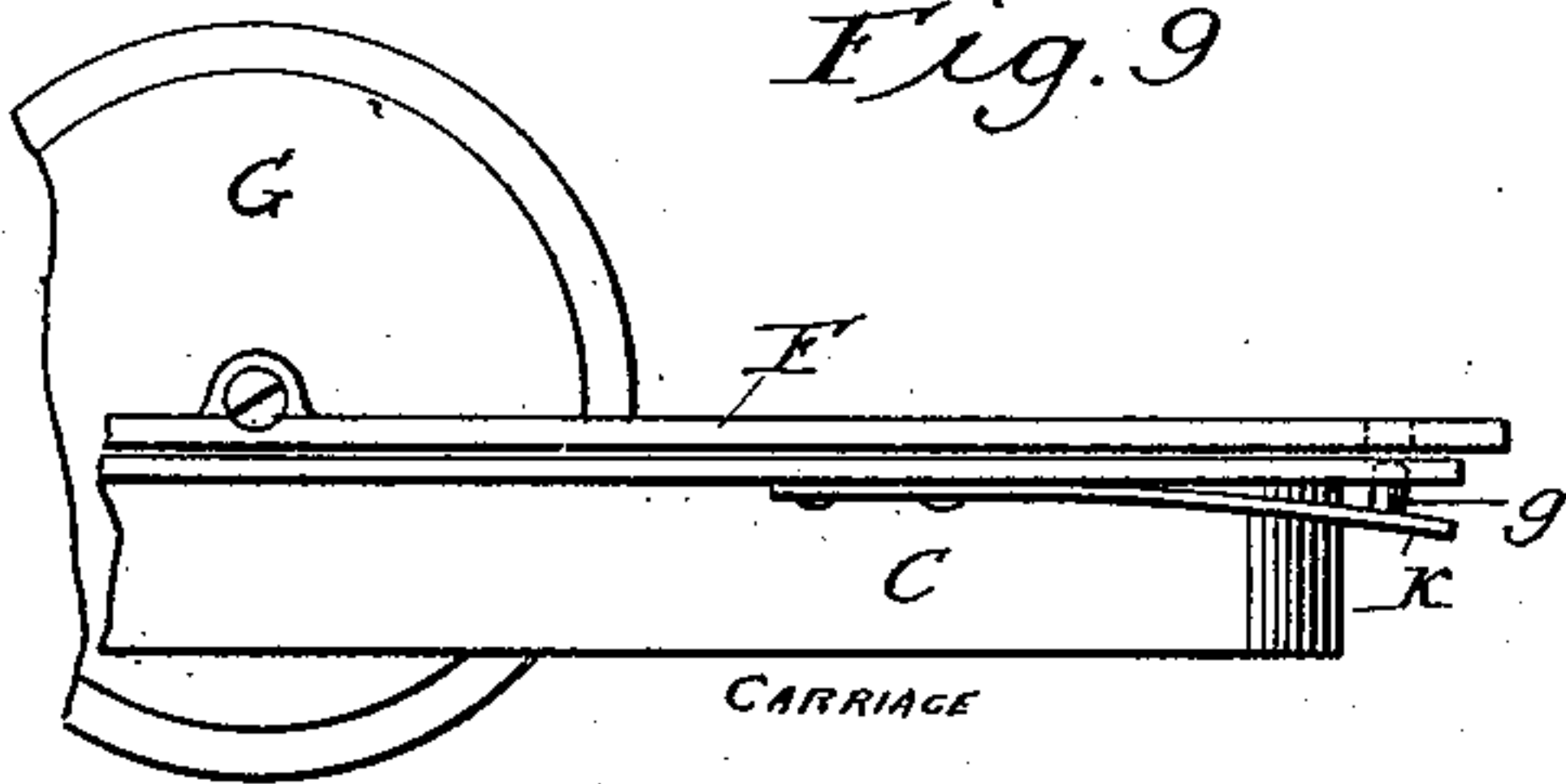
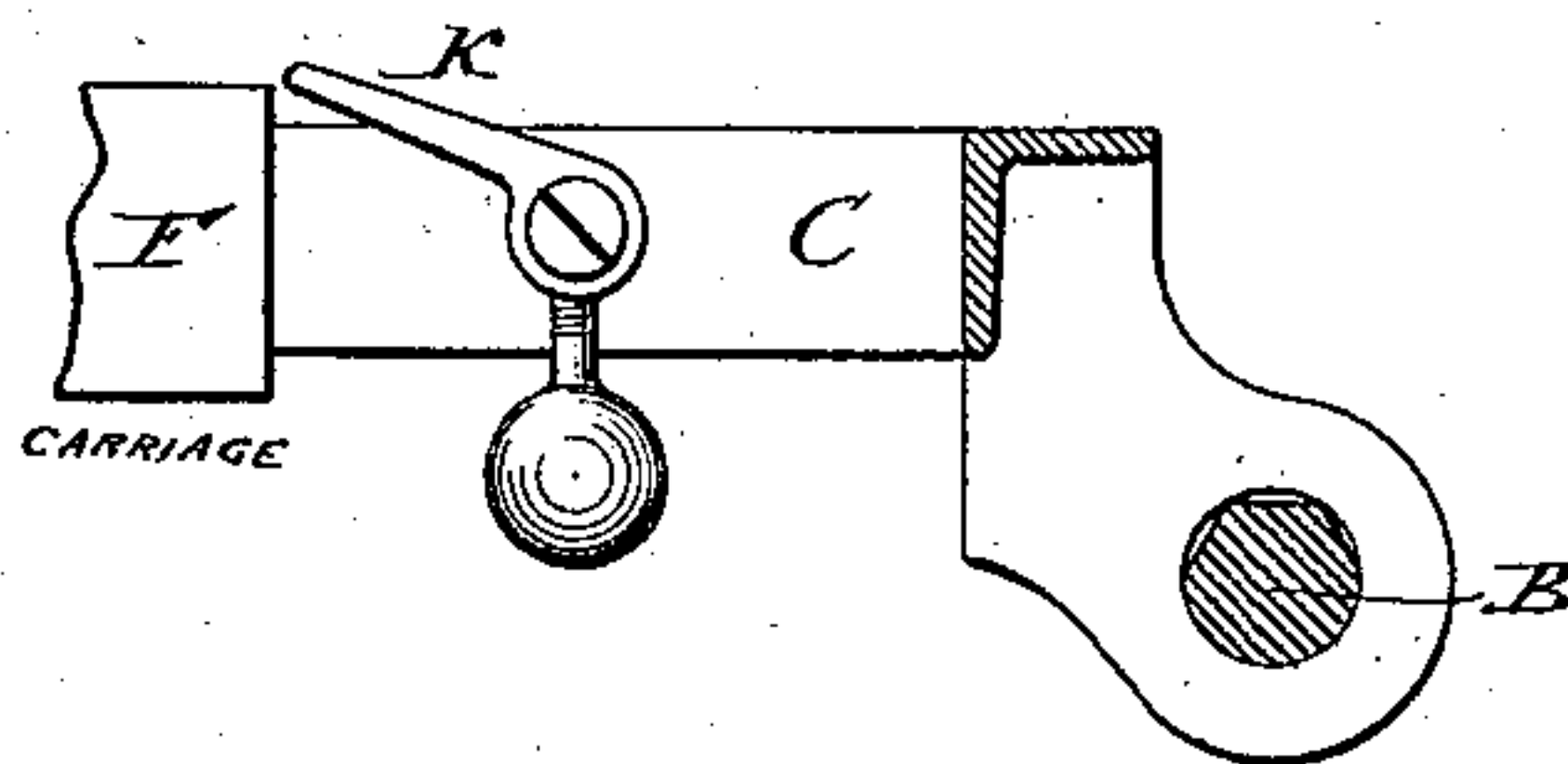


Fig. 8.



WITNESSES

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UNITED STATES PATENT OFFICE

PHILIP T. DODGE, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO
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TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 322,810, dated July 21, 1885.

Application filed February 23, 1885 (No model.)

To all whom it may concern:

Be it known that I, PHILIP T. DODGE, of Washington, in the District of Columbia, have invented certain Improvements in Type Writing Machines, of which the following is a specification.

My invention has reference to what are commonly known in the art as "Remington" typewriters, in which swinging bars, each provided with two characters, are combined with a carriage having, in addition to its lateral motion for printing the characters in line, a forward and backward motion for the purpose of shifting the platen in position to effect the printing of upper or lower case letters, as may be demanded.

In this class of machines the carriage is made in two parts, the upper portion, to which the cylindrical platen is attached, being movable forward and backward with respect to the lower portion. In machines as now constructed the upper portion of the carriage is free to slide upon the lower whenever the carriage is turned upward to permit an inspection of the printing. The result is that when the carriage is lifted its upper portion falls backward with a violent action, and that when the carriage is again lowered to the operative position the upper portion is drawn violently forward by devices provided for the purpose. The aim of my invention is to avoid this useless and objectionable sliding movement of the carriage-top, and to avoid the consequent noise and wear by providing a device which shall automatically lock the two parts of the carriage together whenever it is turned upward, and automatically release them when again brought to an operative position.

My invention is susceptible of embodiment in various forms, a few of which will be hereinafter explained, in each and all of which the locking device accompanies the rising and falling motion of the carriage.

Referring to the accompanying drawings, Figure 1 is a top plan view of the upper parts of an ordinary Remington machine having my improvement applied thereto. Fig. 2 is a vertical cross-section of the same on the line *x x*, looking in the direction indicated by

the arrow, with the carriage in its operative position, the locking device being disengaged. Fig. 3 is a similar view of the parts with the carriage partly elevated and the locking devices in action. Fig. 4 is a vertical cross-section showing another form of the device. Fig. 5 is a top plan view of the same. Fig. 6 is a sectional elevation of the dog in still another form. Figs. 7, 8, and 9 are deviations illustrating other modifications of the invention.

Referring to Figs. 1 and 2, A represents the bed or main frame of the machine; B, a horizontal shaft; C, the lower or main portion of the carriage arranged to slide from right to left, being supported at the rear edge on the shaft B, and at the front edge by a roller, D.

F represents the upper portion of the carriage, giving support to the cylinder or platen G, and arranged to slide forward and backward on the lower or main portion of the carriage for the purpose of bringing the platen over the upper or the lower case type, as required.

H represents the horizontal feed-bar, extending in rear of the shaft B and connected with the carriage in such manner as to reciprocate from right to left therewith.

J is a thumb-latch attached to the feed-bar, and extending on the right-hand of the carriage at the rear corner.

The foregoing parts are all constructed and arranged to operate in the ordinary manner, and are familiar to every person skilled in the art.

K represents the locking device forming the subject of my invention. It consists, as shown in Figs. 1, 2, and 3, of a gravitating pawl or dog having its forward end pivoted at *a* to the upper sliding portion of the carriage, and its rear end arranged to drop within the lower portion of the carriage. The rear end of the dog is formed with a shoulder, *b*, and with a depending arm, *c*. When the carriage is in its operative position, the arm *c* bears upon the thumb-latch J, which acts to sustain the dog in such position that its shoulder *b* will stand above the rear end of the carriage and out of engagement therewith, as plainly rep-

resented in Fig. 2, thus leaving the upper portion of the carriage free to be shifted forward and backward by the operator in the ordinary manner. When, however, the carriage is lifted to permit inspection of the print, the point of the dog is lifted therewith from the supporting-latch J, in consequence of which the dog drops downward, so that its shoulder engages against the inner rear side of the carriage, as shown in Fig. 3, thus locking the upper portion of the carriage against rearward motion. When the carriage is again turned down, the dog, bearing on the latch J, as before, is again lifted out of action.

If desired, a spring may be applied to depress the dog and insure its engagement; but thorough practical tests have shown this spring to be unnecessary.

Referring now to the form of device illustrated in Figs. 4 and 5, K represents the gravitating-latch or locking device, pivoted at its rear end on the shaft L, which is attached in the ordinary manner to the upper or sliding portion of the carriage. At its forward end the dog is adapted to engage on a lip provided for the purpose on the lower portion of the carriage, and when in engagement it prevents the upper portion from moving backward. During the operation of the machine the dog bears upon the bar M, and is maintained thereby out of engagement, leaving the top of the carriage, as before, free to move forward and backward. The bar M is mounted, as usual, in vibrating arms for the purpose of shifting the top of the carriage forward and backward.

Passing now to the construction represented in Fig. 6, the locking-dog K is mounted, as in the preceding example, on the shaft L, and arranged to engage a lip on the front of the carriage. In this instance the dog bears upon and is held out of engagement, as before, by the bar M, but is forked and adapted to serve the additional purpose of the arms now employed for connecting the bar M with the sliding portion of the carriage.

In Fig. 7 the locking-dog K is mounted loosely on the rear shaft, B, with its forward end in position to fall by gravity behind the upper portion of the carriage. It is extended rearward and bent laterally to bear beneath the rack-bar H. The weight of the bar, depressing the rear end of the dog, holds the forward end of latter normally above and out of engagement with the carriage, as shown in Fig. 7. When, however, the carriage is lifted, the forward end of the dog engages behind the upper portion of the carriage, and, turning upward with the carriage, prevents the backward movement of the top portion.

In Fig. 8 the locking-dog K is made in the form of an elbow-lever and pivoted to the lower portion of the carriage, one end of the lever being weighted, and the opposite end made of suitable form to engage the top portion of the carriage when the latter is lifted. When the carriage is in its operative position,

the dog stands, as represented in Fig. 8, with its forward end out of engagement.

In Fig. 9 the dog K consists of a flat spring secured at one end to the lower part of the carriage at its forward side, at the point where the carriage is commonly grasped by the operator in lifting the same. The dog is provided in this case with a stud or pin, *g*. When the parts are in action, the spring stands in the position shown in Fig. 9, with the stud out of action. When, however, the operator grasps the carriage, his thumb, bearing on the under side of the dog, lifts the same, forcing the stud *g* into engagement with the upper portion of the carriage, thereby locking it against backward movement.

It will be observed that in each and all of its forms the locking-dog is rendered inactive whenever the carriage is lowered to an operative position.

I am aware that a complicated system of mechanisms has been employed in connection with the finger-keys to shift the carriage forward and backward for the purpose of locking the two parts of the carriage together. The system has, however, been found so objectionable that its manufacture has been abandoned. My locking device is wholly independent of the mechanisms employed for effecting the forward and backward motion of the carriage.

Having thus described my invention, what I claim is—

1. In a type-writing machine, the reciprocating carriage hinged to swing upward from its operative position, and composed of two parts movable one forward and backward in relation to the other, in combination with the intermediate locking device, substantially as described, adapted to engage automatically as the carriage is raised from an operative position and disengage automatically as it is lowered.

2. In a type-writer, the carriage composed of two parts, one movable forward and backward upon the other, in combination with the connecting dog or lock, substantially as described, adapted to disengage automatically when the carriage assumes an operative position, whereby the movable portion of the carriage is left constantly free when the machine is in action.

3. In a type-writer, the carriage hinged to swing upward from an operative position for the inspection of the writing, and having its upper portion movable forward and backward on the lower, in combination with the dog or connecting device bearing against and held normally out of engagement by a non-rising portion of the machine.

In testimony whereof I hereunto set my hand in the presence of two attesting witnesses.

Witnesses: PHILIP T. DODGE.
WILLIAM H. SHIPLEY,
I. G. JONES.