

(No Model.)

J. M. FAIRFIELD & G. I. FRANCIS.  
TYPE WRITING MACHINE.

No. 465,042.

Patented Dec. 15, 1891.

Fig. 1.

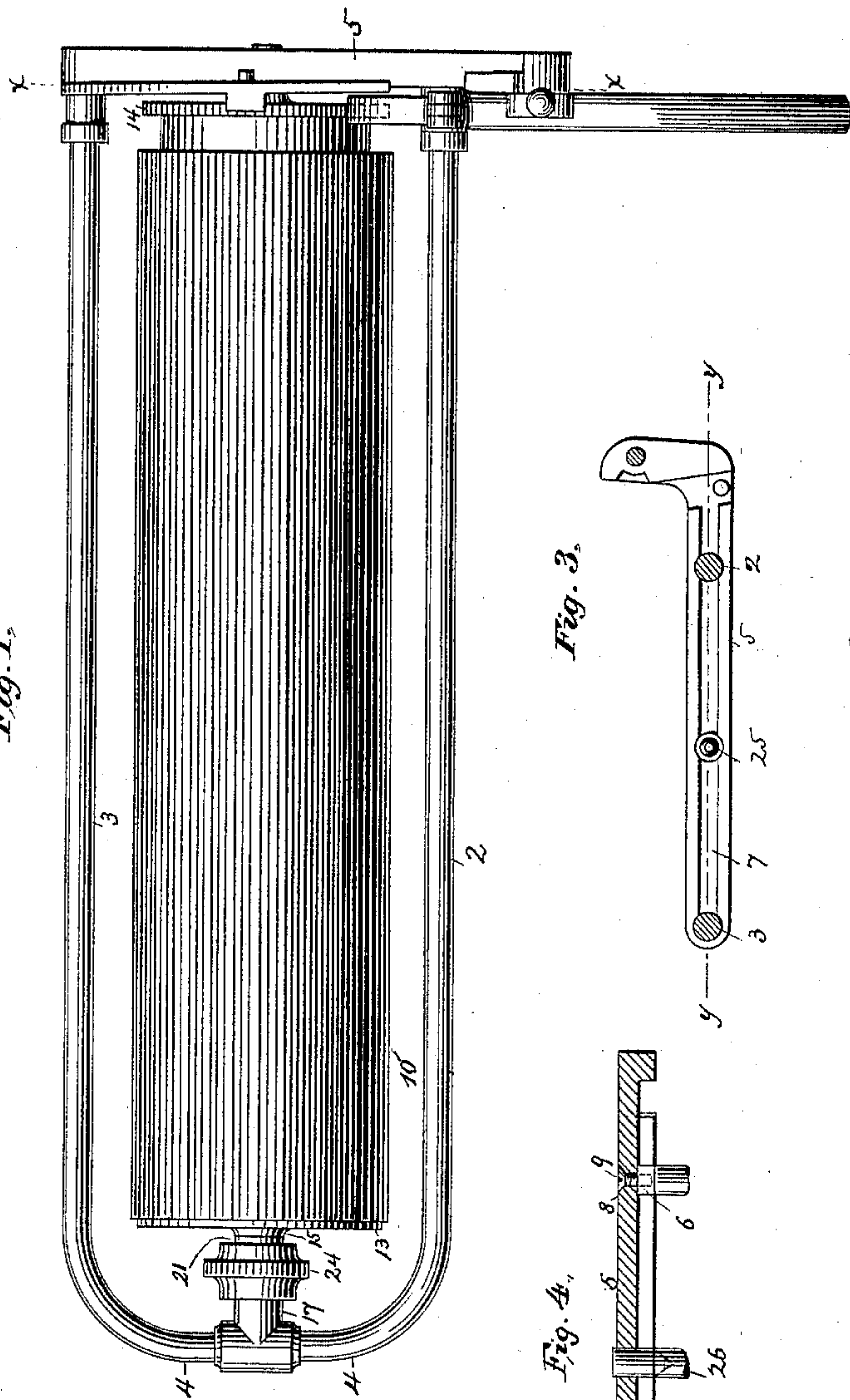


Fig. 3.

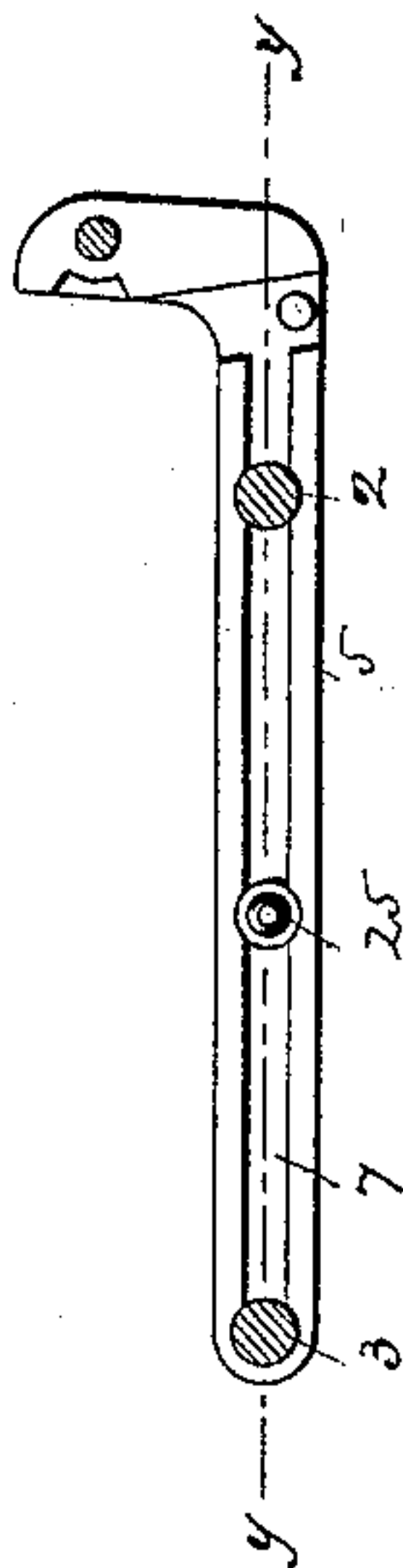


Fig. 2.

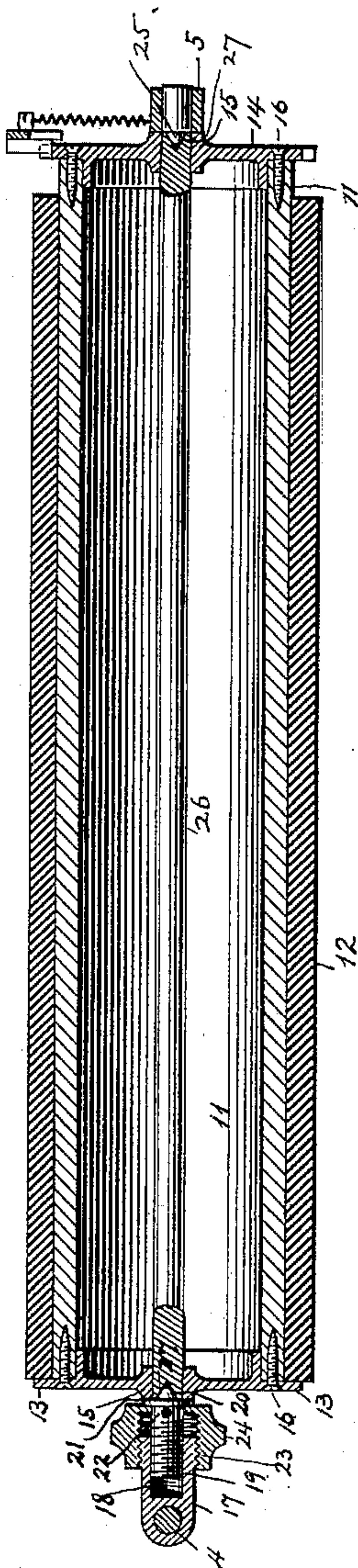
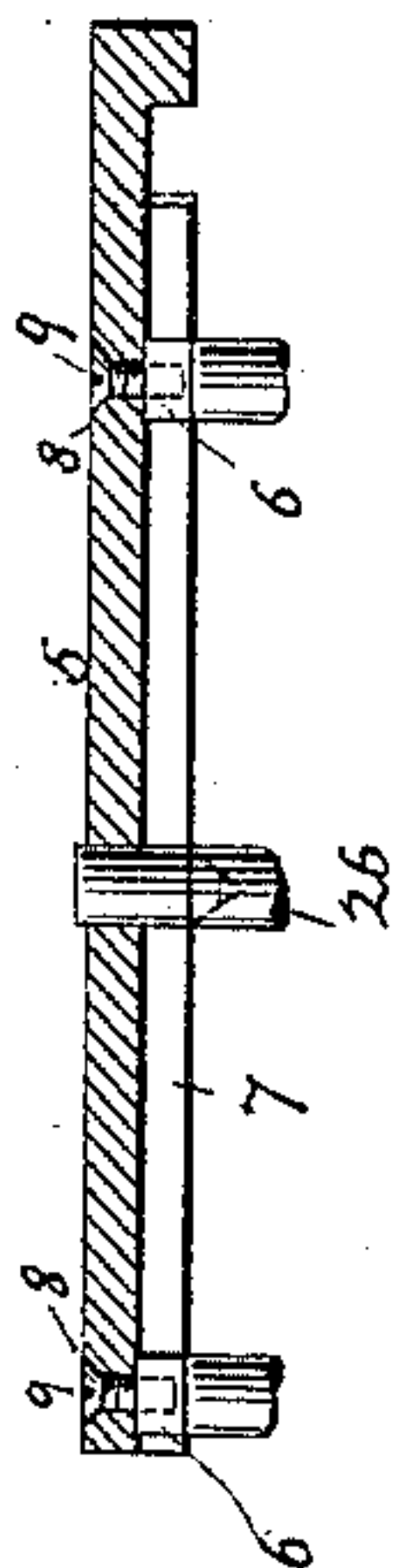


Fig. 4.



Witnesses  
Geo. W. Breck.  
Edward Thorpe.

Inventors,  
John M. Fairfield  
Graham S. Francis  
By his Attorney  
Jacob Felbel



# UNITED STATES PATENT OFFICE.

JOHN M. FAIRFIELD AND GRAHAM I. FRANCIS, OF HARTFORD, CONNECTICUT,  
ASSIGNORS TO THE AMERICAN WRITING MACHINE COMPANY, OF SAME  
PLACE.

## TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 465,042, dated December 15, 1891.

Application filed July 17, 1889. Serial No. 317,833. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN M. FAIRFIELD and GRAHAM I. FRANCIS, the former a citizen of the United States and the latter a subject of the Queen of England, and both residents of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

Our invention has for its principal object to provide a construction of paper-carriage whereby the platen thereof may be readily detached and another substituted. As is well known to those skilled in the art, for ordinary work a comparatively soft platen yields the best results, while for manifolding or the taking of a large number of copies at one time a platen with a harder surface should be employed to obtain the most satisfactory impressions. It is desirable therefore to provide a construction of machine by which the operator may with facility make the change from one type of platen to the other, according to the character of the work to be performed.

To this end our invention consists in the features of construction and combinations of devices hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a top view of a type-writing-machine paper-carriage embracing our invention. Fig. 2 is a central vertical section of the same. Fig. 3 is a vertical section taken at the line *x x*, Fig. 1; and Fig. 4 is a horizontal section taken at the line *y y* of Fig. 3.

In the several views the same part will be found designated by the same numeral of reference.

The carriage-frame consists of a front rod 2, a rear rod 3, and end bars 4 and 5. The end bar 4 is shown as made integral with the front and rear rods; but this is no part of our joint invention. The free ends of the front and rear rods are flattened on opposite sides, as seen at 6, and are threaded axially. The end bar 5 is grooved, as at 7, to receive the flattened ends of the rods 2 and 3, and is perforated at

8 8 for the passage of screws 9 9, which take into the threaded holes in said rods.

10 designates a cylindrical platen consisting, preferably, of a hollow wooden core 11, a surrounding sheath of rubber 12, and circular heads or end pieces 13 and 14, having perforated hubs 15. The heads are attached to the core preferably by screws 16.

Secured to the end bar 4 is an inwardly-projecting socket-piece 17, threaded interiorly, as seen at 18, for the accommodation of a screw 19, provided at its forward end with a conical journal 20, a circular flange 21, and a capstan-hole 22. The socket-piece is also threaded exteriorly, as seen at 23, and is provided with a threaded nut 24.

Fast in the end bar 5 is a conical journal 25, in line with that marked 20, and projecting inwardly. 26 designates a rod preferably supported loosely in the platen-heads and provided at each end with a conical bearing 27 for the reception of the journals 20 and 25.

In order to remove the platen from its frame, the nut 24 is screwed toward the end bar 4, and the screw 19 is turned farther into the socket-piece until the journal 20 is fully out of its seat 27. The platen may then be detached. To insert another one, first engage the journal 25 with its proper bearing 27, then bring the opposite bearing in line with the journal 20, then turn the screw until said journal enters its seat, and then screw up the nut against the flange 21 to prevent any accidental recession of the screw 19 and the journal thereon.

The capstan-hole is provided to enable the screw 19 to be turned by a pin or wire. Instead of this, a square portion may be provided to adapt the device for a small wrench.

At the right-hand end of the carriage-frame is illustrated the line-space mechanism, consisting of a ratchet-wheel, push-pawl, lever, and spring-controlled-platen check; but this group of devices forms no part of our present invention.

What we claim as new, and desire to obtain by Letters Patent, is—

1. In a type-writing machine, the combination, in a paper-carriage, of an end bar provided with a fixed inwardly-projecting socket-



- piece threaded interiorly, a cylindrical platen having a journal-bearing at each end, a screw mounted in said inwardly-projecting threaded socket-piece and adapted to be moved to 5 and from said cylindrical platen and provided with a journal at its inner end for one end of said platen, and an end bar provided with a journal for the opposite end of the platen, as and for the purpose set forth.
- 10 2. In a type-writing machine, the combination, in a paper-carriage, of a cylindrical platen, a platen-axle extending through the platen and having a journal-bearing at each end, an end bar having a journal engaging 15 with the bearing in one end of the platen-axle, an end bar provided with a fixed inwardly-projecting socket-piece threaded interiorly, and a screw mounted in said inwardly-projecting threaded socket-piece and adapted

to be moved to and from said cylindrical 20 platen and provided with a journal at its inner end for the opposite end of the platen-axle, as and for the purpose set forth.

3. In a type-writing machine, the combination, at one end of a paper-carriage having a 25 cylindrical revoluble platen, of a journal-bearing, a journal, a screw, a threaded socket-piece or screw-support, a flange on the screw, and a binding-nut on the socket piece or support, substantially as set forth. 30

Signed at Hartford, in the county of Hartford and State of Connecticut, this 6th day of July, A. D. 1889.

JOHN M. FAIRFIELD.  
GRAHAM I. FRANCIS.

Witnesses:

CHARLES A. SAFFORD,  
THOMAS B. CHAPMAN.