No. 626,556. Patented June 6, 1899.

T. R. NOLAN.

TYPE WRITER PLATEN.

(Application filed Feb. 23, 1899.)

(No Model.)

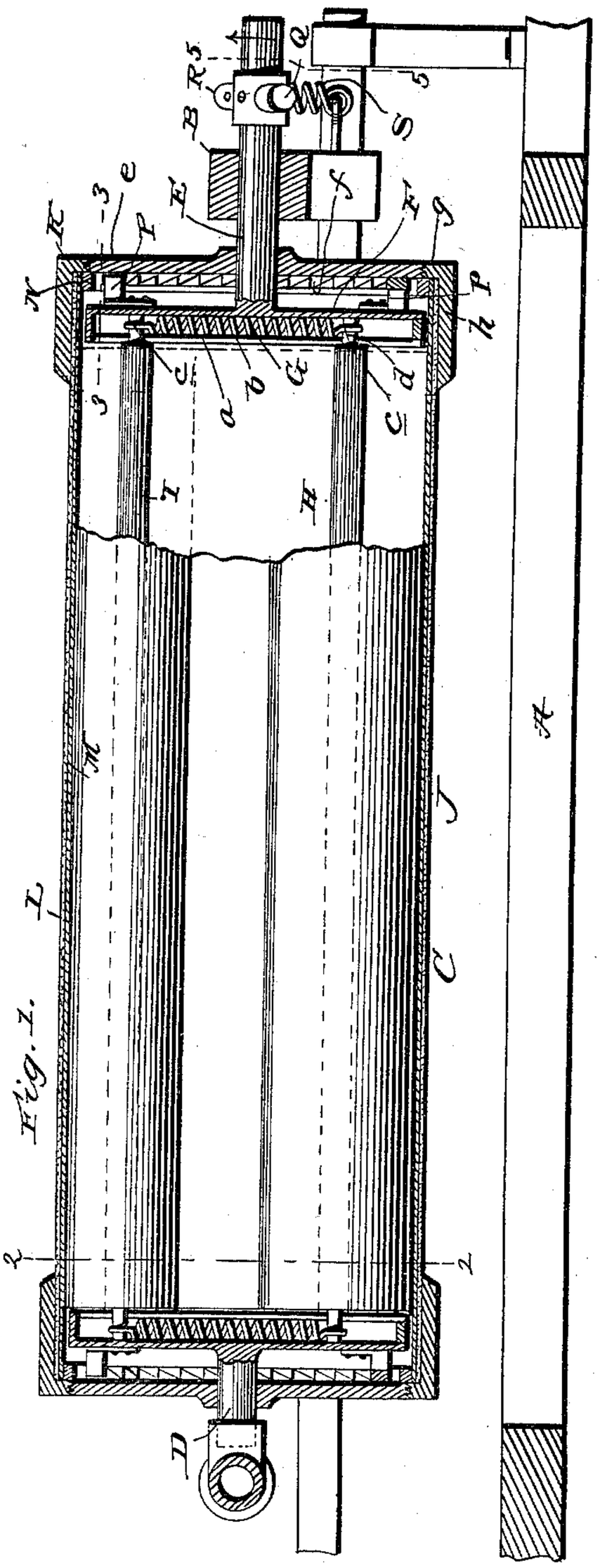

Fig. 1.

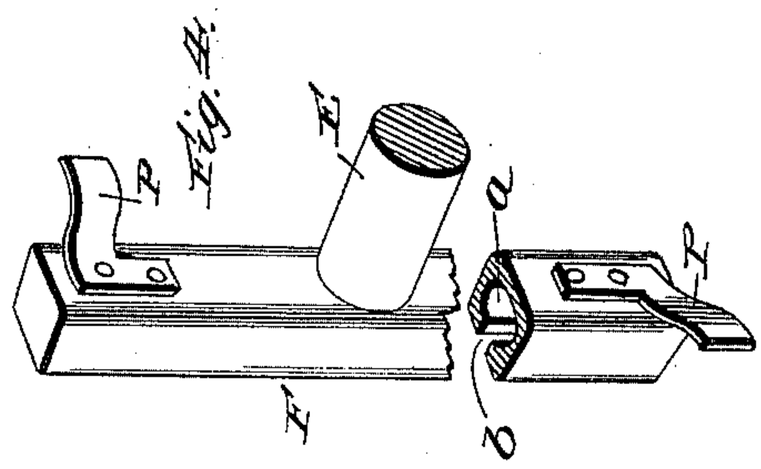

Fig. 4.

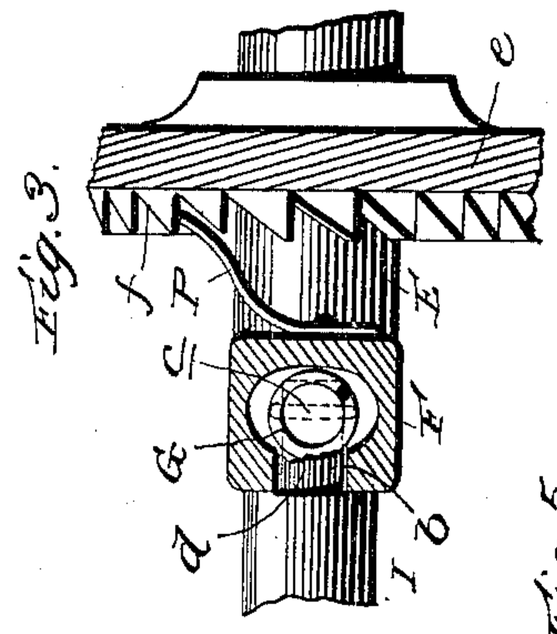

Fig. 3.

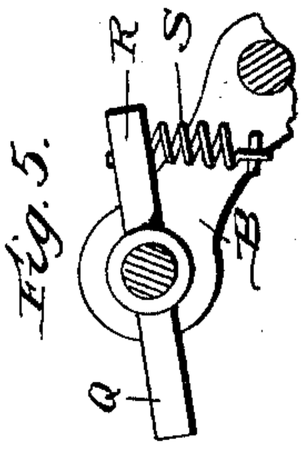

Fig. 5.

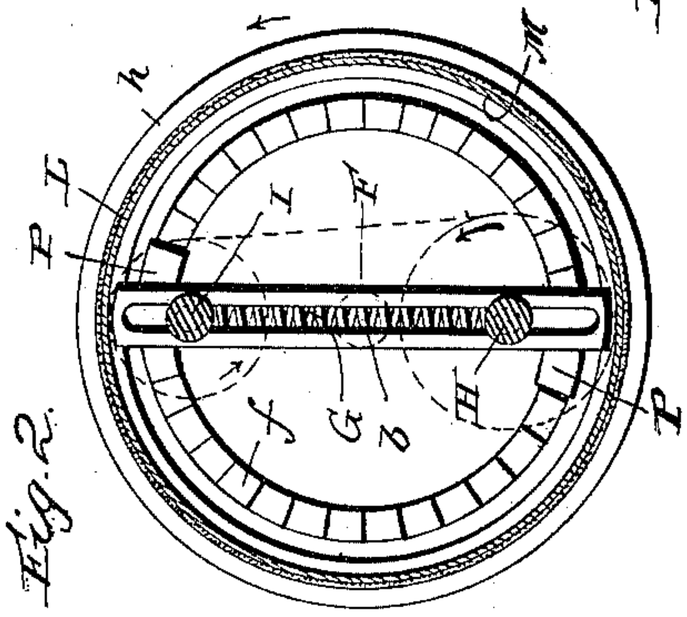

Fig. 2.

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UNITED STATES PATENT OFFICE.

THOMAS R. NOLAN, OF CLEVELAND, OHIO.

TYPE-WRITER PLATEN.

SPECIFICATION forming part of Letters Patent No. 626,556, dated June 6, 1899.

Application filed February 23, 1899. Serial No. 706,528. (No model.)

To all whom it may concern:

Be it known that I, THOMAS R. NOLAN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Type-Writer Platens, of which the following is a specification.

My invention relates to type-writer platens, and has for its general object to provide a platen embodying simple and inexpensive means calculated to automatically make a copy or record of all matter that is written by the machine upon paper fed around upon the platen in the ordinary manner.

The invention will be fully understood from the following description and claims when taken in conjunction with the annexed drawings, in which—

Figure 1 is a longitudinal section illustrating a platen embodying my invention in its operative position on a portion of the frame of a type-writer. Fig. 2 is a transverse section of the platen, taken in the plane indicated by the line 2 2 of Fig. 1. Fig. 3 is a detail section, on an enlarged scale, taken in the plane indicated by line 3 3 of Fig. 1. Fig. 4 is a broken perspective view of one of the heads in which the paper-carrying rollers are journaled and adapted to move. Fig. 5 is a detail section taken in the plane indicated by the line 5 5 of Fig. 1.

In the said drawings similar letters designate corresponding parts in all of the several views, referring to which—

A is a portion of the main frame of a type-writer.

B is a carriage movable on the frame in the usual manner, and C is my improved rotary platen. The platen is provided at its opposite ends with short shafts or trunnions D E, each of which is journaled in a suitable bearing in the carriage B, as shown in Fig. 1, and is provided at its inner end with a T-head F. These T-heads F may be, and preferably are, formed integral with the trunnions and are made hollow, as indicated by *a*, and provided with longitudinal slots in their inner faces, as indicated by *b*.

G are coiled springs which are arranged in the hollow heads F and have eyes *c* at their ends, and H I are rollers which have reduced end portions *d*, arranged in the slots *b* of the heads F and also in the eyes *c* of the springs G, whereby they are pressed outwardly. The roller H is provided, as shown, with a roll of paper, the end of which is carried up to and rolled around the roller I, so that when said rollers are rotated in a manner hereinafter described paper will be fed off the roller H and will be taken up on the roller I.

J is the casing of the platen, which is formed by heads K, loosely mounted on the trunnions D E, and silk L or other suitable yielding material, which is interposed between the heads K and forms a hollow cylinder inclosing the rolls of paper. The casing-heads K in the preferred embodiment of the invention respectively comprise an inner disk *e*, having threads on its edge and also having a ratchet *f* on its inner face, and an outer annular portion *g*, which is threaded to engage the threads of the disk *e* and is provided with an inwardly-directed lateral flange *h*. The meeting ends of the piece of silk forming the hollow cylinder L may be connected by any suitable means, such as stitches, while the ends of said silk cylinder, which are arranged within the flanges *h* of the heads K, are connected to said flanges by cement or other suitable means.

M is a duplicating medium, preferably a piece of carbon-paper, which is arranged within and lies snugly against the inner side of the silk cylinder L throughout the length and circumference thereof and is secured in position by being interposed at its ends between metal rings N and the flanges *h* of the heads K. The said duplicating medium is also arranged with its face inwardly or toward the roll of paper on the roller H for a purpose presently described.

P are oppositely-disposed spring-dogs which are arranged on the heads F of the trunnions and are designed on one movement of the heads to engage the beveled teeth making up the ratchets *f*, and thereby partially rotate the platen-casing J, and on the opposite movement of the heads to ride idly over said teeth, and Q R are opposite lateral arms on the trunnion E. The arm Q is connected by a coiled spring S with a portion of the carriage B, while the arm R is arranged to be engaged by the

hand-lever or other hand device usually provided on type-writer carriages to partially rotate the platen, and which I have not deemed it necessary to illustrate.

As will be readily observed by reference to Fig. 1, the piece of carbon-paper M is interposed between the silk covering L and the roll of paper H, with its face toward the latter, and hence when the machine is operated to write upon a piece of paper surrounding the platen a copy of all the matter that is written will, by reason of the type acting against the carbon-paper, be made upon the paper on the roller H.

In practice the writing is carried on in the usual manner—that is to say, the platen is partially rotated after a line has been written to bring a fresh portion of the paper in line with the striking-point of the type. Such partial rotation of the platen is effected by rocking the trunnion E in the direction indicated by arrow, for it will be seen that when the trunnion is so rocked the dogs P of the heads F, acting against the teeth of the ratchets *f*, will partly turn the casing J. When the trunnion E is released after being rocked as stated, the spring S will return it to its normal position and in so doing will rock the heads F in a direction opposite to that of their first movement and with respect to the casing J, which will remain in the position to which it was moved. When the heads F are thus rocked or moved back to their normal position, the rolls of paper on the shafts H I will move with them, and the friction between said rolls and the flanges *h* of the casing-heads K will rotate the rolls in the directions indicated by arrows in Fig. 2, with the result that paper will be fed off the lower roll and taken up on the upper roll. From this it follows that after each line is written the paper on the rollers H I will be moved to present a fresh portion of paper in line with the striking-point of the type.

When desirable, the rollers H I may be readily removed from the casing J and the paper that has been written upon may be taken off the same, after which said rollers may be provided with a fresh supply of paper and replaced in the casing J. To remove the rollers, it is necessary to remove the trunnions of the platen from their bearings in the carriage B, and then unscrew the disk *e* of one of the casing-heads J. With this done the rollers H I may be readily removed from and as readily replaced in the casing J.

Having thus described my invention, what I claim is—

1. A type-writer platen comprising a casing having a yielding portion, a paper-holding device arranged in said casing, and a duplicating medium arranged at the inner side of the yielding portion of the casing, substantially as specified.

2. A type-writer platen comprising a casing having a cylindrical portion of yielding material, a roll of paper arranged in said casing, and a duplicating medium interposed between the cylindrical portion of the casing and the roll of paper, substantially as specified.

3. In a type-writer platen, the combination of a casing comprising heads and a cylindrical portion of yielding material interposed between and connected to the heads, central trunnions extending loosely through the heads of the casing and having heads at their inner ends, spring-pressed paper-carrying rollers having their ends movable in guides in the trunnion-heads, a suitable ratchet connection between the trunnion-heads and the casing, and a duplicating medium arranged at the inner side of the cylindrical portion of the casing, substantially as specified.

4. In a type-writer platen, the combination of a casing comprising heads one of which has a central removable disk, and a cylindrical portion of yielding material interposed between and connected to the heads, central trunnions extending loosely through the heads of the casing and having heads at their inner ends within the casing, paper-carrying rollers having their ends movable in guides in the trunnion-heads, springs arranged in the trunnion-heads and interposed between the ends of the rollers, a suitable ratchet connection between the trunnion-heads and the casing, and a duplicating medium secured at the inner side of the cylindrical portion of the casing, substantially as specified.

5. In a type-writer, the combination of a platen-carriage, a platen journaled therein and comprising a casing having heads and a cylindrical portion of yielding material interposed between and connected to the heads, central trunnions extending loosely through the heads of the casing and having heads at their inner ends within the casing, spring-pressed paper-carrying rollers having their ends movable in guides in the trunnion-heads, a suitable ratchet connection between the trunnion-heads and the casing, and a duplicating medium secured at the inner side of the cylindrical portion of the casing, a lateral arm on one of the trunnions of the platen, and a spring connecting the said arm and the carriage, substantially as specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

THOMAS R. NOLAN.

Witnesses:
FRED. K. HORN,
FRANK H. TUBB.