No. 669,401. Patented Mar. 5, 1901.

J. R. ROGERS.

LINOTYPE MACHINE.

(Application filed Dec. 26, 1900.)

(No Model.)

Fig. 1.

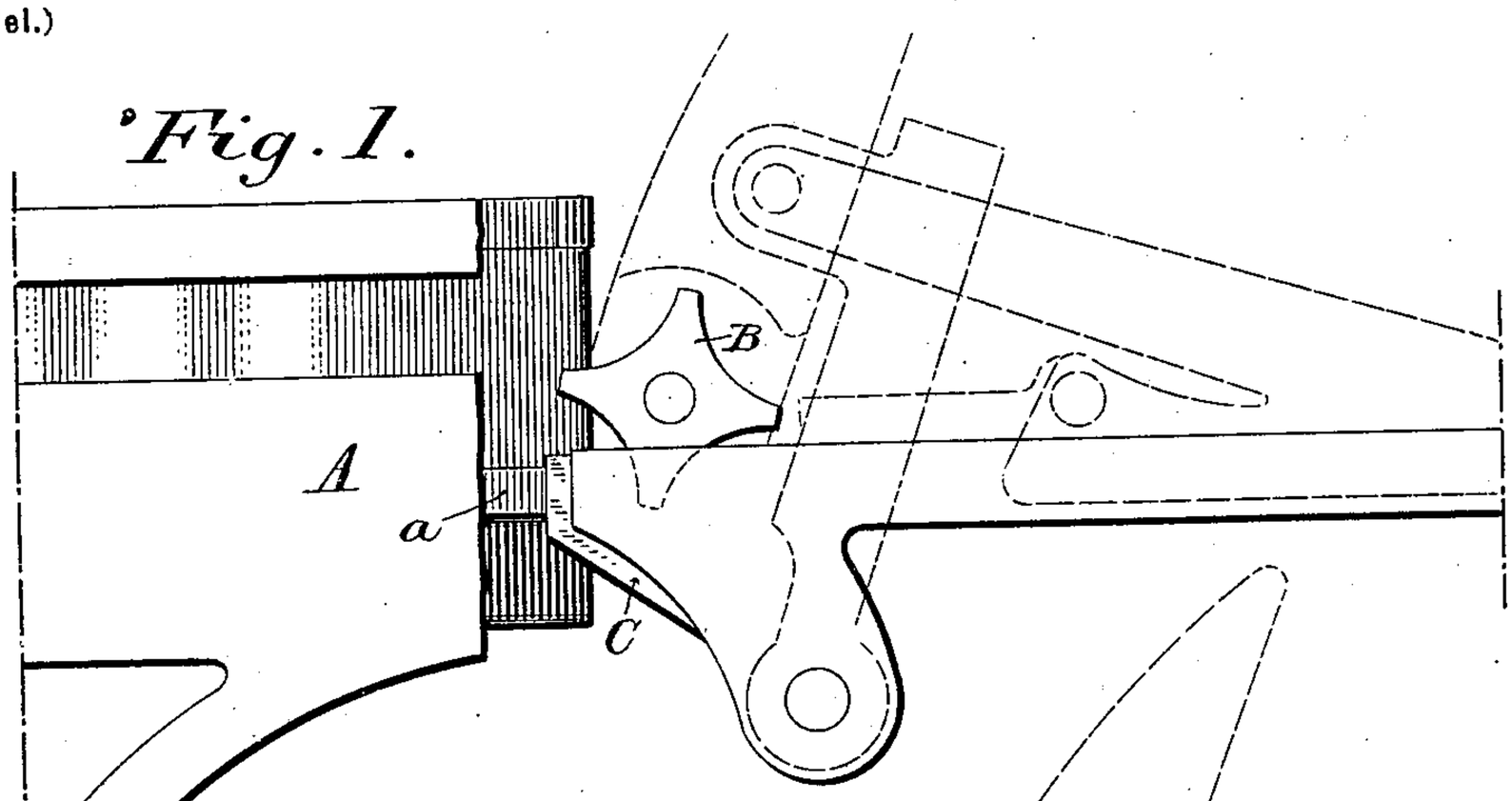


Fig. 2.

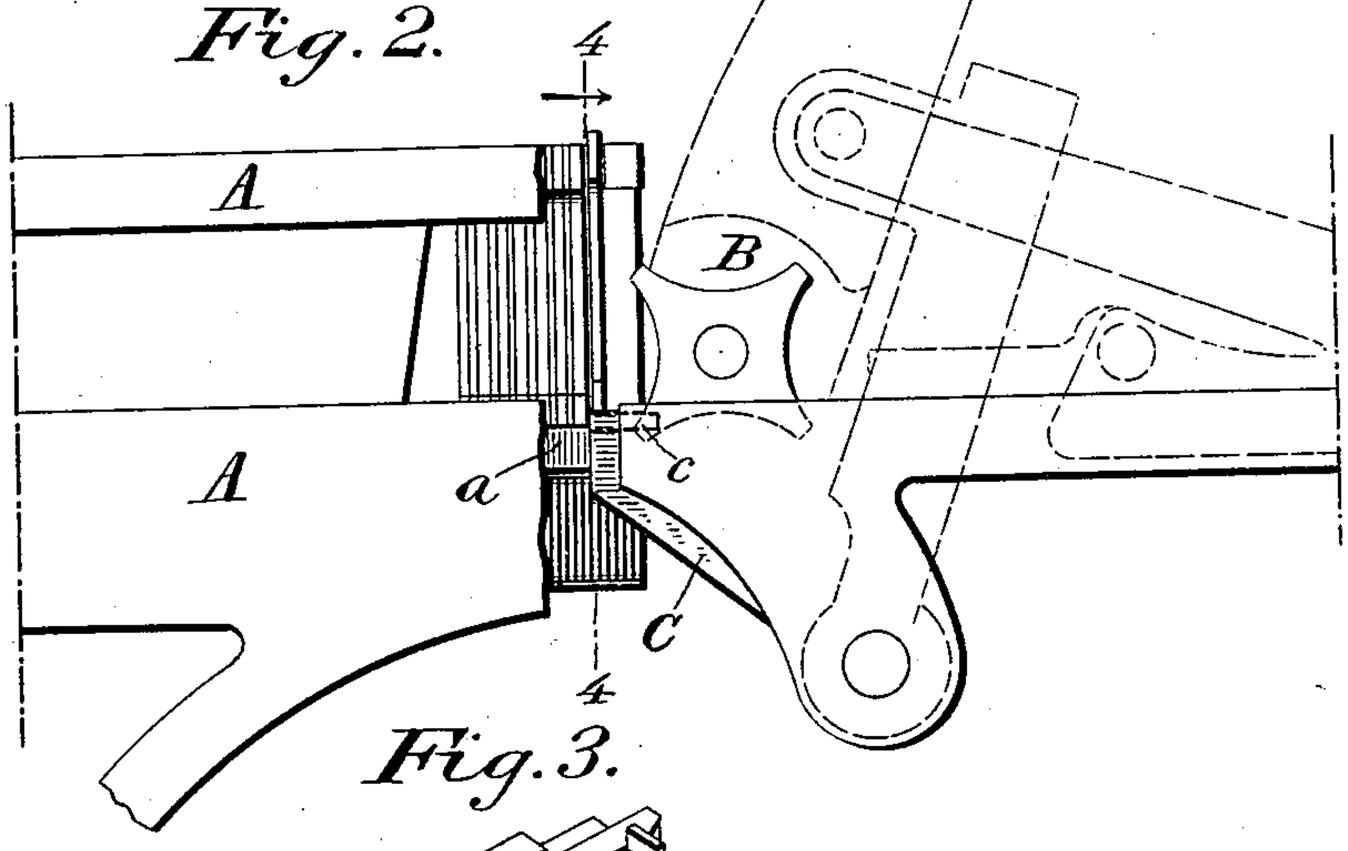


Fig. 4.

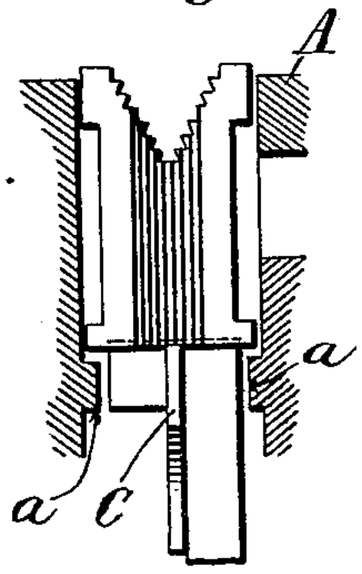
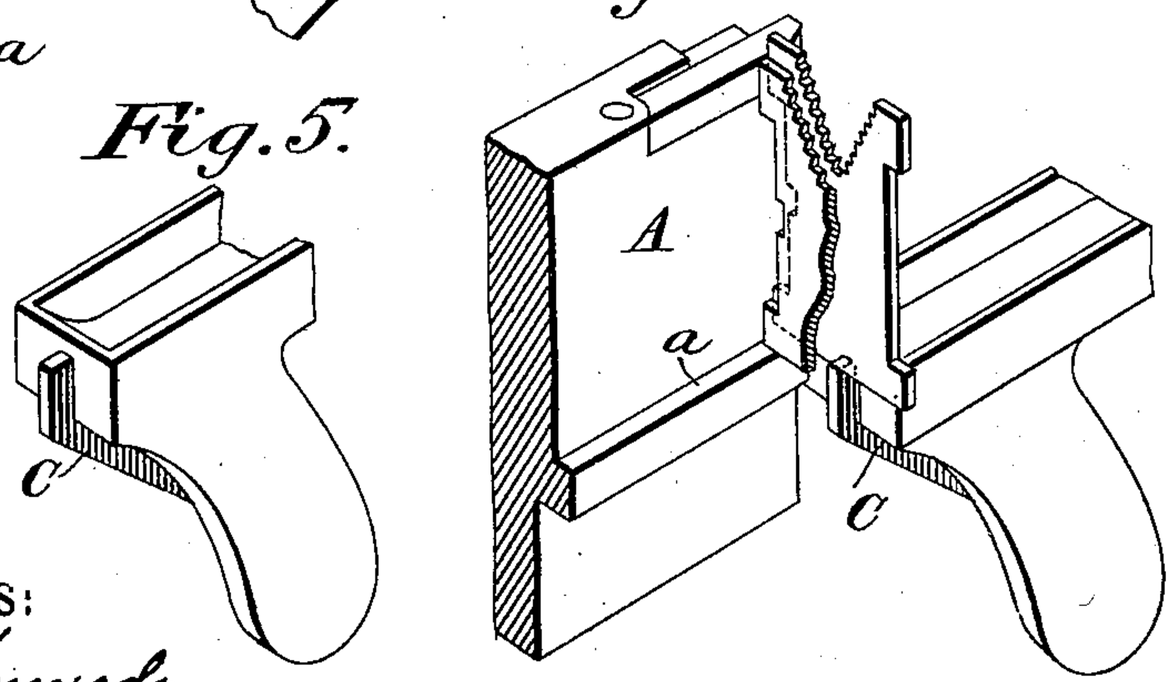


Fig. 3.

Fig. 5.



WITNESSES:

H. R. Kennedy

F. L. Emmon

INVENTOR

J. R. Rogers

BY E. F. Wedge

ATTORNEY

UNITED STATES PATENT OFFICE.

JOHN R. ROGERS, OF BROOKLYN, NEW YORK, ASSIGNOR TO THE MERGENTHALER LINOTYPE COMPANY, OF NEW YORK.

LINOTYPE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 669,401, dated March 5, 1901.

Application filed December 26, 1900. Serial No. 41,044. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. ROGERS, of Brooklyn, county of Kings, and State of New York, have invented a new and useful Improvement in Linotype-Machines, of which the following is a specification.

In the Mergenthaler linotype-machine flat metal matrices, each having a female character or matrix proper in one edge, are delivered one after another in a downward direction into a so-called "assembler," where they are arrested and supported on horizontal shoulders, which sustain them in line. In practice it is found that in running the machine at high speeds the descending matrices strike shoulders in the assembler with such force that they are in the course of time battered or mutilated to an objectionable extent. This mutilation on the lower end of the matrices at the edges is objectionable, because it has a tendency to prevent the matrices from running properly through the magazine and prevent them from being locked up tightly together and to otherwise interfere with their proper operation. The present invention has in view the prevention of this mutilation of the matrices as they enter the assembler; and to this end it consists in a stop or buffer arranged in such position as to encounter the matrices at their lower end midway of their width, or thereabout, so that their motion is checked before they are permitted to come in contact with the sustaining-shoulders in the assembler.

I have shown my improvement as applied to a commercial Mergenthaler linotype-machine of the general character represented in Letters Patent of the United States No. 436,532. With the exception of the parts hereinafter described the machine may be in all respects of ordinary construction.

Figure 1 is front view of the assembling-elevator and attendant parts with my improvement applied, the front wall of the elevator being broken away to expose the other parts to view. Fig. 2 is a similar view showing a number of matrices assembled in the elevator and an icoming matrix supported on the stop device forming the subject of the present invention. Fig. 3 is a perspective view looking rearward and toward the right, showing the same parts as in the preceding figure, but with the front wall of the elevator removed to expose the internal parts to view. Fig. 4 is a cross-section on the line 4 4 of Fig. 2 looking toward the right. Fig. 5 is a perspective view showing the stop device.

Referring to the drawings, A represents the channeled assembling-elevator, into which the matrices are delivered in a downward direction from the right one after another and in which they are finally supported and kept in line by the horizontal shoulders *a*, on which the lower ends of the matrices rest.

B is a rotary star-wheel turning into the end of the assembler and serving to crowd the matrix-line forward to the left in order to leave room at the right for the entrance of the successive matrices in the usual manner.

C represents a stop or support forming the subject of the present invention and consisting simply of a blade or shoulder lying below the star-wheel and projecting a short distance into the end of the assembler, its upper surface being slightly above the level of the matrix-sustaining shoulders in the assembler, as clearly shown in the several figures. Each matrix entering the assembler in front of the star-wheel strikes upon and is brought to rest by the stop C, after which it is crowded forward to the left beyond the end of the stop C, whereupon it settles down to its final level and receives support from the shoulders *a*.

From the foregoing it will be seen that the matrices are caused to settle down on the sustaining-shoulders with an easy action and without any perceptible shock or blow. Although the matrices may advance with considerable speed and strike the stop C with considerable force, no material difficulty results, first, because the central portion of the matrix at the bottom has no special function, and, secondly, because the central portion of the matrix is always thinner than the body portion, so that although it may be slightly upset or thickened it will not prevent the matrices from being locked tightly together in the line.

Another advantage lies in the fact that if the matrices become slightly mutilated or thickened by the action of the stop this thickening is at such a point that it may be read-

ily removed by a file or other instrument without the exercise of any special care and without danger of affecting the matrix in any dimension which is essential.

While I propose under ordinary circumstances to use a rigid stop, it is to be distinctly understood that it may be given a yielding action in any suitable manner—for example, by providing its upper surface with a leather pad or cushion, as indicated by dotted lines *c*, Fig. 2.

In practice it is found that a stop such as herein described answers an excellent purpose in the protection of the matrices and that it does not in the least interfere with the introduction of the usual wedge spacers or justifiers, which hang down through the line.

What I claim as my invention is—

1. In the assembling mechanism of a linotype-machine, a centrally-located stop in the path of the incoming matrices to encounter their lower ends.

2. In a linotype-machine, the assembling-elevator provided with matrix-sustaining shoulders in combination with a stop arranged in the path of the incoming matrices to arrest them before they encounter the shoulders of the assembler.

3. In a linotype-machine, the assembler having horizontal shoulders to sustain the matrices in combination with a star-wheel to advance the matrices and a centrally-located stop in the path of the incoming matrices.

4. In a linotype-machine and in combination with the assembler having horizontal shoulders to sustain the matrices, a matrix-stop to arrest the incoming matrices above the level of the shoulders.

5. In a linotype-machine, the combination of an assembler to receive the matrices, a yielding stop to arrest the advance of each matrix before reaching its final level in the assembler.

In testimony whereof I hereunto set my hand, this 21st day of December, 1900, in the presence of two attesting witnesses.

JOHN R. ROGERS.

Witnesses:

FREDERIC C. WHEELER,

JOHN PAULSEN.