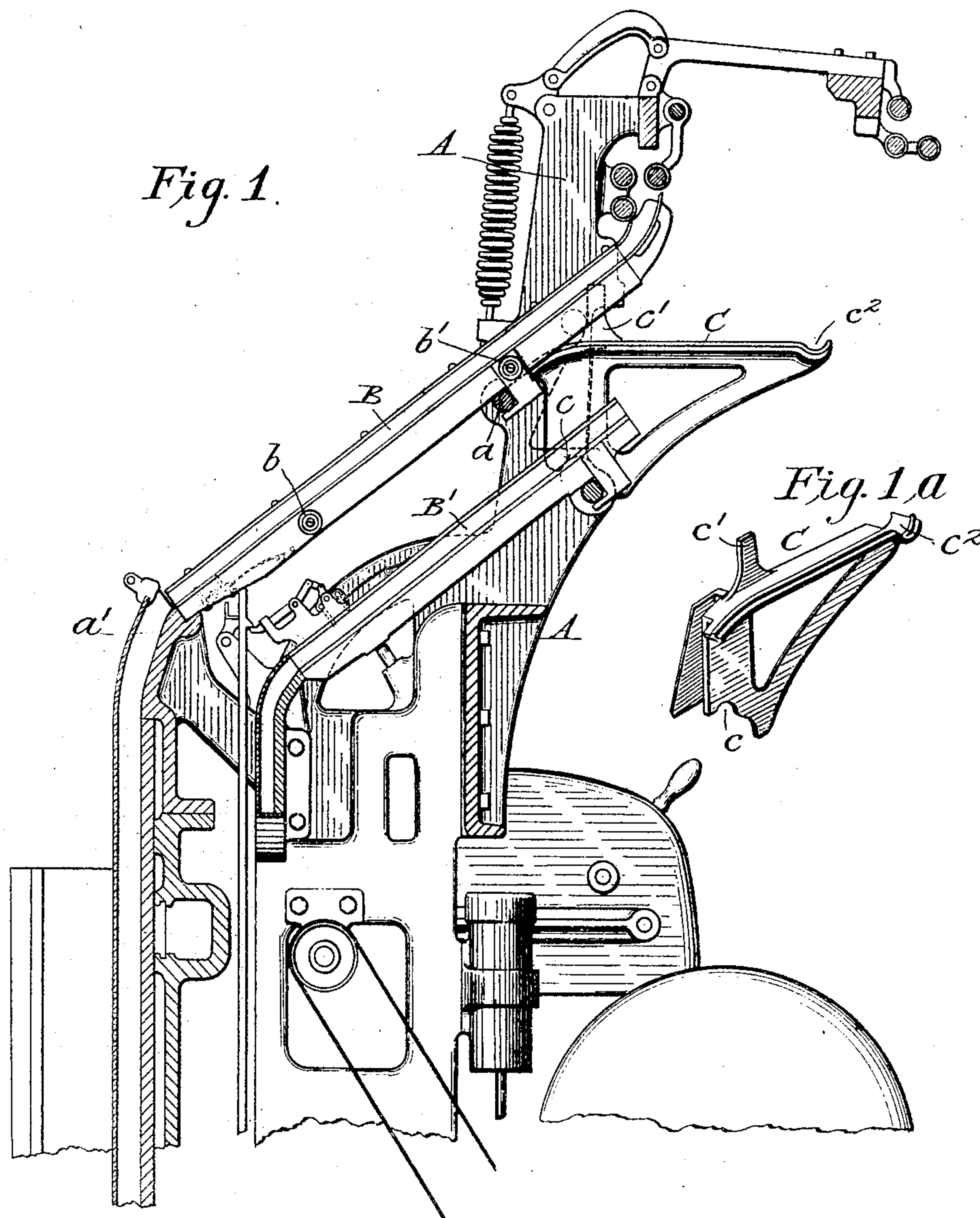


No. 803,928.

PATENTED NOV. 7, 1905.

J. R. ROGERS.
LINOTYPE MACHINE.
APPLICATION FILED NOV. 5, 1904.

3 SHEETS—SHEET 1.



WITNESSES:

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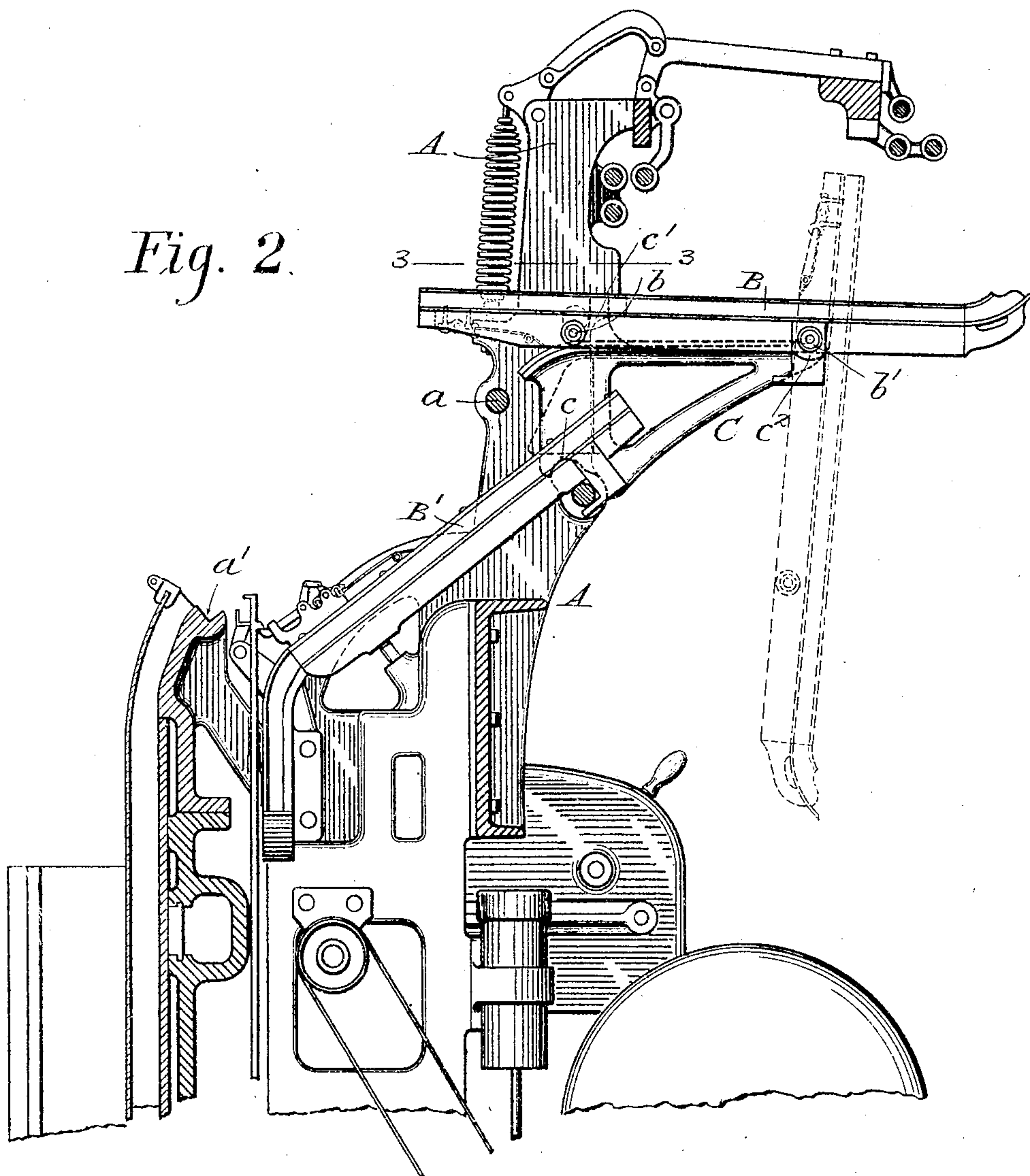
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3 SHEETS—SHEET 2.

Fig. 2.



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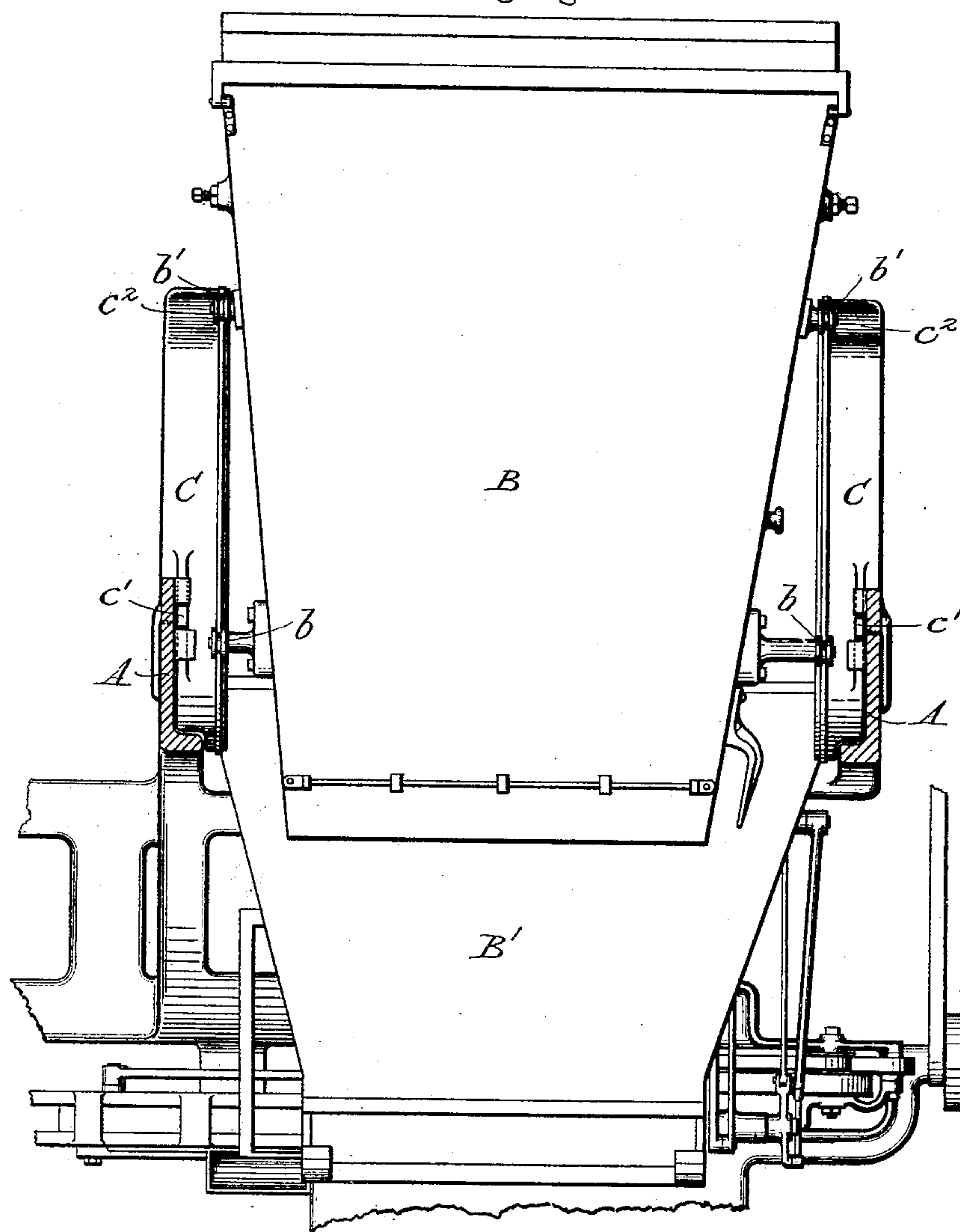
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3 SHEETS—SHEET 3.

Fig. 3.
ON LINE 3—3



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UNITED STATES PATENT OFFICE.

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

LINOTYPE-MACHINE.

No. 803,928.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed November 5, 1904. Serial No. 231,556.

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.

This invention has reference to what are commercially known as "double-magazine linotype-machines" of the general organization represented in Letters Patent of the United States to John R. Rogers, No. 640,033.

This machine contains two independent or unconnected magazines, one overlying the other and both seated on rigid supports in the main frame, so that either magazine may be withdrawn bodily from the rear side of the machine independently of the other.

The aim of the invention is to facilitate the removal of the upper magazine in order that it may be replaced by another containing a different font of matrices and also to protect the lower magazine from injury during such operation.

To this end it consists in combining with the frame of the machine extension brackets or rails adapted to receive and sustain the upper magazine as it is canted upward at the front and withdrawn horizontally from the rear of the frame in the usual manner.

Referring to the drawings, Figure 1 is a vertical section through the upper part of a machine having my improvement applied thereto, the magazines being in their normal operative positions. Fig. 1^a is a perspective view of one of the removable brackets or rails. Fig. 2 is a similar view showing the magazine partly withdrawn. Fig. 3 is a horizontal section on the line 3 3 of Fig. 2 looking downward upon the magazine.

Referring to the drawings, A represents the rigid main frame of the machine, B the upper inclined magazine, adapted to contain a font or set of matrices, and B' a second magazine lying thereunder. Both magazines are seated rigidly in the main frame, and the upper magazine is adapted to be tipped upward at the front and then drawn rearward in a horizontal direction from the main frame. It is supported, as usual, near the upper end by a cross rod or bar *a* and at the lower end by a bearing *a'* on the main frame or equivalent support.

Heretofore the removal of the upper magazine has been effected by tipping it upward at

the front and then drawing it rearward over the elevated bar *a* as a support, its entire weight—over one hundred pounds—being controlled by the operator in the act of removal. In like manner the application of the magazine was effected by the operator lifting its entire weight nearly to the level of his shoulder and then passing it over the bar *a*, these operations requiring a severe effort and being attended with considerable danger to the operator and the magazine. When the magazine is loaded with large matrices, it frequently requires the attendance of two persons to safely handle it.

It will be observed that the two magazines are sustained directly in the frame on rigid or immovable supports therein and that they are wholly independent of each other.

In carrying my invention into effect I provide two brackets or rails C C, adapted to be seated against and interlocked with the upright side bars of the main frame and extend rearward beyond the frame and the magazines immediately under the rear end of the upper magazine B. In the form shown they are flanged vertically to engage the side bars and provided in their lower edges with notches *c* and in the upper edges with lips *c'* to interlock with the frame. These bars are of such form that when in position they will present horizontal or substantially horizontal upper edges or rails adapted to receive and carry rolls or studs *b b'*, secured to the sides or edges of the magazine. The length of the rails is such and the front and rear rollers are so spaced that when the magazine is drawn upward and rearward to a horizontal position both the front and the rear rolls will rest upon the rails, as shown in Fig. 2, thus giving the magazine a firm support in order that it may be conveniently grasped and removed by the attendant. Each rail is preferably formed near the rear end with a depression *c''*, into which the outer rolls *b'* will first drop, as shown in Fig. 2, thus preventing the magazine from sliding rearward and escaping accidentally. While the magazine is thus supported the attendant may easily raise its rear end and draw it rearward until the forward rolls *b* rest in the cavities *c''*. The magazine may then be permitted to turn down around these rollers until it assumes the position indicated in dotted lines in Fig. 2. It will hang safely in this position and may then be readily

grasped at its two edges by the attendant and conveniently and safely removed from the machine.

In applying the magazine it is preferably presented in an upright position, as indicated in dotted lines in Fig. 2, on the forward rollers *b*, seated in the depressions *c*². The rear end is then turned upward until the magazine assumes a horizontal position, when it is pushed forward until the rear rollers are seated on the rails and the magazine sustained without assistance on the part of the attendant in the position indicated by full lines in Fig. 2. The operator then passes to the front of the machine and grasping the forward end of the magazine he draws the same forward, lowering the forward end to its final or operative position, while the rear end is sustained by the rear rollers riding upon the brackets or rails.

It will be observed that owing to the extension of the supports rearward from the frame and the fact that they are adapted to hold the magazine in suspension the attendant is enabled to grasp the magazine by its edges and holding it near his body transfer its entire weight to the supports as the first step in applying it to the machine and that thereafter he is enabled, through the assistance of the supports, to transfer the magazine to its operative position with comparative ease. The necessity for lifting the entire weight to the great height heretofore necessary and of handling the magazine at arm's length, as heretofore, are avoided.

After the magazine is in position the brackets may be instantly unlocked and removed, if desired.

The essence of the invention lies in combining with the main frame, either detachably or permanently, rails or brackets of any form adapted to sustain or assist in sustaining the upper magazine B during its removal from or its application to the machine.

The magazine shown in the drawings is of the usual form employed in commercial linotype-machines, its forward end being narrower than the rear end.

I prefer to arrange the front and rear rollers *b* *b'* in line and to arrange the tracks or rails in parallel lines, as shown in Fig. 3, this arrangement permitting the suspension of the magazine in an inverted position, as above referred to.

The rollers are preferably grooved peripherally to straddle the rails in order to better prevent the magazine from being accidentally shifted or turned edgewise.

While I have shown the brackets C as being extended forward only to a point which admits of the magazine being balanced over their forward ends as it is lowered to its operative position, it is to be understood that the rails may be continued forward and downward to any desired distance.

The attachment of the rollers to the forward end of the magazine so that they travel therewith is advantageous, in that they serve as traveling supports moving with the magazine, so that its balance thereon is maintained throughout its travel, and also in that they serve as a means of suspending the magazine when it is in its outermost position.

Having thus described my invention, what I claim is—

1. In a linotype-machine, the combination of a main frame, an inclined magazine seated in and sustained in operative position by said frame and independently removable at the rear, and means independent of those for supporting the magazine in operative position, to sustain the same in a substantially horizontal position during its withdrawal.

2. In a linotype-machine and in combination with a removable magazine having side projections, rear extensions on the frame distinct from the means for sustaining the magazine in operative position to sustain the outgoing magazine in a horizontal position.

3. In a linotype-machine, a main frame, a rearwardly-removable magazine, and rear extensions in the frame adapted to hold the magazine in suspension, whereby its removal and introduction are facilitated.

4. In a linotype-machine and in combination with a main frame adapted to support the same rigidly in operative position, an inclined rearwardly-removable magazine, and stationary supports on the frame adapted to sustain the outgoing magazine at its longitudinal edges.

5. In a linotype-machine, the combination of a main frame, a removable magazine, B, having projections, *b*, *b'*, and parallel rails or brackets, C, to cooperate with the projections.

6. In a linotype-machine and in combination with a rearwardly-removable magazine having rollers thereon, a main frame provided with guiding and supporting tracks whereon said rollers travel, to facilitate the introduction and removal of the magazine.

7. In a linotype-machine, the combination of the main frame, the rearwardly-removable magazine, B, and the removable brackets or rails, C, applied to the main frame.

8. In combination with the main frame and removable magazine of a linotype-machine, the brackets C, having stops *c*², substantially as and for the purpose described.

9. A complementary bracket C, for use on a linotype-machine, having a rearwardly-removable magazine said bracket being formed as described to interlock with the frame of the machine, and provided with rails or tracks substantially as shown, to sustain the outgoing magazine.

10. The brackets C, constructed with lips to interlock with the main frame and with the top rails and stops *c*².

11. The magazine for a linotype-machine, provided with side rollers adapted to cooperate

ate with rails or guides upon the main frame, said rollers adapted to serve as traveling supports for the magazine and as a means of suspending the same.

5 12. The magazine for a linotype-machine, having at opposite edges front and rear rolls arranged in line whereby they are adapted to travel on two parallel rails to guide the magazine in its course to and from its operative
10 position.

13. In a linotype-machine, in combination with a main frame, and a magazine removable therefrom, means for suspending the magazine from the frame in its course to and from
15 the operative position.

14. In a linotype-machine and in combination with a main frame and an inclined magazine sustained therein and removable therefrom, means for sustaining the magazine in a substantially horizontal position, and for sus- 20 pending it in an upright position, during its passage to and from its operative position.

In testimony whereof I hereunto set my hand, this 3d day of November, 1904, in the presence of two attesting witnesses.

JOHN R. ROGERS.

Witnesses:

JACOB B. BUCKLEY,
R. G. CLARK.