

J. R. ROGERS.
LOGOTYPE MACHINE.
APPLICATION FILED FEB. 4, 1905.

Fig. 1.

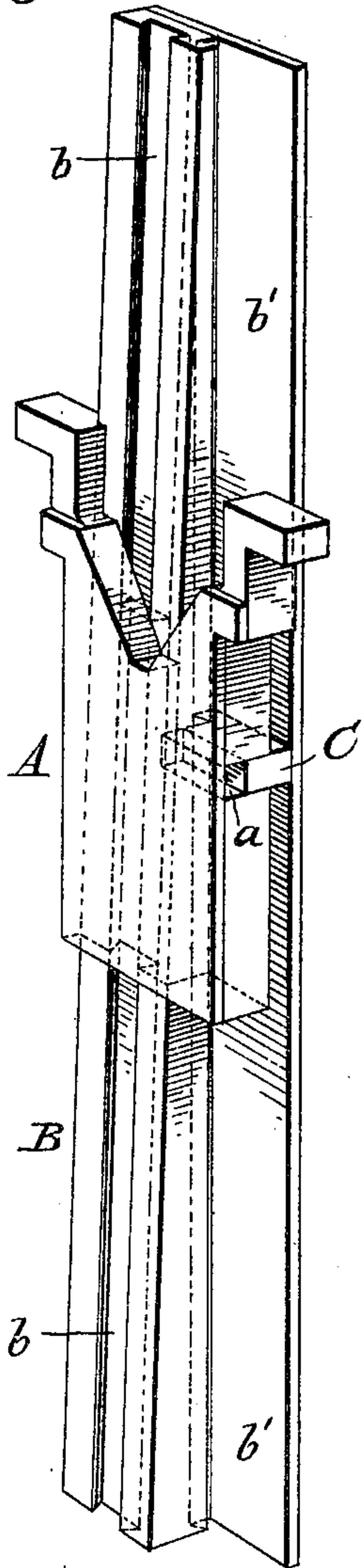


Fig. 2.

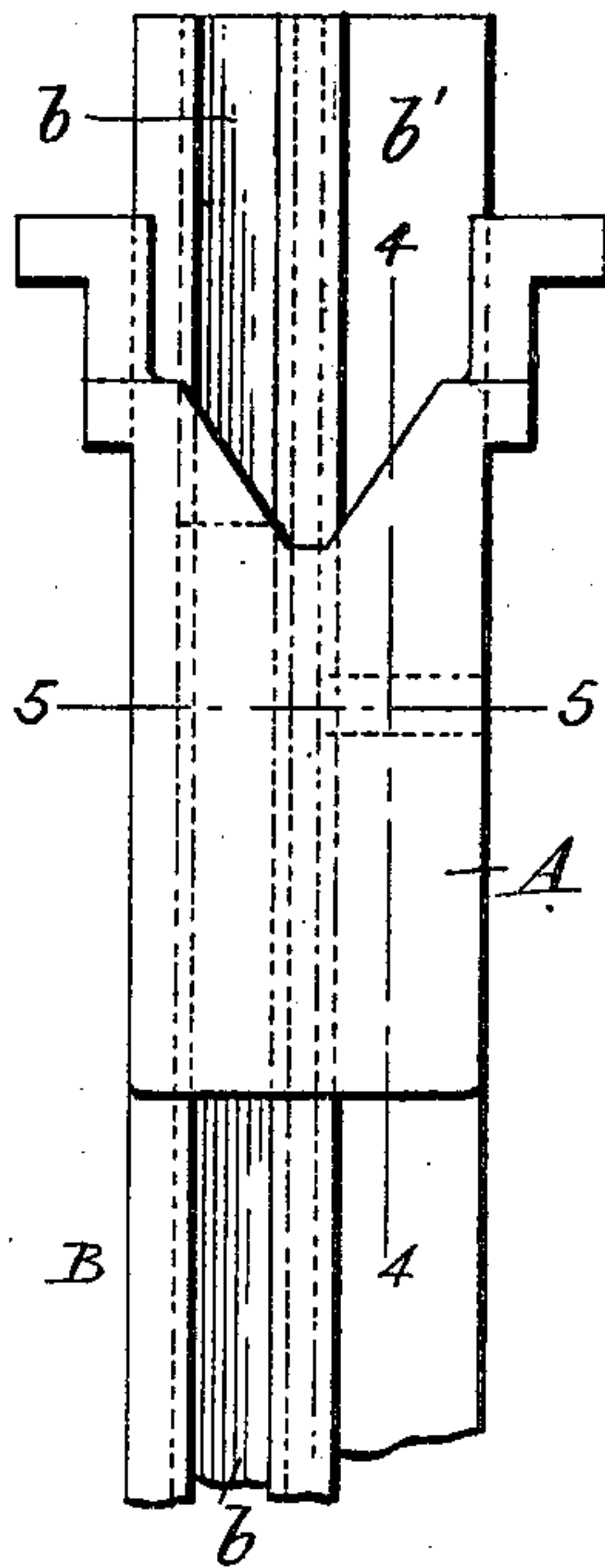


Fig. 3.

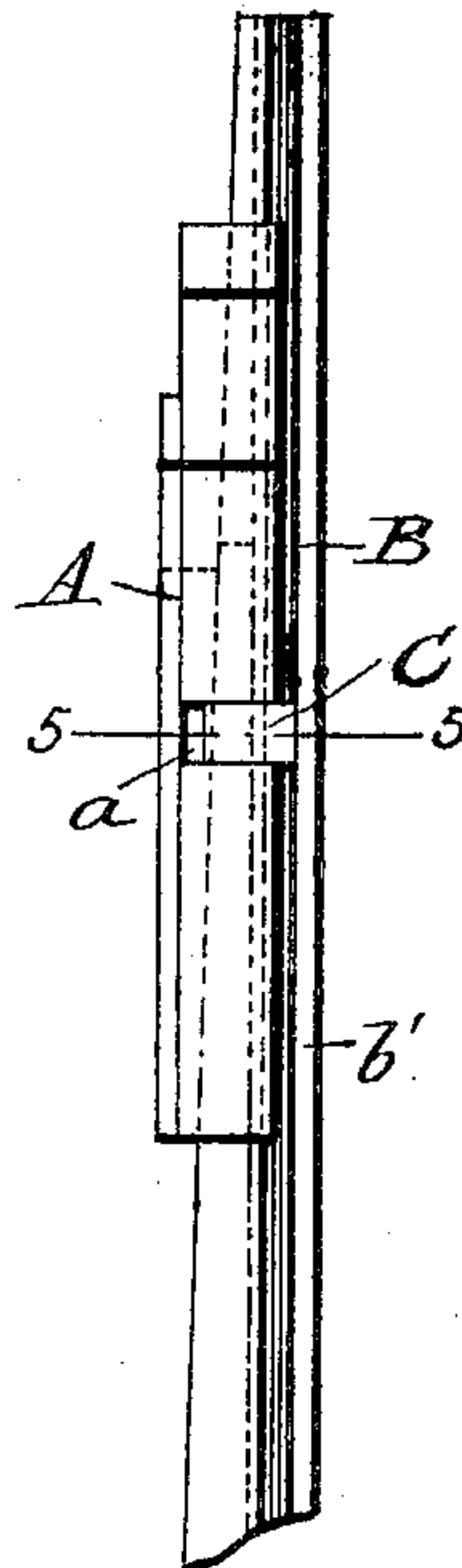


Fig. 4.

ON LINE 4-4

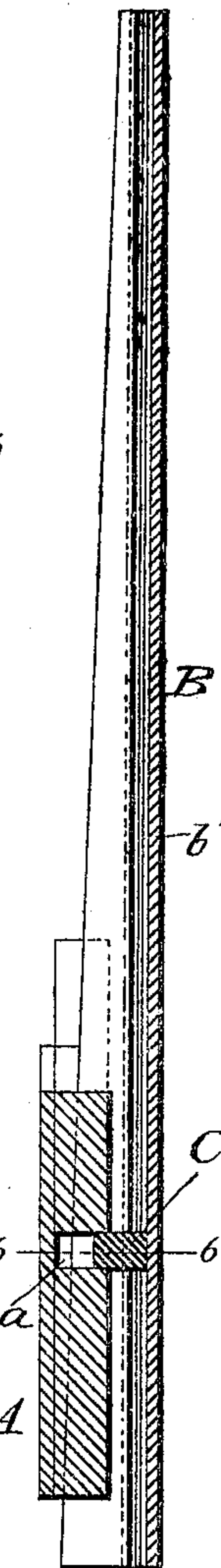


Fig. 5.

ON LINE 5-5

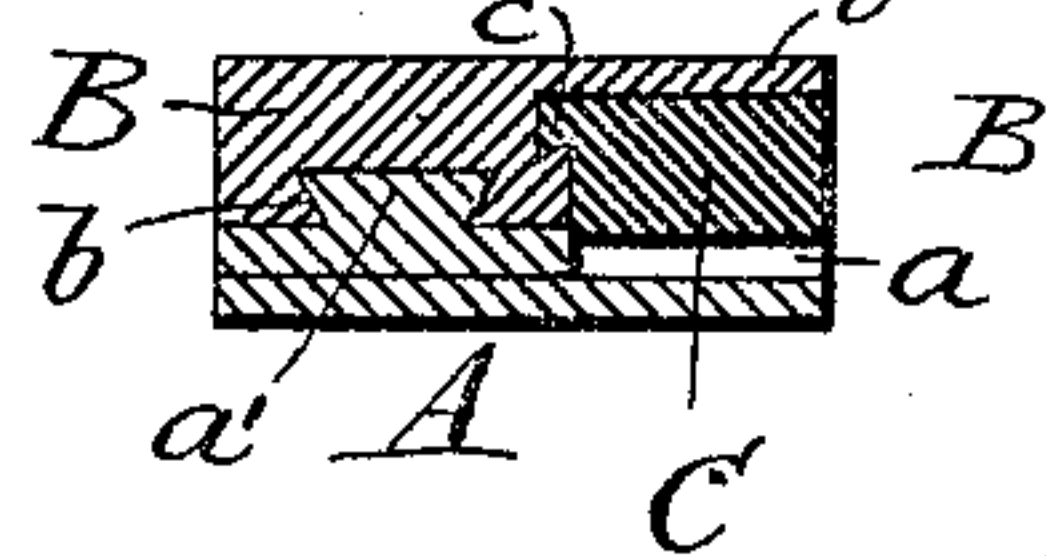
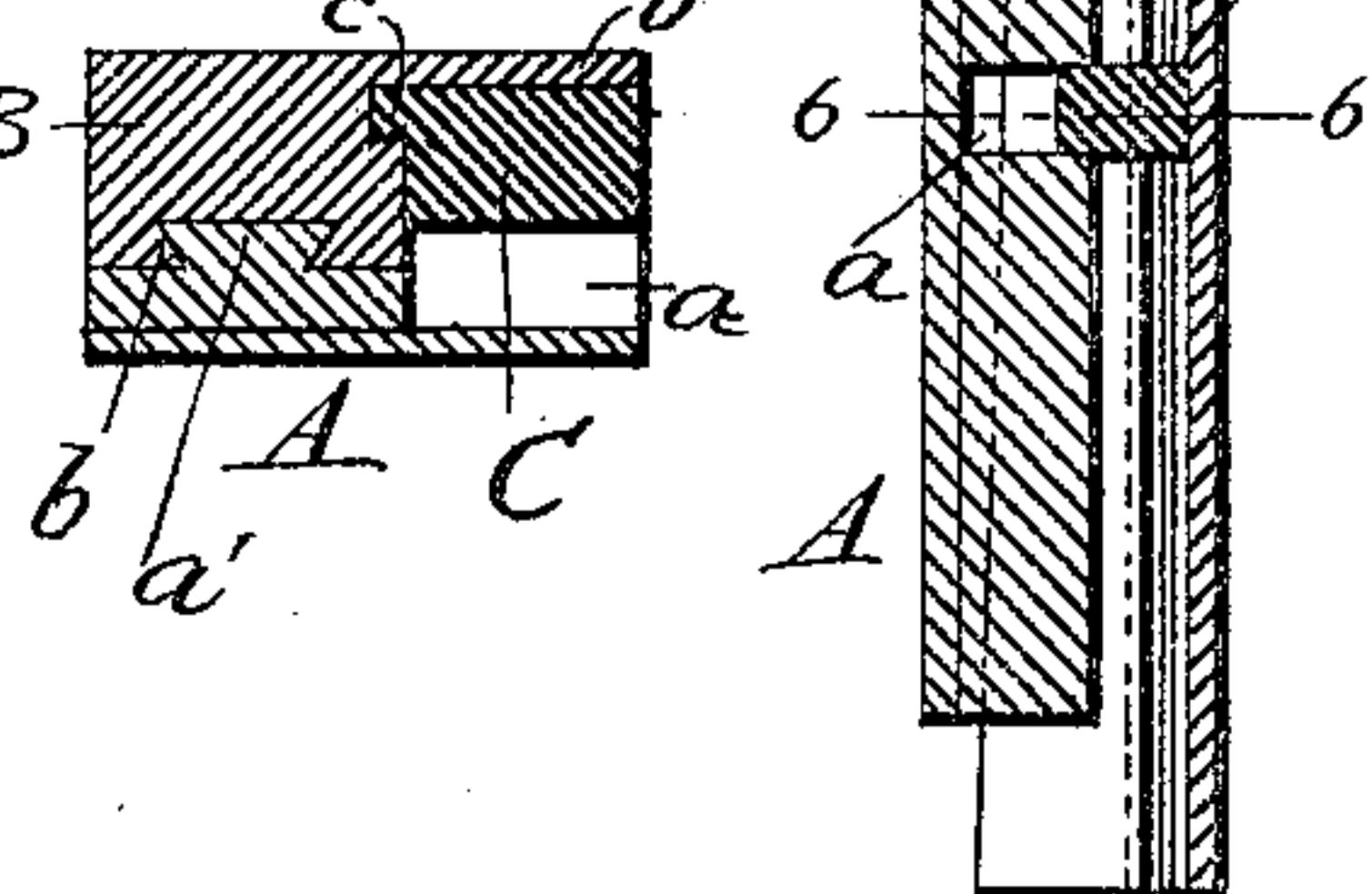


Fig. 6.

ON LINE 6-6



WITNESSES:

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a.m. E. Kennedy.

INVENTOR

J. R. Rogers
BY
P. T. Dodge
ATTORNEY

UNITED STATES PATENT OFFICE.

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

LOGOTYPE-MACHINE.

No. 804,049.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed February 4, 1905. Serial No. 244,221.

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 Logotype-Machines, of which the following is a specification.

My invention relates to an improved expandible spacer or justifier to be used in a machine for casting lines of logotypes from composed lines of matrices represented in my application for Letters Patent of the United States, Serial No. 262,249, filed May 25, 1905.

My logotype-machine resembles the well-known Mergenthaler linotype in that it employs a composed line of matrices representing all the characters to appear in one line of print. In the linotype-machine these characters are all reproduced on a solid or continuous slug or printing-bar commonly known as a "linotype."

In my machine I separate the matrices into word groups and cast therefrom a series of logotypes bearing the respective words in their proper order.

In order that the logotypes may produce a justified line of predetermined length, it is of course necessary to use between them suitable justifying-spaces.

It is the aim of my invention to provide expandible spacers or justifiers which will serve, first, to expand or widen the initial spaces in the matrix-line to effect justification of the line, and, second, to form complete adjustable molds in which to cast spaces adapted to justify the line.

I believe myself to be the first to construct an expandible space which serves both as a means of justifying the matrix-line and as a complete adjustable mold in which to produce a space, the thickness of such cast space depending on and corresponding to the adjustment of the spacer.

My spacer is of the well-known Schuckers type, consisting of two oppositely-tapered wedges connected by a sliding joint, so that the space may be introduced as a whole into the matrix-line and thereafter increased in thickness at the operative point by thrusting one wedge through the line, while the other is held at rest therein, as fully described in Letters Patent of the United States No. 474,306 and used in modified forms in the commercial linotype-machines of the present day.

Figure 1 is a perspective view of my com-

bined spacer and mold. Fig. 2 is a side elevation of the same. Fig. 3 is an edge view. Fig. 4 is a longitudinal section on the line 4-4 of Figs. 2, 5, and 6. Fig. 5 is a cross-section on the line 5-5 of Figs. 2 and 3. Fig. 6 is a cross-section on the line 6-6 of Fig. 4.

Referring to the drawings, A and B represent the two members of my combined space and mold. In side elevation the member A will have the same general outline and the same width from edge to edge as the matrices between which it is to be used. In one edge it is provided with a horizontal cell or cavity *a*, in which to form the justifying-wedge. This cavity is closed on one vertical side and at the rear or inner end, but is open at the front or outer edge in order that the metal may be delivered therein. Its opposite vertical wall is formed by a horizontally-movable block or liner C, which may be moved inward and outward in order to vary the horizontal width of the mold-cell *a*, and thereby determine the thickness of the justifying-space which is to be cast therein.

It will be observed that in my device the adjustable mold-cell *a* is closed and adapted to confine the metal on four sides and at the base. In other words, it is a complete mold or cell adapted to receive and confine the molten metal for the required space and to give the same the appropriate size and form.

The member B is tapered longitudinally—in other words, made of wedge form. Its right-hand face is vertical; but its left face is inclined, adapted to fit against a corresponding inclined surface on the member A, and provided with a vertical dovetail groove *b* to receive a corresponding rib *a'* on the member A, as shown in Figs. 5 and 6, this connection preventing the separation of the parts, but permitting the member B to slide upward and downward in relation to its companion, so that the thickness through the compound space—that is to say, through the members A and B—may be increased or diminished at the operative point in the line of matrices while their opposite or outermost surfaces remain parallel.

The sliding member B is constructed with a thin vertical extension *b'*, which bears against the outer side of the liner C, in order to confine the same in place and push it inward as the member B is moved downward to reduce the space occupied in the line. In this man-

ner the width of the mold cell or cavity a and the thickness of the space cast therein will be reduced in exact proportion to the reduction in the operative thickness of the spacer.

5 The liner has at its inner end a lip or shoulder c , which enters a corresponding vertical dovetail slot in the slide B, so that when the member B is moved upward to increase the working thickness of the space the liner C will
10 be moved outward to a corresponding extent. Thus it will be seen that variations in the thickness of the spacer are accompanied by a like variation in the adjustment of the mold-cell a , so that whenever a series of these
15 spacers seated in a line of matrices are adjusted to justify the line the mold-cells will be so adjusted that the spaces formed therein will be of suitable width to justify the series
20 of logotypes produced from the line of matrices when said logotypes are assembled in line with the cast spaces between them.

What I claim as my invention is—

1. The combined expansible spacer and

mold containing a mold-cell, closed on four sides; whereby it is adapted to determine the 25 form and size of the space.

2. An expansible spacer consisting of two cooperating wedges, having between and within them a mold-cavity with four side walls and a base for the formation of a space. 30

3. The combination of a wedge member A, provided with a mold-cell, a cooperating wedge member B, and a movable mold-liner C.

4. The combination of the member A, containing a mold-cell a , open at the front only, 35 a movable liner C, seated in the mold-cell, and a wedge member B, cooperating with the member A, and also cooperating with the liner C to effect its adjustment.

In testimony whereof I hereunto set my 40 hand, this 1st day of February, 1905, in the presence of two attesting witnesses.

JOHN R. ROGERS.

Witnesses:

JOHN PAULSEN,

JACOB B. BUCKLEY.