

No. 644,363.

Patented Feb. 27, 1900.

O. MERGENTHALER.
LINO TYPE MACHINE.

(Application filed May 19, 1897.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 2.

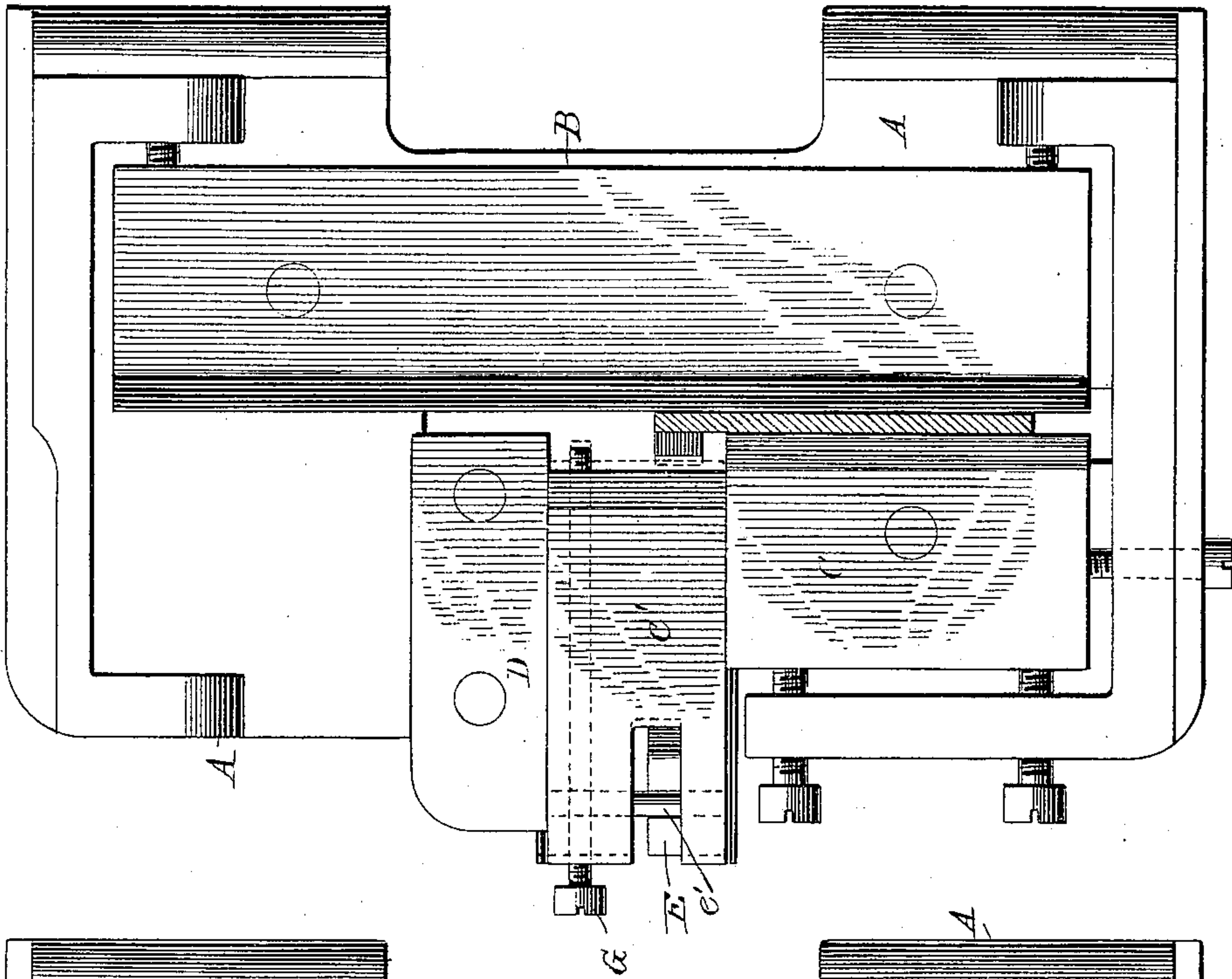
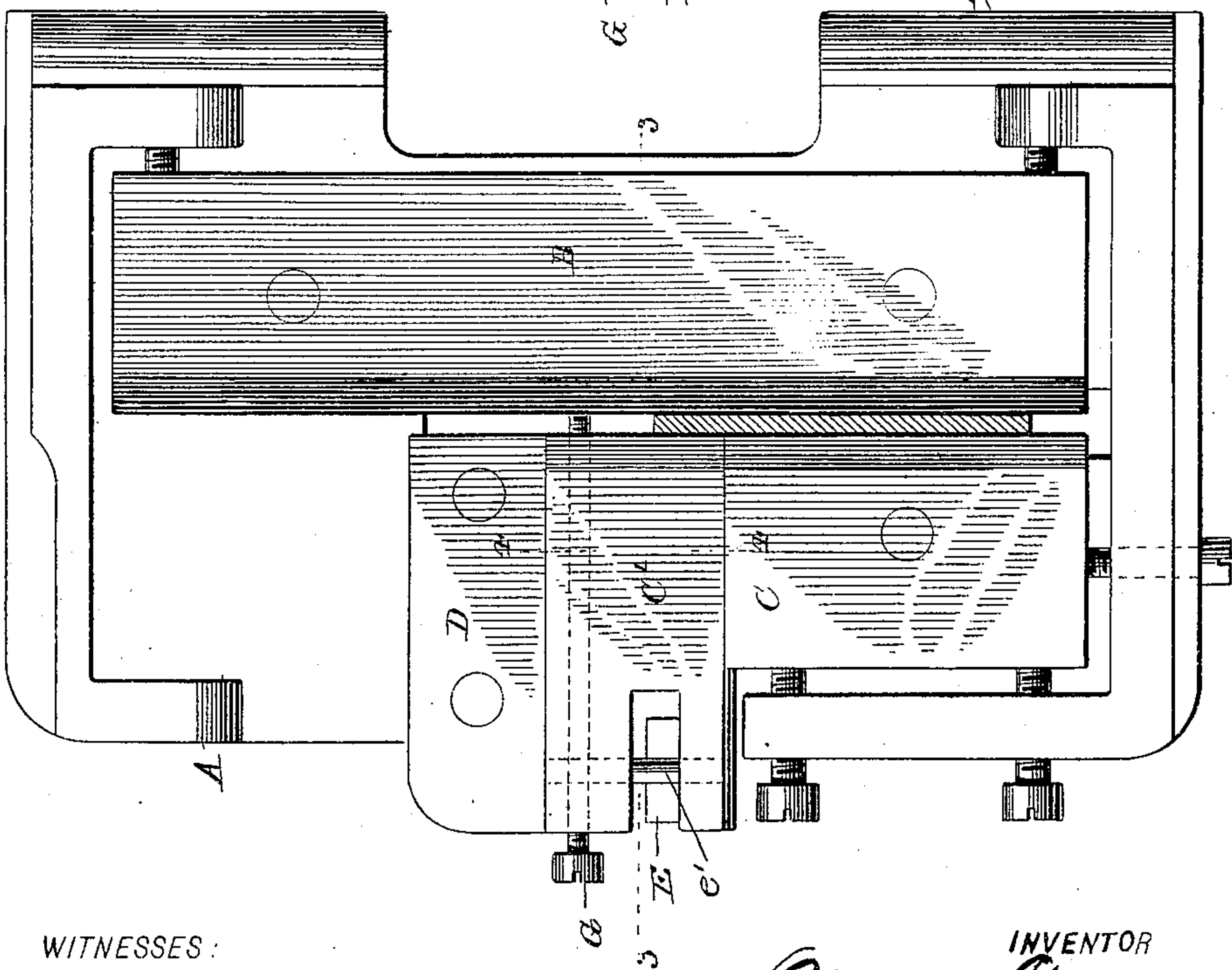


Fig. 1.



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LINTYPE MACHINE.

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Fig. 4.

On-line-4-4.

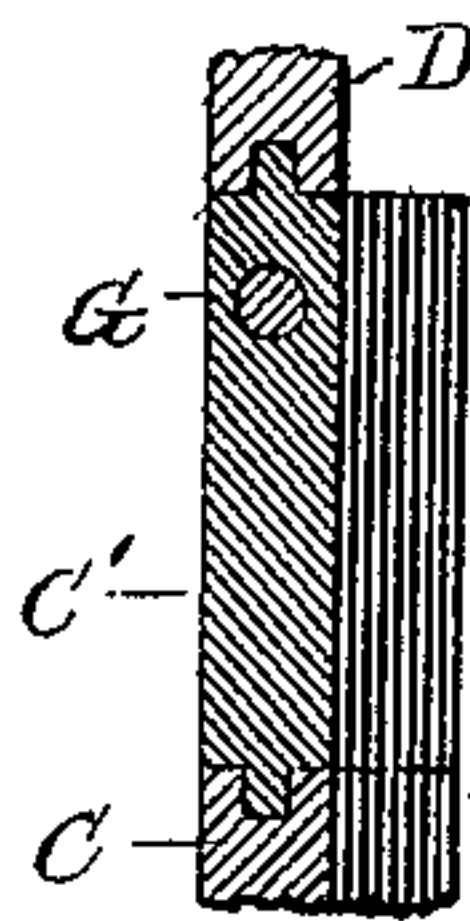


Fig. 3.

On-line-3-3.

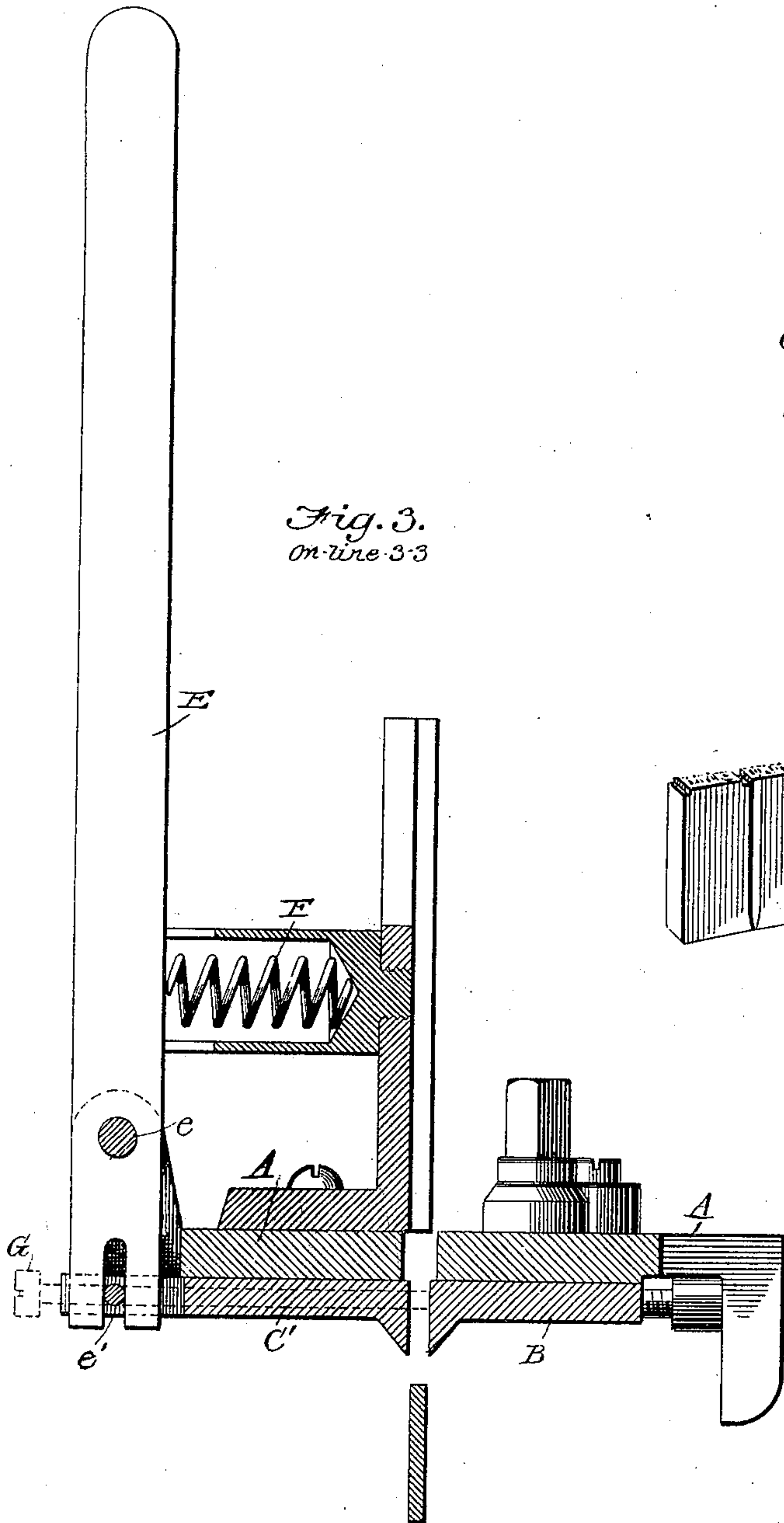
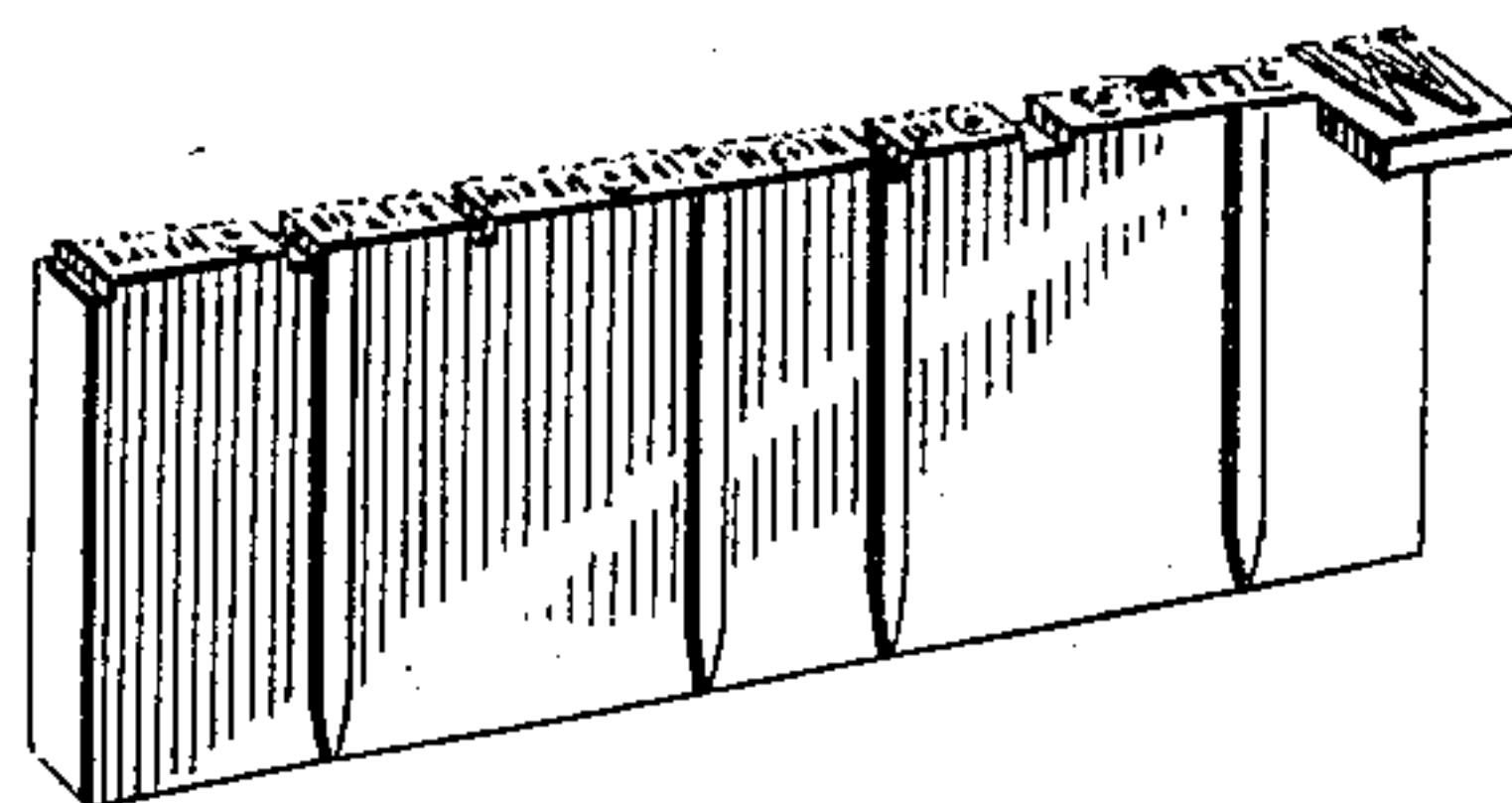


Fig. 5.



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UNITED STATES PATENT OFFICE.

OTTMAR MERGENTHALER, OF BALTIMORE, MARYLAND, ASSIGNOR, BY
MESNE ASSIGNMENTS, TO THE MERGENTHALER LINOTYPE COM-
PANY, OF NEW YORK, N. Y.

LINOTYPE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 644,363, dated February 27, 1900.

Application filed May 19, 1897. Serial No. 637,248. (No model.)

To all whom it may concern:

Be it known that I, OTTMAR MERGENTHALER, of Baltimore, State of Maryland, have invented a new and useful Improvement in Linotype-Machines, of which the following is a specification.

It is now a common practice in linotype-machines to produce slugs or linotypes having at one end a two-line letter projecting beyond or overhanging the side of the slug, these slugs being used in connection with adjacent slugs having blank surfaces to receive and support the overhanging ear, as shown in Letters Patent of the United States granted to me December 24, 1895, No. 551,981. The existence of this overhanging character or ear prevents the delivery of the slug between parallel trimming-knives usually employed in these machines. It is therefore desirable that the machines should be provided with knives which will trim the ordinary slugs throughout their length, but which may be adjusted to permit the passage of the slugs having the overhanging ear.

To this end my invention consists, essentially, in a divided knife adapted to trim the slug throughout its length, but having one section so mounted that when slugs are produced with ears or two-line letters one section may be retracted to permit the passage of the ear thereby.

As the machine may be in all other respects of ordinary construction—such, for example, as that represented in Letters Patent No. 436,532, granted to me September 16, 1890—I have limited the drawings to those parts with which my invention is immediately associated.

Referring to the drawings, Figure 1 is an inside face view of the trimming-knife in accordance with my invention, the movable section being shown in its forward position in line with the stationary section in order to trim the slug from one end to the other. Fig. 2 is a similar view showing the movable section retracted to permit the passage of slugs with ears thereon. Fig. 3 is a horizontal section on the line 3 3 of the preceding figures. Fig. 4 is a vertical transverse section on the

line 4 4 of the preceding figures. Fig. 5 is a perspective view of one of the slugs.

Referring to the drawings, A represents a stationary portion of the machine commonly known as the “knife-block,” and B a stationary knife bolted thereto, as usual, to trim one side of the slug.

C C' represent the knife for trimming the opposite side of the slug, which is delivered between the two knives in the manner shown in Fig. 3, as in the ordinary Mergenthaler machine.

The knife C C' is substituted for the ordinary stationary continuous knife. It consists of a section C, secured rigidly in place, and the section C', arranged to slide horizontally backward from the knife B. When the section C' is in its forward position, as shown in Fig. 1, its edge forms a continuation of the edge of the section C, so that the two form jointly a continuous knife adapted to dress the slug throughout its length. When, however, the section C' is retracted, as shown in Fig. 2, its edge stands in the rear of the edge of the section C, leaving a wide space or opening through which the protruding ear of the slug may pass, as shown. It will be observed in this case that the body of the slug is trimmed by the knife C from the inner edge of the overhanging lip to the opposite end. The section C' may be guided in any suitable manner. As herein shown, it is provided on its face with longitudinal lips, which are guided in the upper end of the section C and in the lower edge of a fixed guide D, respectively.

The adjustment of the movable knife may be effected in any suitable manner. A simple and satisfactory arrangement is that shown in the drawings, in which E represents a horizontal hand-lever pivoted to the frame or knife-block at *e* and slotted at its inner end to receive a connecting-pin *e'* in the sliding knife. A spiral spring F, acting on the lever, tends to hold the knife in its normal position.

The inward movement of the knife C' is controlled so that it will aline exactly with the section C by a stop-screw G, extending

through the movable section and bearing at its inner end against the knife B. Of course any other adjustable stop device may be employed.

5 In practice the movable knife-section is held normally in the position shown in Figs. 1 and 3, so that the slug is trimmed in the ordinary manner. Whenever a slug with an ear is to be ejected, the operator presses the
10 handle to the right and holds the movable section back until after the passage of the ear. Although the knife may not dress the face of the slug throughout its length, this fact is immaterial, since the slugs are com-
15 monly provided with raised ribs or bearing-surfaces, the outermost rib standing out of line with the ear, so that it is trimmed, thus giving the slug proper bearing-surfaces on its side, that it may lock up accurately in the
20 line.

Having thus described my invention, what I claim is—

1. In a linotype-machine, a slug-trimming knife comprising two sections one of which is
25 movable relatively to the other, substantially as described.

2. In a linotype-machine, a slug-trimming knife comprising two sections, in combination

with means for moving one of said sections out of action when it is desired to trim a slug 30 having a lateral projection, substantially as described.

3. In a linotype-machine, a slug-trimming knife comprising a fixed section and a mov-
able section in combination with means for 35 throwing the movable section into and out of action, whereby they are adapted for joint or independent use, substantially as described.

4. In a linotype-machine, a slug-trimming knife comprising a fixed section and a section 40 adapted to slide forward and backward, substantially as described.

5. In a linotype-machine, a pair of oppos-
ing trimming-knives one of said knives being stationary and the other knife comprising two 45 sections one of which is movable relatively to the other to facilitate trimming slugs having lateral projections, substantially as described.

In testimony whereof I hereunto set my hand, this 17th day of September, 1896, in the 50 presence of two attesting witnesses.

OTT. MERGENTHALER.

Witnesses:

CHARLES H. AKERS,
J. M. WATTS.