

No. 850,114.

PATENTED APR. 9, 1907.

D. S. KENNEDY.
LINOTYPE MACHINE.
APPLICATION FILED AUG. 30, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

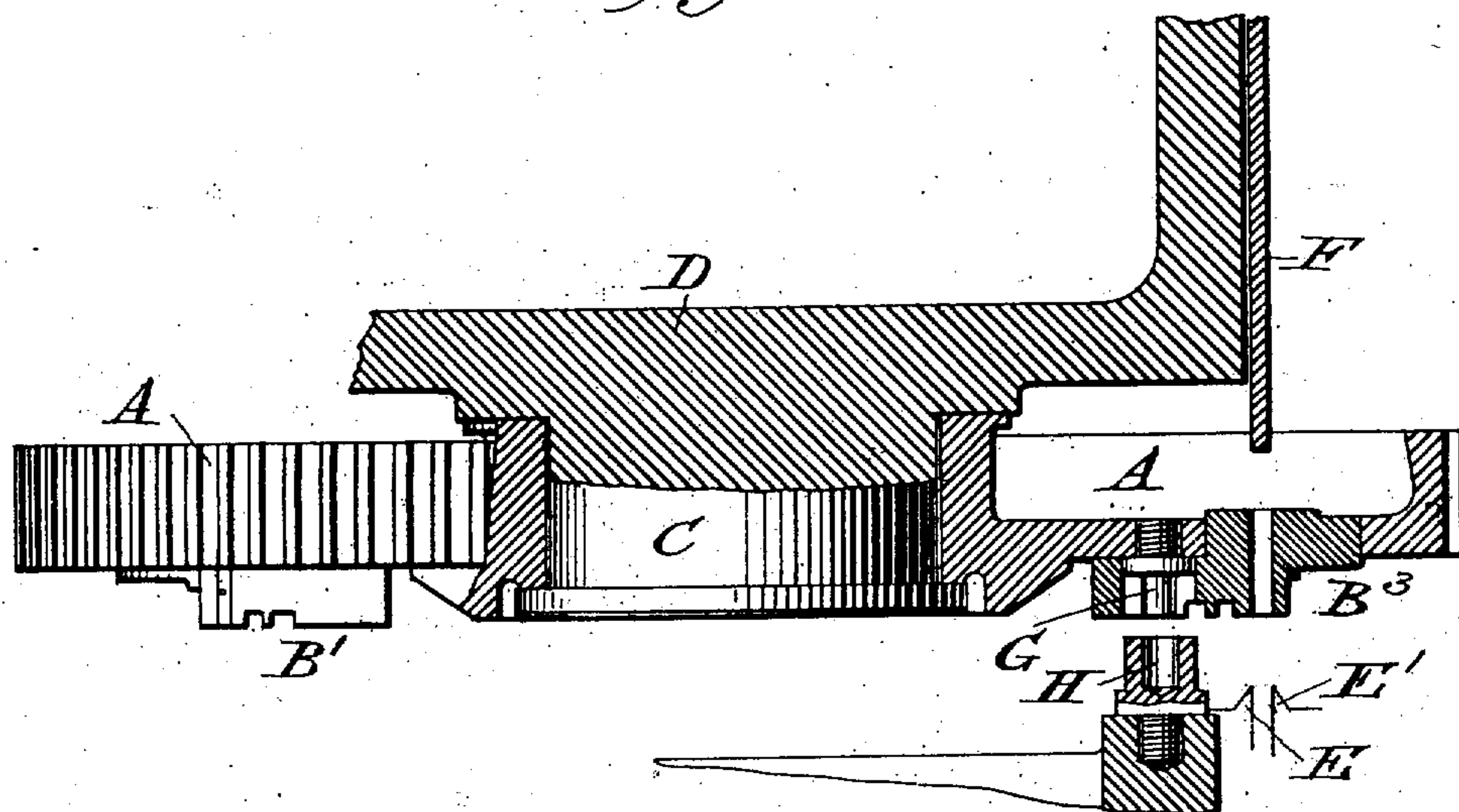
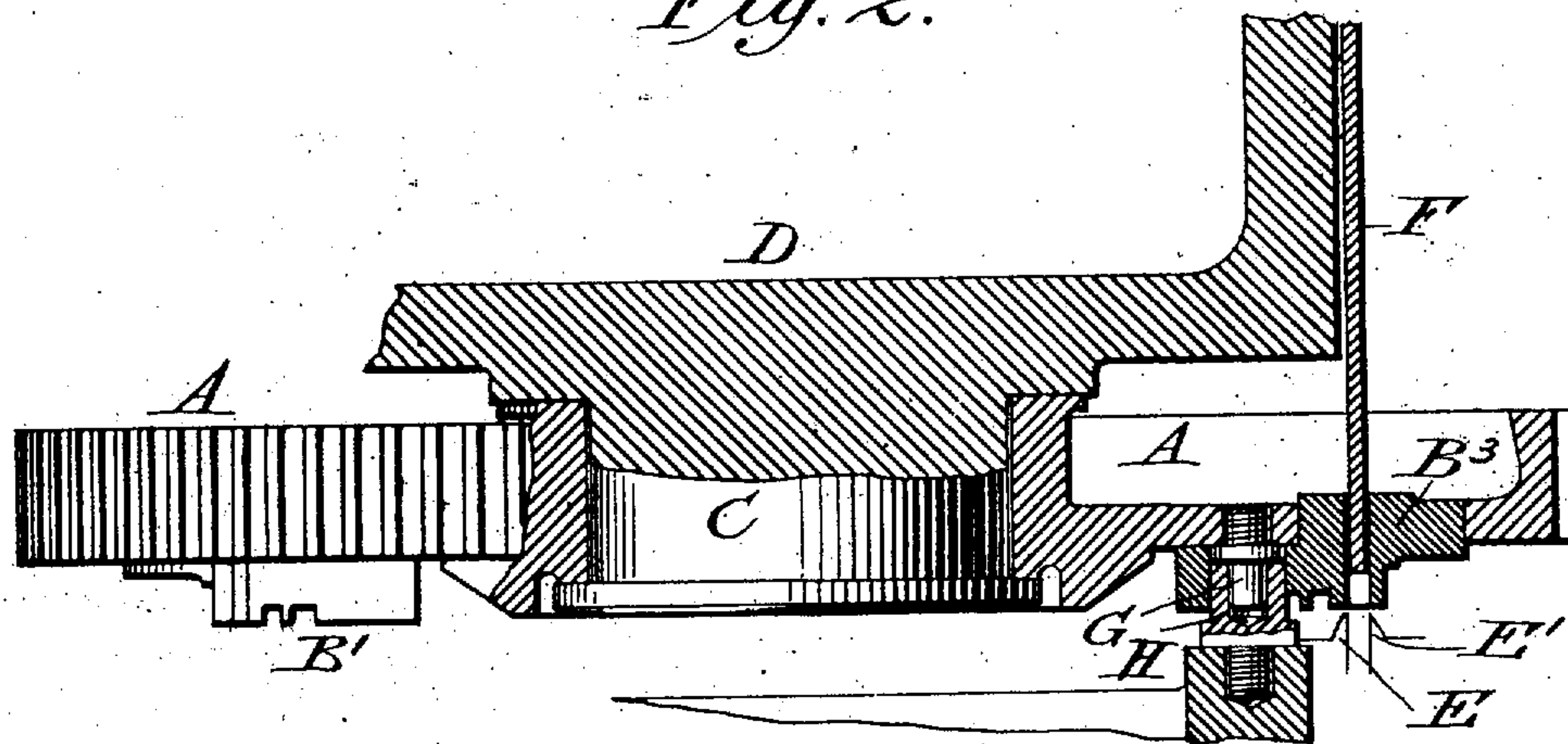


Fig. 2.



WITNESSES:

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Luther C. Morrison

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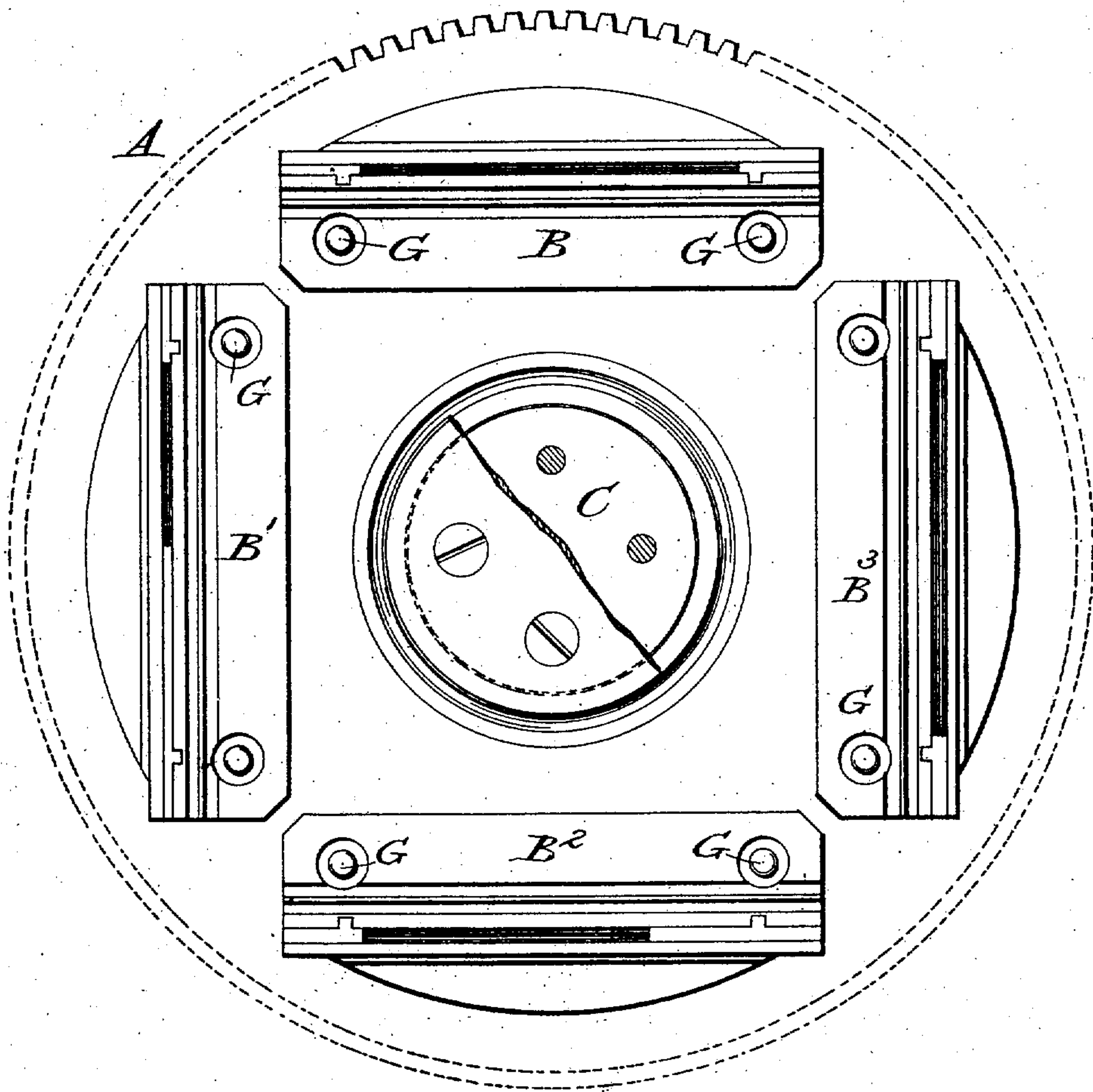
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Fig. 3.



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UNITED STATES PATENT OFFICE.

DAVID S. KENNEDY, OF NEW YORK, N. Y., ASSIGNOR TO MERGENTHALER
LINO TYPE COMPANY, A CORPORATION OF NEW YORK.

LINO TYPE-MACHINE.

No. 850,114.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed August 30, 1906. Serial No. 332,603.

To all whom it may concern:

Be it known that I, DAVID S. KENNEDY, of New York, borough 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 linotype-machines wherein a melting-pot is arranged to deliver molten metal into a slotted mold and against a composed line of matrices presented momentarily to the front of the mold-slot for the purpose of producing printing-slugs or linotypes having type characters in relief on one edge, as shown, for example, in Letters Patent of the United States No. 436,532. In this class of machines one or more molds are commonly mounted in a vertical intermittingly-rotating disk, each mold being presented first in a horizontal position during the casting operation and thereafter carried by the rotation of the disk to a vertical position in front of an ejector-blade, by which the slug is driven from the mold and between trimming-knives, which insure its proper thickness and the parallelism of its opposite sides.

In order to secure the proper action of the parts, it is necessary that the mold and the slug therein shall be presented in exact alinement with the knives. Owing to the wear of the parts, the expansion and contraction under varying temperatures, and other causes, it is found difficult in practice to secure such alinement. Heretofore the practice has been to fit the molds tightly to their carrying wheels or disks and to mount the disks closely upon their journals or axes for the purpose of carrying the molds positively to the required position.

In carrying my invention into effect I depart from this practice and purposely mount a mold or its supporting-disk so that it has a moderate freedom of movement horizontally and vertically, and I provide the mold or its support and the main frame or other support for the trimming-knives with interlocking members so arranged that when the mold is moved to the ejecting position it is brought positively into alinement with the knives.

The essence of the invention lies in the employment of a freely-movable or floating mold with means for bringing it positively

into the proper relation with the knives, the alinement being effected by the interaction of these parts at or near the mold.

In the accompanying drawings I have shown my invention in a form adapted for application to the commercial Mergenthaler linotype-machines of the present day; but it is to be understood that it may be applied to any analogous machine and that the details of construction may be modified at will, provided there is no departure from the general mode of action herein described and shown.

Figure 1 is a horizontal section through the mold-disk, mold, and adjacent parts in the positions they occupy during the rotation of the mold-wheel. Fig. 2 is a similar view with the parts in the ejecting position. Fig. 3 is a face view of the mold-disk.

Referring to the drawings, A represents the usual upright intermittingly-rotated mold-carrying wheel, and B, B', B², and B³ are four slotted molds of the ordinary construction firmly attached to the disk, the mold-slots extending through from front to back in the ordinary manner and being of different dimensions to produce slugs of different sizes.

C represents a central journal or axis around which the mold-disk revolves and by which it is supported, this stud being formed upon or secured rigidly to the usual supporting-slide D, which is mounted to move horizontally in the main frame of the machine for the purpose of moving the mold forward and backward to and from the matrices and the trimming-knives, as usual in all linotype-machines of the present day.

Heretofore it has been the custom to fit the mold A closely upon its journal, so that movement edgewise thereon was impossible. I depart from this practice and make the journal of a diameter slightly less than that of the hole or bearing in the mold-disk, so that the disk may move or float edgewise in any direction to the extent of two or three thousandths of an inch, more or less.

E and E' represent the stationary parallel knives located vertically in front of the mold when the latter is in the ejecting position.

F is a reciprocating ejector-blade arranged to advance through the mold from the rear in order to expel the contained slug and drive it between the trimming-knives E E', as usual, the distance between the knives

being adjustable in the ordinary manner as the varying thickness of the slugs produced may demand.

G G represent studs or dowel-pins firmly secured to the disk adjacent to the molds, preferably one at each end of each mold, and H H are corresponding sockets secured firmly to the main frame and adapted to closely fit the studs. The sockets are located adjacent to the trimming-knives above and below the same and in such position that when the mold containing a slug to be ejected is advanced from the position shown in Fig. 1 to the position shown in Fig. 2 the studs will enter the sockets, and thereby compel the mold to assume a position in which its side faces are exactly parallel with the edges of the knives.

If the mold on being turned to its position fails to aline with the knives, the studs entering the sockets will shift the mold in one direction or another until exact alinement is secured. This action may involve the movement of the disks and the contained molds horizontally or vertically, or both; but the bearing-surfaces are of such strength and the movements required are so slight that an easy and perfect action is secured in practice.

The molds shown in the drawings are of the ordinary construction, consisting of cap and body portions and removable intervening liners at the ends, the substitution of liners varying in thickness or in length serving to change the dimensions of the slot and of the slugs produced therein, as usual.

While I prefer to employ the dowel-pins and sockets in the form shown, it is to be understood that the only essential requirement is that the mold shall be formed to move and that the interlocking surfaces shall be such as to compel the mold to assume the proper relation to the knives.

In the construction shown each of the dowel-pins is provided with a collar or flange and screwed firmly into the mold-disk through a hole in the mold, the mold being screwed to the disk, as usual.

Having thus described my invention, what I claim is—

1. In a linotype-machine, the combination of slug-trimming knives, a mold having a free or floating movement as described, and interlocking devices whereby the mold is brought positively into alinement with the knives when carried to the ejecting position.

2. In a linotype-machine, the combination of trimming-knives, a mold, a mold-carrying wheel rotatable around an axis and also movable radially in relation thereto, and interlocking surfaces for insuring alinement of the mold and knives.

3. In a linotype-machine, a horizontally-movable slide D, the mold-carrying wheel A connected to the slide by a horizontal axis and movable radially in relation to said axis, in combination with knives to trim the slug as it is delivered from the mold, and interlocking surfaces fixed in relation to the mold and the knives respectively; whereby the alinement of the mold and knives is insured preparatory to the ejection of the slug.

4. In a linotype-machine, fixed knives to trim the slugs, an ejector for delivering the slugs from the mold and between the knives, an intermediate floating mold and interlocking surfaces to bring the mold in alinement with the knives when it is moved to the ejecting position.

In testimony whereof I hereunto set my hand, this 20th day of August, 1906, in the presence of two attesting witnesses.

DAVID S. KENNEDY.

Witnesses:

J. R. ROGERS,

E. C. MORIARTY.