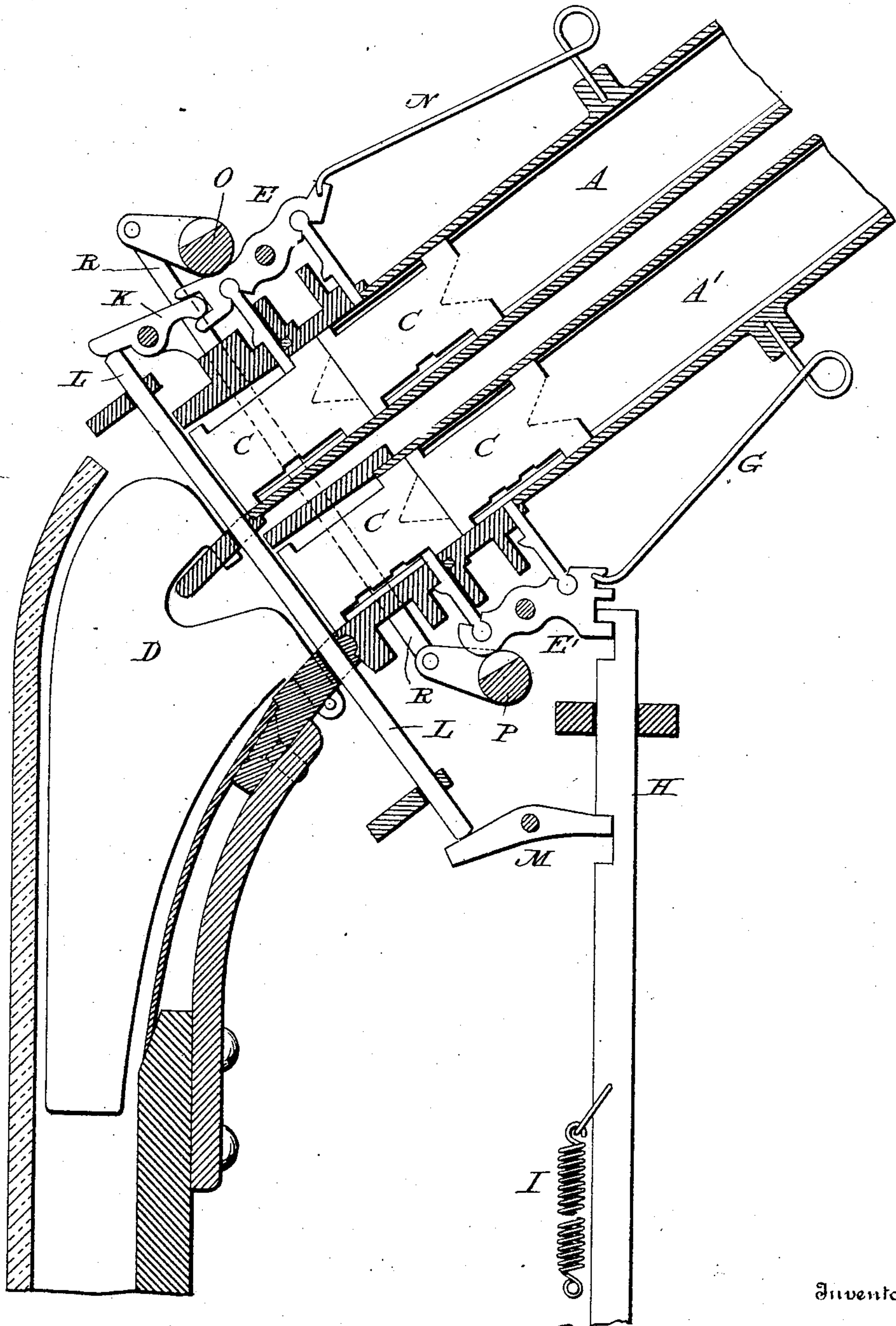


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C. MUEHLEISEN.
LINOTYPE MACHINE.
APPLICATION FILED JAN. 7, 1905



Witnesses

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LINOTYPE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 786,140, dated March 28, 1905.

Application filed January 7, 1905. Serial No. 240,049.

To all whom it may concern:

Be it known that I, CARL MUEHLEISEN, residing in the city of Berlin, Germany, have invented a new and useful Improvement in Linotype-Machines, of which the following is a specification.

This invention relates to linotype-machines and kindred machines wherein two magazines for the circulating matrices are arranged one over the other, the escapement devices of the two magazines controlling the delivery of the matrices being connected with a single-key mechanism, so that the matrices may be discharged from one magazine or the other at will.

It has in view the simplification of the devices for actuating the two series of escapements; and to this end it consists in a peculiar arrangement of actuating and connecting devices hereinafter described.

The drawing represents a vertical section from front to rear through the lower end of the magazines and the adjacent parts.

With the exception of the parts specifically described herein, the machine may be in all particulars of ordinary construction.

Referring to the drawing, A and A' represent the two inclined magazines, one overlying the other. These magazines are rigidly supported in position, and they consist each of two parallel plates, grooved in their inner proximate faces to receive and guide the upper and lower edges of the matrices C. These matrices enter the upper ends of the magazines from the distributing mechanism, descend by gravity, and finally escape at the lower end one after another as they are released by the escapement devices.

D represents a stationary receiving-throat, arranged opposite the lower ends of the magazines and divided, as usual, by partition-plates into vertical channels, through which the released matrices descend to the assembling devices below. This stationary throat-plate is made of suitable width vertically at the top to receive matrices from both magazines.

The upper magazine is provided on the upper side with a series of escapement devices

E, one for each channel therein, while the lower magazine is provided on the underside with a corresponding escapement E'. These escapements consist, as usual in the Mergenthaler machines, each of a lever pivoted on a fixed central pivot and provided near the opposite ends with two dogs or pawls, which are projected alternately into the magazine by the oscillation of the lever, the effect being to release the matrices one at a time, permitting the foremost matrix at the extreme end of the magazine to escape and the next matrix to assume its place in a manner well understood in the art. The lower escapement is engaged by a vertical actuating-bar H; guided in the main frame and connected with a finger mechanism. This bar H is urged constantly downward, as shown, by a spring I, of such strength that the escapement is held normally in the position shown in the drawing, with the lower pawl elevated, and this against the stress or strain of a spring G, attached to the magazine and engaging the rear end of the escapement-lever. When the bar H is raised through the finger-key mechanism, so as to relieve the escapement from the downward pull, the spring G acts to reverse the escapement-lever momentarily, withdrawing the lower or forward pawl and elevating the other, so that the forward matrix is permitted to escape, after which the parts assume their original position.

The escapement-levers E of the upper magazine are each notched in their lower or forward ends to embrace the end of the actuating-lever K, which is mounted at the middle on a horizontal pivot in the frame and acted upon at the outer end by a thin lifting-slide L, guided in the frame and seated at the lower extremity at one end of a centrally-pivoted lever M, which has its opposite end engaged by the actuating-bar H, before referred to. A spring N acts on the rear end of the escapement E and tends, like the spring of the lower escapement, to reverse the position of the escapement, which stands normally as shown in the drawing.

When the bar H is raised, it releases the escapements of both the upper and lower maga-

zines, so that the matrices would be discharged from the two magazines simultaneously were there no provision to the contrary. To prevent this action and insure the delivery from one magazine at a time, I mount in the frame the horizontal rock-shafts O and P, extending beneath the upper and lower escapements, respectively. These rock-shafts are flattened on one side, so that when turned in one position their full surfaces will bear against the escapement-levers and prevent their movement, while, on the contrary, they will, when turned to present their flattened sides, permit this movement of the escapements. These two rock-shafts O and P are provided at one end with cranks, connected by a coupling-rod R, whereby they are caused to turn simultaneously and to maintain such relative positions that when either bar locks the adjacent series of matrices the other shaft will leave the adjacent matrices unlocked. Thus it is that the actuating rod or bar H is enabled to actuate the escapement of the upper or the lower magazine, according to the position of the shafts O and P.

It will be observed that the notches in the bar H to receive the rear end of the escapement E' and the lever M are elongated vertically to permit of lost motion of the part. This is done in order that one set of devices may remain at rest while the others are in action.

It will of course be understood that the slide L for actuating the upper escapements lies between the paths of the outgoing matrices. In other words, the matrices from the different channels pass respectively on the right

and left of the slide without coming in contact therewith.

Having thus described my invention, what I claim is—

1. In combination with the parallel magazines having their respective escapements on the outer sides, the actuating-rod H, directly engaging the lower escapement, the two levers and the slide connecting the bar H with the upper escapement, and means for locking the escapements alternately.

2. In a linotype-machine, the lower magazine having escapements in the bottom side, the upper magazine having escapements on the top side, the springs acting on the escapements to reverse their positions, the lever K, slide L and lever M, connecting with the upper escapement, the actuating-bar H engaging the lower escapement and the lever M, with lost motion between them, a spring I, acting to carry the bar H downward in opposition to the escapement-springs, and means for locking one escapement or the other at will.

3. In a linotype-machine, the combination of a magazine having the escapement on the upper side, a spring for reversing the position of the escapement, an actuating-bar H, the two levers and the slide connecting said bar with the escapement, and a spring to move the bar H downward.

In testimony whereof I hereunto set my hand, this 19th day of December, 1904, in the presence of two attesting witnesses.

CARL MUEHLEISEN.

Witnesses:

WOLDEMAR HAUPT,
HENRY HASPER.