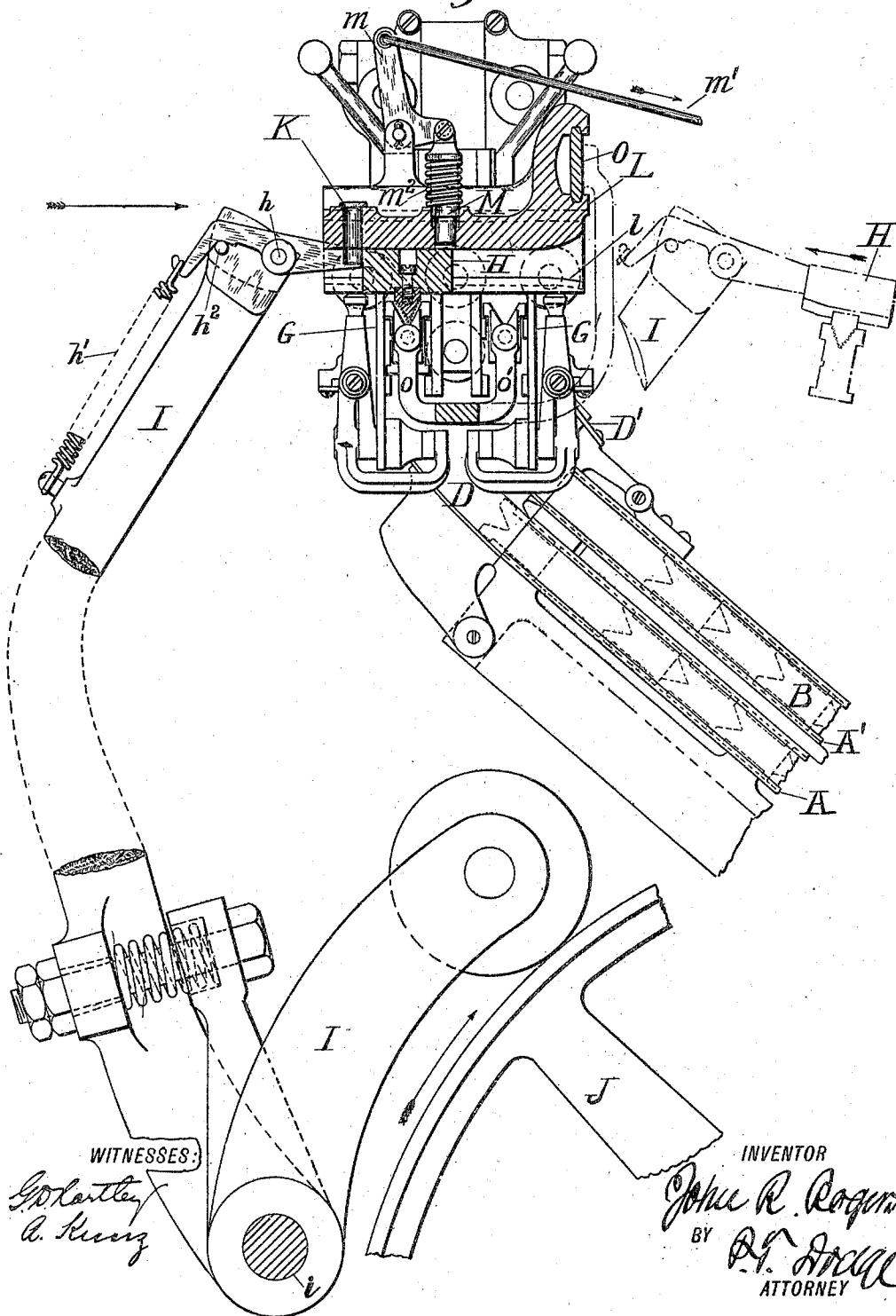


J. R. ROGERS.
 LINE CASTING MACHINE.
 APPLICATION FILED DEC. 2, 1909.

957,802.

Patented May 10, 1910.
 2 SHEETS—SHEET 1.

Fig 1.



WITNESSES:

G. Hartley
 A. King

INVENTOR

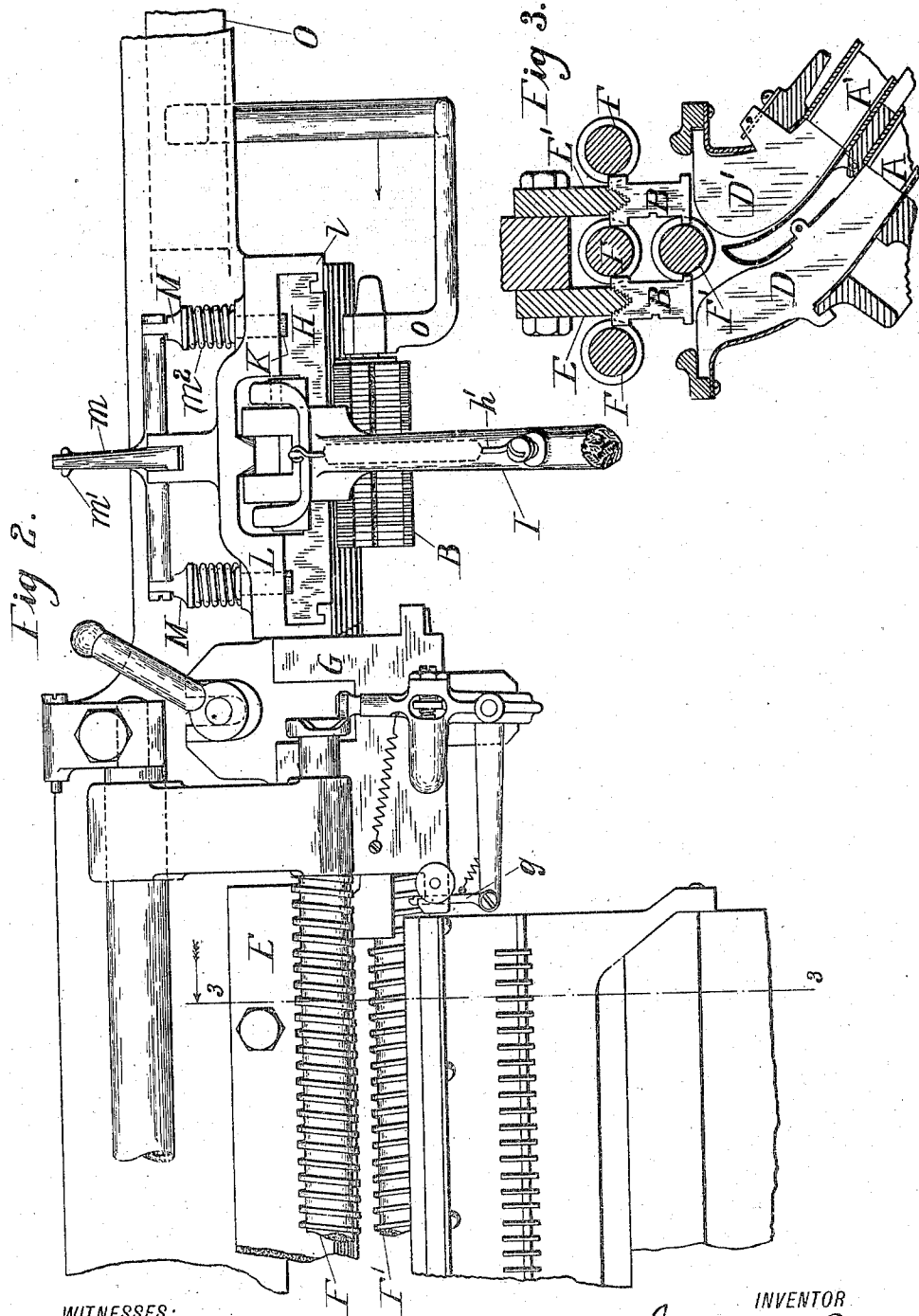
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UNITED STATES PATENT OFFICE.

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

LINE-CASTING MACHINE.

957,802.

Specification of Letters Patent.

Patented May 10, 1910.

Application filed December 2, 1909. Serial No. 531,036.

To all whom it may concern:

Be it known that I, JOHN R. ROGERS, of borough of Brooklyn, county of Kings, and State of New York, have invented a new and useful Improvement in Line-Casting Machines, of which the following is a specification.

This invention relates to that class of line casting machines in which two or more magazines, each carrying a set or font of matrices, are combined with a distributor mechanism by which the matrices in the composed lines are returned to the proper channels in the magazines from which they were delivered.

The invention consists in the combination of two or more magazines and a fixed distributing mechanism for each magazine, with a carrier for the matrix lines, so constructed and arranged that its travel may be varied at will in order that it may deliver a matrix line to one distributing mechanism or another as demanded.

In the drawings I have shown my improvement embodied in a Mergenthaler line casting machine of the general organization represented in Letters Patent of the United States No. 436,532, except that two magazines and distributors are provided in place of the single magazine of said patent. I have limited the drawings to those parts of the machine with which my invention is directly associated, and it is to be understood that as to all other parts the machine may be of any ordinary or approved construction.

Referring to the drawings, Figure 1 is a side elevation showing the magazines, their mouths or entrances, and the overlying distributors with my adjustable carrier for delivering the matrices thereto, portions being shown in vertical section. Fig. 2 is a rear elevation of the same looking in the direction indicated by the arrow in Fig. 1. Fig. 3 is a vertical cross section on the line 3—3 of Fig. 2.

Referring to the drawings, A and A¹ represent two inclined magazines, one overlying the other. These magazines are adapted to carry the matrices B, and are channeled longitudinally in the interior for the purpose of guiding the same in the ordinary manner. The magazines are provided respectively at the upper ends with the usual channeled throats or entrances D and D¹ to

receive the matrices from the distributor and direct them into the upper ends of the channels.

E and E¹ are two parallel stationary distributor bars overlying the respective magazine throats or entrances, their lower edges, of V form, being toothed longitudinally in varying combinations, to suspend the correspondingly toothed matrices delivered at one of the bars until they arrive over their respective channels in the magazines, in the manner well understood in the art.

F—F¹ are horizontal feed screws lying adjacent to the distributor bars for the purpose of engaging the vertical edges of the matrices and carrying them along the bars to the points of release.

G and G¹ are two distributor lift boxes, so-called, similar to those used in the ordinary Mergenthaler machines. These boxes are arranged one at the end of each distributor, and each box is provided as usual with the vertical lifting finger *g*, by which the matrices are lifted successively from the end of the composed line to the distributor bar and feed screws. A composed line of matrices designed for distribution into either magazine requires to be delivered endwise into the corresponding distributor box G in the ordinary manner.

For the purpose of lifting the composed lines from the mechanism below and presenting them to the box of one distributor or the other as required, I provide the line carrier H, consisting of a plate having on the under side a horizontally toothed bar to engage and carry the matrices, the teeth of the bar engaging the usual distributor teeth of the matrices as shown in Fig. 1. This plate H has on one side an arm jointed at *h* to the upper end of the carrying lever I, which latter is mounted on the horizontal axis *i* and acted upon at its lower end by a lifting cam J, the lever and cam being very similar to those employed in the commercial Mergenthaler machines. The arm of the carrier H is connected by a spring *h*¹ to a stud on the carrier arm, this spring serving normally to hold the carrier in the relation to the arm shown in dotted lines in Fig. 1 against the stop pin *h*². This connection, however, permits the carrier to swing downward in relation to the arm when it meets with resistance. The carrier and its lever swing downward to receive the matrix line

endwise from the lower mechanism of the machine and, with the line held in suspension, as shown in dotted lines in Fig. 1, the carrier is swung upward until it presents
 5 the matrix line opposite one or the other of the distributor boxes G as occasion may require.

For the purpose of arresting the carrier in position to deliver its matrix line into
 10 the rear distributor box for distribution into the lower magazine, I provide stationary stops or banking pins K, projecting below a stationary guide plate L having at its ends
 15 dependent flanges l to receive and guide the ends of the carrier. The arrangement of the parts is such that as the carrier is swung upward and rearward it will ride beneath
 20 and be guided by the plate L until its rear end encounters the stop K, by which it will be arrested in the rearmost position which it assumes.

If the matrix line is to be distributed into the upper magazine it is necessary to arrest the line carrier H at an earlier stage in its
 25 travel, and for this purpose I propose to provide movable stops or abutments in any suitable form. In the form shown they consist of vertical studs M, guided in the plate L and connected at their upper ends to an
 30 angular lever m pivoted on the frame and connected to the rear ends of an actuating wire m^1 which can be extended downward and forward within reach of the operator. The movable stops M are encircled by lifting
 35 springs m^2 by which they are held normally in an elevated and inoperative position. Whenever the line is to be distributed to the upper magazine, this wire m^1 is drawn forward and the stops depressed in
 40 time to arrest the line carrier H opposite the forward distributor box. Owing to the jointed connection between the carrier and the operating lever I, the carrier is permitted to move rearward in a straight line
 45 as it approaches its final position. The actuating wire or rod m^1 may be fastened to a handle at the front and connected for direct operation by the attendant, or it may be connected with any suitable locking or connecting
 50 devices, these features forming no part of the present invention. After the line is in position opposite either of the distributor boxes it must be carried horizontally into the same, and for this purpose I provide a
 55 horizontal delivery slide O guided in the main frame and provided with two arms o and o^1 , one opposite each of the distributor boxes, so that as the slide moves forward one or the other of its arms will advance the
 60 line into a distributor box according to the position of the carrier H. This slide corresponds to the single slide of the commercial Mergenthaler machine, and may be actuated

by the ordinary mechanism or in any other suitable manner.

The essence of the invention lies in combining with two distributing mechanisms, whatever their form, a line carrier H of any
 65 suitable form, and means whereby it may be caused to present the line to the one distributor or the other at will as desired. It will be manifest to the skilled mechanic that the details may be widely modified without
 70 changing the principle of operation.

My mechanism is advantageous in that it
 75 permits the single line elevating or carrying mechanism to deliver the composed lines to one distributor or another as required.

It is to be observed that the parts may be adjusted to cause the delivery of a line to
 80 either distributor while a preceding line is in course of distribution by the other distributor, so that the composition from one magazine may be carried on while the distribution of matrices from the other magazine is
 85 being completed.

Having thus described my invention, what I claim is:

1. In a line casting machine the combination of two fixed distributors and a carrier
 90 for composed lines of matrices, said carrier adjustable at will to present matrices to one distributor or the other as demanded.

2. In combination, two magazines, two corresponding distributors, a matrix line
 95 carrier having a variable extent of travel, and adjustable means to determine the extent of said travel.

3. In combination with the carrying lever and the line carrier yieldingly jointed there-
 100 to, a fixed stop engaging the carrier to arrest the same at one point, and a controllable device to arrest the carrier at another point.

4. In a line casting machine the combination of two distributor mechanisms, a line
 105 carrier adapted to present a composed line of matrices to either distributor mechanism, and means controllable at will for determining the presentation of the line.

5. In a line casting machine the combination
 110 of the two distributor boxes, the line carrier, variable in movement that it may present a line of matrices to either box, and a delivery slide having two arms opposite the respective boxes, whereby said carrier is
 115 adapted to deliver the matrices to one box or the other according to the position of the carrier.

In testimony whereof I hereunto set my hand this thirtieth day of November, 1909,
 120 in the presence of two attesting witnesses.

JOHN R. ROGERS.

Witnesses:

DAVID S. KENNEDY,
 LUCY E. SMITH.