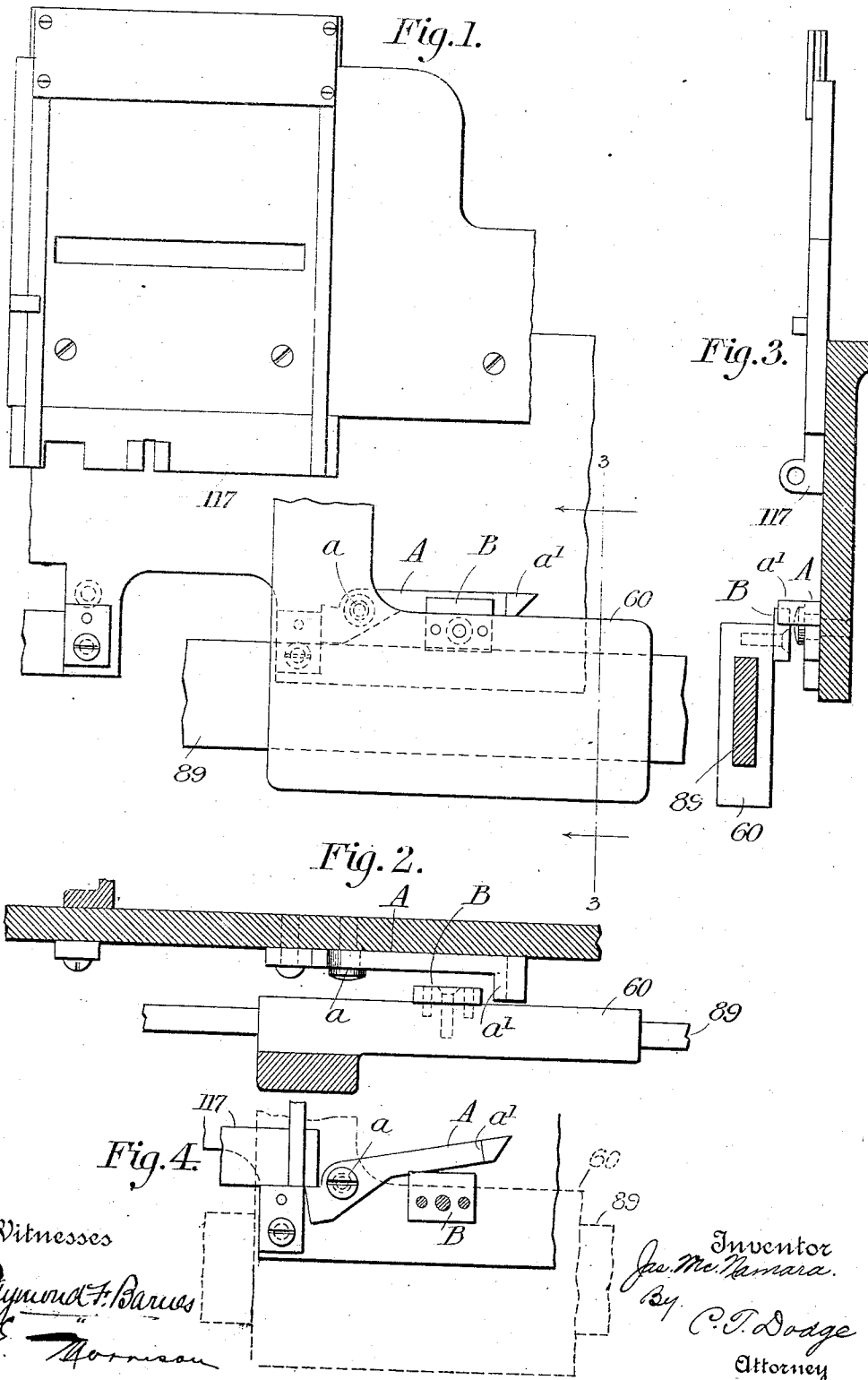


J. McNAMARA.  
LINE CASTING MACHINE.  
APPLICATION FILED APR. 17, 1909.

939,291.

Patented Nov. 9, 1909.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## LINE-CASTING MACHINE.

939,291.

Specification of Letters Patent.

Patented Nov. 9, 1909.

Application filed April 17, 1909. Serial No. 490,448.

To all whom it may concern:

Be it known that I, JAMES McNAMARA, of Montreal, Province of Quebec and Dominion of Canada, have invented a new and useful  
5 Improvement in Line-Casting Machines, of which the following is a specification.

This invention has reference to those line casting machines in which circulating matrices are selected by finger-keys, assembled temporarily in lines which are presented successively to a mold to form type characters on the slugs cast therein, and thereafter returned to a magazine from which they were released.

15 The improvements are intended more particularly for embodiment in machines of the character represented in Letters Patent of the United States No. 605,141, known to commerce under the trademark "Monoline." In  
20 these machines the justification of the composed lines is effected by expansible spacers, each composed of two connected, oppositely tapered wedges which are seated in the composed line between the matrices, one edge  
25 of each spacer having an ear which projects edgewise therefrom, to engage retaining devices by which the wedge is held down in the line while its companion is being raised to effect the elongation and justification of  
30 the line. After the casting action, the composed line is moved horizontally from the casting position in front of the mold to an elevating and distributing mechanism, by which the matrices in the line are separated and returned to the appropriate channels in the magazine. Before the line  
35 reaches the elevator, a downwardly moving pressure device acts upon the upper end of the elevated wedges to push them down to their original positions, as is necessary in order that they may pass properly to the elevator. In practice it occasionally happens that the pressure device is prevented by the presence of metal chips or otherwise  
45 from descending the proper distance, and in consequence of this fact, the wedges standing above the proper level are liable to come in contact with other parts of the machine, which results in breakage or injury.  
50 The aim of my invention is to avoid this occurrence, and to this end consists in combining with the so-called line delivery carriage, by which the composed line is transferred horizontally, a means to prevent its

movement toward the elevator unless the 55 justifying wedges are first carried down to the proper level.

In its preferred form this device consists of a detent or lock controlled by the pressure device, and engaging the carriage to  
60 prevent the transfer of the matrices.

With the exception of the parts forming the subject of my invention, the machine may be in all respects like that represented in Patent 605,141 or of any similar commercial form. I have therefore restricted the  
65 drawings herein to those parts with which my improvement is immediately associated.

Figure 1 is a front elevation showing a portion of the carriage detent and the pressure device by which the latter is actuated, the detent being in operative position. Fig. 2 is a top plan view of said parts. Fig. 3 is a vertical section on the line 3—3 of the preceding figures. Fig. 4 is a front elevation showing the manner in which the detent is held out of action when the pressure device descends to the proper level.

In the drawing, 60 represents a horizontally movable line carriage, by which the  
80 composed line of matrices and justifiers is confined and moved horizontally from the composing position toward the left of the casting position, and thereafter to the right to the elevator and distributor. It is mounted to move on the horizontal bar or support  
85 89, and receives motion through a lever and cam, as usual.

117 represents a vertically movable pressure device, sometimes known as the primary  
90 line depressor. It is a skeleton frame mounted to move vertically on guides in the main frame when the composed line, in its course to the distributor, stands thereunder, so that the matrices and justifier wedges will be  
95 forced down to the common level.

The foregoing parts may all be constructed and arranged to operate in the same manner as the parts indicated by like numerals in the patent above referred to.

100  
105  
Passing now to my improvement, A represents the detent or locking dog, connected to the main frame by a horizontal pivot,  $a$ , near one end, and having the opposite end formed with a lateral shoulder,  $a^1$ , adapted to engage a block, B, secured to the side of the line carriage.

The rear end of the dog A stands beneath

the depressor slide, in such position that if the slide descends to the proper level, it will act upon the dog and lift its forward end above the path of the block B on the line carriage, leaving the latter free to advance the line to the elevator and distributor. If, however, for any reason the depressor frame 117 fails to descend far enough to carry the spacers and matrices downward to such position that they will freely enter the elevator, the dog will remain in the normal position shown in Fig. 1, so that as the carriage moves to the right with the line it will be arrested by the dog, and the transfer of the line in improper position prevented.

Having thus described my invention, what I claim is:

1. In a machine of the class described, the line carriage, means for depressing the matrices to a common level, and intermediate means for controlling the movements of the carriage.

2. In a machine of the class described, the line carriage, a detent to control the move-

ment of the carriage, and a matrix alining device acting to control the carriage detent.

3. In a machine of the class described, the line carriage and the matrix depressor slide, in combination with the intermediate detent, A, controlled by the slide and acting to prevent the advance of the carriage.

4. In a machine of the class described, the line carriage for transferring the composed line to the distributing mechanism, in combination with means for depressing the members of the line to a common level, and means acting normally to prevent the advance of the line carriage toward the distributor whenever the depressor fails to properly align the matrices.

In testimony whereof I hereunto set my hand this 9th day of March, 1909, in the presence of two attesting witnesses.

JAMES McNAMARA.

Witnesses:

WESLEY BARRETT,  
J. E. SCOTT.