W. NICHOLAS & W. ACKERMAN.

DELIVERING TYPE TO A GALLEY IN TYPE SETTING AND TYPE CASTING MACHINES.

APPLICATION FILED JULY 7, 1914.

1,237,686. Patented Aug. 21, 1917.

FIG. 2.

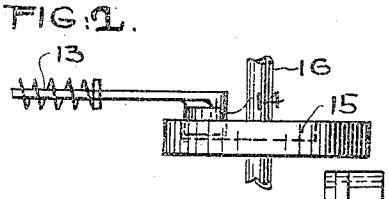


Fig. 3.

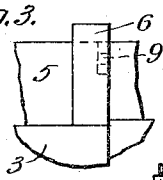
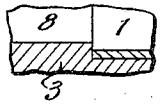
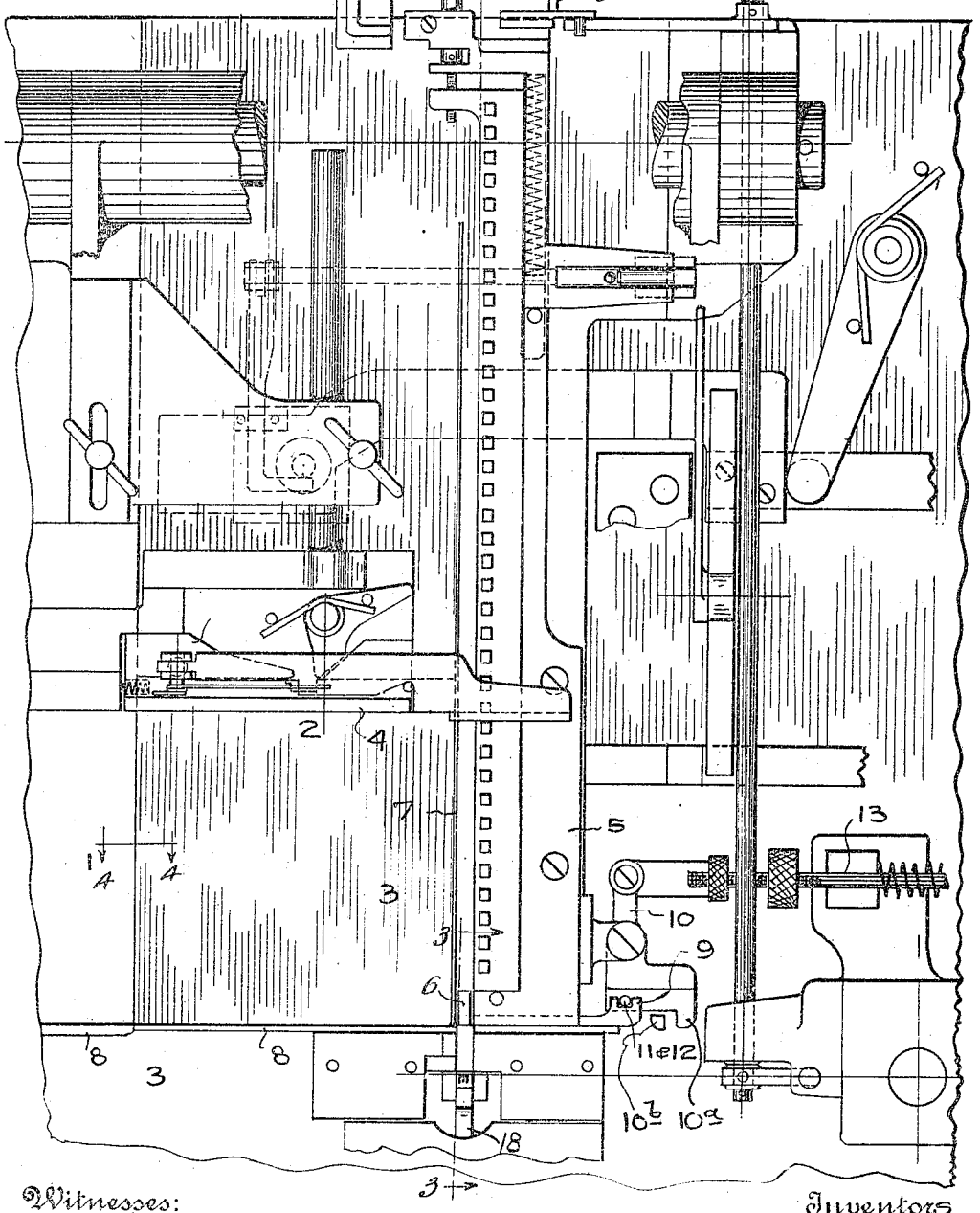


Fig. 4.





Witnesses:

Fig. 1.

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UNITED STATES PATENT OFFICE.

WILLIAM NICHOLAS, OF SOUTHPORT, CONNECTICUT, AND WILLIAM ACKERMAN, OF BROOKLYN, NEW YORK, ASSIGNORS TO PREMIER MACHINE COMPANY, A CORPORATION OF DELAWARE.

DELIVERING TYPE TO A GALLEY IN TYPE-SETTING AND TYPE-CASTING MACHINES.

1,237,686. Specification of Letters Patent. Patented Aug. 21, 1917.

Application filed July 7, 1914. Serial No. 849,578.

To all whom it may concern:

Be it known that we, WILLIAM NICHOLAS, a subject of the King of Great Britain, residing at Southport, county of Fairfield, and State of Connecticut, and WILLIAM ACKERMAN, a citizen of the United States, residing in the borough of Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements for Delivering Type to Galleys in Type-Setting and Type-Casting Machines, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

Our invention relates to improvements in type casting and setting machines, having especial reference to the galley mechanism employed in connection therewith. One of the objects of our invention is to provide a galley mechanism which may be adjusted both to the pointwise value of type to be fed therein and also adjustable to various lengths of lines to be held thereby, from the minimum to the maximum lengths, such as are employed for example in magazine, newspaper, book and job printing. While essential features of our invention may be used in ordinary type setting machines and various types of casting machines, the preferred embodiment herein illustrated is designed with a view to being employed in a type casting and composing machine similar to the one illustrated in our joint Patent No. 964,677.

Generally described, our invention comprises what may be termed an adjustable galley head mechanism, into which a line may be inserted either after or during the assembling or composing of the type in the usual manner of setting machines, and means for transferring the lines thus composed into the open end of an ordinary printer's galley. Special forms of galleys have been designed for use in connection with machines of this class, but our present invention contemplates the employment of the ordinary printer's galley of the usual form, open at the end, into which the assembled lines are forced by what is termed the line pushing mechanism, and its novel features more particularly considered comprise the mechanism for receiving the type as they are being composed and holding them in proper position to be placed in the galley automatically as soon as the line is completed, and the means whereby this mechanism can be adjusted with a minimum of care and attention on the part of the operator.

In the accompanying drawing illustrative of a preferred embodiment of our invention, Figure 1 is a plan view of the galley head or holder; Fig 2 is a detail; Fig. 3 is a sectional elevation upon line 3—3 of Fig. 1 looking in the direction of the arrows; and Fig. 4 is a like sectional view on line 4—4 of Fig. 1.

Having reference to the drawing, 1 represents an ordinary printer's galley such as is usually employed on type setting machines, which is adapted to lie with its open end flat upon the floor 3 of the galley head mechanism 2, being clamped thereon in such manner that the top surface of the bottom of the galley lies substantially in the same plane as that of the head, in which position the galley is clamped at one end to the supporting head mechanism, and at the other to an extension reaching substantially the length of the galley and supplying a suitable support therefor, which is not shown in the drawings. The galley head mechanism 2 has adjustable side walls to correspond with those of the galley itself, which may be any width, and therefore the head block is made adjustable to such varying widths. Hence, in order thus to receive lines of different widths in a single galley, a slidable mechanism is provided which comprises a removable side-bar 4 forming temporarily one side wall of a galley while the lines are being pushed thereinto.

We are aware that galley devices have been made with such removable walls paralleling the opposite sides of the galley which have been adjustable to different column widths, and while this feature forms a necessary part of our present invention, it is not in itself claimed as a novel feature, except in so far as it is found necessary to complete the operations of the other elements of our apparatus. The parallel bar 4 therefore is held at one end in the head mechanism 2 of the galley supporting device and the other is conveniently clamped to the end wall at the foot of the galley by any con-

venient means which is readily detachable from the galley. The floor 3 of the galley head mechanism extends laterally to any width desired and may be made to cover substantially the full width of the composing machine, and has resting thereupon a head block 5, which is adjustable laterally as required, in accordance to the point size of line being set on the machine. In its normal position of rest, the head block 5, therefore, furnishes one of the guiding walls into which the line is fed while being assembled in the process of composing the printing types into lines. This bar is adapted to be moved by any well known means for operating galley pushers, from its normal position of rest transversely across the channel into which the line has been fed in the manner indicated, thereby forcing the composed line into the galley or rather into the head mechanism 2 of the galley 1, which forms a practical continuation of the galley proper. A rule 7 of the form commonly employed in this connection, in the present embodiment of our invention is made to extend upwardly from the floor 3 of the galley head mechanism through a slot of substantially the same width as the thickness of the rule, which in the usual manner, by mechanism properly timed for the purposes, causes the rule to be withdrawn below the surface of the floor of the galley head immediately before the head block 5 or guide is operated to remove the line as described. The head block and rule are made substantially the full width of the galley mechanism and therefore, by adjusting the side bar 4 laterally to any given width of line, highly convenient adjustable means have been disclosed for transferring the line from the casting machine into the galley.

The type are fed singly into the assembling channel between the head block 5 and the rule 7 against a frictional traveling block 6 which may be made of soft rubber or other suitable expansible material by suitable delivering means, which carries each type to a point immediately beyond the line of the fixed galley wall 8. At this point in the floor within the advancing galley a slight step down is provided into which the foot of the type drops and by means of which that portion of the type is retained within the lines of the galley, with the delivering means withdrawn. The upper portion of the type body is similarly held within the lines of the galley by means of an auxiliary pusher which is slidably mounted upon the head block 5, having the side thereof adjacent the point where the type are received in operable alinement with the inner wall of the side 8 of the galley. The pusher 9 is operated by means of a connection with a fulcrum lever 10 pivotally mounted upon the block 5, one end of which by means of a pin 11 is engaged by a traverse slot 12 in the auxiliary pusher. The lever 10 in turn is operably connected with a cam rod 13 upon the outer end of which is a roll 14 which engages a cam 15 on the driving shaft 16 of the type casting machine. On the shaft 16 is also pinned the cam which operates the type delivering plunger 18, the cam and connecting mechanism not being shown, it being deemed necessary merely to point out that the operation of the cam and plunger 18 must be synchronized with that of the auxiliary pusher 9 upon the fulcrum lever 10 above referred to. Hence it will be seen that by suitably designing and arranging cams upon the shaft 16, the auxiliary pusher can be made to act upon the type immediately after it has been delivered into proper position beyond the galley wall 8.

The means for holding the type as the line is being composed which has been delivered into the galley head in the manner described, comprises the traveling block 6, as pointed out, which is slidably mounted to traverse the full length of the head block 5, but when the line has been completed, it is forced into the galley by the operation of the lateral movement of the head block 5 immediately upon the withdrawal of the rule 7 beneath the floor of the galley, each line being delivered against the ordinary galley block of the usual frictional type, or a preceding line of composition. The type thus forced into the galley being held in normal position adjacent the inner wall of the side piece 8.

The cam rod 13 is urged in the direction of the cam 15 by means of a coil spring suitably provided thereon as shown in Fig. 1, and operates normally to hold the cam roll against its cam. The rod itself is adjustably connected with the fulcrum lever 10 by screw adjustment to admit of a lateral adjustment of the head block 5 of the galley in accordance with the size of type to be held therein, which in the process of adjustment after the block 5 has been set to the size of type to be employed in connection therewith, the adjusting screw on the rod 13 is turned until the type contacting edge of the auxiliary pusher 9 coincides with corresponding surface of the head block 5 which as has been seen delivers the entire line into the galley. It is apparent that as the line is pushed by the head block into the galley, inasmuch as the fulcrum lever to which the auxiliary pusher is attached is mounted upon the head block, the auxiliary pusher would be carried beyond the type contacting face of the block 5 unless preventive means is supplied. Hence the fulcrum lever has a stop portion 10^a which is projected to contact a stationary stop 10^b on the frame of the machine.

Having described our invention, what we claim is:

1. In a type casting and composing machine, a galley mechanism comprising means for receiving type therein as composed into lines in said machine; means comprising a line pusher for transferring lines into said galley, said line pusher being adjustable in accordance with the pointwise value of type lines; and yielding means on said line pusher for supporting the forward end of the lines of type received therein; and means adjustably attachable to said line pusher defining the end of the line to be received into said galley.

2. In a type casting and composing machine, a galley mechanism comprising a fixed wall and a laterally movable wall parallel to said fixed wall; means for feeding successive type into said galley mechanism comprising a type plunger; a type pusher at the receiving throat of said galley mechanism adapted to be withdrawn as type are fed thereinto and immediately thereafter adapted to push said type against the inner face of said fixed wall; a line pusher adapted to push lines of type into a galley attached to said mechanism, said type pusher being slidably mounted on said line pusher, and having the type contacting end thereof normally in alinement with the corresponding surface of said line pusher; and means for operably adjusting said type and line pusher in accordance with pointwise dimensions of lines of type cast by said machine.

3. In a type casting and composing machine, a galley mechanism comprising a transversely recessed floor portion adapted to receive therein the galley bottom by the open end, said recess having a depth slightly greater than the thickness of said galley bottom; a clamping block to support the end of the galley; a fixed side wall and a lateral movable wall parallel to said fixed wall, said fixed wall adapted to form a stop for the galley and said movable wall adapted to form a supporting guide for type in said galley; means for adjustably holding said movable wall parallel at all positions relative to said fixed wall, comprising a clamped block and means for justifying said clamp block to the floor of said galley mechanism.

In testimony whereof, we have hereunto set our hands in the presence of two subscribing witnesses.

WILLIAM NICHOLAS.
WILLIAM ACKERMAN.

Witnesses:
EDITH ENNISSON,
JAMES ENNISSON.