(No Model.) 2 Sheets—Sheet 1.

M. H. WHITTAKER.

MEANS FOR FACILITATING ALTERATIONS OF PRINTING SURFACES.

No. 557,039. Patented Mar. 24, 1896.

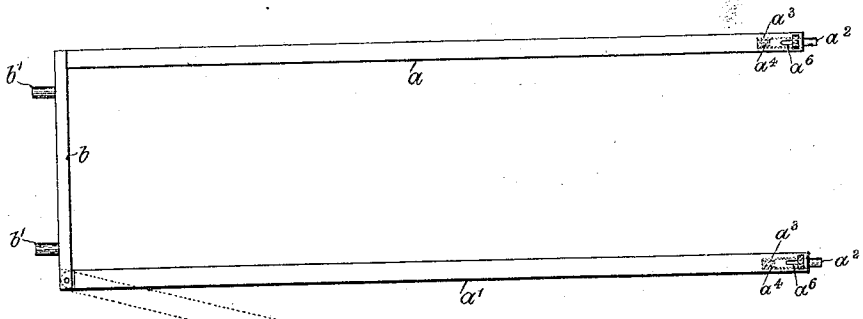

Fig. 1.

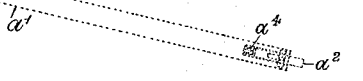

Fig. 2.

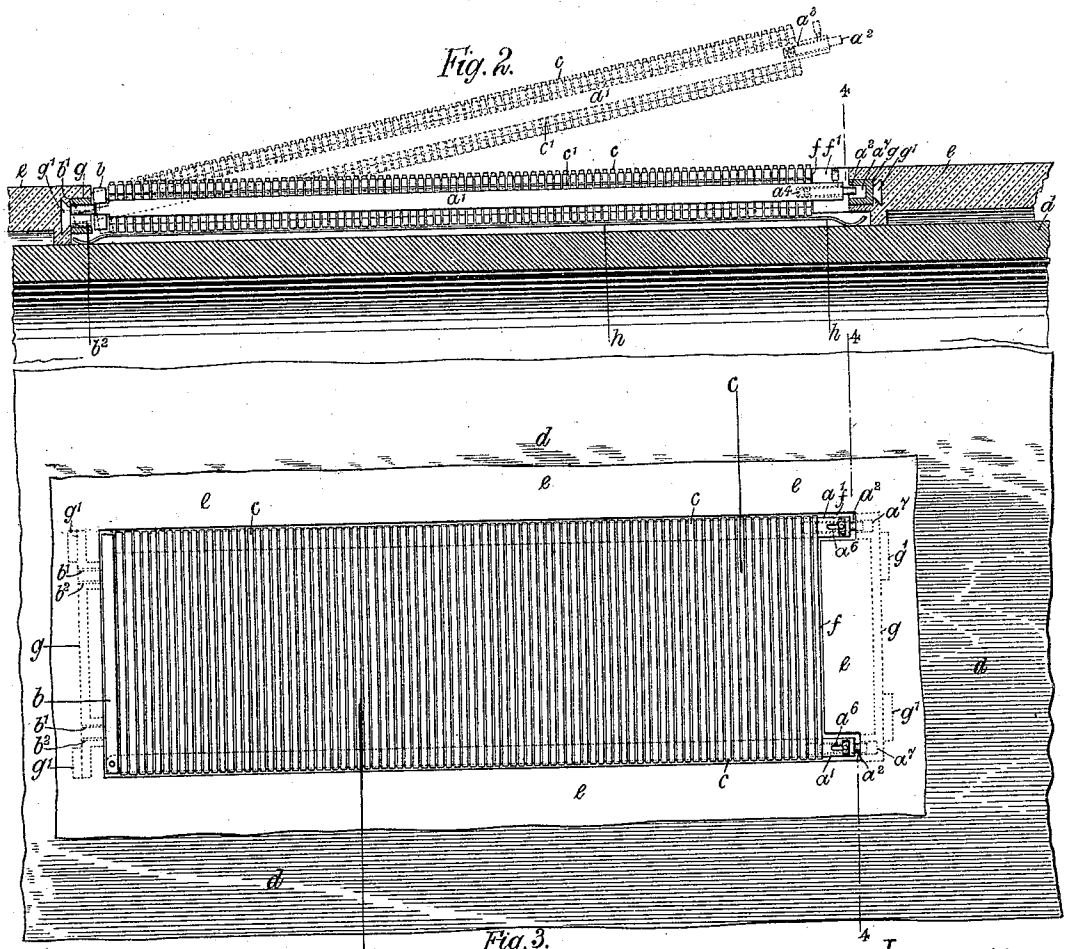

Fig. 3.

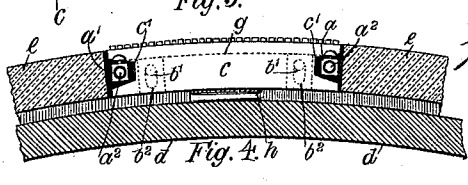

Fig. 4.

WITNESSES.

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(No Model.) 2 Sheets—Sheet 2.

M. H. WHITTAKER.

MEANS FOR FACILITATING ALTERATIONS OF PRINTING SURFACES.

No. 557,039. Patented Mar. 24, 1896.

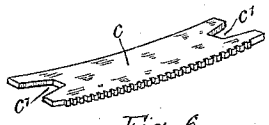

Fig. 6.

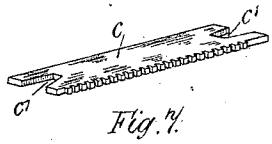

Fig. 7.

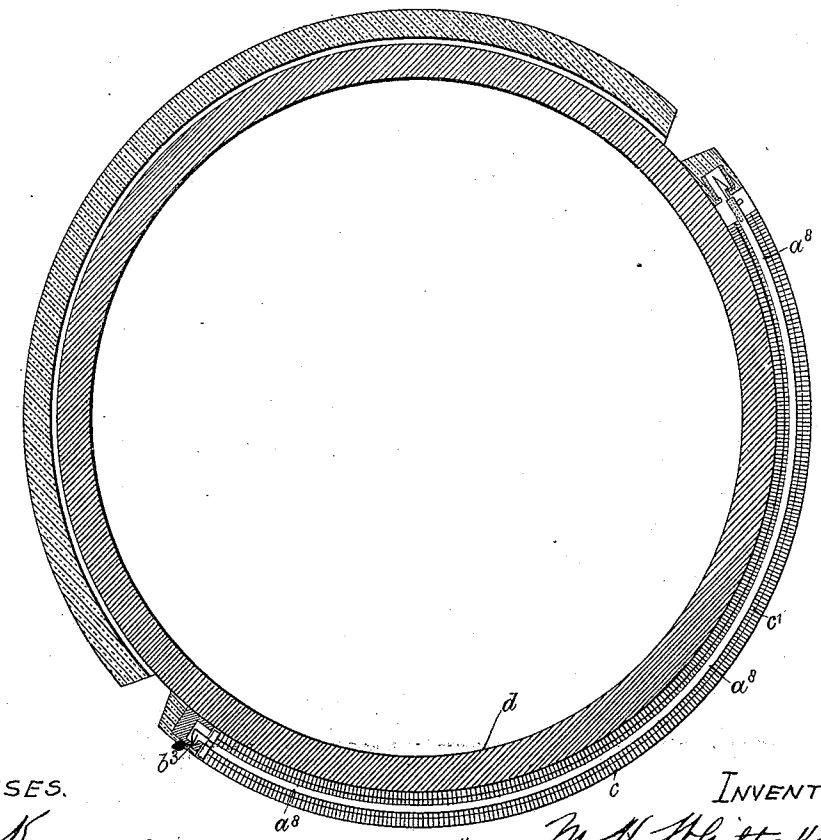

Fig. 5.

WITNESSES.

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UNITED STATES PATENT OFFICE.

MATTHEW HENRY WHITTAKER, OF HULL, ENGLAND, ASSIGNOR TO THE MERGENTHALER LINOTYPE COMPANY, OF NEW JERSEY.

MEANS FOR FACILITATING ALTERATIONS OF PRINTING-SURFACES.

SPECIFICATION forming part of Letters Patent No. 557,039, dated March 24, 1896.

Application filed August 18, 1894. Serial No. 520,715. (No model.) Patented in England July 8, 1891, No. 11,641.

To all whom it may concern:

Be it known that I, MATTHEW HENRY WHITTAKER, a subject of the Queen of the United Kingdom of Great Britain and Ireland, of Hull, in the county of York, England, have invented certain new and useful Improvements in Devices for Facilitating the Alteration of Portions of Printing-Surfaces, (for which I have obtained the following patent: Great Britain and Ireland, No. 11,641, dated July 8, 1891;) and I do hereby declare that the following is a full, clear, and exact description of the invention, reference being made to the accompanying drawings, which are to be taken as part of this specification and read therewith, and one which will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to permit the speedy change of a portion of a printing-form, and more particularly the stereotype forms or turtles, such as are used in rotary presses, and this to the end that late news or other important matters may be carried into the forms on the press without causing material delay or stoppage.

In carrying my invention into effect I provide the form with a cavity of any suitable area and seat therein a movable frame or holding device by which a portion of the matter is held in place, so that it may be quickly removed and replaced by other matter.

My invention is intended more particularly for use in connection with linotype matter—that is to say, with forms composed in whole or in part of linotypes or slugs, each bearing the characters to print an entire line—and the drawings represent such embodiment of the invention.

Figure 1 is a plan view of the frame or holder for the removable matter. Fig. 2 is a longitudinal section through a type-form in place on the cylinder of the press with my invention incorporated therein, section being taken on the line 2 2 of Fig. 3. Fig. 3 is a plan view of the matters represented in Fig. 2. Fig. 4 is a cross-section on the line 4 4 of Figs. 2 and 3. Fig. 5 is a section through the cylinder of a press at right angles to its axis, showing my invention incorporated in a form thereon. Fig. 6 is a perspective view of a linotype, curved for use on a cylinder, at right angles to its axis. Fig. 7 is a similar view of a linotype, adapted for application to a cylinder, in the direction of its axis.

In carrying my invention into effect I provide the form or printing-surface E, which in this instance is an ordinary stereotype or turtle, with a cavity of a size and shape corresponding to the matter which is to be made removable. In Figs. 2, 3 and 4, f represents this cavity, of suitable form to receive a single column of matter. In this cavity I seat a removable frame, such as shown in detail in Fig. 1, or of any equivalent construction. As here shown, the frame consists of two side bars, a and a', the former attached rigidly and the latter pivoted to a cross-bar b at one end, this bar being in turn provided with two tenons b'. These tenons are intended to be thrust into sockets g seated in the form at one end of the cavity, for the purpose of holding the frame down in place, as shown in Figs. 2 and 3.

In order to hold down the opposite end of the frame, its arms a and a' are each provided with a longitudinally-sliding bolt a^2, urged downward by a spiral spring a^3 and provided with thumb-pieces protruding through slots a^6. These thumb-pieces serve the double purpose of controlling the motion of the bolts and permitting them to be withdrawn by the finger. When the frame is in place in the form, the bolts are seated in sockets g, fixed in the form. The sockets at the two ends of the cavity are preferably formed in hard metal plates, which are fixed firmly in place by casting the form around them, or otherwise.

For use with the parts above described I provide linotypes c, such as shown in Figs. 6 and 7, with notches or cavities c' in their opposite ends to admit the side bars a and a' of the retaining-frame.

In order to insert the new or supplemental matter into the form, it is only necessary to unbolt the ends of the frame to raise the same, as indicated by dotted lines in Fig. 2, after which the linotypes are inserted, as shown, with the side bars seated in their ends, and the frame then closed down into the main form and bolted fast, as shown in Figs. 1, 2 and 3. In these figures the lines run circum-

ferentially of the cylinder, and the linotypes are curved accordingly.

If the dowels b' are made straight, as shown in the drawings, the sockets must be elongated vertically to admit them, and the form will not lock down tightly upon the surface of the cylinder. In such case I introduce under the supplemental form, between it and the cylinder, a spring-plate h, which serves to urge the supplemental form outward and keep its surface flush with that of the main form. It is to be understood, however, that the details may be modified at will, provided there is no departure from the general construction and mode of operation herein described.

If it be required to apply the linotypes lengthwise of the cylinder, I adopt the construction shown in Fig. 5. The linotypes in this case are made straight, as shown in Fig. 7, and secured in place in the cavity in the form or turtle by means of the rods or bars a^8, which have a curvature corresponding to that of the cylinder. They are seated in the ends of the linotypes and hooked at one end to engage sockets b^3 fixed in the form, while their opposite ends are provided with hooked latches, also engaging sockets in the form, to keep them in place.

It is manifest that the construction of the frame for holding the linotypes in the cavity of the form may be varied at will, and that the notches or openings in the linotypes may be made of any form and located in any manner necessary to co-operate with said frame.

Having thus described my invention, what I claim is—

1. In combination with the stereotype form having a cavity therein, linotypes notched at their ends, and the retaining-frame seated in said notches and locked within the form, substantially as described.

2. In combination with the form, having a cavity therein, the frame provided with the tenons and locking-bolts, and the linotypes, recessed to interlock the said frame.

In witness whereof I have hereunto affixed my signature, in the presence of two witnesses, this 25th day of May, 1894.

MATTHEW HENRY WHITTAKER.

Witnesses:
JNO. PRYBUR,
THOMAS WARDELL.