(No Model.)

C. T. MURRAY.

STEREOTYPE PLATE.

No. 605,894. Patented June 21, 1898.

Fig. 1.

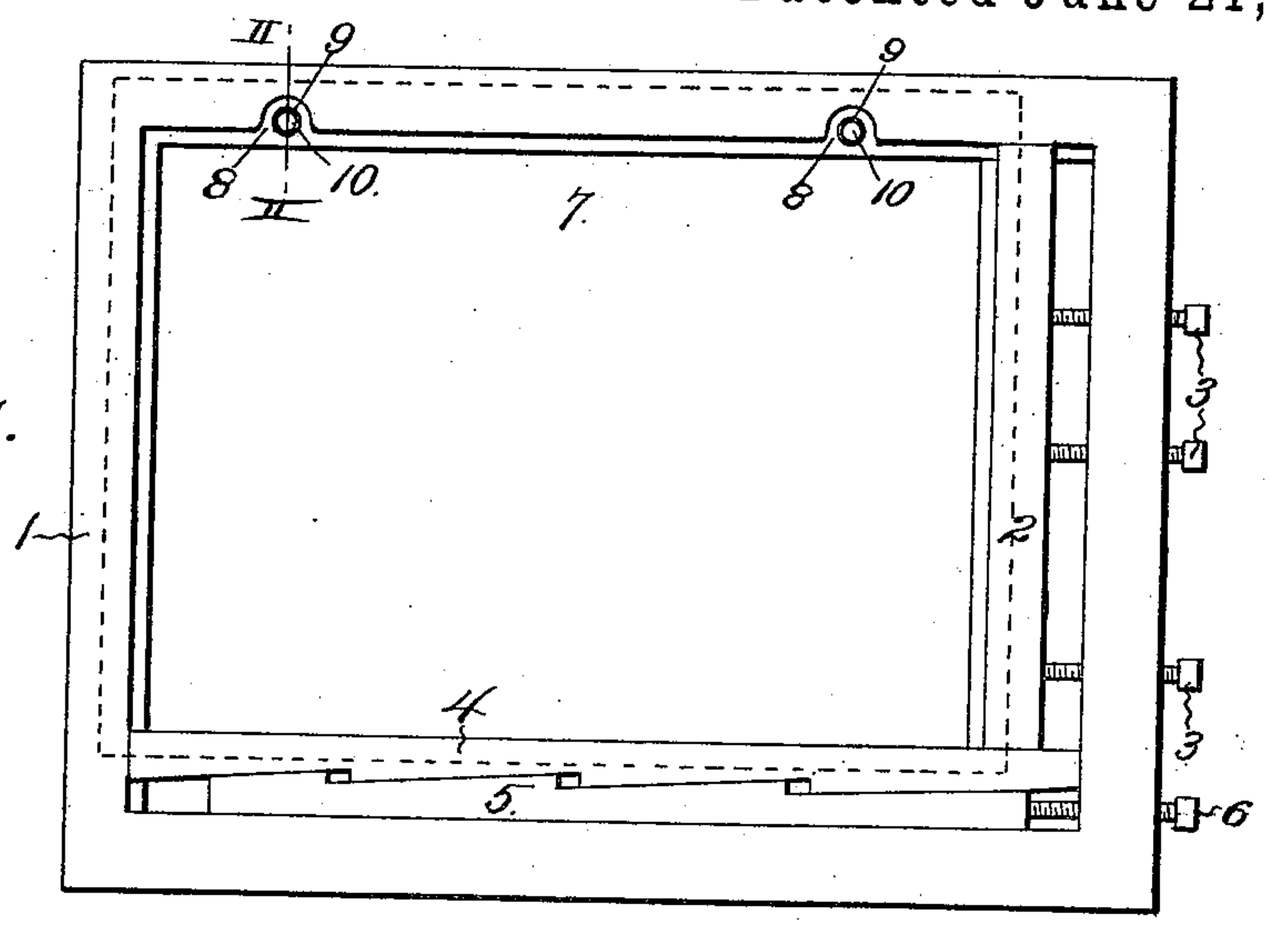


Fig. 2.

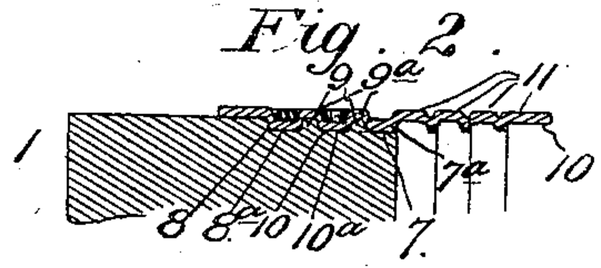


Fig. 3.

Fig. 4.

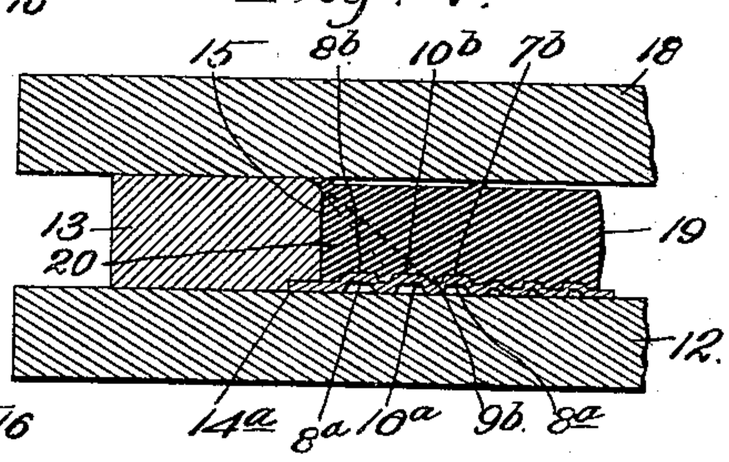


Fig. 5.

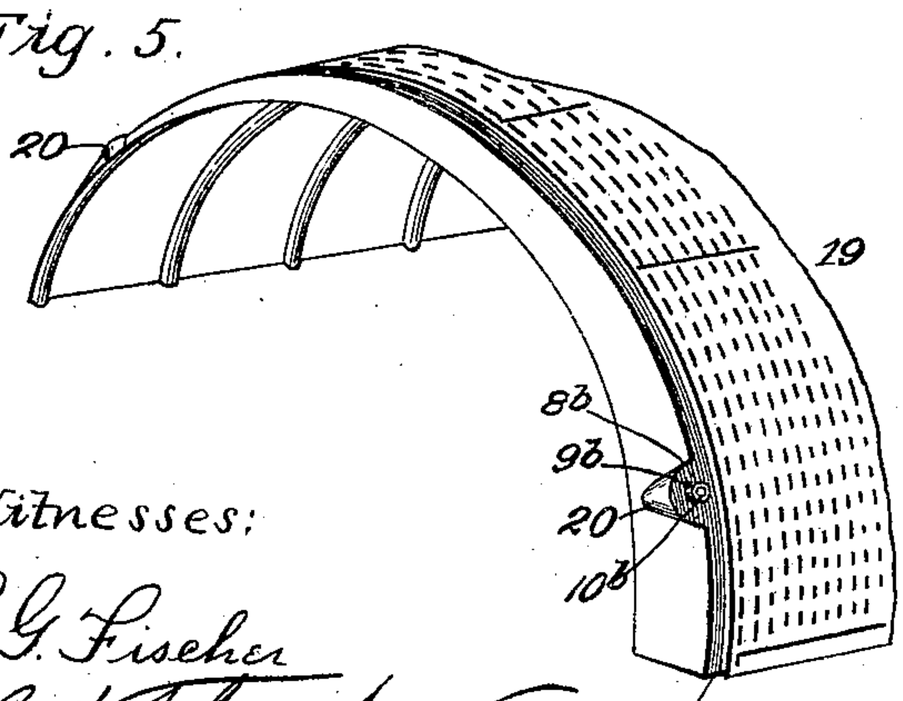
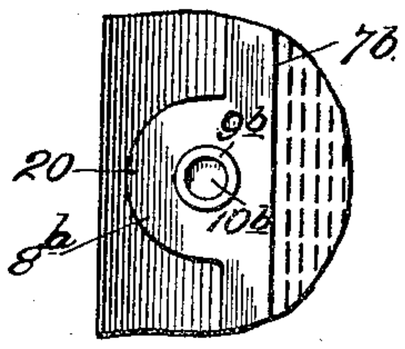


Fig. 6.



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UNITED STATES PATENT OFFICE.

CHARLES T. MURRAY, OF KANSAS CITY, MISSOURI.

STEREOTYPE-PLATE.

SPECIFICATION forming part of Letters Patent No. 605,894, dated June 21, 1898.

Application filed March 15, 1897. Serial No. 627,736. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. MURRAY, of Kansas City, Jackson county, Missouri, have invented certain new and useful Improvements in Stereotype-Plates, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to stereotype-plates.

The object of my invention is to produce a curved stereotype-plate provided with marks or cavities at one end or side for a purpose which will be hereinafter explained.

In order that the invention may be fully understood, reference is to be had to the said accompanying drawings, in which—

Figure 1 represents a plan view of a stereotype-chase, the dotted lines of said figure representing a matrix which is pressed thereon in the customary manner to receive the impression from the type and parts of the chase. Fig. 2 is an enlarged cross-section on the line II II of Fig. 1, said figure representing the matrix as pressed down upon the chase. Fig. 3 represents a plan view of a portion of the hinged section or matrix-holder of the casting-box, with the gages and matrix in position therein. Fig. 4 represents, on an enlarged scale, a cross-section taken on the line IV IV of Fig. 3, said section also including the part of the casting-box between which and the matrix the molten stereotype metal is poured to form the plate. Fig. 5 represents a perspective view of a portion of the stereotype-plate removed from the casting-box. Fig. 6 is a plan view of a part of the same on an enlarged scale.

In the said drawings, 1 designates a chase of the ordinary construction. 2 designates a cross-bar at one end thereof, which is adjustable to the length or width of the matrix to be formed—that is, of the page to be printed. 3 designates set-screws for adjusting said bar.

4 and 5 designate bars having inclined faces in engagement, and 6 a set-screw for adjusting one of them longitudinally, and thereby increasing or diminishing the width or length (according to the direction in which the type is set) of the chase.

The construction thus far described is common.

At three or all sides the chase is internally reduced in thickness or channeled, as shown at 7, and at one side or end, accordingly as the type is set in columns extending in one direction or the other, it is formed with a pair of semicircular channels 8, communicating with and of the same depth as the channel 7. Concentrically of said channels lugs 9 project upwardly to the same plane as the face of the chase, and said lugs are in turn provided with cavities 10, preferably circular, of a depth equal to said channel.

The matrix, of the customary material—paper—is pressed firmly against the chase in the usual manner, so as to receive a clear and distinct impression of all of the type, projections, and cavities of the chase within the margins of the matrix. Referring to Fig. 2, where a part of the matrix is shown after being so compressed, 11 designates the type impressions. 7^a designates the depressed portion fitting in and corresponding to the channel 7. 8^a designates depressed semicircular portions corresponding to and fitting in the semicircular channels 8. 9^a designates the upwardly-projecting circular portions corresponding to the lugs 9. 10^a designates the depressed circular portions fitting in the cavities 10 of said lugs 9. 12 designates the semicircular or approximately semicircular section of an ordinary stereotype casting-box used in newspaper-offices and which in practice is thrown to a horizontal position to receive the matrix. 13 designates the semicircular head-gage, which fits within said holder 12 in the customary manner. At the margin which contacts with the stereotype-plate it is beveled to an angle approximating forty-five degrees, so that the resultant casting will be of the same formation. This beveled formation of the head-gage is also common. The edge, which is beveled, is reduced in thickness to form a groove 14^a of equal thickness with and to receive the adjacent end of the matrix, which projects into said groove between the holder 12 and said head-gage, as shown clearly in Fig. 4. The matrix is pushed toward the gage until it is arrested by contact with the opposing wall of the groove, as shown in Fig. 4.

The beveled edge of the head-gage embodying my invention is provided with semicir-

cular cavities 15, equal in number and disposed properly to receive the semicircular ribs 8^a of the matrix, which ribs are nothing more nor less than the depressed portions 8^a of the matrix when inverted, in which position it is fitted in the holder in the customary manner.

From the foregoing it will be apparent that it is only necessary in placing the matrix provided with the ribs 8^a in position to see that the ribs enter the notches or cavities 15 of the head-gage, which of course requires no special effort or judgment on the part of the casting-box attendants. When it is so disposed, the side gages 16, which are of the customary construction and arrangement and therefore require no special description, do not and cannot overlap the matrix more than it should be overlapped at either margin—that is to say, sufficiently to secure it firmly, but not to cover the folio, heading, &c., to such extent as to prevent contact therewith of the fused stereotype metal which is poured or introduced between the matrix and plate 18 of the body of the casting-box, (not shown,) this operation, of course, taking place after the box is closed by folding against it the holder 12 in the usual manner. It may be stated here that the only change made in the casting-box as used by all newspaper plants is the notching of the head-gage. The casting thus formed is represented in Fig. 4 by the numeral 19. It is beveled where it contacts with the beveled edge of the head-gage, as shown in dotted lines in said figure and in full lines clearly in Fig. 5, and is provided with triangular-shaped lugs 20 where the molten metal enters the notches or cavities 15. The margin 7^b of the plate, the faces 8^b, the projection 9^b of the said lugs, and the holes or cavities 10^b of said projections correspond in location and form to the parts 7, 8, 9, and 10 of the chase, as will be readily seen. These holes or cavities 10^b play a very important part in that they determine the position of the stereotype-plate on a stereotype-plate-finishing machine of my invention, patented November 2, 1897, and numbered 592,813. The said machine is for the purpose of automatically "finishing" curved stereotype-plates ready for the printing-press and embodies, among other things, a rotary cylinder, upon which the stereotype-plates must be clamped in a certain position before the finishing operation can begin. It must, as stated, be clamped in a certain position, and to accomplish this the machine embodies a gage mechanism adapted to register with the indicating-points in the shape of marks, cavities, or projections, as explained, formed on the stereotype-plate, and thereby insure that the latter is accurately positioned on the rotatable cylinder.

Having thus described the invention, what I claim as new, and desire to secure by Letters Patent, is—

As a new article of manufacture, a curved stereotype-plate provided with one or more lugs projecting outwardly from its edge, and pins provided with cavities projecting upwardly from said lugs, substantially as described.

In testimony whereof I affix my signature in the presence of two witnesses.

CHARLES T. MURRAY.

Witnesses:

M. R. REMLEY,

G. Y. THORPE.