(No Model.) 3 Sheets—Sheet 1.

S. H. HORGAN.

PRINTING BLOCK.

No. 478,750. Patented July 12, 1892.

Fig 1.

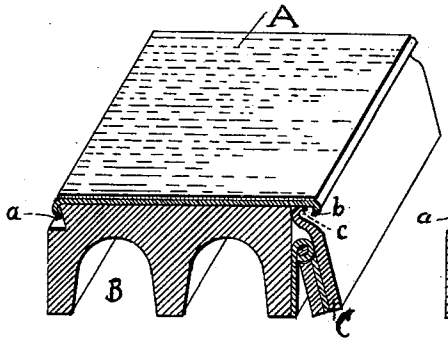


Fig 2.

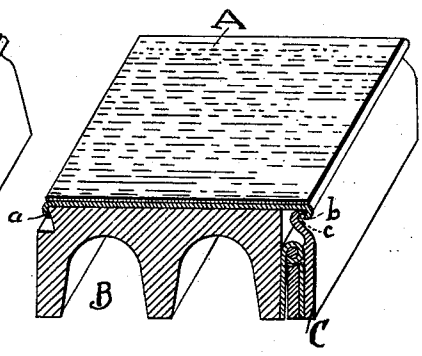


Fig 3.

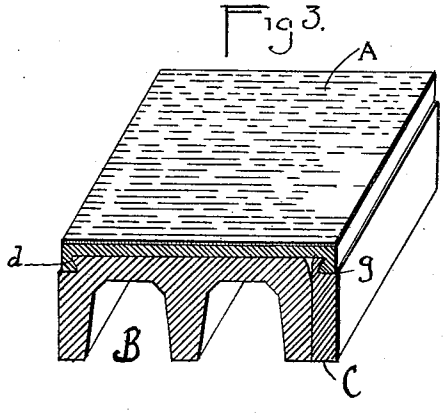
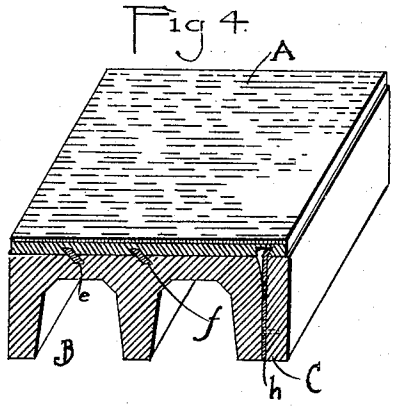


Fig 4.



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(No Model.) 3 Sheets—Sheet 2.

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PRINTING BLOCK.

No. 478,750. Patented July 12, 1892.

Fig. 5.

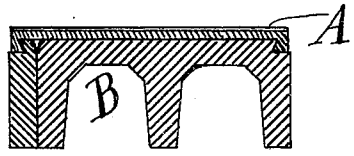


Fig. 6.

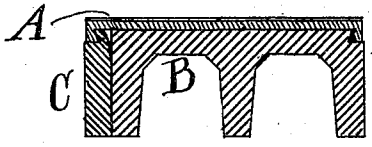


Fig. 7.

Fig. 8.

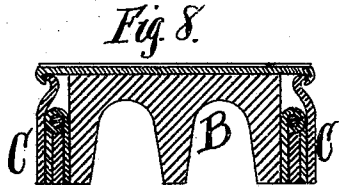
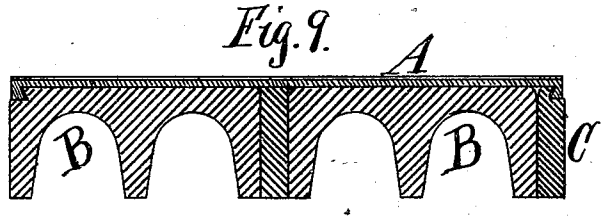


Fig. 9.



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(No Model.) 3 Sheets—Sheet 3.

S. H. HORGAN.

PRINTING BLOCK.

No. 478,750. Patented July 12, 1892.

Fig. 10.

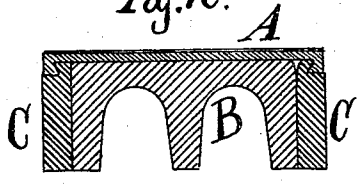


Fig. 11.

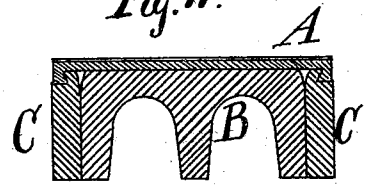


Fig. 12.

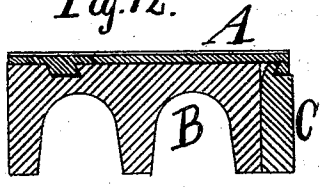
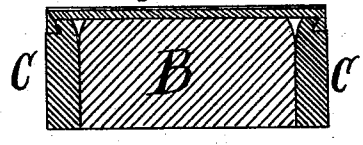


Fig. 13.



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UNITED STATES PATENT OFFICE.

STEPHEN H. HORGAN, OF JERSEY CITY, NEW JERSEY.

PRINTING-BLOCK.

SPECIFICATION forming part of Letters Patent No. 478,750, dated July 12, 1892.

Application filed October 2, 1889. Renewed January 11, 1892. Serial No. 417,634. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN H. HORGAN, of Jersey City, in the county of Hudson and State of New Jersey, have invented a certain new and useful Improvement in Printing-Blocks, of which the following is a specification.

I will describe the improvement in detail, and then point out the novel features in claims.

In the accompanying drawings, Figure 1 is a perspective view of a printing-block embodying my improvement. Fig. 2 is another view of the same, and Figs. 3 to 13 are views of other styles of printing-blocks embodying my improvement.

Similar letters of reference designate corresponding parts in all the figures.

A designates a printing plate or shell. It may be made of any suitable material—as, for instance, type-metal, aluminium, celluloid, or vulcanized rubber. In the forms illustrated in Figs. 1 and 2 the outer edges of this plate or shell are made to extend downward and inward, as at *a b*.

The base for the plate or shell is shown as made in two portions B C. These portions are shown as hinged together in Figs. 1 and 2, or they may be made capable of separation from each other, as shown in Figs. 3 and 4. Where the two portions of the base are hinged together it will be seen that when the upper part of the portion C is thrown back against the portion B, as shown in Fig. 1, the plate or shell is capable of being readily applied to or removed from the base from above. Now when the plate or shell is placed on the base and pressure is applied to the base when placed in position between the column-rules the hooked-shaped part *c* of the portion C will take hold of the end *b* and draw the printing plate or shell sidewise and hold it down tightly in place. In practice with this form of base I prefer to so make the plate or shell that when lateral pressure is applied to the base the base and plate or shell will fit tightly even before the lower ends of the portions B and C touch each other.

In Fig. 3 the side of the portion B adjacent to the portion C is slightly rounded or shaved off at its upper end, and since in practice I prefer to make the plate or shell so that when it is applied to the base the base and plate or shell will fit tightly even before lateral pressure is applied to the base when lateral pressure is applied to the base the plate or shell will be drawn sidewise and held down tightly in place. It will be readily understood that the same remarks apply to the form of block illustrated in Fig. 4. Of course in the forms of base illustrated in Figs. 3 and 4 the portion C might be rounded at the upper end of the side adjacent to the portion B, as shown in Figs. 6 and 12, or the portions B and C might both be slightly rounded or shaved off at the upper ends of the sides adjacent to each other, as shown in Figs. 5, 9, 10, 11, and 13.

It will be clearly understood that in every form of block the object intended to be accomplished is the drawing of the plate or shell sidewise and the holding of the plate or shell down tightly in place by the application of pressure to the sides of the base.

Where a plate or shell of heavy material—such, for instance, as type-metal—is employed, the portion B of the base may be provided with a groove *d*, in which one of the tracks of the plate or shell may travel. (See Fig. 3.) Inasmuch, however, as one of my objects is to enable the plate or shell to be made as light as possible, I may use some light and flexible material—such, for instance, as celluloid—and simply have the ends of the plate or shell extended downward and inward, as in Figs. 1 and 2, or I might, if preferred, glue or otherwise secure a plate or shell of light material, as celluloid, to a backing of tin, for instance, or some other suitable material and have the material which forms the backing extend downward and inward at its ends.

It might be desirable in some instances to mount the plate or shell on a backing, say, of wood or a backing composed of two or more thin sheets of veneer or some other like material. In such cases flanges, feathers, or projections *e f*, Fig. 4, may be made integral with the portion B of the base or may be secured thereto in any suitable manner, and these flanges, feathers, or projections will fit into corresponding recesses in the plate or shell or backing thereof, and so assist in holding the plate or shell and base together. In such case the groove *d* and the track which fits in it,

Fig. 3, may be dispensed with. These flanges, feathers, or projections *e f* should of course be inclined outwardly at a suitable angle, and I prefer to make this angle less than forty-five degrees. The portion C of the base is so shaped at its upper outer end that it will assist in drawing the plate or shell sidewise and hold it in place. I may, for instance, form the upper end into the shape shown at *c*, Figs. 1 and 2, or I may simply groove out the upper outer end, as at *g*, Fig. 3, or rivet or otherwise secure a strip *h*, Fig. 4, to the portion C and bend this strip outwardly at an angle toward the side at its upper end.

The base B C will preferably be made slightly wider than the plate or shell A, so that the column-rules will not press on the plate or shell when in the type-form. Of course the number of pieces of which the base is composed may be varied, and in Figs. 7, 9, 10, 11, and 13 I have shown the base as made in more than two pieces. If preferred, the two side portions of the base might be formed like the portion C, as shown in Figs. 8, 10, 11, and 13. If for any reason the plate or shell should work loose on the base, (illustrated in Figs. 3 and 4,) all that would be necessary to remedy the defect would be to insert a strip of paper or other material of proper size and thickness between the parts B and C.

By my improvement I produce a printing-block having many advantages over the printing-blocks in ordinary use. The printing plate or shell of my block may be attached to and detached from the base from above, thereby obviating the necessity for removing the base from position between the column-rules in order to attach or detach a plate or shell. I also produce a base which upon lateral pressure being applied thereto will tend to draw the plate or shell sidewise and to hold it down tightly in place. I thereby obviate the objectionable springing upward of the plate or shell or the loosening of the plate or shell. As the upper surface of my base supplies a solid rest for the printing plate or shell, I am enabled to employ a very light and thin printing-plate in a very satisfactory manner.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a printing-block, a base provided with means at its outer sides for holding a plate or shell, said base being made in more than one portion, one of said portions at or near the upper end of the side next the adjacent portion receding away from said adjacent portion, substantially as specified.

2. In a printing-block, a base made in more than one portion, two of said portions being hinged together at sides adjacent to each other, so that lateral pressure upon the base will cause the lower sides of the portions of the base adjacent to each other to rest against each other, substantially as specified.

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