No. 760,279. PATENTED MAY 17, 1904.

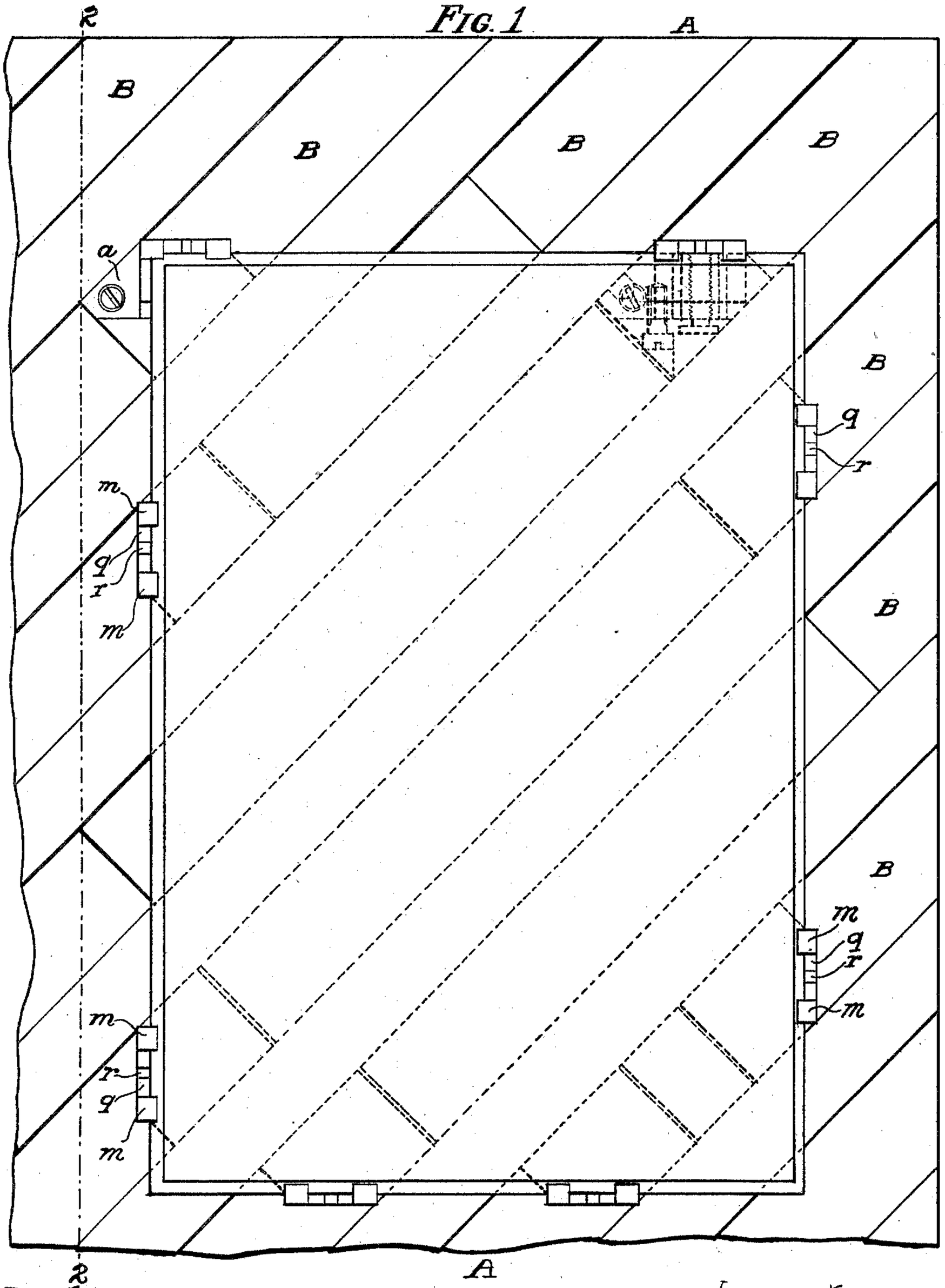
W. S. TIMMIS.

DEVICE FOR HOLDING PRINTING PLATES.

APPLICATION FILED JUNE 26, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

FIG. 1



Witnesses.
Wm N. MacLean
Peter A. Ross

Inventor:
Walter S. Timmis
By Edmond Cowgen Brown
Attorney

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2

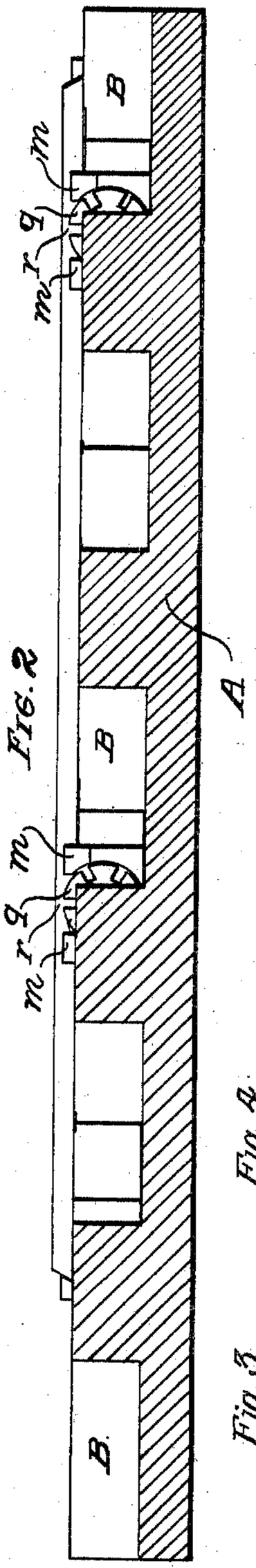


Fig. 7

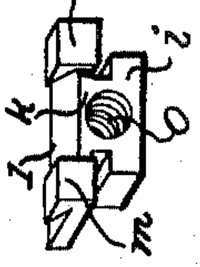


Fig. 6

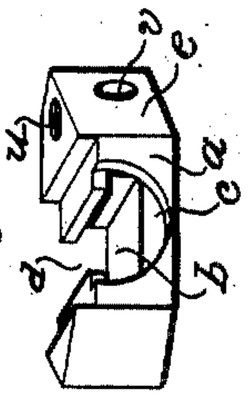


Fig. 9

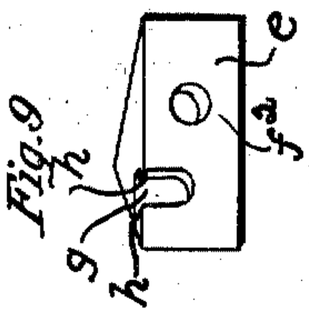


Fig. 5

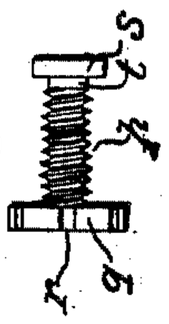


Fig. 12

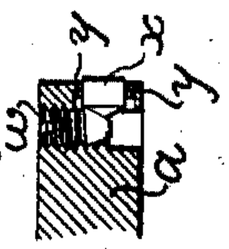


Fig. 4

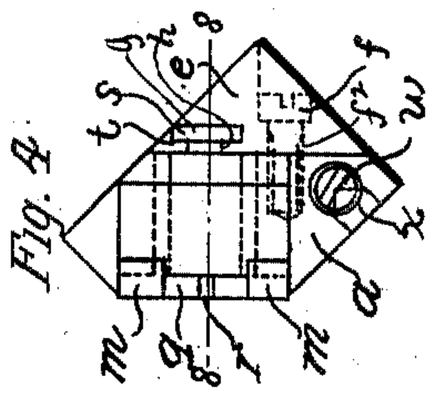


Fig. 8

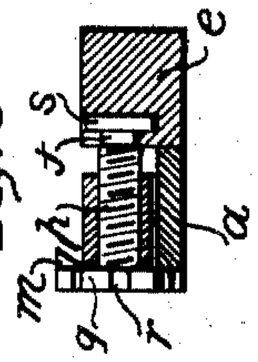


Fig. 3

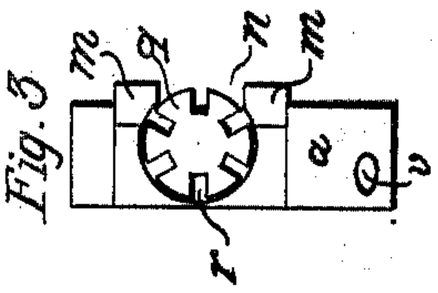
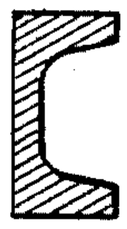


Fig. 11

Fig. 10



Witnesses.
Wm. N. MacLean
Peter A. Ross

Inventor:
Walter S. Timmis
By Edmund Cougar Brown
Attorneys

No. 760,279. Patented May 17, 1904.

UNITED STATES PATENT OFFICE.

WALTER S. TIMMIS, OF CRANFORD, NEW JERSEY.

DEVICE FOR HOLDING PRINTING-PLATES.

SPECIFICATION forming part of Letters Patent No. 760,279, dated May 17, 1904.

Application filed June 26, 1902. Serial No. 113,197. (No model.)

To all whom it may concern:

Be it known that I, WALTER S. TIMMIS, a citizen of the United States, and a resident of Cranford, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Devices for Holding Printing-Plates, of which the following is a specification.

My invention relates to printers' blocks for holding electrotypes and other printing-plates in a form while being printed from and for adjusting them laterally therein, so as to bring them exactly into the desired position for printing upon a predetermined portion of a sheet of paper or other material.

The object of my invention is to provide means for securely holding an electrotype or other printing-plate, which means shall be capable of being quickly, easily, and firmly secured at any desired location in the form and which shall permit of the accurate and easy adjustment of the printing-plate and shall permit of the edges of adjacent plates approaching more nearly together than has heretofore been possible, which means shall also be durable, compact, easily operated, and possess other advantages hereinafter pointed out or referred to.

The invention consists in the novel construction, combination, and arrangement of a bed or base plate, a block, means for securing said block to said base-plate, a sliding jaw and means for operating the same, with other parts and devices, as hereinafter and in the accompanying drawings more particularly set forth.

In the accompanying drawings, Figure 1 is a plan view of an electrotype or other printing-plate, being shown held by devices constructed according to my invention. Fig. 2 is a vertical section on the line 2 2 of Fig. 1. Fig. 3 is a front view of the devices immediately concerned in the holding of the plate. Fig. 4 is a plan view of Fig. 3. Fig. 5 is a view of the adjusting-screw forming part of the invention. Fig. 6 is a perspective view of the block proper. Fig. 7 is a perspective view of the sliding piece. Fig. 8 is a section on the line 8 8 of Fig. 4. Fig. 9 is a perspective view of the rear plate, and Figs. 10, 11, and 12 are detail views hereinafter explained.

In carrying my invention into effect I provide a bed or base plate A, having grooves B running slantingly across the same, the walls of which are preferably vertical, or approximately so. In these grooves may be placed any desired number of the plate-holding devices which form a part of the invention. (Shown in Figs. 3 and 4.) These devices comprise a number of parts, being constructed as follows: I provide a hollowed block or casing *a*, which is of somewhat irregular form in plan view, as shown in Fig. 4. Through this block passes a longitudinal bore or opening *b*, which is rectangular in cross-section during the greater portion of its length, but the front end of which is enlarged into a circular opening *c*. The bore *b* is open at the top, this opening constituting a slot *d*. To the rear of the block *a* a triangular rear block *e* is secured by a screw *f*. This rear block *e* is particularly shown in Fig. 9. It is provided with an opening or recess *g*, a portion of which is narrower than the rest, forming a flange or ridge *h*, (see Figs. 4 and 9,) and is perforated at f^2 to permit the passage of the screw *f*. A sliding piece is also provided, which is shown particularly in Fig. 7. The lower part *i* is adapted to fit into the bore *b* of the block *a*, an upright neck *k* is adapted to pass through the slot *d*, and a flat upper portion *l* is adapted to slide upon the top of the block *a*. The front end of the upper portion *l* is provided with two upwardly-projecting flanges or hooks *m*, which also extend out forward beyond the lower part *i* and between which is a recess *n*. (See Fig. 3.) Longitudinally extending through the lower portion *i* is a screw-threaded aperture *o*. A screw device for moving the sliding piece is also provided, which is particularly shown in Fig. 5. This device comprises the screw *p*, the disk *q* at the front end, provided with notches *r*, and the disk *s*, smaller than the disk *q*, at the rear end. A groove or annular recess *t* is provided between the end of the screw-threads and the disk *s*, as shown in Fig. 5.

When the parts above described are assem-

bled, the screw *p* is passed into the screw-threaded opening *o* of the sliding piece, which is then inserted into the block *a*. The disk *q* then lies in the recess *c*, and the end of the screw upon which has been placed the disk *s* lies in the opening *g* in the block *e*, the flange or ridge *h* of the plate *e* lying in the groove *t* at the end of the screw. The blocks *a* and *e* are then secured together by the screw *f*. The sliding piece and other parts are then in the positions shown in Figs. 3, 4, and 8.

The devices which have just been described constitute when assembled one of the blocks for holding and adjusting a printing-plate, which are, as stated above, placed in the grooves B of the plate A. The means for securing them at any particular point in said grooves is as follows: In the block *a* is provided a screw-threaded opening *u*, which passes downward through the block and which communicates near its lower end with a lateral opening *v*, which is not screw-threaded. A screw *w* is inserted in the opening *u* and a plug *x* in the opening *v*. The plug *x* is provided with studs *y*, which engage with the somewhat contracted orifice of the opening *v* and prevent the falling out of the plug, allowing it, however, to protrude to a certain extent for the purposes hereinafter pointed out. The lower end of the screw *w* and the inner end of the plug *x* are tapered off and are adapted to lie contiguous to and engage with each other, as shown particularly in Fig. 12.

The operation of my invention is as follows: A suitable number of the devices are placed in the grooves B of the base-plate A in position to hold the edges of an electrotype or other printing-plate and are secured therein by screwing down the screw *w*, the tapering end of which acts upon the like tapering end of the plug *x* and forces the same outward against the side of the groove, securely locking the block. The spaces between blocks may be filled in by the devices shown in Figs. 10 and 11, which are arched pieces of metal or other suitable material and which merely serve as supports for the portions of the electrotype or other printing-plate which lie over portions of said grooves B not occupied by the blocks. The edges of the printing-plate are then placed on the flat top portions *l* of the sliding pieces, the beveled edges of the plate being securely held by the undercut rear sides of the hooks *m*. The plate may then be adjusted laterally with great facility and with perfect accuracy by turning the screws of the various blocks, of course slackening the screws of the blocks on the side of the plate toward which it is desired to move the plate before substantially moving forward the screws of the blocks on the other side. The screws are turned by inserting any suitable lever device through the recess *n* between the hooks *m* and into the notches *r* of the disk *q*. The thrust of the screw when the sliding piece is moved backward is taken up by the disk *s* acting upon the plate *e*.

The simplicity, compactness, strength, and ease of operation of my invention are self-evident. The use of a grooved base-plate or bed renders the use of furniture or other devices for filling up the printing-form unnecessary. The sliding of the blocks in the diagonal grooves of the base-plate provides a simple and rapid coarse adjustment for the printing-plate, while after the blocks are secured in the grooves a delicate fine adjustment may be obtained by the manipulation of the sliding pieces, as above described.

I wish to call particular attention to one important advantage, which is that owing to the construction of the front part of the sliding piece the hooks *m* and the disk *q* may be placed in the same vertical plane instead of in adjacent planes, as heretofore, thus permitting the edges of two adjacent printing-plates held by oppositely-facing blocks to approach much nearer to each other than could otherwise be the case and permitting very narrow margins to be produced when desired, an advantage the importance of which will be readily appreciated by those skilled in the art.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is as follows:

1. In a printing-plate holder, the combination with a bed or base-plate provided with grooves running slantingly with reference to the sides of the base-plate; of a printer's block adapted to be secured in one of said grooves, comprising the block proper, a sliding piece adapted to engage with a printing-plate, and means for moving said sliding piece; the front edges of said sliding piece and of said means for moving the same being capable of being placed in approximately the same vertical plane.

2. In a printing-plate holder, the combination with a bed or base-plate provided with grooves running slantingly with reference to the sides of the base-plate; of a printer's block adapted to be secured in one of said grooves, comprising the block proper, a sliding piece provided with hooks or jaws adapted to engage with a printing-plate, and means for moving said sliding piece; said hooks or jaws being capable of being placed in approximately the same vertical plane as the front end of said means for moving said sliding piece.

3. In a printing-plate holder, the combination with a bed or base-plate provided with grooves running slantingly with reference to the sides of the base-plate; of a printer's block adapted to be secured in one of said grooves, comprising the block proper, a sliding piece provided with a pair of hooks or jaws adapted to engage with a printing-plate, and means for moving said sliding piece; said hooks or jaws being capable of being placed in approximately the same vertical plane as the front end

of said means for moving said sliding piece and being separated sufficiently from each other to permit access between them to the said moving means for the purpose of operating same.

4. In a printing-plate holder, the combination with a bed or base-plate provided with grooves running slantingly with reference to the sides of the base-plate; of a printer's block adapted to be secured in one of said grooves, comprising the block proper, a sliding piece adapted to engage with a printing-plate, means adapted to move said sliding piece comprising a screw revolubly secured to the block proper and means on the end of said screw whereby the same may be revolved, said means being capable of being placed in approximately the same vertical plane as the front of the said sliding piece.

5. In a printing-plate holder, the combination with a bed or base-plate provided with grooves running slantingly with reference to the sides of the base-plate; of a printer's block adapted to be secured in one of said grooves, comprising the block proper, a sliding piece provided with hooks or jaws adapted to engage with a printing-plate, and means for moving said sliding piece comprising a screw revolubly secured to the block proper and means on the end of said screw whereby the same may be revolved; said means being capable of being placed in approximately the same vertical plane as the front end of the sliding piece.

6. In a printing-plate holder, the combination with a bed or base-plate provided with grooves running slantingly with reference to the sides of the base-plate; of a printer's block adapted to be secured in one of said grooves, comprising the block proper, a sliding piece provided with hooks or jaws adapted to engage with a printing-plate, and means for moving said sliding piece comprising a screw revolubly secured to the block proper and means on the end of said screw whereby the same may be revolved; said hooks or jaws being capable of being placed in approximately the same vertical plane as the means for revolving said screw and separated sufficiently from each other to permit access between them to said screw-revolving means for the purpose of operating same.

7. In a printing-plate holder, the combination with a bed or base-plate provided with grooves running slantingly with reference to the sides of the base-plate; of a printer's block adapted to be secured in one of said grooves, comprising the block proper, provided with a notched or apertured rear plate or block, a sliding piece adapted to engage with a printing-plate, and means for moving said sliding piece, comprising a screw revolubly secured to said rear plate or block, and means on said screw for revolving the same; said means being capable of being placed in approximately the same vertical plane as the said hooks or jaws.

8. In a printing-plate holder, the combination with a bed or base-plate provided with grooves running slantingly with reference to the sides of the base-plate; of a printer's block adapted to be secured in one of said grooves, comprising the block proper, provided with a notched or apertured rear plate or block, a sliding piece adapted to engage with a printing-plate, and means for moving said sliding piece, comprising a screw revolubly secured to said rear plate or block, and means on said screw for revolving the same; said means being capable of being placed in approximately the same vertical plane as the said hooks or jaws, and the said hooks or jaws being separated sufficiently from each other to permit access between them to the said moving means for the purpose of operating same.

9. In a printing-plate holder, the combination with a bed or base-plate provided with grooves running slantingly with reference to the sides of the base-plate; of a printer's block adapted to be secured in one of said grooves, comprising the block proper, provided with a notched or apertured rear plate or block; a sliding piece provided at its forward corners with hooks or jaws, separated laterally from each other and projecting forward beyond the end of the lower part of the sliding piece; and a screw passing through said sliding piece and revolubly secured to said rear plate or block, said screw being provided upon its front end with means for revolving the same; the said projecting hooks or jaws being capable of being placed in approximately the same vertical plane as said screw-revolving means.

10. In a printing-plate holder, the combination with a bed or base-plate provided with grooves running slantingly with reference to the sides of the base-plate; of a printer's block adapted to be secured in one of said grooves, comprising the block proper, having a bore or hollow; a rear plate or block; a sliding piece, adapted to engage with a printing-plate, the lower part of which lies in said bore and the upper part of which slides on the top of said block proper; and a screw adapted to move said sliding piece revolubly secured to said rear plate and provided with means for revolving the same; the front edges of said sliding piece and of said screw-revolving means being adapted to be placed in approximately the same vertical plane.

11. In a printing-plate holder, the combination with a bed or base-plate provided with grooves running slantingly with reference to the sides of the base-plate; of a printer's block adapted to be secured in one of said grooves, comprising the block proper, having a bore or hollow; a rear plate or block; a sliding piece the lower part of which lies in said bore and the upper part of which is provided with hooks or jaws adapted to engage

with a printing-plate; and a screw adapted to move said sliding piece revolubly secured to said rear plate or block and provided with means for revolving the same, the said hooks or jaws and the said screw-revolving means being capable of being placed in approximately the same vertical plane and the said hooks or jaws being separated from each other sufficiently to permit access to the screw-moving means below for the purpose of operating same.

12. In a printing-plate holder, the combination with a bed or base-plate provided with grooves running slantingly with reference to the sides of the base-plate; of a printer's block adapted to be secured in one of said grooves, comprising the block proper, having a bore or hollow; a rear plate or block; a sliding piece the lower part of which lies in said bore and the upper part of which is provided with hooks or jaws adapted to engage with a printing-plate; and a screw adapted to move said sliding piece revolubly secured to said rear plate or block and provided with means for revolving the same comprising a disk provided with teeth or notches; the said hooks or jaws and the said screw-revolving means being capable of being placed in approximately the same vertical plane and the said hooks or jaws being separated from each other sufficiently to permit access to the screw-moving means below for the purpose of operating same.

13. In a printing-plate holder, the combination with a bed or base-plate provided with grooves running slantingly with reference to the sides of the base-plate; of a printer's block adapted to be secured in one of said grooves, comprising the block proper, a rear plate, a sliding piece adapted to engage with a printing-plate, and means for moving said sliding piece, comprising a screw revolubly secured to said rear plate, means for revolving said screw, and means operated by said screw adapted to be pressed against a side of a groove.

14. In a printing-plate holder, the combination with a bed or base-plate provided with grooves running slantingly with reference to the sides of the base-plate; of a printer's block adapted to be secured in one of said grooves, comprising the block proper, provided with a notched or apertured rear plate, a sliding piece adapted to engage with a printing-plate, and means for moving said sliding piece, comprising a screw, a diminished end of which passes through the aperture of said rear plate and bears outside thereof a disk or washer, and provided at its other end with means whereby said screw may be revolved.

Signed at New York city, in the county of New York and State of New York, this 13th day of June, A. D. 1902.

WALTER S. TIMMIS.

Witnesses:
H. V. LOUGH,
SIDNEY S. GROTTA.