No. 772,453. PATENTED OCT. 18, 1904.

F. A. BERRY.

STEREOTYPE BLOCK.

APPLICATION FILED JULY 27, 1904.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

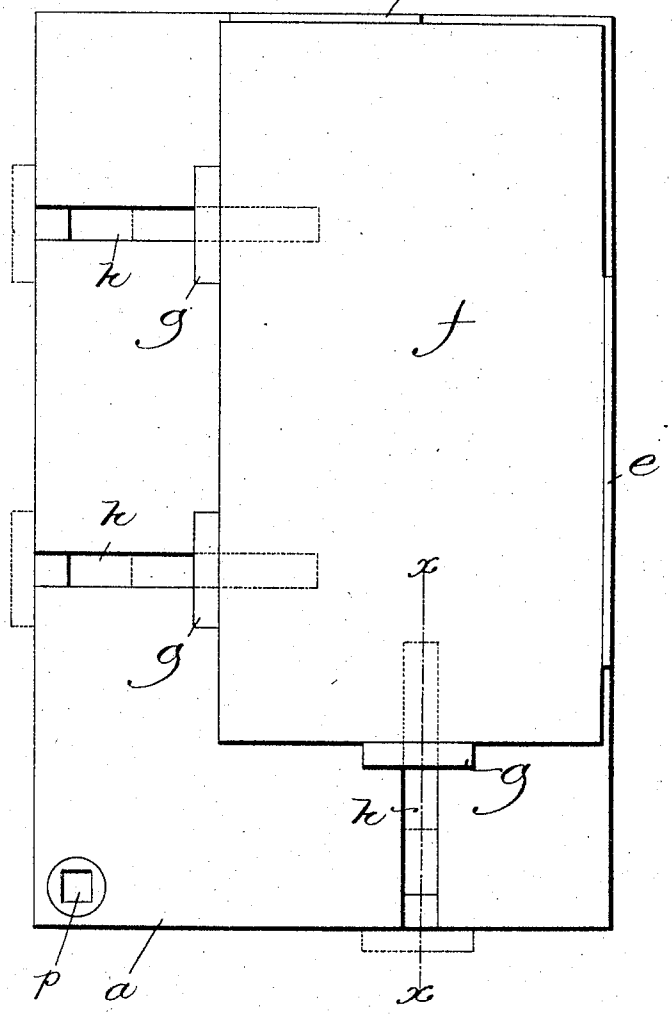
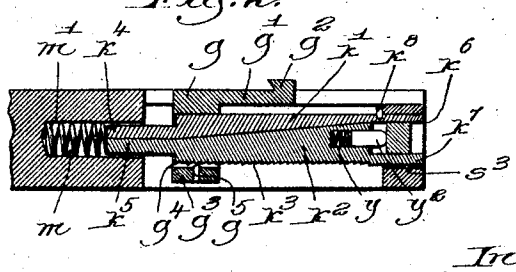


Fig. 2.



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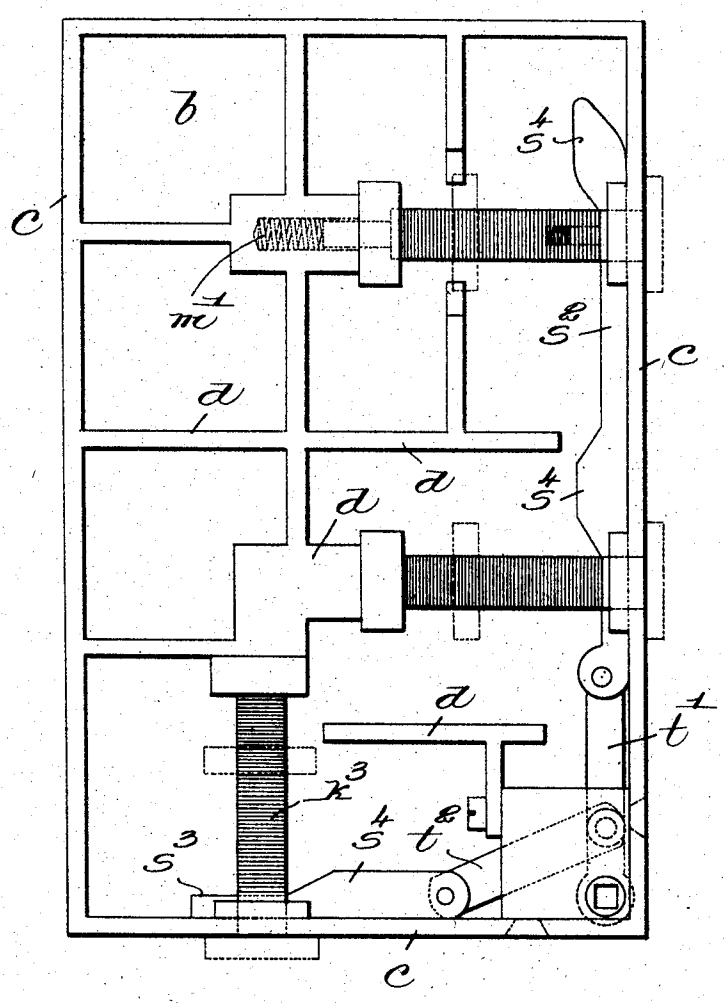
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STEREOTYPE BLOCK.

APPLICATION FILED JULY 27, 1904.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.



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No. 772,453. Patented October 18, 1904.

UNITED STATES PATENT OFFICE.

FRANCK A. BERRY, OF MEDFORD, MASSACHUSETTS, ASSIGNOR TO THE TYMPALYN COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

STEREOTYPE-BLOCK.

SPECIFICATION forming part of Letters Patent No. 772,453, dated October 18, 1904.

Application filed July 27, 1904. Serial No. 218,332. (No model.)

To all whom it may concern:

Be it known that I, FRANCK A. BERRY, a citizen of the United States, residing at Medford, county of Middlesex, and State of Massachusetts, have invented an Improvement in Stereotype-Blocks, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

The present invention relates to stereotype-blocks for holding stereotype-plates, such as are used by printers in book and other like presses, and is an improvement upon my invention described and claimed in Patent No. 764,517, granted July 5, 1904.

The object of the present invention is to improve the means for clamping or locking the dog and carrier together preliminary to the clamping or locking of the dog against the stereotype-plate, and the invention will be more fully defined in the appended description and claims.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 shows a top plan view of the block with a plate in position thereon and held by the clamping-dogs. Fig. 2 is a partial sectional view of the block shown in Fig. 1, taken on the line x x, with the clamping-dog moved backwardly. Fig. 3 is a bottom plan view of the stereotype-block, showing the construction of the parts.

The general construction and operation of the device is the same as that set forth in the aforesaid Patent No. 764,517, to which reference is hereby made for a more complete description.

The block a of the usual oblong shape and preferably formed from a metal casting comprising a top b, with the plate-holding flanges e, side flanges c, and reinforcing strengthening-ribs d, in which ribs and flanges operating parts are seated, the cam-bars s^2 s^3, with the carrier-operating cam-surfaces s^4 thereon, the post p for operating the cam-bars and connected therewith by means of the links t' t^2, are all as shown in the said Patent No. 764,517. The block a is provided with a series of slots h, in which the clamping-dogs g are located and slide. The slots and clamping-dogs are herein shown as three in number, two clamping-dogs being arranged at the long edge of the plate and another at the short edge, although this arrangement may be varied as required.

In the aforesaid Patent No. 764,517 carriers were provided for each dog, the dogs were given a preliminary independent adjusting movement on the carriers to bring them into contact with the edge of the stereotype-plate, and then the carriers were moved simultaneously, the preliminary movement of the carriers causing the clamping-dogs to tip or assume an inclined position, whereby they engaged with and became locked or clamped to the carriers, and the continued movement of the carrier then locked or clamped the dogs against the edge of the stereotype-plate. In the present invention I do away with any tipping or inclining of the clamping-dogs with respect to the carrier.

The clamping-dogs g comprise an arm g', resting in the groove h and flush with the top of the block and provided with a head g^2, projecting above the block and formed with an inclined face to come in contact with the edge of the stereotype-plate. The dogs are also provided with a depending shank g^3, having an opening g^4 therethrough.

The carrier for each dog is made expansible, so as to expand and grip the opposite sides of the opening g^4 in the dog without tipping or inclining the dog, but locking or clamping the dog and carrier firmly together, so that upon the continued movement of the carrier the dog will move therewith and lock or clamp the stereotype-plate. The carrier is herein shown as composed of two oppositely-wedge-shaped parts k' k^2, and they are preferably vertically arranged. When the parts of the carrier are in their normal contracted position, as shown in Fig. 2, the opening g^4 in the dog is of such size that the dog may be slipped easily back and forth over the carrier, and in this way the preliminary adjusting movement of the dog to bring it up against the edge of

the stereotype-plate is given. In order to lock or clamp the dog to the carrier, one of the wedge-shaped parts of the carrier is given a sliding movement, which serves to expand the carrier until the parts of the carrier grip tightly the walls of the opening g^4 in the dog. To insure the gripping of the dog by the carrier, I preferably form one clamping-surface with teeth or corrugations k^3 and form in the corresponding face of the opening g^4 in the dog a coöperating part, herein shown as a tooth g^5. The parts of the carrier are preferably reduced at the inner ends k^4 k^5 and enter and slide in a bearing-opening m in the depending flange d. Located in the opening m is a coiled spring n, which serves to retract both parts of the carrier when the dogs are unlocked or unclamped from the stereotype-plate. The opposite ends of the parts of the carriers are also preferably reduced at k^6 k^7 and slide in bearings in the side flange c. As in the aforesaid Patent No. 764,517, I provide for a yielding connection between the carriers and the operating cam-bars. This connection consists in a small spring y, seated in a recess in the end of the carrier and bearing against a block y^2, which projects in contact with the cam-bar s^3 or s^2.

The operation of the device will be obvious from the foregoing description. With the cam-bars in the position shown in Fig. 3 and with the carriers in their normal retracted and contracted position, as shown in Fig. 2, the stereotype-plate f is placed in position against the flanges e, as shown in Fig. 1. The dogs g are then slipped along in the slots h until their heads g^2 come against the edges of the stereotype-plate. The post p is then turned by means of a suitable key, causing the cam-bars s^2 and s^3 to slide simultaneously and the cam-bars s^4 simultaneously to act against the followers y^2, thus causing an inward movement of the parts k^2 of the carrier. The inward movement of the parts k^2 of the carrier causes this part to slide along the part k' and the consequent expansion of the carrier and the gripping of the dog in the opening g^4. The continued movement of the cam-bars s^2 s^3 causes the two parts of the carrier locked to the dog to have a further movement, which by reason of the interposition of the spring-pressed follower y^2 between the cam and the carrier is yielding, and this continued movement locks or clamps the dogs firmly against the edge of the stereotype-plate and holds it in place, the yielding connection allowing for any inequalities in the preliminary adjustment of the dogs in the edges of the stereotype-plate or in the lost motion of the cam-bars. It will thus be seen that the clamping-dog is brought into position without being tipped or inclined.

Changes in the construction of the carrier, whereby it is rendered expansible to grip the dogs, may be made without departing from the scope of this invention, for I believe that I am the first to provide an expansible carrier for the dog.

One part of the carrier, as k^2, is held within the block by means of the cam-bar, and it may be necessary, depending upon the construction, to provide some particular means for maintaining the other part, as k', within the block. To this end I show a stop-pin k^8 in the cam part k', which abuts against the edge of the block and limits its outward movement.

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

1. A stereotype-block comprising a carrier mounted therein, a clamping-dog preliminarily adjustable along said carrier, means for expanding the carrier to grasp the dog, means for imparting locking or clamping movement to said carrier and dog.

2. A stereotype-block comprising a multi-part carrier mounted therein, a clamping-dog preliminarily adjustable along said carrier, means for relatively moving the parts of the carrier to expand the same and thereby grasp the dog, means for imparting locking or clamping movement to said carrier and dog.

3. A stereotype-block comprising a carrier mounted therein, said carrier being composed of two oppositely-wedge-shaped parts movable the one upon the other, a clamping-dog having a depending shank with an opening therein for the carrier, whereby the dog may be preliminarily adjusted along the carrier, means for moving one part of the carrier upon the other to cause the carrier to expand and grasp the opening in the shank of the dog, means for imparting a locking or clamping movement to said carrier and dog.

4. A stereotype-block comprising a carrier mounted therein, said carrier being composed of two oppositely-wedge-shaped parts movable the one upon the other and provided on one exterior face with teeth or corrugations, a clamping-dog having a depending shank with an opening therein for the carrier whereby the dog may be preliminarily adjusted along the carrier, a tooth or projection in said opening for coöperating with the teeth or corrugations on the carrier, means for moving one part of the carrier upon the other to cause the carrier to expand and grasp the opening in the shank of the dog, means for imparting a locking or clamping movement to said carrier and dog.

5. A stereotype-block comprising a series of carriers mounted therein, a clamping-dog for each carrier preliminarily and independently adjustable along said carrier, means for simultaneously expanding the carriers to grasp the dogs, and means for simultaneously imparting locking or clamping movement to said carriers or dogs.

6. A stereotype-block comprising a series of carriers mounted therein, a clamping-dog for each carrier preliminarily and independently

adjustable along said carrier, means for simultaneously expanding the carriers to grasp the dogs, and means for simultaneously imparting locking or clamping movement to said carriers or dogs, comprising yielding connections between said means and each of said carriers.

7. A stereotype-block comprising a series of carriers mounted therein, each of said carriers being composed of two oppositely-wedge-shaped parts movable the one upon the other, a series of clamping-dogs each having a depending shank with an opening therein for its respective carrier, whereby each dog may be preliminarily and independently adjusted along its carrier, means for simultaneously moving one part of each carrier upon the other to cause each carrier to expand and grasp the opening in the shank of its dog, means for simultaneously imparting a locking or clamping movement to said carriers and dogs.

8. A stereotype-block comprising a series of carriers mounted therein, each of said carriers being composed of two oppositely-wedge-shaped parts movable the one upon the other, a series of clamping-dogs each having a depending shank with an opening therein for its respective carrier, whereby each dog may be preliminarily and independently adjusted along its carrier, means for simultaneously moving one part of each carrier upon the other to cause each carrier to expand and grasp the opening in the shank of its dog, means for simultaneously imparting a locking or clamping movement to said carriers and dogs, comprising yielding connections between said means and each of said carriers.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANCK A. BERRY.

Witnesses:
GEO. W. GREGORY,
MARGARET A. DUNN.