March 29, 1932. E. F. NOELL ET AL 1,851,288

PRINTER'S REGISTERING DEVICE

Filed July 15, 1929

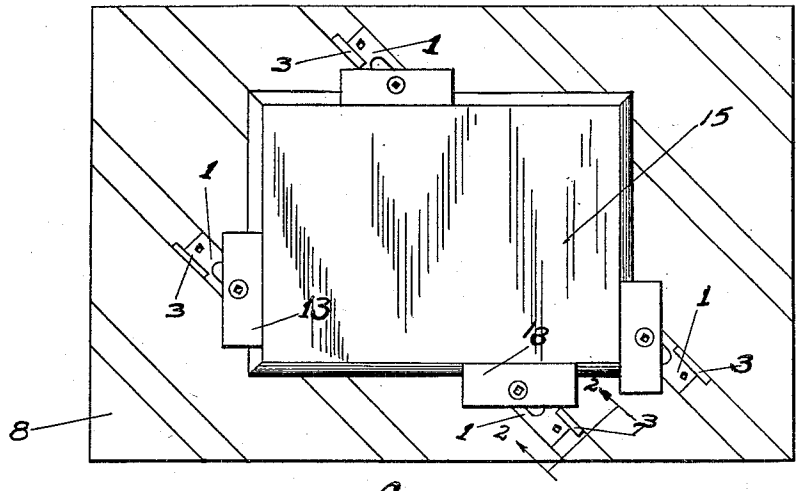

Fig. 1.

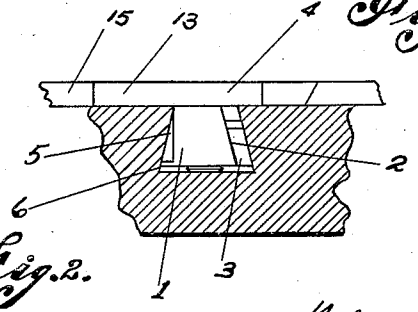

Fig. 2.

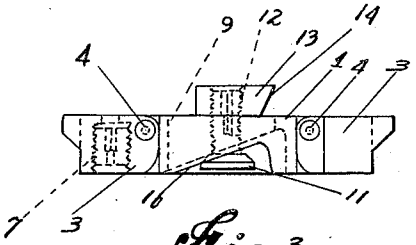

Fig. 3.

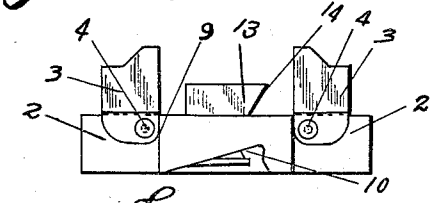

Fig. 4.

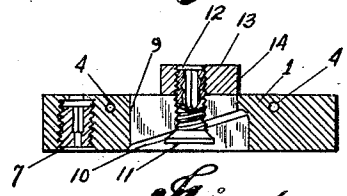

Fig. 6.

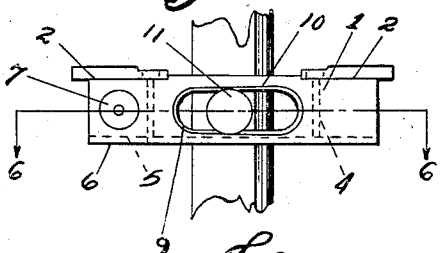

Fig. 5.

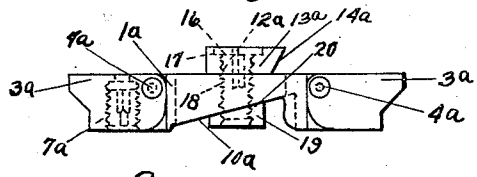

Fig. 7.

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UNITED STATES PATENT OFFICE

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PRINTER'S REGISTERING DEVICE

Application filed July 15, 1929. Serial No. 378,327.

Our invention relates to printers' registering devices which are often called, in the trade, drop in hooks, inasmuch as they are adapted to be dropped into the grooves of a foundation plate, and by manipulation hooked over the beveled edge of a printing plate to hold it in position.

It is the object of our invention to provide a registering device which may be placed within the groove of a foundation support and moved to a position adjacent the edge of a printing plate which it is desired to hold, and then clamped in position. In combination with the body portion, thus adapted to seat within, and be clamped within a groove, it is our object to incorporate a clamping hook mounting which, when actuated, will rock the clamping hook, so that it will more tightly engage the edge of a printing plate. Thus, it is our object to provide a clamping body carrying a clamping hook, which is adjustable relative to the body.

It is further our object in the type of device noted, to provide a structure which will be simple to make, which will be inexpensive, considering the much wider range of adjustability provided relative to previously known devices, and which will be efficient mechanically.

The above and other specific objects which will be hereinafter described, we accomplish by that certain combination and arrangement of parts of which we have shown several prefered modifications.

Referring to the drawings:—

Figure 1 is a plan view of a printing plate retained on a grooved foundation support by registering devices made in accordance with our invention.

Figure 2 is a fragmentary sectional view taken along the lines 2—2 in Figure 1.

Figure 3 is a side elevation of a preferred type of registering device.

Figure 4 is a side elevation of the device shown in Figure 3 with the clamping plates elevated.

Figure 5 is a bottom plan view of the type of devices shown in the previously referred to figures.

Figure 6 is a sectional view of the device previously shown taken along the lines 6—6 in Figure 5.

Figure 7 is a side elevation of a slightly modified type of registering device.

The registering device in both modifications has, preferably, a solid body 1 having one side provided with slanting surfaces 2 at each end, on which are pivotally mounted the clamping plates 3 as indicated at 4. The inclination of the outer surfaces of the clamping plates is such that when inserted within a groove, the slanting outer surfaces of the plates will be parallel with the slant of the wall of the groove. The other side 5 of the body is provided with a substantially flat side with a flange 6 at the lower end which, with the top wall of the said side, makes an angle corresponding to that of the inner wall of the groove opposite that previously referred to, so that when the body is clamped within the groove there will be no tendency for the body to rock laterally within the groove.

For clamping the body within the groove of a foundation plate, an adjustment screw 7 is provided which bears against the bottom wall of the groove, and during its adjustment elevates the body until the clamping plates 3 and the flange and upper edge of the wall opposite bear against the walls of the groove. The ordinary foundation plate with which this type of clamping device is adapted for use consists of a cylindrical or flat member 8, having slots arranged transversely therein. The slots are of dovetail shape as indicated in Figure 2.

Extending through the body of the device, we have provided an opening 9, having beveled inclined bearing surfaces 10 or slanting tracks, against which the head 11 of an adjustment screw 12 will seat. The adjustment screw is threaded in the clamping jaw member 13. After the body of the device is seated within a dovetail groove, which may be readily accomplished by holding the device in the position shown in Figure 4 and by rocking the body slightly, manipulating it into position within the groove, the plates 3 are pressed down into the position shown in Figure 3, and the screw 7 is adjusted by means of a key to lock the body in the groove.

By turning the adjustment screw 7, the beveled head 11 bears against the inclined tracks and causes the clamping face 14 of the jaw 13 to move closer to the printing plate, rocking slightly about the pivot point of the head 11 of the screw. The clamping face can thus be used both to move the printing plate slightly, and to cause a more gripping engagement of the clamping face of the device against the edge of the printing plate.

In the drawings, in Figure 1 a printing plate 15 is indicated held in position by four registering devices.

In Figure 7 we have shown a modification which, however, is constructed on the same principle as the device illustrated in the other figures. Thus, we have provided a body 2*a* with clamping plates 3*a*, pivoted as indicated at 4*a*. An adjustment screw 7*a* clamps the body in the groove. The clamping jaw 13*a* has an adjustment screw 12*a* rotatably mounted therein. The screw has a flanged head 16, which seats against an annular bearing surface 17. The screw has a squared hole 18 therein for the reception of a key. Detachably threaded on the end of the screw is a nut 19, having an inclined upper surface 20 which bears against the inclined trackways 10*a*. The operation of adjusting the body and then moving the clamping face 14*a* relative to the body, is accomplished similarly to the manner described for operating the device shown in the other figures.

While we have only shown two modifications illustrating our invention it will be apparent that mechanical changes in the size, shape, and relation of parts will occur to others without departing from the principle involved.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent, is:—

1. A printer's registering device having a body provided with adjustable means for retaining said body in a groove of a foundation support, a plate clamping member, and means for moving said member relative to said body, comprising an adjustment screw movable along inclined tracks in said body, said screw having an enlarged head with beveled bearing surfaces.

2. A printer's registering device having a body provided with adjustable means for retaining said body in a groove of a foundation support, a plate clamping member, and means for moving said member relative to said body, comprising an adjustment screw movable along inclined tracks in said body, said screw having an enlarged head with beveled bearing surfaces, and said inclined tracks being also beveled.

3. A printer's registering device having a body provided with means for clamping same in a dovetail groove of a foundation support, said device having a clamping jaw adjustable independently of said body clamping means, said adjustable clamping jaw having an adjustment screw having an enlarged head with beveled bearing surfaces, and said body having inclined bearing tracks along which said beveled head is slidable during rotation of said screw.

4. A printer's registering device having a body provided with adjustable means for retaining said body in a groove of a foundation support, a plate clamping member slidable on the upper part of said body to clamp and unclamp a plate, said body having a downwardly facing surface inclined upward in the direction in which said member slides to clamp the plate, and means movably engaging said inclined surface and said member to draw said member downwardly and also in clamping direction.

5. A printer's registering device having a body provided with adjustable means for retaining said body in a groove of a foundation support, a plate clamping member slidable on the upper part of said body to clamp and unclamp a plate, and wedging means on said body and on said member, respectively, relatively movable to draw said member downwardly and also in clamping direction.

6. A printer's registering device having a body provided with adjustable means for retaining said body in a groove of a foundation support, a plate clamping member slidable on the upper part of said body to clamp and unclamp a plate, said body having an opening down through it, lower edges of said opening being inclined upward in the direction in which said member slides to clamp the plate, and means extending through said opening and movably engaging said inclined edges and said member to draw said member downwardly and also in clamping direction.

7. A printer's registering device having a body provided with adjustable means for retaining said body in a groove of a foundation support, a plate clamping member slidable on the upper part of said body to clamp and unclamp a plate, said body having an opening down through it, lower edges of said opening being inclined upward in the direction in which said member slides to clamp the plate, and a screw having a head up against said inclined edges, extending up through said opening and threaded into said clamping member and engageable through the top of said member for turning, whereby said member may be drawn downwardly and also in clamping direction.

8. A printer's registering device having a body provided with adjustable means for retaining said body in a groove of a foundation support, a plate clamping member slidable on the upper part of said body to clamp and unclamp a plate, said body having an opening down through it, lower edges of said opening being inclined upward in the direction in

which said member slides to clamp the plate, a nut up against said inclined edges, and a screw extending down through said clamping member, rotatable in said member and engaging downwardly thereon and extending down through said opening and threaded into said nut, said screw being engageable in the upper part of said member for turning, whereby said member may be drawn downwardly and also in clamping direction.

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