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C. F. WELDON

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PRINTER'S QUOIN CHASE

Filed Oct. 31, 1927

Fig. 1.

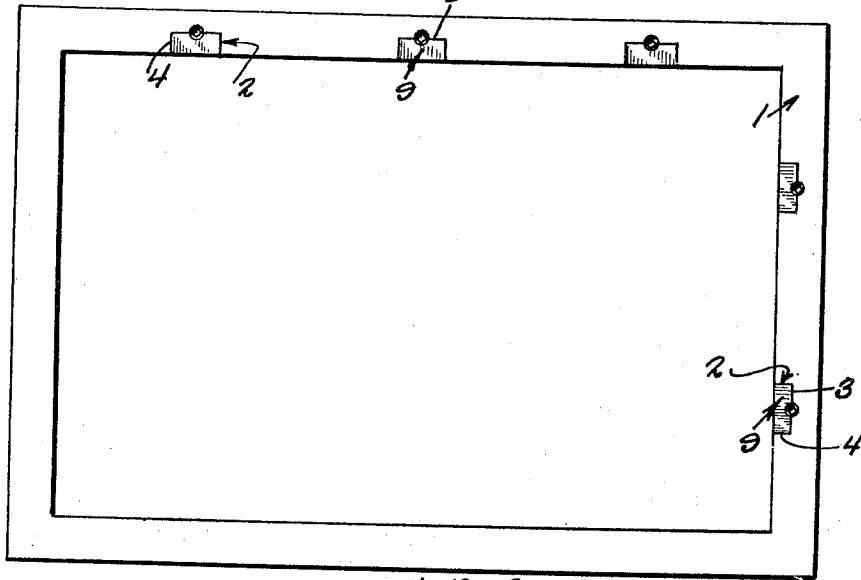


Fig. 2.

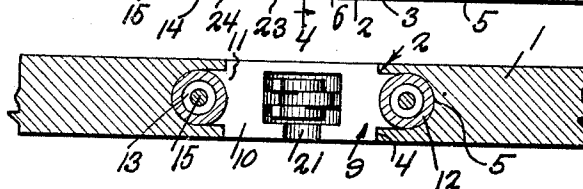
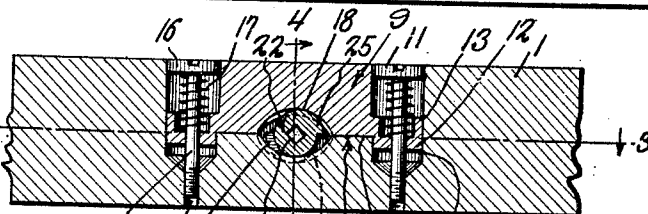


Fig. 3.

Fig. 4.

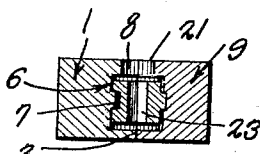


Fig. 4.

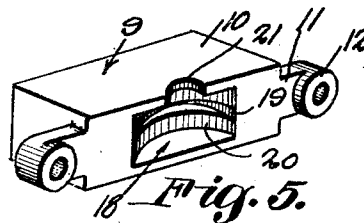
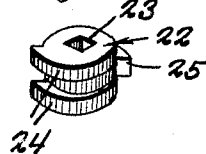


Fig. 5.

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PRINTER'S QUOIN CHASE

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This invention relates to an improvement in printing-presses and more particularly to a novel chase and quoin assemblage for such presses.

5 The disadvantages attending the use of the ordinary quoins, in the ordinary form of chase, are well recognized. The quoins now in general use are of various makes and sizes and are assembled within the chase frame and
10 adjusted to effect clamping of the type composition within the chase. In using such quoins, care must be exercised in selecting the proper sizes, and in arranging the quoins, and as the quoins are separate from the chase,
15 they are liable to become misplaced, thus frequently causing delays. Likewise, the quoins being separate from the chase, their adjustment to effect locking of the type composition within the chase establishes merely a frictional
20 contact between the quoins and the sides of the chase, so that it frequently happens that they will become displaced or loosened and frequently with considerable damage to the printing-press, to say nothing
25 of the additional time and labor involved in resetting the type in the event of such loosening of the quoins. Therefore, the present invention has as its general object to provide an assemblage comprising a chase, and quoins
30 assembled with the chase and, therefore, permanently associated therewith, so as to overcome the disadvantages attending the loss or misplacing quoins of the ordinary construction, and likewise insuring against any
35 displacement of the quoins in such a manner as would result in release of the type composition.

Another object of the invention is to provide an assemblage comprising a chase, quoins
40 assembled with the chase, and means whereby adjustment of the quoins may be conveniently effected, so that the necessity of assembling the component parts of the separate quoins which have heretofore been employed, is
45 avoided, and the type composition may be locked in the chase in a much more secure manner than has heretofore been possible and in much less time and with less likelihood of any disarrangement of the composition at the
50 time of adjustment of the quoins.

Another object of the invention is to provide, in a chase and quoin assemblage, a novel means for maintaining the quoins in proper position with respect to the sides of the chase, and means for adjusting the quoins with respect to said sides, to bind the type composition within the chase, which adjusting means will be of such a character as to positively preclude any loosening of the quoins with a consequent release of the type composition.

While the accompanying drawings and the description which is to follow, constitute a disclosure of the preferred embodiment of the invention, it will be understood that various changes may be made within the scope of what is claimed.

In the accompanying drawing:—

Figure 1 is a plan view of the chase and quoin assemblage embodying the invention,

Figure 2 is a horizontal sectional view taken on a plane substantially midway between the upper and lower sides of one of the members of the chase frame and illustrating the means for properly positioning the quoins with respect to the said frame member and the means for adjusting the quoins, the quoins in this figure, being in full retracted position.

Figure 3 is a vertical longitudinal sectional view taken substantially on the line 3—3 of Figure 2 looking in the direction indicated by the arrows, the adjusting means for the quoins being shown in elevation,

Figure 4 is a vertical transverse sectional view taken substantially on the line 4—4 of Figure 2 looking in the direction indicated by the arrows,

Figure 5 is a perspective view of one of the quoins removed from the assemblage,

Figure 6 is a perspective view of the adjusting member for the quoins.

The chase is indicated in general by the numeral 1 and comprises the usual rectangular frame, and in order to accommodate the quoins and the positioning and adjusting means therefor, the said frame is formed, in each of two relatively adjacent sides, with two or more recesses indicated in general by the numeral 2. Each recess 2 is of rectangular form and the recesses are preferably sym-

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metrically arranged as clearly shown in Figure 1 of the drawing. Each recess includes an inner plane wall 3 parallel to the inner side of the frame member in which the recess is formed, and end walls 4 which are located in planes at right angles to the wall 3. For a purpose to be presently explained, each end wall 4 of each recess is formed, in turn, with an approximately semi-cylindrical recess indicated by the numeral 5, and the wall 3 of each recess is formed intermediate its ends, with an arcuate recess indicated by the numeral 6 the wall of which is formed, midway between the upper and lower sides thereof, with a rib 7. The upper wall of each recess 6 is formed with a substantially semi-circular notch indicated by the numeral 8, the purpose of which will presently be explained.

The quoins are indicated in general by the numeral 9 and are of counterpart construction, and, therefore, a description of one will suffice for all. Each quoin 9 comprises a substantially rectangular cast metal body 10 of dimension to fit snugly within the respective recess 2, with corresponding faces of the quoins flush with corresponding surfaces of the respective side member of the chase frame, when the quoin is in full retracted or inactive position. The body 10 of the quoin is provided at each end with a laterally extending ear 11 which is formed at its end with a collar 12 having its bore enlarged at that side which is presented in the same direction as the clamping face of the quoin, as indicated by the numeral 13. These ears 11 and collars 12 project and slidably fit in the recesses 5 in the end walls 4 of the respective recesses 2, so that the respective quoins will be supported within the recesses and held against any displacement except the inward adjustment of the quoins to clamping position, as will presently be explained. The frame member 1 of the chase is formed at spaced points with threaded openings 14, and adjusting screws 15 are fitted through the collars 12 and are threaded at their ends into the said openings 14, the heads of the screws, indicated by the numeral 16, being rotatably and adjustably accommodated within the recesses 5. A compression spring 17 is arranged upon each screw 15 and bears at one end against the head 16 of said screw and at its other end seats in the enlargement 13 of the opening in the respective collar 12, and at this point it will be understood that by adjusting the screws 15 to the position shown in Figure 2, the heads of the screws will be flush with the inner sides of the respective members of the chase frame 1. It will also be evident that the quoin 9 may have outward movement with respect to the member of the frame 1 upon which it is mounted, against the tension of the springs 17 upon the respective screws 15.

The body 10 of the quoin 9 is formed in its inner face with a recess 18 which opposes and registers at its end with the recess 6 in the wall 3 of the recess 2 and the inner wall of the recess 18 is formed, midway between the upper and lower walls of the recess, with a groove 19. It will be observed that the recesses 6 and 8 have their inner walls curved longitudinally on the arc of a circle and that these walls are of an extent less than a semi-circle. The upper wall of the recess 18 is formed with a notch 21 corresponding to the notch 8, and these notches are of semi-circular form and match in the fully retracted position of the quoin, the inner walls of the recesses 6 and 18 being eccentric to the center of the circular opening defined by the matching notches 8 and 21. Adjustment of the quoin is effected through rotation of a cam which is best illustrated in Figure 6 of the drawing and which is indicated by the numeral 22. The cam 22 is formed centrally with an opening 23 which is preferably of rectangular contour, although it may be of any other polygonal contour, so as to adapt it to receive the polygonal bit of a key through the medium of which the cam may be rotated. The cam 22 is arranged within the recesses 6 and 18 with the upper end of its opening 23 located opposite the opening defined by the registering notches 8 and 21, and the cam is formed at one side with spaced eccentric ribs 24 extend for substantially one-half the wall of the recess 6 and bear their outer sides against the surface of the said wall. These ribs 24 extend for substantially one-half the circumference of the body of the cam 22, and a similar rib 25 is formed upon the body of the cam at the opposite side thereof and is located in a plane between the ribs 24, the rib 25 being received within the groove 19 in the inner wall 20 of the recess 18 in the quoin. The rib 25 is likewise eccentric to the axis of the cam 22.

In the use of the chase and quoin assemblage, the type composition is assembled in the chase, in the usual manner, and a suitable key (not shown) having a polygonal bit, is engaged in the openings 23 of the cams 22 of the several quoins, successively, and is adjusted so as to effect inward adjustment of the respective quoins, with respect to the sides of the chase in the recesses of which they are mounted, to cause the quoins to have binding engagement against the furniture which is disposed within the chase about the type composition.

It will be evident from the foregoing that the invention contemplates a printer's chase and quoin assemblage in which the quoins, required to hold the type composition within the chase, are at all times maintained in assembled relation with the chase, the quoins being individually adjustable so as to exert any desired degree of binding action against

the furniture within the chase, and by reason of this association of the chase and quoins, all of the advantages heretofore outlined, are obtained, and the disadvantages attending the use of ordinary quoins, are overcome.

Having thus described my invention, what I claim as new is:

A printing-press chase and quoin assemblage comprising a chase frame having a recess in the inner face of one of its sides and provided with recesses in the opposite end walls of the first mentioned recess and likewise provided with threaded openings communicating with the inner ends of the second mentioned recesses, a quoin adjustably disposed in the first mentioned recess and having apertured portions projecting into and guided by the second mentioned recesses, screws threaded into said openings and having heads closing the outer ends of the second mentioned recesses, springs upon the screws bearing between the heads thereof and the apertured portions of the quoin, the screws extending through said apertured portions and adapted to permit the adjustment of said springs, and means coacting with the inner side of the quoin and the inner wall of the first mentioned recess and adjustable to effect adjustment of the quoin against the tension of said springs.

In testimony whereof I affix my signature.

CHARLES F. WELDON.

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