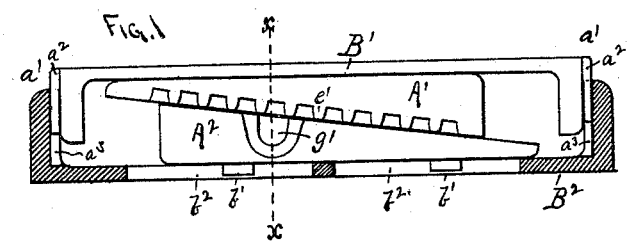
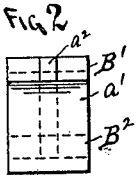
(No Model.)

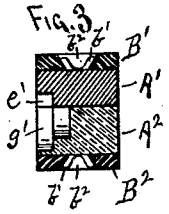
E. P. MOWERS.

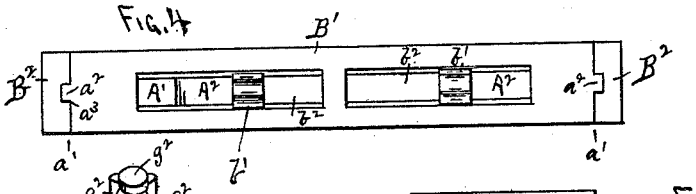
PRINTER'S QUOIN.

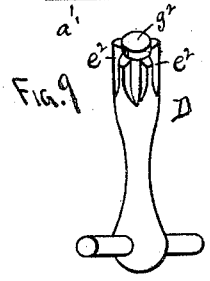
No. 459,071. Patented Sept. 8, 1891.

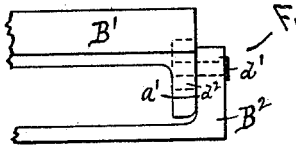


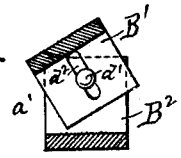


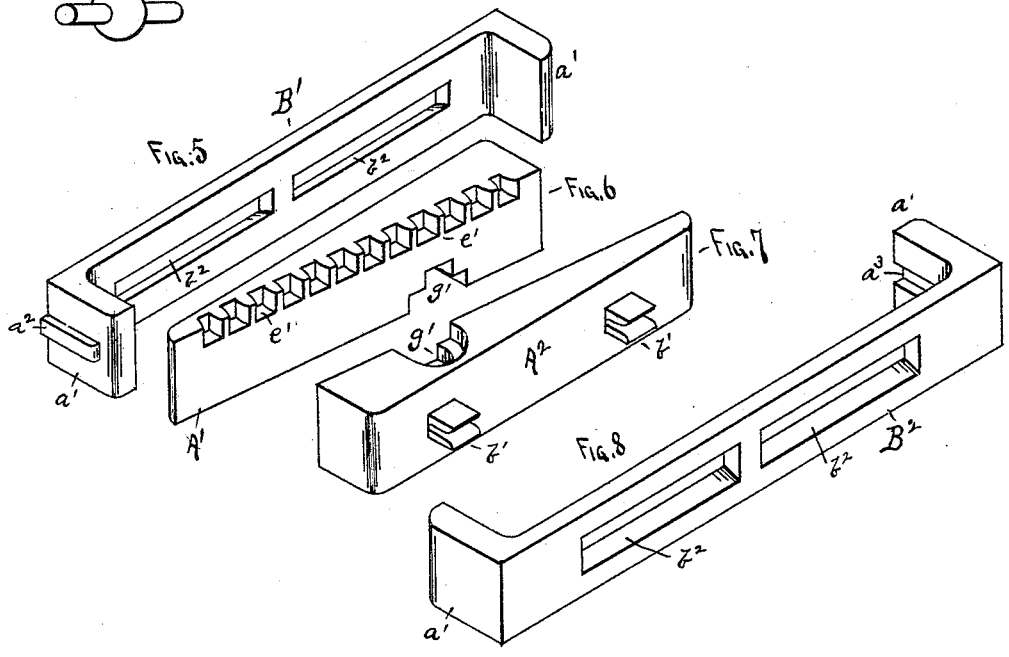












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Eugene P. Mowers,
INVENTOR. BY
Charles N. Woodward,
Atty.

UNITED STATES PATENT OFFICE.

EUGENE P. MOWERS, OF ST. PAUL, MINNESOTA.

PRINTER'S QUOIN.

SPECIFICATION forming part of Letters Patent No. 459,071, dated September 8, 1891.

Application filed August 1, 1889. Serial No. 319,463. (No model.)

To all whom it may concern:

Be it known that I, EUGENE P. MOWERS, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Printers' Quoins, of which the following is a specification.

My invention relates to improvements in printers' quoins, its object being to provide a quoin having all the parts permanently secured together, by means of which a direct lateral pressure may be brought to bear upon the adjacent type and chase without any sliding or longitudinal movement of the quoin upon either of them, thereby avoiding any twisting or disarranging of the type in the process of "locking up."

To this end my invention consists in providing a pair of duplicate wedges with their inclined faces in bearing contact and in reverse position with reference to each other, so that the smaller end of one is adjacent to the larger end of the other and their outer sides or faces parallel with each other, and inclosing them with a two-part housing or frame secured, respectively, to the adjacent wedges and to each other in such manner that while each wedge-piece is permanently secured to its frame-piece it has freedom of longitudinal movement upon the same, and similarly the interlocking parts of the frame-pieces are free to slide upon each other to permit lateral movement or extension of the frame itself, as the wedges are caused to slide upon or past each other in the space with the frame.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view and partial section of my improved quoin, shown partially expanded. Fig. 2 is an end view of the same; Fig. 3, a cross-section on the line $x\,x$ of Fig. 1; Fig. 4, a side elevation; Fig. 5, a detached perspective view of the inner frame-piece; Figs. 6 and 7, perspective views of the duplicate wedge-pieces; Fig. 8, a perspective view of the outer frame-piece; Fig. 9, a perspective view of the key or wrench; and Fig. 10 is two details of the adjacent ends of the frame-pieces, showing a modified construction.

In the drawings, A' A^2 represent the duplicate wedge-pieces, having their inclined faces contiguous or in contact, their outer faces being therefore parallel. Surrounding and embracing these wedges is a housing or frame made up of the pieces B' B^2, the inturned ends a' of the frame-piece B^2 overlapping the similarly inturned ends of the frame-piece B', a rib or projection a^2 upon each of the inclosed ends of the frame-piece B' lying in a groove a^3 in the overlapping end of the other frame-piece, whereby the two pieces are guided in their lateral movement to and from each other.

In order to permanently secure the wedge-pieces to their respective adjacent frame-pieces, I prefer to provide studs b' upon the outer face of the wedge, which are bifurcated, as shown, and project through slots b^2 in the frame-piece. The slots have inclined sides, as shown best in Fig. 4, and the studs are secured therein by spreading the stud so that the two parts overlap the inclined sides of the slot, and thus, while permitting the stud to move freely longitudinally of the slots, cannot be withdrawn from them.

In lieu of the rib a^2 and groove a in the ends of the frame-pieces, a pin or screw d^4 may be passed through a slot d^2 in the outer member and secured to the inner member. The latter construction or its equivalent is preferred, for the reason that it serves to permanently secure the frame-pieces together, so that the four parts of the quoin form one complete whole.

In order to readily operate the quoin, I prefer to form teeth e' along one of the corners of the inclined face of each wedge-piece and a socket g' in the other edge, as shown best in Figs. 6 and 7. This socket is adapted to receive the end g^2 of the key D, and the teeth e^2 of the key will mesh into the teeth e' of the opposite wedge-piece. By turning the key or wrench the wedges are caused to move past each other, and according to the direction in which they are moved will laterally expand the frame-pieces or allow them to be contracted. The wedges being all made similar, when placed in position in the frame-pieces, will present on each side of the quoin

a socket and contiguous row of teeth, so that the quoin may be operated indifferently either side up.

Operation: The wedges of the quoin being adjusted with their large ends at the ends of the frame or housing so that the quoin is contracted or narrowed as much as possible, it is placed in the chase and the furniture fitted closely to it. The key is then inserted into the socket and turned about its end g^2 as a pivot, and the teeth e^2 thus meshing with the teeth e' will cause the wedge-pieces to move longitudinally upon each other and gradually expand the frame or housing, the members of which have a true lateral movement upon each other, thus causing a direct pressure to be applied to the chase and furniture. The quoin is loosened, so as to be removed by inserting the key and turning it in the reverse direction. It will thus be seen that the quoin is always ready for use by the simple adjustment of the position of the wedge-pieces with the fingers, and can be used indifferently either side up or with either side presented to the furniture or type.

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

1. In a printer's quoin, the combination of a pair of outer laterally-adjustable side pieces, and duplicate wedge-pieces sliding longitudinally on the adjacent side pieces and moving past each other within the space between the side pieces, substantially as and for the purposes set forth.

2. In a printer's quoin, the combination of the duplicate pieces $A' A^2$, having oppositely-inclined contiguous faces, and the inclosing frame-pieces $B' B^2$ adjustably connected together, and each similarly connected to the back of the adjacent inclosed wedge-piece, whereby the frame-pieces may be expanded laterally by the longitudinal movement of the wedges past each other, substantially as described.

3. In a device of the class described, the combination of a housing or frame made up of the two parts $B' B^2$, laterally adjustable to and from each other, the duplicate wedges arranged within said frame, having their inclined faces contiguous and provided with gear-teeth along one of the edges of the inclined face, and a socket in the other edge of said face, adapted to receive a key to engage the teeth of the other wedge.

4. In a printer's quoin, the combination of a laterally-expansible frame, duplicate wedges inclosed therein, and means for sliding the wedges upon each other to expand said frame, substantially as and for the purposes set forth.

5. In a printer's quoin, the combination of a pair of duplicate wedges, means for sliding them upon each other, and a two-part housing therefor permanently secured together and to said wedges and laterally expansible by the action of the wedges, substantially as and for the purposes set forth.

6. In a printer's quoin, the combination of interlocking laterally-expansible frame-pieces and duplicate wedges secured within said frame-pieces and sliding longitudinally upon each other and the frame-pieces, substantially as and for the purposes set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

EUGENE P. MOWERS.

Witnesses:
C. N. WOODWARD,
H. S. WEBSTER.