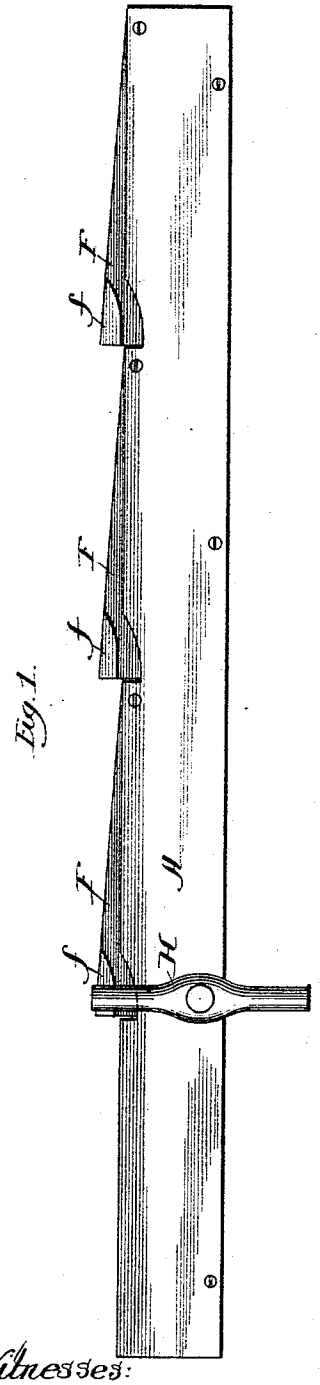
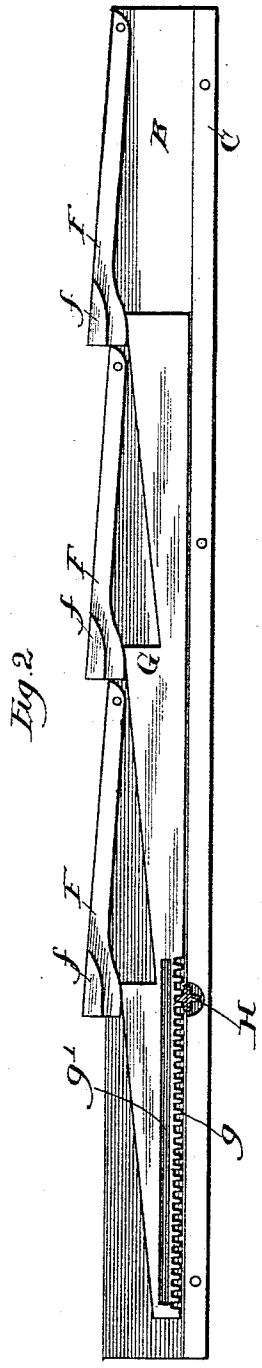
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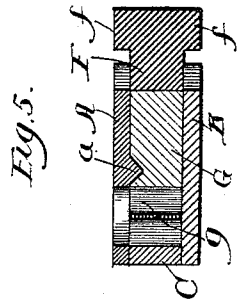
G. MILLIKEN.

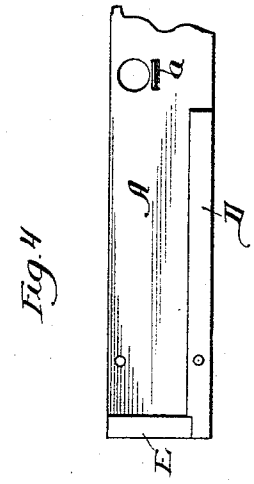
PRINTER'S QUOIN.

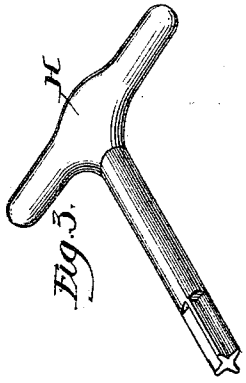
No. 458,426. Patented Aug. 25, 1891.











Witnesses:
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE MILLIKEN, OF ONECO, ASSIGNOR OF ONE-HALF TO WILLIAM H. McCALL, OF YELLOW CREEK, ILLINOIS.

PRINTER'S QUOIN.

SPECIFICATION forming part of Letters Patent No. 458,426, dated August 25, 1891.

Application filed December 8, 1890. Serial No. 373,878. (No model.)

To all whom it may concern:

Be it known that I, GEORGE MILLIKEN, a citizen of the United States of America, residing at Oneco, in the county of Stephenson and State of Illinois, have invented certain new and useful Improvements in Printers' Quoins, of which the following is a specification, reference being had to the accompanying drawings, wherein—

Figure 1 is a side view of my improved quoin, showing a key for operating the same in position for use. Fig. 2 is a similar view of the same with the front plate removed and the shank of the key in section. Fig. 3 is a perspective of the key seen in Fig. 1. Fig. 4 is a broken under view of the portion of the face-plate seen in Fig. 2 at the left, and Fig. 5 is a transverse section taken through the key-hole.

My invention relates to a device for locking up type in a chase, and is designed to take the place of the quoins ordinarily used for this purpose, the objects of my invention being to shorten the time necessary to perform such operation, and also to enable the chase of type to be keyed up with perfect accuracy.

The device which I have constructed is shown in its preferred form in the drawings, and the essential features thereof which I believe to be new and desire to secure by Letters Patent are closely defined in the claims at the end of this specification.

I shall proceed to describe the construction illustrated specifically and in detail; but I do not intend to thereby limit myself to the same, as great variation is possible, both in form and arrangement, without departing from the essential features pointed out in the claims.

My improved quoin, as seen in the drawings, consists of top and bottom plates A B, spaced apart by a strip C, extending from end to end on one side, as seen in Fig. 2, and by pieces D and E (seen in Fig. 4) upon the opposite side. These two plates are secured together by means of screws, and between them cam-shaped arms F are pivoted at one of their ends upon the side of the quoin opposite to the strip C. These arms are designed to be pressed laterally from between the plates and to bear directly against either the chase or the side or end sticks. To give them as wide a bearing upon the latter as possible, their free ends are extended on each side by means of lugs *f*, and the top and bottom plates are notched, as seen in Fig. 1, to receive these lugs. The inner sides of the arms are inclined inward from the pivots, so that the widest portion of said arms is opposite the lug *f*. Behind these inclined surfaces a rack-bar G is placed, sliding upon the strip C and having a series of inclined surfaces on the side adjacent to the arms F. To bring the bearing between these inclines and the arms F directly opposite to the bearing-points of the latter the inner sides of said arms are concave, so that they cannot under any circumstances bear upon the rack G, except at the point desired. In locking up the chase the arms F are forced sidewise by moving the rack G toward the left in the drawings, and to do this said bar has upon the edge opposite from the inclines a second rack *g*, and a hole is made in the top plate above this rack for the insertion of a toothed key adapted to mesh with the teeth of the rack and to move the bar G longitudinally by turning the same. Such a key is seen in Fig. 3 and is lettered H.

To hold the rack with which it engages firmly up to the key, a groove *g'* is formed in said rack, and a lug *a* upon the under surface of the top plate directly opposite the hole in which the key is inserted to slide in said groove. As a less desirable equivalent a pin might be secured to the rack *g* and a slot provided in one of the two plates, in which the pin would slide back and forth. The construction shown, however, is preferable, because the supporting-lug *a* is stationary with respect to the key-hole during the operation of the quoin.

In using my improved quoins but two are required to lock up any ordinary chase—one at the side and one at the end—and the locking up consists merely of placing the quoins in position and extending them laterally to tighten up the form by means of the key H.

I claim as new—

1. The combination of a frame, a longitudinally-movable bar sliding therein having a series of inclines upon one side, means for moving said bar back and forth, and a series of swinging arms pivoted to the frame at one

end and having inwardly-inclined edges adapted to bear upon the inclines of the bar, whereby the free ends of said arms may be forced laterally from the frame by the longitudinal movement of the bar, substantially as described.

2. The combination, with a longitudinally-movable bar having a series of inclines upon one edge and a series of teeth upon the other, of a supporting-frame having a key-hole or bearing adjacent to said teeth suitably arranged to receive a toothed key adapted to mesh with the teeth and when rotated to move the bar, and a series of swinging arms pivoted to the frame having outer bearing-edges and inner edges adapted to ride upon the inclines on the bar, substantially as described.

3. The combination of the bar G, having the series of inclines upon it and the teeth *g*, the frame A, having the key-hole therein, and the series of pivoted arms F, having outer bearing-edges and inner curved edges, substantially as described.

4. The combination of a longitudinally-movable bar having a series of inclines upon one edge and a series of teeth upon the opposite edge, a frame inclosing said bar having a key-hole adjacent to the teeth of the latter and means rigid with itself and adjacent to the key-hole for guiding the bar, and a series of pivoted arms arranged to be forced outward by the inclines upon the bar, substantially as described.

5. The combination of the frame A, bearing the lug *a*, the bar G, having the groove *g'*, the teeth *g*, and a series of inclines on the opposite side therefrom, and the swinging arms F, having the laterally-projecting faces *f*, substantially as described.

GEORGE MILLIKEN.

Witnesses:
HIRAM SKINNER,
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