(No Model.)

J. N. O. HANKINSON.

KEY FOR LOCKING QUOINS.

No. 346,156. Patented July 27, 1886.

Fig. 1.

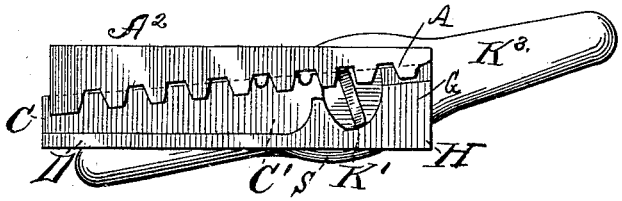


Fig. 2.

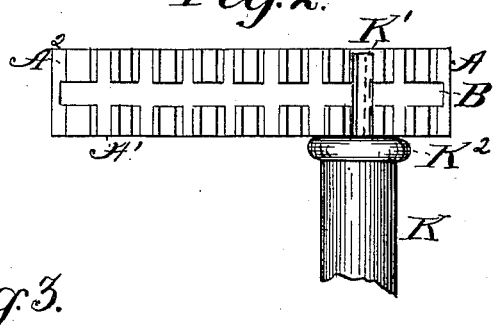


Fig. 3.

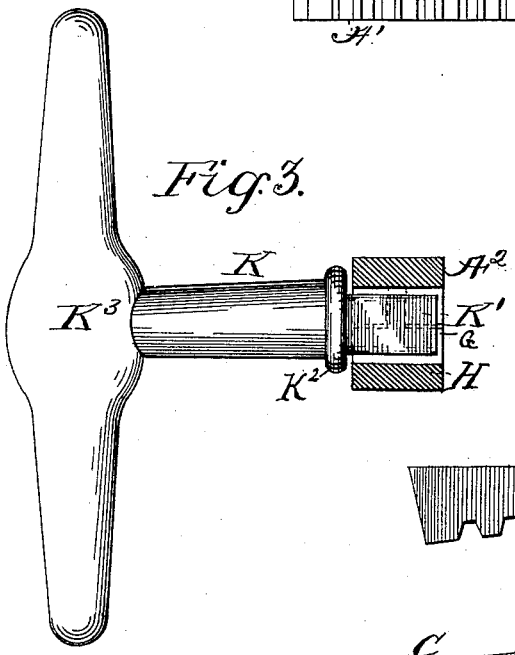
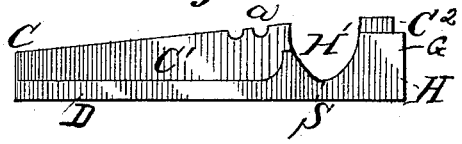


Fig. 4

Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

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KEY FOR LOCKING QUOINS.

SPECIFICATION forming part of Letters Patent No. 346,156, dated July 27, 1886.

Application filed June 6, 1885. Serial No. 167,885. (No model.)

To all whom it may concern:

Be it known that I, JOHN N. O. HANKINSON, a citizen of the United States, residing at Harrisburg, in the county of Dauphin and State of Pennsylvania, have invented certain new and useful Improvements in Operating-Keys for Locking Quoins for Printers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to provide an instrument for operating my locking printers' quoins, so adapted that its bit shall reach through the cut-away abutment of the one of a pair of quoins to effectively engage the teeth of both the racks on the opposite quoin of the pair, and that its boss or shank shall set against the upper edges of the quoins when in the furniture, to secure its stability and even action in its engagement with the quoins.

In the accompanying drawings, making a part of this specification, Figure 1 represents a plan of my quoins as arranged at work, but inverted, with my key-bit engaging them, as in moving them to tighten the form in the furniture thereby. Fig. 2 represents a plan of my key applied to engage both racks of a quoin. Fig. 3 represents a cross-section of two quoins, taken through the axis of my rotary key, inserted between them. Figs. 4 and 5 represent side views of the quoins of a pair to which my key is adapted.

Similar letters denote similar parts and portions in all the illustrations of my device.

A A′ denote two similar racks or sets of teeth on the face of major quoin A^2, having between said sets of teeth the open way B, as shown.

Letters C D denote the minor quoin, constructed with longitudinal tenon C thereon, massed centrally on basal ledge D, and having in its butt H the transverse segment or cam H′, the corresponding bearings, G G, on either side of the section C^3 of said tenon C serving to sustain the opposite quoin evenly thereon as guides against which the racks A A′ ride or set. Said segment or cam is on its face an angular curve or groin—that is, its deepest portion, S, is the intersection of two curves, as shown in Fig. 1—that the flat blade K′ of key K K′ K^2 may have one of its edges purchase or bear against the wall of said segment in its travel from said deepest portion thereof, while during its rotation the opposite edge of said bit is moving or pushing the opposite quoin by working between the teeth in both the racks at the same time. Said key K K′ K^2 consists of cross-handle K^3 and shaft K, which latter is provided with enlarged shoulder or boss K^2, and the flat bit or blade K′, projected centrally from said boss in line with the axis of shaft K. Said bit is of length to nearly reach through said segment H′, while the boss K^2 sets against the butt H and side of quoin A^2, that it may engage both the racks A A′, thus producing even action and resisting tendency to cant vertically while locking up the form in the furniture by my quoins. Said blade is of such breadth that at each rotation its one edge advances a set of teeth engaged thereby sufficiently to enable the opposite edge of the same to mesh with the next set of teeth in said racks. The corners of the edges of said bit are taken off a little to afford ample clearance in quitting engagement with a set of said teeth and certain insertion in meshing with the next set of teeth. The quoins stay in position as advanced by the action of said key correctly, to permit the same to be rotated continuously, without special attention or repeated insertion, until the requisite tightness of the form is obtained, when the quoins are permanently locked to maintain their position for press-work. The boss K^2 serves as a guard to keep the quoins down evenly while the bit K′ is engaging the racks on the same to tighten the form. The segment or cam H′ is located in the butt A of quoin C D, to obtain the most ample bearing possible both for the bit K′ and the boss K^2, and such certain purchase both in the cam and in the teeth that the key's bit shall not slip or miss its hold, but drive the quoins upon each other with a steady movement.

I am aware that a pinion on shaft has heretofore been used for driving quoins; also, that a wrench-form driver has been used; but I am not aware that a key or instrument has ever been adapted to have thorough engagement with both said racks in manner to overcome tendency to cant the quoins, and that lessened the liability to break the teeth of the quoins by correct engagement therewith. I therefore

make my claim only in the limits wherein my improvement lies.

I claim—

1. The operating-key for printers' quoins, set forth, having its shaft provided with cross-handle, a flat bit on its opposite end, and an enlarged annular shoulder at inner end of said bit, all integrally united, said bit being of length nearly equal to depth of quoins, and of breadth that while its one edge fully meshes with the teeth of both racks on one of the pair of quoins its opposite edge shall bear or purchase in the tubular segment or cam in the mate quoin, substantially as and for the purposes set forth.

2. In combination, a pair of printers' quoins, one of which has on its meeting face two similar racks, with a longitudinal way between the same, and the other of which has on its meeting face a longitudinal tenon adapted to travel in said way, and a transverse tubular segment or cam in its butt, with a flat-bit key adapted by purchase in said segment to engage the corresponding teeth in both said racks simultaneously, substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand in presence of two witnesses.

JOHN N. O. HANKINSON.

Witnesses:

DANL. GLACE,

G. W. JACKSON.