

(No Model.)

C. REITTER.
PRINTER'S QUOIN.

No. 531,332.

Patented Dec. 25, 1894.

Fig. 1.

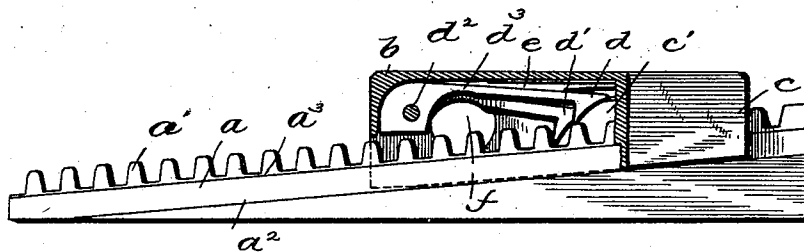


Fig. 2.

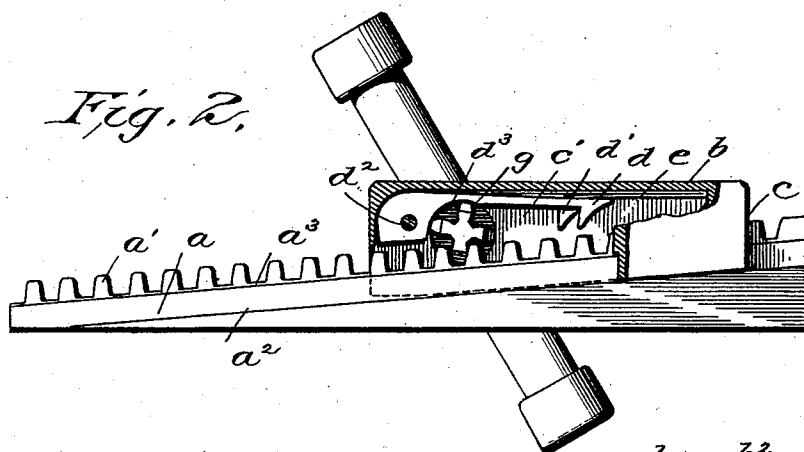
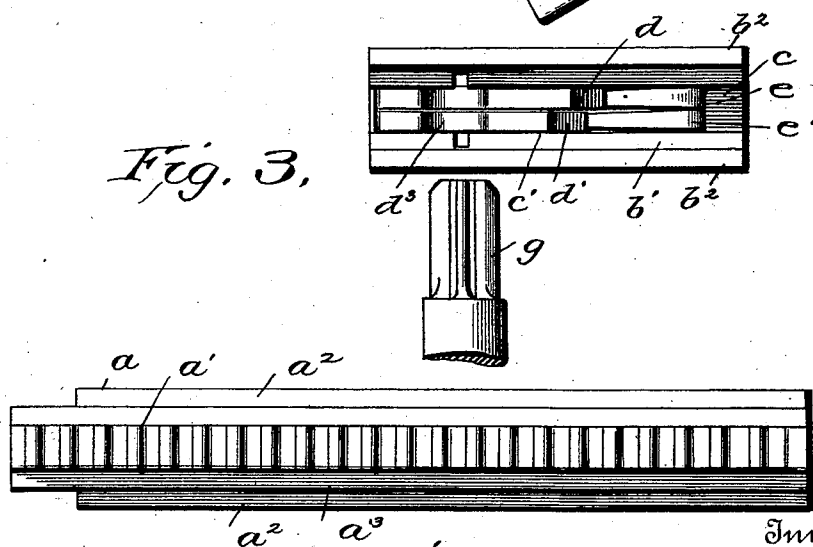


Fig. 3.



Witnesses

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Fig. 4, Christian Reitter
for *Phuason*
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UNITED STATES PATENT OFFICE.

CHRISTIAN REITTER, OF SAGINAW, MICHIGAN.

PRINTER'S QUOIN.

SPECIFICATION forming part of Letters Patent No. 531,332, dated December 25, 1894.

Application filed February 21, 1894. Serial No. 501,036. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN REITTER, a citizen of the United States, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Printers' Quoins; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to that class of quoins composed of double wedges or wedging surfaces provided with a rack and adapted to be operated by a key.

The object of my invention is to provide means which will more perfectly lock the wedges securely in place when once adjusted, and so that they cannot jar loose in the forms while being handled, or while on a long run in the press. This I accomplish by dogs or pawls on one wedge adapted to co-operate with a rack upon the opposite wedge, the rack and pawls being so arranged that the insertion of the key will release them and permit the wedges to be actuated, all of which will be more fully described hereinafter and pointed out in the claims.

In the accompanying drawings: Figure 1, represents a side elevation of my device part of one of the wedges being cut away to show the pawls in engagement with the rack; Fig. 2, a similar view showing the key inserted and its effect upon the pawls, as in the act of locking a form, and Figs. 3 and 4 interior views of the wedges when separated.

The rack section is represented by the reference letter *a* and is provided with a longitudinal rack *a'*, and rabbit grooves *a²*. The formation of these grooves leaves a ridge *a³* which is wider than the rack thereby leaving a smooth surface upon opposite sides of the rack on which the opposite wedge bears and slides. The opposite section is denoted by the letter *b* and is provided with rabbit grooves *b'* adapted to fit the corners of the longitudinal ridge *a³* and to leave extensions *b²* which fit within the rabbit grooves *a²* and pass astride the ridge.

In the wedge *b* is formed a longitudinal groove *c*, through which the rack extends, and communicating with this groove is a longitudinal chamber *c'* provided for the reception of my improved dogs or catches now to be described. Pivoted in the larger end of the wedge *b* are two catches or pawls *d* and *d'* the former being longer than the latter so that while the shorter one is in engagement with one rack tooth, the other will extend beyond and its nose bear upon the top of the preceding tooth, and in position to engage therewith upon being slightly advanced. By this arrangement the catches are made to alternately engage the teeth of the rack and be susceptible of finer adjustment. Springs *e* and *e'* are employed to keep the catches always in engagement with the teeth of the rack. These springs may be of any convenient form, but I prefer to use the V-shaped leaf or gun spring shown, as it is effective and simple. It will be observed that one of the springs *e* has a longer arm than its companion *e'* thereby causing the nose of the pawl *d* to extend farther out into the rack than its companion, so that when the key is inserted the pawls will be successively disengaged. To effect this disengagement I provide a key hole *f* which extends transversely through the section *b* at a point between the pivot *d²* of the catches and their ends, and the catches are so disposed across the key hole that when the key is inserted it will engage the pawls and they will be thrown back out of engagement with the rack, a circular notch *d³* being formed to facilitate the insertion of the key. This key consists of the usual bar having its ends fluted to form longitudinal teeth *g* so that the key acts upon the rack like a pinion. In the present instance the end of the key is tapered to facilitate its insertion.

From the foregoing description of my improved means it will be seen that when the quoin is placed in position for locking the form, the insertion of the key will press back first the short and then the long catch and disengage them from the rack, and then upon turning the key, one or both of the wedges will be advanced as represented by the arrows. During this movement, as previously stated, the catches are held out of engagement, but

upon withdrawing the key one or the other will spring into engagement with one of the rack teeth and hold the sections against any possibility of backward sliding. In unlocking the form the insertion of the key disengages the catches as before and a reverse turn permits them to be moved backward.

The great advantage of my invention is that it overcomes all possibility of the forms becoming loosened during long runs on the press, or from jarring while in transit, or while being handled.

It is evident that the details of my invention could be varied in many slight ways which might suggest themselves to a skillful mechanic, and therefore I wish it understood that I do not limit myself to the exact construction herein shown, but consider myself entitled to all such variations that come within the spirit and scope of my invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A printer's quoin comprising a pair of key operated wedges, in combination with catches arranged to be actuated by the key in the operation of inserting and withdrawing, substantially as described.

2. A printer's quoin comprising the usual co-operating wedges, one of which is provided with a longitudinal rack and the other with a transverse key hole, and spring-actuated catches extending across the key hole in such

a manner as to be thrown out of engagement by the insertion of the key in the manner and for the purpose substantially as described.

3. A printer's quoin comprising a pair of key-operated wedges, in combination with a catch arranged to be actuated by the key in the operation of inserting and withdrawing the latter, substantially as described.

4. The herein described printer's quoin consisting of the combination of a pair of wedge-sections, one of which is provided with a longitudinal rack, an opposing section grooved to pass astride the rack, and provided with a transverse key hole, and a pair of spring-actuated catches extending across the key hole, one being arranged to project farther into the rack than the other, whereby the insertion of the key will disengage them successively, substantially as described.

5. The herein described printer's coin which consists of a wedge section provided with a longitudinal rack, in combination with an opposing wedge-section provided with spring actuated catches of unequal length arranged to be successively actuated by the insertion and withdrawal of the key, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHRISTIAN REITTER.

Witnesses:

CHAS. C. BASTIAN,
FRED J. REITTER.