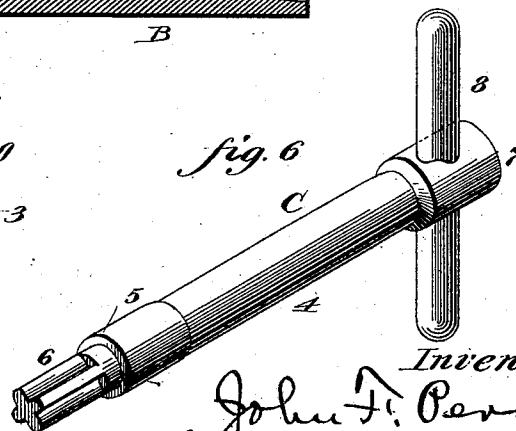
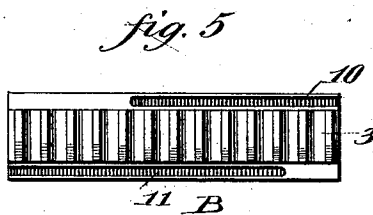
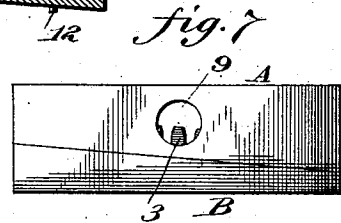
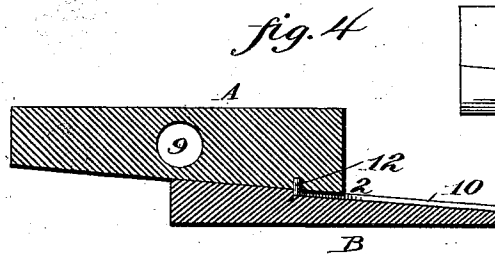
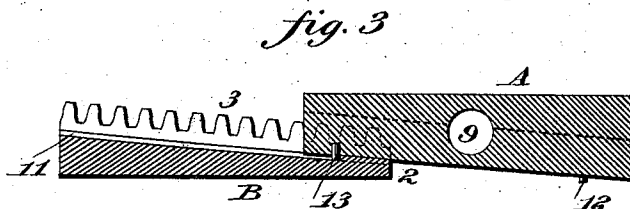
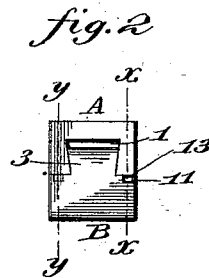
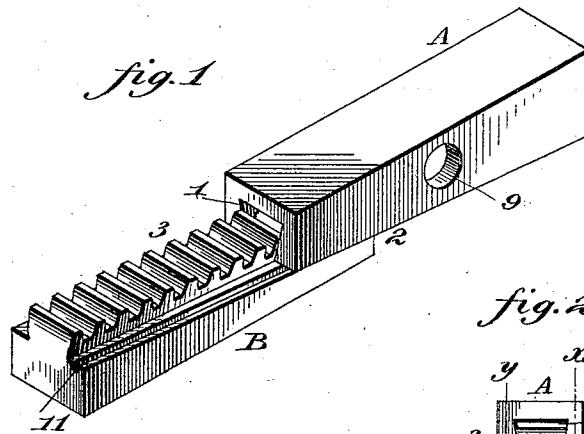


(No Model.)

J. F. PERRY.
QUOIN.

No. 502,990.

Patented Aug. 8, 1893.



Witnesses

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Inventor
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Att'y.

UNITED STATES PATENT OFFICE.

JOHN F. PERRY, OF CHICAGO, ILLINOIS.

QUOIN.

SPECIFICATION forming part of Letters Patent No. 502,990, dated August 8, 1893.

Application filed January 19, 1893; Serial No. 458,892. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. PERRY, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Printers' Quoins; and I do hereby 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.

My invention relates to an improvement in printers' quoins.

The invention will first be described in connection with the accompanying drawings, and then pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my improved quoin. Fig. 2 is an end elevation of the same. Fig. 3 is a longitudinal sectional view taken on the line $x-x$ Fig. 2, the quoin being in its contracted position. Fig. 4 is also a longitudinal sectional view, but taken on line $y-y$ Fig. 2, and with the quoin in its expanded or open position. Fig. 5 is a plan view of the lower wedge. Fig. 6 is a perspective view of the quoin wrench. Fig. 7 is a side elevation of my quoin at perfect lock-up.

Referring to the drawings, A is an upper and B a lower wedge, the upper wedge having a dovetail-slot 1, running parallel to the slanting sides 2 of the wedges. The lower wedge B has a central, longitudinal rib 3, provided with cogs so as to form a rack, this rib or rack being also dovetailed to fit snugly and slide longitudinally in the slot 1 of the upper wedge.

It will be apparent that when the wedges are in the position shown in Fig. 3, the quoin will be at its minimum width and when the wedges are slid upon each other until they occupy the position shown in Fig. 4, the quoin will be at its maximum thickness.

To move the wedges longitudinally on each other I use a wrench C, as shown in Fig. 6, consisting of a stem 4 having a shoulder 5 and a pinion 6 at one end, and the usual head 7 with the cross-rod 8 at the other end. The pinion of the wrench is adapted to be inserted into a transverse socket 9 in the upper wedge and to engage with the central rack or rib 3 of the lower wedge, the transverse socket 9 extending entirely through the upper wedge

to permit of the introduction of the wrench from either side. It is plain that on revolving the wrench in one direction, the pinion and the rack will drive the wedges so as to narrow the quoin, and when the wrench is revolved in the opposite direction the pinion and rack will drive the wedges so as to widen the quoin.

To limit the longitudinal movement of the wedges and thereby prevent them from separating from each other, I form two small grooves 10 and 11 in the lower wedge, one on each side of the central rack 3. Groove 10 begins at one end of the wedge and terminates a short distance from the other end of the wedge, while groove 11 begins at that end of the wedge near which groove 10 terminates, and terminates a short distance from that end of the wedge where groove 10 begins.

Projecting into groove 10 and limiting the movement of the wedges in one direction, is a stop-pin 12 fastened to the lower face of the upper wedge; and projecting into groove 11 to limit the movement of the wedges in the opposite direction, is a stop-pin 13, also secured to the lower face of the upper wedge.

The use of my improved quoin is apparent from the foregoing description.

As the movement of the wedges in either direction is limited so that the dovetail rack cannot entirely leave its slot, it will be understood that the two wedges cannot become separated, an advantage fully appreciated by any one skilled in the art.

I am aware that rack and pinion-actuated wedge quoins are old, but all of which I have any knowledge are open to the disadvantages of having separable wedges. Moreover, in none of them is there any suitable bearing for the pinion on the wrench, which in my construction is formed by the socket in the upper wedge. By this arrangement all slipping of the wrench is avoided and a firm bearing given to it when turning. Another great advantage of my construction is that I am enabled to cog the central rib to the extreme ends of the lower wedge, whereby, I gain a greater longitudinal movement of the wedges than in those forms of similar quoins with which I am acquainted, thus enabling me, either to make the quoin of the usual length which will open wider than in the old

forms, or to construct a quoin which will be shorter than the old forms, yet open to the same width, the slope of the wedges in all cases being the same; preferably I construct
 5 my quoin of malleable iron, for strength, durability and finish, though other suitable metal can be used.

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

1. In a quoin, an upper wedge having a longitudinal dovetail slot, a lower wedge having a longitudinal dovetail rib adapted to slide freely within the slot, said lower wedge being
 15 also provided with a groove on each side of the dovetail rib, one groove commencing at one end of the wedge and terminating near the other end of the wedge, and the other groove commencing at that end of the wedge
 20 where the first one terminates, and terminating at that end where the other groove begins, and a pair of stop-pins secured to the under side of the upper wedge, each stop-pin projecting into one of the grooves, substantially
 25 as described and for the purpose set forth.

2. In a quoin, the combination, with an upper wedge having a longitudinal dovetail slot

and a circular socket wholly within said wedge, said socket being midway between the ends of the wedge and opening into the dove- 30 tail slot, of a lower wedge having a longitudinal cogged rib arranged to slide freely within the slot, said lower wedge being also provided with a groove on each side of the dovetail rib, one groove commencing at one 35 end of the wedge and terminating near the other end of the wedge, and the other groove commencing at that end of the wedge where the first groove terminates, and terminating at that end where the other groove begins, 40 and a pair of stop-pins secured to the under side of the upper wedge, each stop-pin projecting into one of the grooves, the distance between the end of each groove and the end of the wedge being such that the stop-pins 45 will limit the movement of the wedges when the last cog of the rib is in line with the transverse socket, substantially as described.

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

JOHN F. PERRY.

Witnesses:

MORTON T. CULVER,
 HARRY N. CULVER.