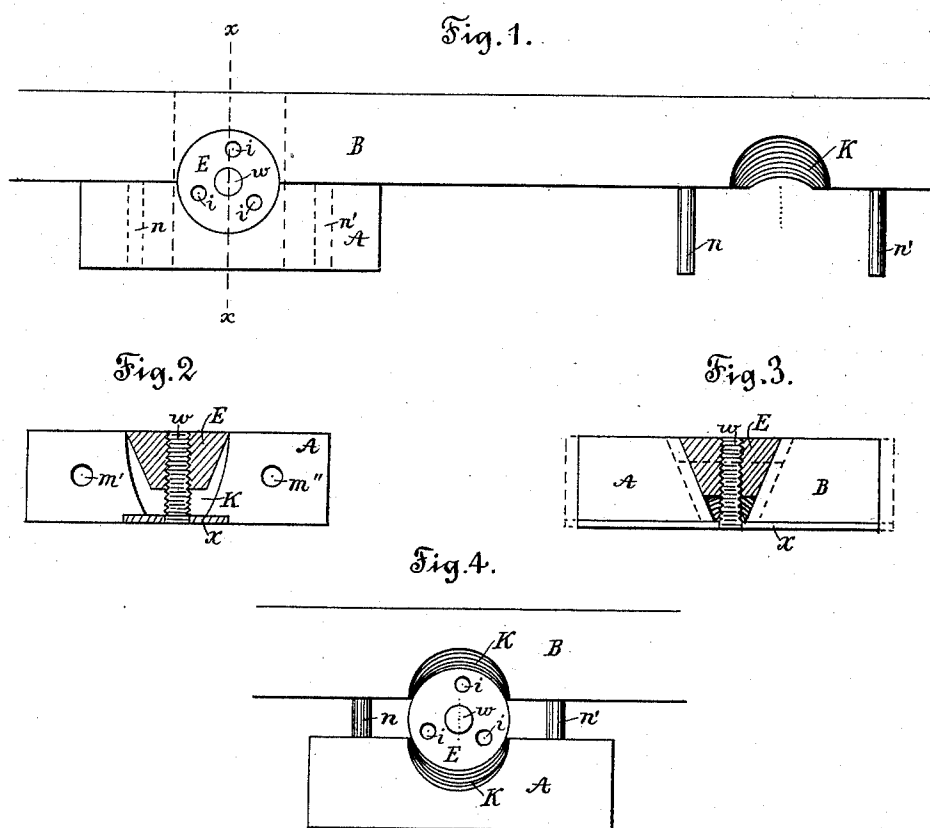


(Model.)

E. A. & A. G. SCHMID.
PRINTER'S QUOIN.

No. 483,792.

Patented Oct. 4, 1892.



Witnesses:
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UNITED STATES PATENT OFFICE.

ERNST A. SCHMID AND ADOLPH G. SCHMID, OF PEORIA, ILLINOIS.

PRINTER'S QUOIN.

SPECIFICATION forming part of Letters Patent No. 483,792, dated October 4, 1892.

Application filed March 23, 1892. Serial No. 426,084. (Model.)

To all whom it may concern:

Be it known that we, ERNST A. SCHMID and ADOLPH G. SCHMID, citizens of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Printers' Quoins; and we 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.

Our invention relates to certain new and useful improvements in printers' quoins, by means of which a quoin is provided being simple in construction, durable, and very practical for the purpose designed.

More particularly our invention relates to a metal quoin detachably connected with a foot-stick or side-sticks and adjusted by means of a suitable wedge or socket nut.

That our invention may be more fully understood, reference is had to the accompanying drawings, in which—

Figure 1 shows a portion of a foot-stick properly modified for the attachment of our improvement, and also shows our improved quoin attached thereto. Fig. 2 is a cut section on a line with the inner face of the foot-stick and the inner face of the quoin and through the wedge or socket nut and screw and plate. Fig. 3 is a cut sectional view through the line xx of the attached quoin in Fig. 1, showing in dotted lines the expansion where the wedge or socket nut is screwed downward. Fig. 4 is a plan view of the device expanded.

In the figures, B refers to the foot-stick or a portion thereof; A, to the quoin; $m'' m'''$, to perforations therein.

K is a circular recess in the inner side of the foot-stick, forming upon the upper face of the foot-stick one-half of the arc of a circle and cut out of the body at the edge of the foot-stick and gradually tapering but continuing the same size of circles, only reducing the arc so that at its lower portion or the lower face of the foot-stick it is reduced to one-eighth of the circumference of the same circle, and the middle portion of the arc depression on a line from the top face to the lower face forms a gradual oblique taper, while the sides from the center or circum-

ferential center are concaved to form concaved oblique surfaces, the concave gradually increasing from central point to outer edges of depressions, there being formed in the quoin A an exactly similar depression to coincide with the one in the foot-stick to form a gradually downwardly-tapering circular recess when the two parts are placed in conjunction, this formation being adapted to receive the socket-nut E, which nut being screwed down, its edges bearing against the central oblique faces, will force the quoin from the foot-stick and the separation allows the head to pass downward at the points of contact just named, and the concaved sides allow the head to pass downward at those points.

$n n'$ are pins fixed to the inner face of the foot-stick and parallel with the upper face.

E is a wedge or socket nut internally threaded and provided with socket-holes $i i i$.

W is a screw upon which the wedge or socket nut is designed to bear, and x is a plate bearing in recesses or grooves in the lower face of the foot-stick and quoin, and to this plate there is integrally attached the screw w .

In operation as a quoin for the purpose of locking the form, the proper adjustments having been made of the form around the body of the type and with suitable bearing-pieces intervening between the body of type and the quoin, with the said pieces being with or nearly in contact with the said quoin, a suitable socket-wrench is applied to the wedge or socket nut E, and the same is screwed downward upon the threaded bolt w , and as it bears downward it will be seen that the quoin A, carried upon the pins $n n$, will be borne away from the foot-stick B and against the body of the type by the wedge or socket nut bearing downward upon the slanting straight face of the recesses in the foot-stick and quoin, thus pushing the quoin away from the foot-stick, as the said quoin is free to move by pressure, the wedge or socket nut or the head thereof being free to move downward by means of the recesses in foot-stick and quoin being uniform and the arc of the partial circle always conforming to the shape of the nut-head, thus obviating by construction the possibility of binding to stop the downward progress of the wedge or socket nut. It will further be seen that because of the angle of

the recess formed by placing the foot-stick B and quoin A face to face, corresponding to the angle to which the wedge or socket-nut E is cut, the latter will always be in contact on the sides its whole thickness with the foot-stick B and quoin A, as shown in Fig. 3. And the adjustment of the plate x is such that an equal pressure is had upon both the quoin and foot-stick, thus preventing any warping or tilting and providing a uniform and gradual pressure.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

15 In a printer's quoin, the combination of a foot-stick formed with a circular depression cut out of its inner face to form a half-circle at its upper portion and one-eighth of a circle at its lower portion, the lower circle having the same radius, the whole circular recess being of uniform radius and decreasing length of chord and the middle portion of the arc depression on a line from the top face to

the lower face forming a gradual oblique taper, while the sides from the center or circumferential center are concaved to form concaved obliquely-tapering surfaces, the concave gradually increasing from the central oblique line to outer edges of depressions, with an exactly similar depression in the quoin to coincide with the one in the foot-stick to form a gradually downwardly-tapering circular recess when the two parts are placed in conjunction, and there being provided the socket-nut, cone-shaped, and adapted to be screwed down to force the quoin from the foot-stick and the threaded stem upon which the socket-nut is screwed, all substantially as described and set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

ERNST A. SCHMID.

ADOLPH G. SCHMID.

Witnesses:

AUGUST H. BACH,

LOUIS SCHLEICHER.