

(No Model.)

A. T. H. BROWER.
PRINTER'S QUOIN.

No. 560,021.

Patented May 12, 1896.

Fig. 1.

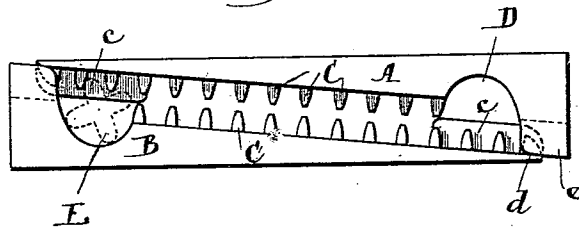


Fig. 2.

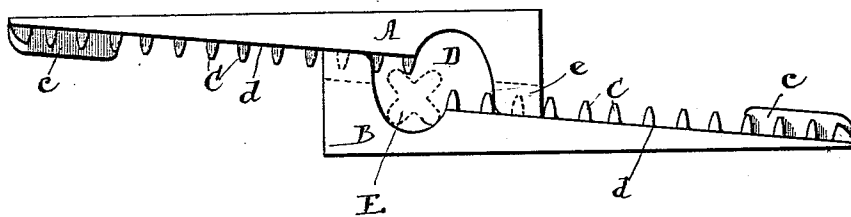


Fig. 3.

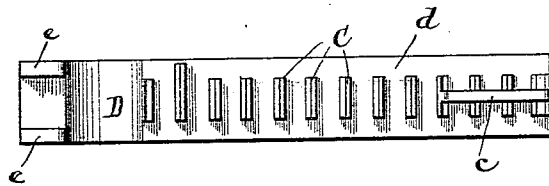
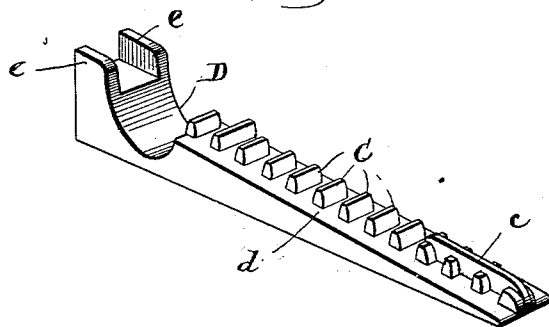


Fig. 4.



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UNITED STATES PATENT OFFICE.

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PRINTER'S QUOIN.

SPECIFICATION forming part of Letters Patent No. 560,021, dated May 12, 1896.

Application filed September 30, 1895. Serial No. 564,100. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM T. H. BROWER, residing at Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Printers' Quoins, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

The present invention has relation to that class of printers' quoins in which two wedge-shaped bodies of like construction are provided upon their opposing faces with rack-bars and with guide lugs and bearings, the rack-bars serving to permit the movement of the bodies by means of a suitable pinion-key, while the guide-lug bearings serve to maintain the bodies in proper relative position; and more particularly does my invention relate to the improvement in printer's quoin set forth in Letters Patent No. 413,166, granted to me October 22, 1889. In the construction of this class of quoins it has heretofore been the practice to provide the opposing faces of the wedge-shaped bodies either with shallow rack-bars at each side of a central web or fin or to provide the opposing faces of the wedge-shaped bodies with a central rack-bar, as in my above-mentioned patent. One of the advantages of this last-mentioned construction is that a more direct and positive means is afforded for engagement of the pinion-key in order to effect the movement of the parts of the quoin, but in order to allow the initial movement of the parts of the quoin the practice has been to omit the rack-bars from the smaller ends of the quoin. A consequence of this construction is that the initial wedging movements of the parts of the quoin have been commonly effected by a blow from the mallet or other means than the pinion-key.

The object of the present invention is to provide a quoin of such construction that when the wedge-shaped parts are set together for use the initial as well as the final movements of the parts for the purpose of locking the type-form can be effected by the pinion-key and whereby all danger of the parts of the quoin becoming jammed is avoided.

To this end my invention consists in the novel construction of quoin hereinafter de-

scribed, illustrated in the accompanying drawings, and particularly pointed out in the claims at the conclusion of this specification. 55

Figure 1 is a view in side elevation of a printer's quoin embodying my invention. Fig. 2 is a view similar to Fig. 1, but showing the parts in different position. Fig. 3 is an inner face view of one of the quoin-sections. Fig. 4 is a perspective view of one of the quoin-sections. 60

A and B designate the two sections of my improved quoin, each of these sections being of like construction. Each of the sections A and B has its inner face provided with a central rack-bar C, that extends along the inclined inner face of the section for a considerable distance. At each side of the rack-bar C is a bearing *d*, whereon rest the guide-lugs *e*, formed on the inner face of each quoin-section at its larger end. 65 70

By reference to Figs. 3 and 4 of the drawings it will be seen that the last tooth but one of each rack-bar C, adjacent the bearing-lugs *e*, is formed longer than the remaining teeth of the rack-bar. The purpose of this construction is to limit the movement of the quoin-sections so that at least one tooth of each rack-bar will always be opposite the notch D of the other quoin-section and in readiness to receive the key. Obviously also these longer teeth of the rack-bar C, by limiting the movement of the quoin-section, prevent the lugs *e* from entering the notches D. 75 80 85

The central rack-bar C, at the smaller end of the quoin, is provided with a web or fin *c*, this web or fin being of such size as to span the notch D, formed in the inner face of each quoin-section adjacent its larger end. The notches D are of proper size to permit the pinion-key E to be inserted into engagement with the rack-bar C, as shown in Figs. 1 and 2. The web *c*, at the end of each of the rack-bars C, is of such height that when the quoins are set together the inner faces of the webs *c* will with certainty prevent the interlocking of the rack-bars C or the jamming of the small ends of the quoins against the guide-lugs *e*, and thus insure a continuous and easy movement of the quoins at all times. 90 95 100

From the foregoing description it will be seen that when the two sections A and B of the quoin are set together between the furni-

ture within the chase they can be freely slipped by hand until they assume the position seen in Fig. 1 of the drawings. Since the webs *c* at the outside bear upon the teeth of the rack-bars, and as these webs are of sufficient length to span or bridge the notches D of the quoins, the initial bearing of the webs upon the teeth C is easily transferred, as the quoins are further moved, to the lugs *e* at the larger ends of the quoins. Thus a continuous and easy movement of the quoins can be had without jar or digression from the initial line of movement. When the parts are in the position shown in Fig. 1, the sections A and B can be shifted by the engagement of the pinion-key E with the shallow portions of the rack-bar C, lying on each side of the web *c*. Inasmuch as the initial movements of the quoins from the position shown in Fig. 1 requires but comparatively slight force, the shallow portions of the rack-bar C, adjacent the web *c*, afford adequate bearings for the pinion-key; but as the sections of the quoin are moved toward the position shown in Fig. 2 the webs *c* pass from opposite the notches D, and the pinion-key E can then be more deeply inserted into full engagement with the central rack-bars C. As a consequence, during the final movements of the quoin-sections, which must be effected with considerable force, the pinion-key E, being in full engagement with the central rack-bars C, will exert a direct strain upon the quoin-sections and avoid all danger of lateral movement or distortion.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. A printer's quoin of the character described comprising a wedge-shaped body having a central rack-bar along its inner face, to approximately its smaller end and having its smaller end provided with a short raised rib and with teeth at the side of said raised rib, substantially as set forth.

2. A printer's quoin comprising a pair of wedge-shaped sections A and B each provided at its larger end with guide-lugs *e* and with a notch D and each provided upon its inner face with a central rack-bar C extending to approximately its smaller end, the part of said rack-bar C at the smaller end of each section being provided with a short raised rib or web *c*, substantially as set forth.

3. A printer's quoin comprising a pair of wedge-shaped sections A and B, each provided at its larger end with guide-lugs *e* and with a notch D and each provided upon its inner face with a central rack-bar C extending to approximately its smaller end, a part of said rack-bar C at the smaller end of each section being provided with a short raised rib or web *c*, and each of said rack-bars C being provided adjacent its opposite end with a tooth longer than the remaining teeth of the rack-bars and adapted to engage with one of the lugs *e* to limit the movement of the quoin-sections.

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Witnesses:

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