(No Model.)

W. J. BUSSE.

PRINTER'S QUOIN.

No. 470,650. Patented Mar. 8, 1892.

FIG. 1.

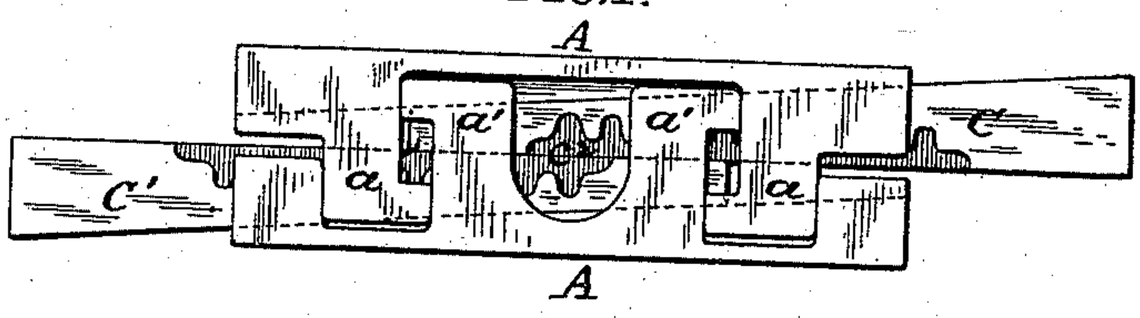


FIG. 2.

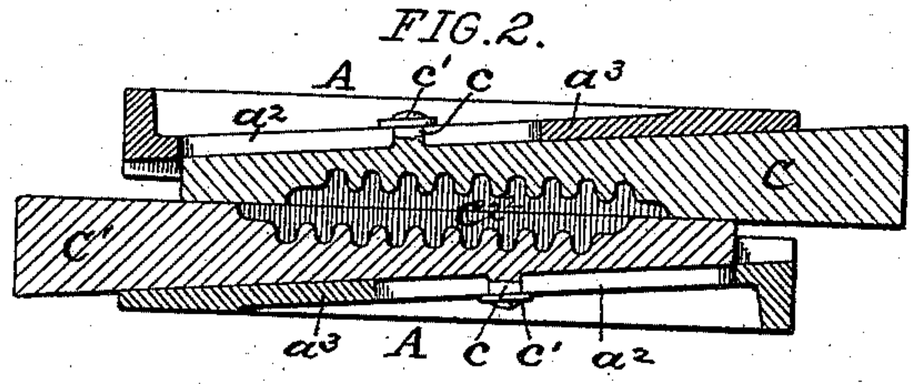


FIG. 3.

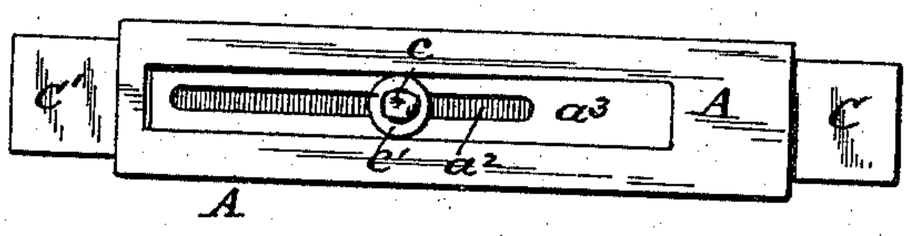
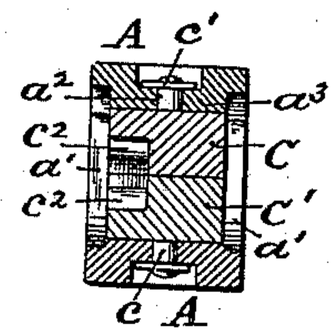


FIG. 4.



ATTEST.

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INVENTOR:

William J. Busse,

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UNITED STATES PATENT OFFICE.

WILLIAM J. BUSSE, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO JOHN R. BRANDT, OF SAME PLACE.

PRINTER'S QUOIN.

SPECIFICATION forming part of Letters Patent No. 470,650, dated March 8, 1892.

Application filed September 28, 1889. Renewed August 17, 1891. Serial No. 402,908. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. BUSSE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois have invented certain new and useful Improvements in Printers' Quoins, of which the following is a specification.

This invention relates to that type of printers' quoins in which the duplicate expanding-wedges are inclosed by a laterally-expansible casing or housing connected together against independent longitudinal movement, the objects of the present improvement being, first, to provide in the above type of printers' quoins a disconnected or independently-acting duplicate wedge formation adapted to move in opposite directions and with which the inclination or slant of the wedge faces can be made very slight and yet accomplish the usual amount of lateral expansion of the quoin, in consequence whereof the tendency of the parts to jarring loose in use is reduced to a minimum and the holding qualities of the quoin correspondingly increased; second, to provide an improved construction of the laterally-expanding housing or casing of the quoin, whereby the parts are connected together in a laterally-expansible manner only and at the same time afford means whereby the simultaneous movement of the duplicate wedge members can be positively insured. I attain such objects by the construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a printer's quoin embodying my present improvements; Fig. 2, a horizontal section of the same, illustrating the duplicate wedge formation; Fig. 3, a side elevation, and Fig. 4 a transverse section.

Similar letters and figures of reference indicate like parts in the several views.

Referring to the drawings, A A represent the outer laterally-moving counterpart side pieces or wedges, the inner of faces which are inclined in opposite directions, as shown, so as to form inclined bearing-surfaces for the duplicate wedges C and C′, the inclined faces of which are arranged in opposite directions, so as to correspond with the inclined faces of the outer pieces A A, as shown, the contact-faces of the wedges being in a plane parallel with that of the outer bearing-faces of the side pieces 1 and 2 of the quoin. As so constructed a duplicate wedge construction is provided that acts in an independent or disconnected manner and in opposite directions, so that each individual wedge mechanism accomplishes one-half of the total expansion of the quoin, and in consequence thereof can be made with a correspondingly slighter inclination than would be the case in the usual single coacting wedge mechanism, where the whole of the quoin-expansion is accomplished by a pair of contiguous inclined wedge faces. With a decrease in the inclination of the wedge surfaces, as above stated, a corresponding increase in the holding properties of the parts ensues, with a relative decrease in the liability of the parts jarring loose in practical use.

The housing or side pieces A A are connected together against independent longitudinal movement, but capable of a limited lateral expanding movement, by the following improved construction: The side pieces A A are made somewhat deeper than the wedges C and C′ and are formed with top and bottom flanges that are cut away to form interlocking hook-shaped prongs a and a', that engage together, as shown in Fig. 1, to admit of the before-mentioned limited lateral expanding movement of the parts in the practical use of the quoin. Another practical advantage resulting from the above improved construction is that it affords a simple, ready, and perfect means to form a fulcrum for the usual pinion-key or wrench in imparting a simultaneous movement to the wedge-pieces C and C′ in an endwise direction past each other, this being readily provided by an aperture or orifice formed in the central part of the upper flange of one of the side pieces, as illustrated in Fig. 1.

The duplicate wedges C and C′ are each connected to its respective side or housing piece A or A by a guide-stud c, passing through a longitudinally-extending slot a^2 in the inclined or obliquely-arranged web a^3 of the housing-pieces and provided with a confining head or washer c', as indicated in Figs. 2, 3, and 4.

In the practical use the wedges C and C′

may be adjusted by blows, &c., upon their thicker end. It is preferable, however, to employ the usual well-known rack-and-pinion movement for effecting an adjustment. For this purpose the meeting faces of the wedges C and C′ will be recessed out at their top side to form the toothed racks c^2, in which the usual pinion-key will be inserted and by its rotation impart the required longitudinal movement simultaneously and in opposite directions to said wedges and a corresponding lateral adjustment to the said pieces A, the central flange aperture before described constituting a fulcrum for the pinion-key in effecting the simultaneous movement of the wedges.

The advantages resulting from my improved construction, in addition to those ensuing from the slight taper or inclination of the wedge faces, as before stated, are that the parts are all connected together and will not accidentally fall apart. An accidental blow upon the projecting ends of the wedge-pieces will only tend to tighten the adjustment of the quoin parts instead of tending to loosen the same, as in some former constructions. It admits of a longitudinal movement of the wedges bodily together in an oblique direction between the housing-pieces without affecting the lateral adjustment of the same, this feature being of especial value in cases where the quoin is used close up to the corner of the type-holding chase.

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

1. A printer's quoin comprising, in combination, an inner expanding wedge mechanism and an outer two-part housing formed with top and bottom flanges that are cut away to form interlocking prongs that connect the two parts together against independent longitudinal movement and admit of a limited lateral expanding movement of the parts, substantially as set forth.

2. A printer's quoin comprising an inner expanding wedge mechanism consisting of two wedges adapted to move each other and having a rack formation on their contiguous surfaces, in combination with an outer two-part housing having a flange extending over the top of the wedges and provided with an aperture to form a fulcrum for the pinion-key employed to impart simultaneous movement to the wedges, substantially as set forth.

3. A printer's quoin comprising, in combination, a pair of outer laterally-adjustable side or housing pieces, the inner faces of which are inclined in opposite directions, and a pair of duplicate inner wedges, the outer faces of which are correspondingly inclined, the parts constituting a quoin having a pair of independent and disconnected wedge constructions, substantially as herein described.

4. A printer's quoin comprising a pair of outer laterally-adjustable side or housing pieces having top and bottom interlocking prongs a and a' and longitudinally-slotted webs a^3, in combination with the duplicate inner wedge-pieces having guide-studs c, that pass through the slotted webs a^3 and are provided with confining heads or washers c', substantially as set forth.

In testimony whereof witness my hand this 23d day of September, 1889.

WILLIAM J. BUSSE.

In presence of—
ROBERT BURNS,
GEO. H. ARTHUR.