

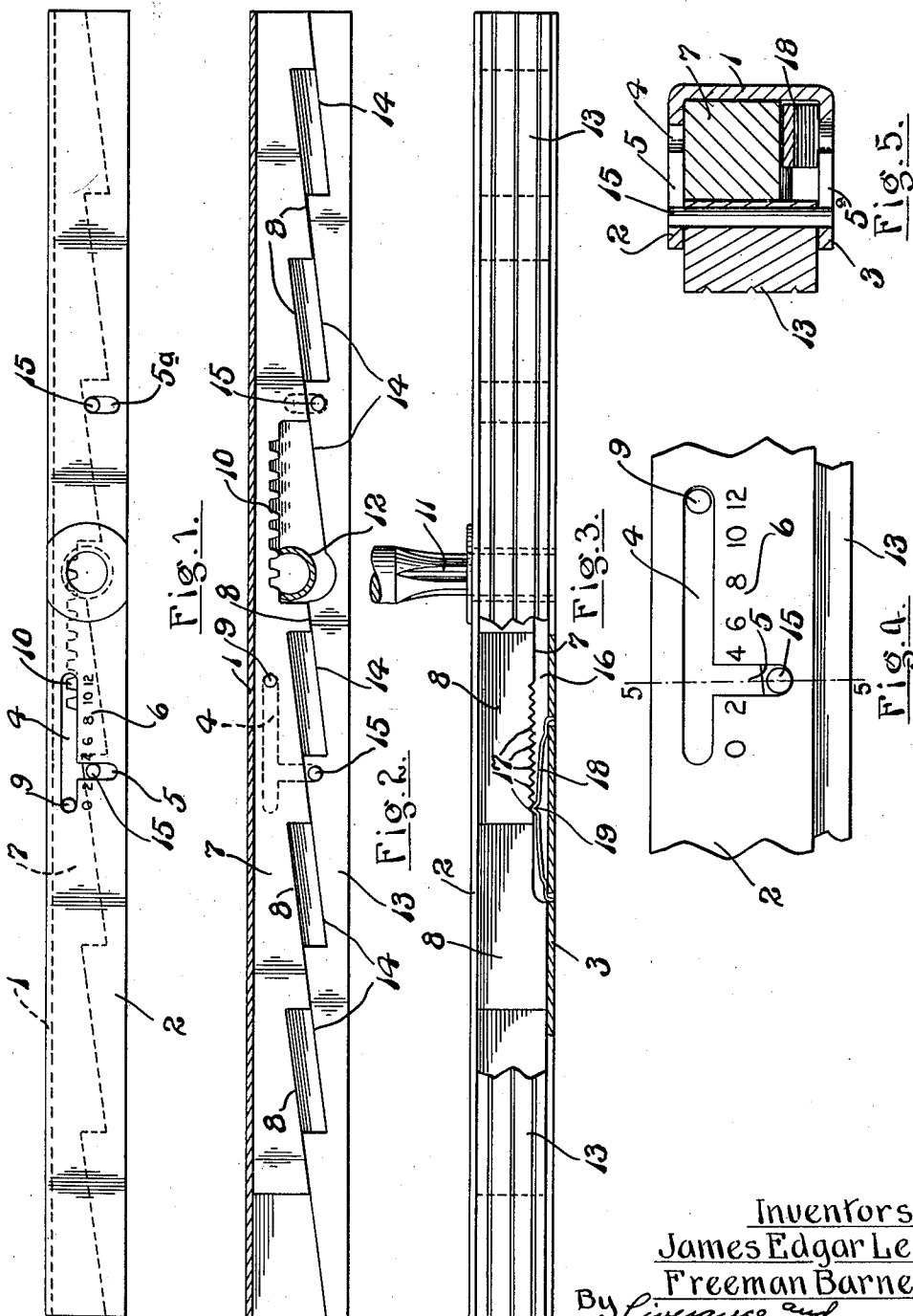
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J. E. LEE ET AL

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PRINTER'S QUOIN WITH EXPANSION INDICATING MEANS

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Inventors
James Edgar Lee
Freeman Barney
By *Linnace and Van Antwerp*
Attorneys

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PRINTER'S QUOIN WITH EXPANSION
INDICATING MEANS

James Edgar Lee, Grand Haven, and Freeman
Barney, Spring Lake, Mich., assignors to The
Challenge Machinery Company, Grand Haven,
Mich., a corporation of Michigan

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1

The present invention relates to a printer's quoin. Quoins are subject of severe use and strain and in some cases to abuse, must be operated quickly and easily, readily released from its locking means whenever desired for adjustment of the members of the quoin to each other, and have means for indicating the degree of lateral enlargement of the quoin for use in replacing in its exact former position if for any reason it has to be unlocked.

The present invention attains all of these objects and purposes, and many others not enumerated, to a better and more marked degree than previously. Because of the severe use or abuse of the quoins, due to the operator not previously knowing when the quoin was either in entirely closed or entirely open position, thereby causing the operator to strain the quoin or its operating key and in many instances injure or break them, one primary advantage of the present invention resides in novel construction and the indicator means associated therewith which eliminates all possibility of the operator not knowing positively when the quoin is closed or open in its entirety, thereby obviating such breakage and injury as has previously occurred.

An understanding of the invention may be had from the following description, taken in connection with the accompanying drawing, in which,

Fig. 1 is a plan of the printer's quoin made in accordance with our invention.

Fig. 2 is a longitudinal horizontal section there-through.

Fig. 3 is an elevation with parts being broken away and shown in section for disclosing the retaining means used to hold the quoin in any position to which adjusted.

Fig. 4 is a fragmentary plan, enlarged, showing the quoin laterally extended and the indicating indicia used therewith, and

Fig. 5 is an enlarged transverse section through the quoin.

Like reference characters refer to like parts in the different figures of the drawing.

In the construction of the quoin, a channel member having a web 1 and, as shown in the drawing, upper and lower spaced flanges 2 and 3 is provided. Between the ends of the upper flange parallel to and adjacent the web 1 a horizontal slot 4, closed at both ends, is cut, having a branch slot 5 extending therefrom outwardly as shown in Figs. 1 and 4. Other slots 5a parallel to the slot 5 and spaced therefrom are also provided in said upper and lower flanges 2 and

2

3 of the channel member, the only difference between the slots 5 and 5a is that the latter are closed at both ends while the former is in conjunction with the slot 4. At the outer side of the slot 4 indicating characters which, in practice are even numbers between 0 to 12 inclusive, as indicated at 6, are stamped or otherwise applied to the upper flange of the channel member as shown.

Within the channel member two elongated wedge members or bars are housed. The inner bar 7 at its outer side is provided with a plurality of consecutive wedge surfaces 8 from one end thereof to another. Such wedging bar 7 is longitudinally movable with respect to the channel member in which it is located within the limits prescribed by a pin 9 extending from the bar 7 and having its upper end received in the slot 4.

The member 7, between its ends, is formed with a short rack 10 which is engageable by the inserted end of a removable key 11 having teeth to engage the rack, being turned manually. The rack engaging end of the key is guided and maintained in engagement with the rack by a partially cylindrical guide 12 best shown in Fig. 2.

The other or second wedging bar 13 is also elongated, has the same length as the described channel and is somewhat longer than the wedging bar 7 (Fig. 2). At its inner side it has cooperative or inclined faces 14 adapted to ride or bear against the faces 8 of the bar 7. Said outer member 13 is provided with pins 15 passing there-through, the ends of which are seated in the slots 5 and 5a. It is apparent that on engaging the rack 10 with the key 11 the wedging bar 7 may be moved longitudinally within the channel member so that the end of the pin 9 traverses the slot 4 from one end thereof to the other or to any intermediate position between the ends which may be required. With such movement when the wedging member 7 is moved to the right, the outer member 13 will move bodily, and is properly held in movement by the guiding engagement of the pins 15 and the slots 5 and 5a.

At its under side the member 7 is longitudinally recessed for a distance intermediate of its ends, as at 16, and at the under side of the recessed portion of the bar has a plurality of transverse grooves 17, preferably triangular in shape, as shown in Fig. 3. A spring detent or holding member 18 of the form shown in Fig. 3 with its ends inserted in openings in the lower channel flange 3, midway between its ends is formed with an upwardly extending projection 19 or detent shaped to enter any of the recesses 17 which

3

may be moved to such detent during the longitudinal movement of the wedging bar 7.

In the use of the quoin for locking type bars or electro plates or any other printer's supplies used in a form, one side of the quoin may engage the type, the other an outside holding frame. The quoin is operated by the key 11 to force the outer bar 13 against the inner side of the frame and thus securely bind the type bars and the like and hold them against displacement.

As the key is rotated the wedge bar 7 will move longitudinally forcing the bar 13 outwardly to expand it for its clamping action and the pin 9 will move longitudinally in the slot 4. When the pin 9 is at the left end of the slot 4 the quoin is wholly contracted and when the pin is at the opposite end of the slot the quoin is at the limit of its expansion. Thus the operator can plainly see, by the position of the pin in the slot, the degree to which the quoin has been either contracted or expanded and he will not attempt to force it in either direction beyond its limit.

Previously with the quoin structures used this was not possible, and frequently the rack at 10 or the key was injured or broken because of the operator not knowing positively when the quoin was entirely closed or open, continued in either case to apply heavy force on the key with danger of strain and breakage. With this invention such undesirable exertion of the operator will not take place as he can always see when the quoin is fully closed or fully expanded, the pin 9 having reached either one end or the other of slot 4.

The construction of quoin is very practical and useful. The invention is defined in the appended claims and is to be considered comprehensive of all forms of structure coming within their scope.

We claim:

1. In a printer's quoin, an elongated channel member having a vertical web and upper and lower spaced flanges, said upper flange between its ends having an elongated slot closed at both ends therethrough, a wedging bar mounted for longitudinal movement within and having a side bearing against the web of said channel bar, a pin extending from said wedging bar into said slot, a second cooperating wedging bar located at the outer side of the first wedging bar, said wedging bars having cooperating inclined faces whereby movement of the first wedging bar longitudinally may move the second wedging bar outwardly or release it for inward movement, means for guiding said second wedging bar in its outward and inward expanding and retracting movements, and means for manually moving the first wedging bar in a longitudinal direction, a plurality of spaced indicating characters adjacent the slot in said upper flange, all of which are at all times visible and with reference to which said pin comes opposite in succession thereto as it moves with the first wedging bar lengthwise of the slot.

4

2. In a construction as described, an elongated channel guide member having a vertical web and spaced upper and lower horizontal flanges, one of said flanges between its ends and adjacent the web having an elongated slot of predetermined length therein closed at both ends and a branch slot connected therewith extending outwardly toward the edge of said flange, an elongated wedging bar mounted to bear at one side against said vertical web and located between the upper and lower flanges, a pin extending from said wedging bar into said elongated slot in said flange, said flange at a side of the slot into which the pin extends having lengthwise of the slot a plurality of spaced indicating characters thereon, means for moving said wedging bar in the direction of its length to move the pin from one end of said slot to the other and to intermediate positions between said ends, a second wedging bar located outwardly of the first wedging bar, said wedging bars having cooperating inclined surfaces whereby on longitudinal movement of the first wedging bar in one direction the second wedging bar is forced outwardly, a pin extending from the second wedging bar, said pin being received in said branch slot, said flange at a distance from said branch slot having a slot parallel thereto with closed ends, and a second pin extending from said second wedging bar having its end received in the last mentioned slot.

3. A printer's quoin having a body, a longitudinally movable wedge bar in said body, a cooperating transversely movable wedge bar in said body, means for guiding and limiting the movement of said transversely movable wedge bar, means for moving said longitudinally movable wedge bar, a longitudinal slot in said body and a pin projecting from said longitudinally movable wedge bar into said slot and transversible therein and visible from the exterior of the body, the length of said slot and the travel of the pin therein corresponding to the movement of said transversely movable wedge bar and the limits thereof.

4. The elements of claim 3 combined with indicia on the exterior of said body adjacent said longitudinal slot serving to indicate the position of the pin relative to the extent of its movement.

JAMES EDGAR LEE.
FREEMAN BARNEY.

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