C. L. DINGENS.

PRINTER'S QUOIN.

APPLICATION FILED OCT. 8, 1908.

904,849. Patented Nov. 24, 1908.

Fig. 1.

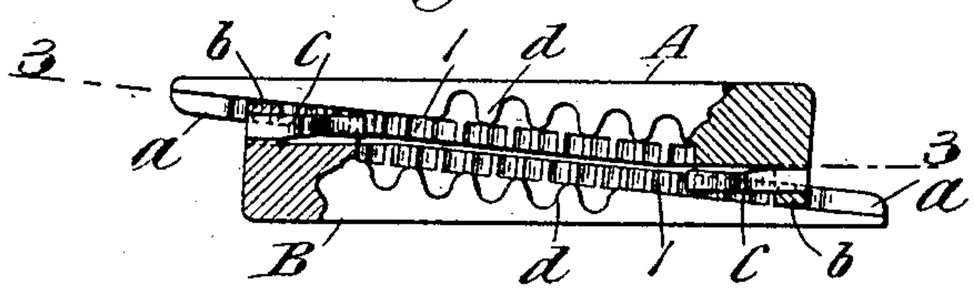


Fig. 2.

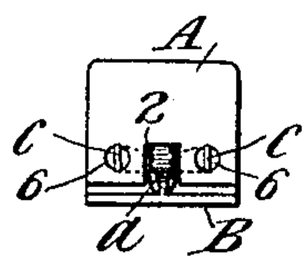


Fig. 3.

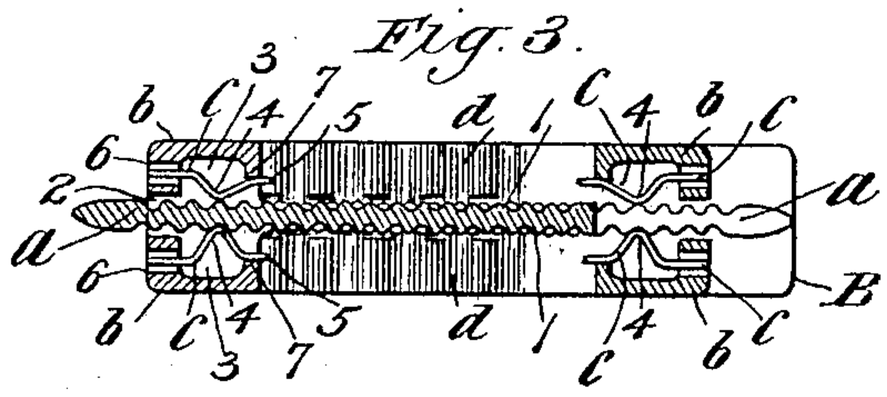


Fig. 4.

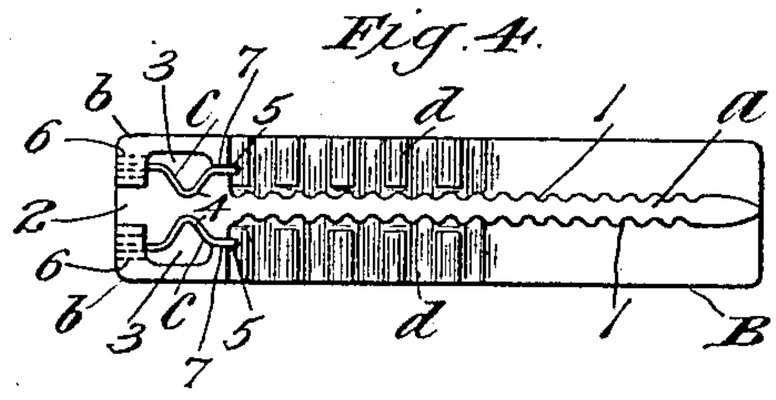


Fig. 5.

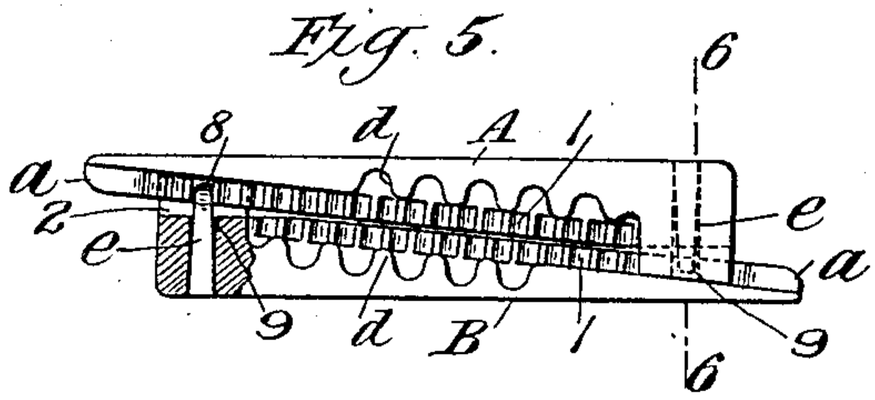


Fig. 6.

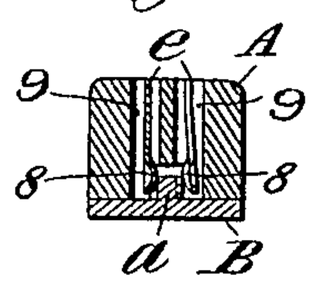
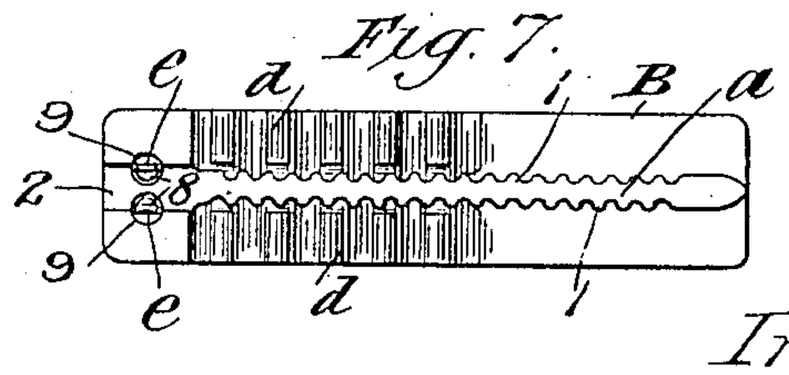


Fig. 7.



Witnesses:
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P. N. Tilden

Inventor:
Carl L. Dingens
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UNITED STATES PATENT OFFICE.

CARL L. DINGENS, OF NEW YORK, N. Y.

PRINTER'S QUOIN.

No. 904,849. Specification of Letters Patent. Patented Nov. 24, 1908.

Application filed October 8, 1908. Serial No. 456,780.

To all whom it may concern:

Be it known that I, CARL L. DINGENS, a citizen of the United States, residing at New York, county of New York, and State of New York, have invented certain new and useful Improvements in Printers' Quoins, fully described and represented in the following specification and the accompanying drawings forming a part of the same.

This invention relates to printers' quoins of that class which are used in pairs and provided with inclined co-acting faces, the object of the invention being to provide locking devices which shall prevent any slip of the quoins and which shall be simple and durable.

For a full understanding of my invention, constructions embodying the same in preferred forms will now be described in detail in connection with the accompanying drawings forming a part of this specification, and the features forming the invention will then be specifically pointed out in the claims.

In the drawings:—Figure 1 is a side view, partly in section, showing a pair of quoins embodying the invention in a preferred form. Fig. 2 is an end view, looking to the left in Fig. 1. Fig. 3 is a section on the line 3 of Fig. 1. Fig. 4 is a face view of one of the quoins. Fig. 5 is a view similar to Fig. 1, showing a modified construction. Fig. 6 is a section on the line 6 of Fig. 5. Fig. 7 is a face view of one of the quoins of Figs. 5 and 6.

Referring now to Figs. 1 to 4, A and B are the two quoins of a pair, these quoins being identical, so that description of one will apply to both. *a* is a central rib on the face or inclined side of the quoin having locking teeth 1 on opposite sides, which are preferably staggered, as shown, so that the space between successive locking teeth is reduced to a minimum. At the large end each quoin has lugs *b* extending upward from the face, between which is the groove 2 for the rib *a* of the other quoin. In these lugs *b* is a cavity 3 in which is mounted a spring *c*, this spring projecting into the groove 2 and being adapted to engage the locking teeth 1 on opposite sides of the rib *a* of the other quoin. This spring *c* in the form now being described has the V-shaped locking part 4 projecting into the groove 2 and bearing ends 5 which bear against the lugs *b* on opposite sides of the cavity 3 and support the locking portion 4 of the spring so as to provide a very firm locking spring and secure a strong, efficient locking action. The springs *c* are preferably driven through the holes 6 in the ends of the lugs *b*, and on the opposite side of the cavity 3 the lugs are cut away to form shoulders 7 against which the ends 5 of the springs bear.

The usual gear racks *d* on the quoin faces are shown, but it will be understood that the quoins may be of any other suitable construction for tightening.

The construction shown in Figs. 5 to 7, is the same as that shown in Figs. 1 to 4 and above described, except that the locking springs *e* are straight springs concaved at their locking ends to form curved locking portions 8 engaging the locking teeth 1, and are driven into holes 9 extending from the face to the back of the quoin, instead of through the ends as in Figs. 1 to 4.

The operation of the quoin will be understood from the above and a brief statement. In locking up, with the quoins in the position shown in Figs. 1 and 5, the springs *c* or *e* of each quoin will successively engage the locking teeth 1 of the rib *a* of the other quoin, as the quoins are tightened by the key, shooting stick, or otherwise. The two springs of each quoin engage successively the staggered teeth on opposite sides of the rib, so that one spring of each pair always engages a locking tooth and the quoins are locked in all positions and slip prevented. The successive teeth of the ribs will force the springs back to permit the teeth to pass the springs, so that the quoins may readily be tightened and loosened.

While the staggering of the teeth on the ribs is preferred so as to provide for wide rounded teeth with small spacing, the same result may be secured by staggering the springs, and the invention, broadly considered, is not thus limited, but may be embodied in constructions in which neither the teeth or springs are staggered.

The constructions illustrated are only preferred embodiments of the invention, and modifications may be made therein while retaining the invention defined by the claims. The two forms shown are selected especially because of simplicity and cheapness of manufacture in that the springs may be applied by driving through holes, but other forms of springs not thus applied and of other forms may be used.

What I claim is:—

1. A quoin having a longitudinal rib on its face provided with locking teeth on each side and a groove having locking springs on its opposite sides adapted to engage the locking teeth on the rib of a co-acting quoin.

2. A quoin having a longitudinal rib on its face provided with staggered locking teeth on each side and a groove having locking springs on its opposite sides adapted to engage alternately the locking teeth on the rib of a co-acting quoin.

3. A pair of quoins having inclined co-acting faces, each having a longitudinal rib on its face provided with locking teeth on each side, a groove receiving the rib of the other quoin, and locking springs on opposite sides of the groove engaging the locking teeth on the rib of the other quoin.

4. A quoin having a rib *a* with locking teeth on opposite sides, lugs *b* forming groove 2, and springs *c* on opposite sides of the groove having locking portions 4 and ends bearing against the lugs.

5. A quoin having lug *b* provided with cavity 3 and hole 6 extending from the end of the quoin into the cavity, the inner wall of the cavity 3 being cut away to form shoulder 7, and a locking spring passing through hole 6 and bearing against shoulder 7.

In testimony whereof, I have hereunto set my hand, in the presence of two subscribing witnesses.

CARL L. DINGENS.

Witnesses:

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C. J. SAWYER.