(No Model.)

W. WICKERSHAM.

PRINTER'S QUOIN.

No. 456,245. Patented July 21, 1891.

Fig. 2

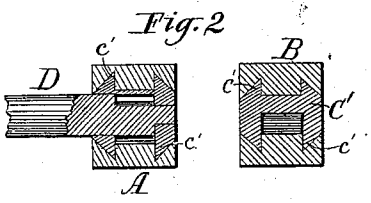


Fig. 1

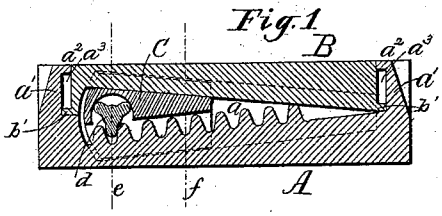


Fig. 8

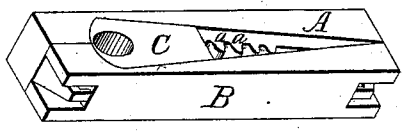


Fig. 6

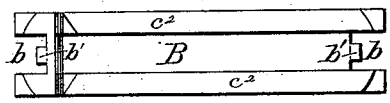


Fig. 3

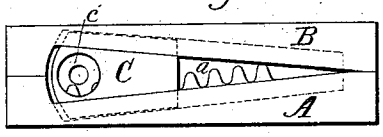


Fig. 5

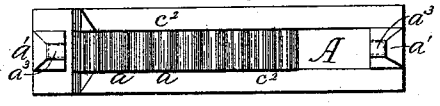


Fig. 7

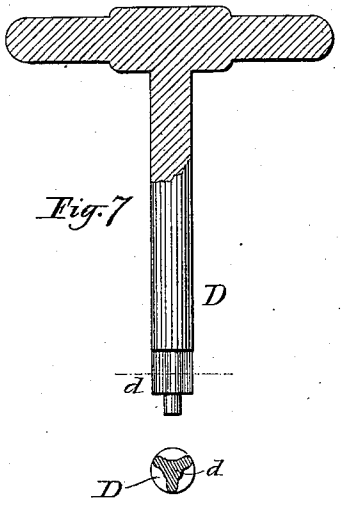
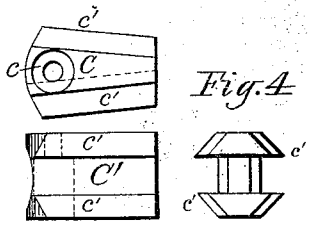


Fig. 4



Witnesses

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PRINTER'S QUOIN.

SPECIFICATION forming part of Letters Patent No. 456,245, dated July 21, 1891.

Application filed September 12, 1889. Serial No. 323,792. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WICKERSHAM, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Printers' Quoins; and I hereby declare that the following specification, including the drawings, is a full, clear, and exact description thereof.

My invention consists, first, in two tapering bars so connected together at the ends by lugs that while they can expand sufficiently to lock the form they cannot separate from each other, one holding onto and carrying the other by means of its lugs at the ends, one of which bars is provided with a rack in the adjacent side of it to the other bar; also, this outside bar is provided with a groove or channel V-shaped in its cross-section, adapted to receive a V-shaped wedge, giving said wedge a diagonal bearing against the bars as it moves from one end to the other in expanding the quoin and as it rests in said channel when the form is locked.

Referring to my drawings, Figure 1 is a horizontal section through the middle of the quoin. Fig. 2 shows two vertical and cross sections in the dotted lines *e* and *f*. Fig. 3 is a plan view of my quoin, showing by dotted lines the extremities in the channels of the two bars and the extremities of the wedge as it rests in said channels; also, it shows the rack of one of the bars, also the bearing for the pinion in the wedge. Fig. 4 shows a plan view and also a side elevation of the wedge. Fig. 5 is a side elevation of the bar which has the rack and the lugs at its ends by which it is secured to the other bar. Fig. 6 is a side elevation of the bar which has no rack, but has channels for the wedge, and shows the spaces at its ends for the lugs of the other bar to fit into, by means of which lugs one bar holds and carries the other. Fig. 7 shows the key with its pinion, and also a cross-section of said pinion. Fig. 8 is a perspective view of my quoin.

A is a bar or member having the rack *a* and the two lugs *a' a'* at its ends to attach it to the bar B, which has spaces *b b* at its ends, adapted to receive the lugs *a' a'*.

C is the wedge, with its bearing *c*, adapted to receive the pinion *d*, said wedge having V-shaped edges *c' c'*.

D is the key, with its pinion *d*, adapted to enter into the bearing *c* in the wedge C, and its teeth are adapted to mesh into the rack-teeth *a a*, so that when the key is turned the wedge C will thereby be moved from one end to the other of the bars A and B, and thereby expand the quoin.

There are two small projections *b' b'* extending into the spaces *b b* of the bar B, which move in grooves in the lugs *a' a'*. These small projections are shown in Fig. 6, but shown in their grooves in Fig. 1, so that after the wedge C is put in its place and the bar B is adjusted outside of it then the upper portions of the projections *a' a'* are bent over the grooves a^3, as shown at a^2 a^2, Fig. 1, when the quoin is completed.

The bar B can move outward or away from the bar A in expanding the quoin until the projections *b' b'* come in contact with the projections a^2 a^2 on the lugs, when the quoin is fully expanded, and this is done by turning the pinion *d* and making its teeth move in the rack-teeth *a a* until the wedge is caused to traverse to the opposite end of the quoin from that shown in Fig. 1.

At Fig. 4 are shown two views of the wedge—at C a plan view, and at C' a side elevation.

In Fig. 2 are shown two cross-sections on the quoin—at C C a section in the dotted line *e*, and at C' in the dotted line *f*.

The V-shaped channels c^2 c^2 and the V-shaped edges of the wedge C are of great utility, as the diagonal bearing of the wedge thereby obtained gives to the wedge more than twice the holding power than it would otherwise have, making the lock of the form doubly secure.

My key D is provided with a pinion *d*, having only three teeth. In many cases this may be omitted and of no value; but in this case with a pinion of three teeth I can reduce the width of the quoin to one-half of an inch or less, which is as narrow as is ever needed in locking any form, and yet have the teeth large enough and strong enough for the purpose needed, which I cannot have if I have more than three teeth in said pinion.

My quoin is operated by placing it between

the chase and the type in the form and then placing the pinion d of the key D in the bearing c, where its teeth can mesh into the teeth of the rack $a\ a\ a$ as said key is turned, and then by turning the key the wedge C is caused to traverse from one end of the bars A and B to the other end, and thereby expanding the quoin and locking the form.

Having explained my invention, I will state my claim as follows:

A printer's quoin having a system of three members, consisting of two outside bars and an intermediate wedge between them, one of the outside bars having a lug at each end, by which it holds onto and carries the other outside bar, and provided with a rack on the adjacent side to the other bar, both of the outside bars being provided with V-shaped channels in their adjacent sides to receive the V-shaped edges of the intermediate wedge, which wedge is shorter than the bars A and B, the lugs being provided with grooves $a^3\ a^3$ for the small projections $b'\ b'$ to play in, and the projections $a^2\ a^2$, all substantially as herein set forth.

WILLIAM WICKERSHAM.

Witnesses:
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