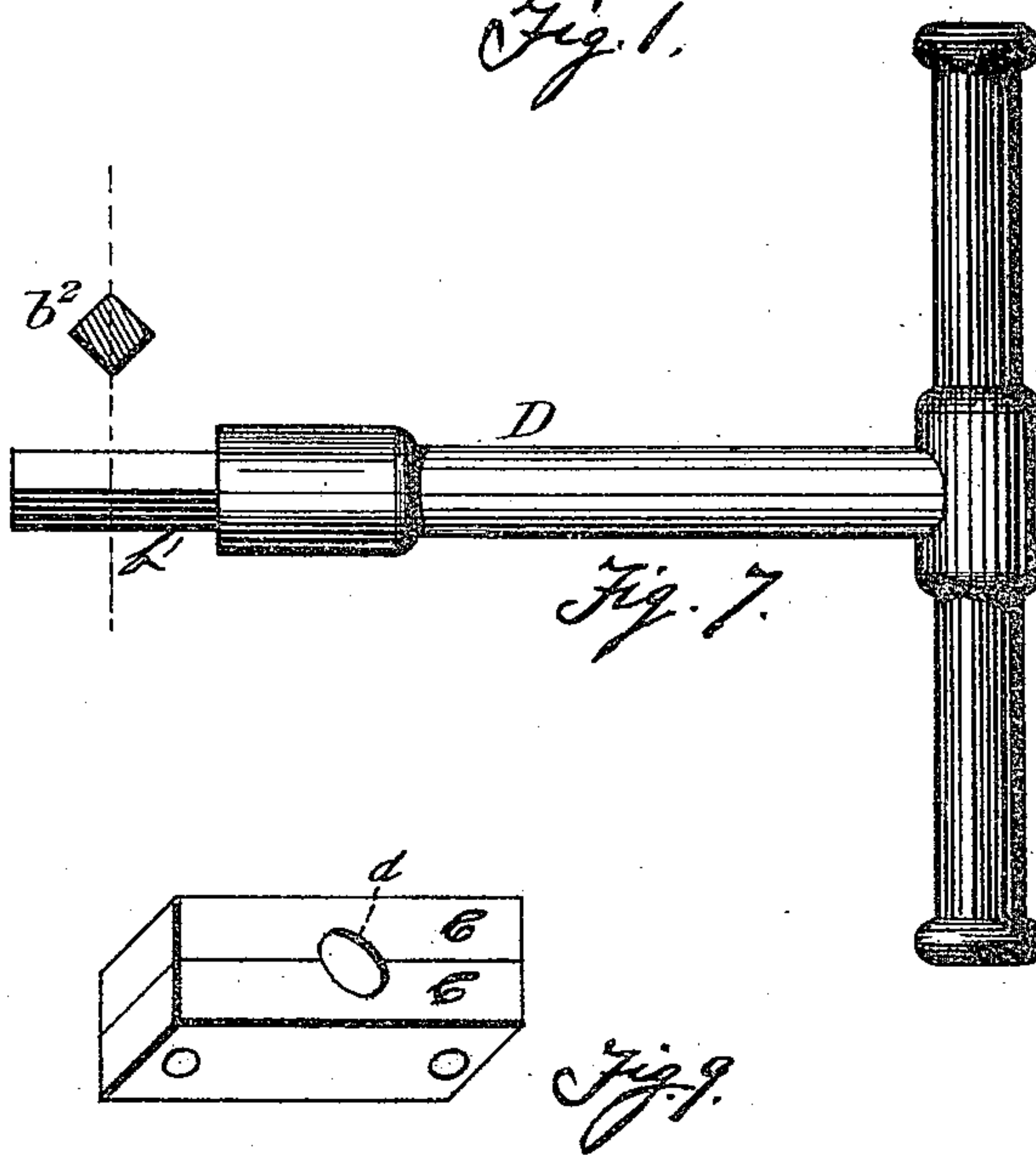
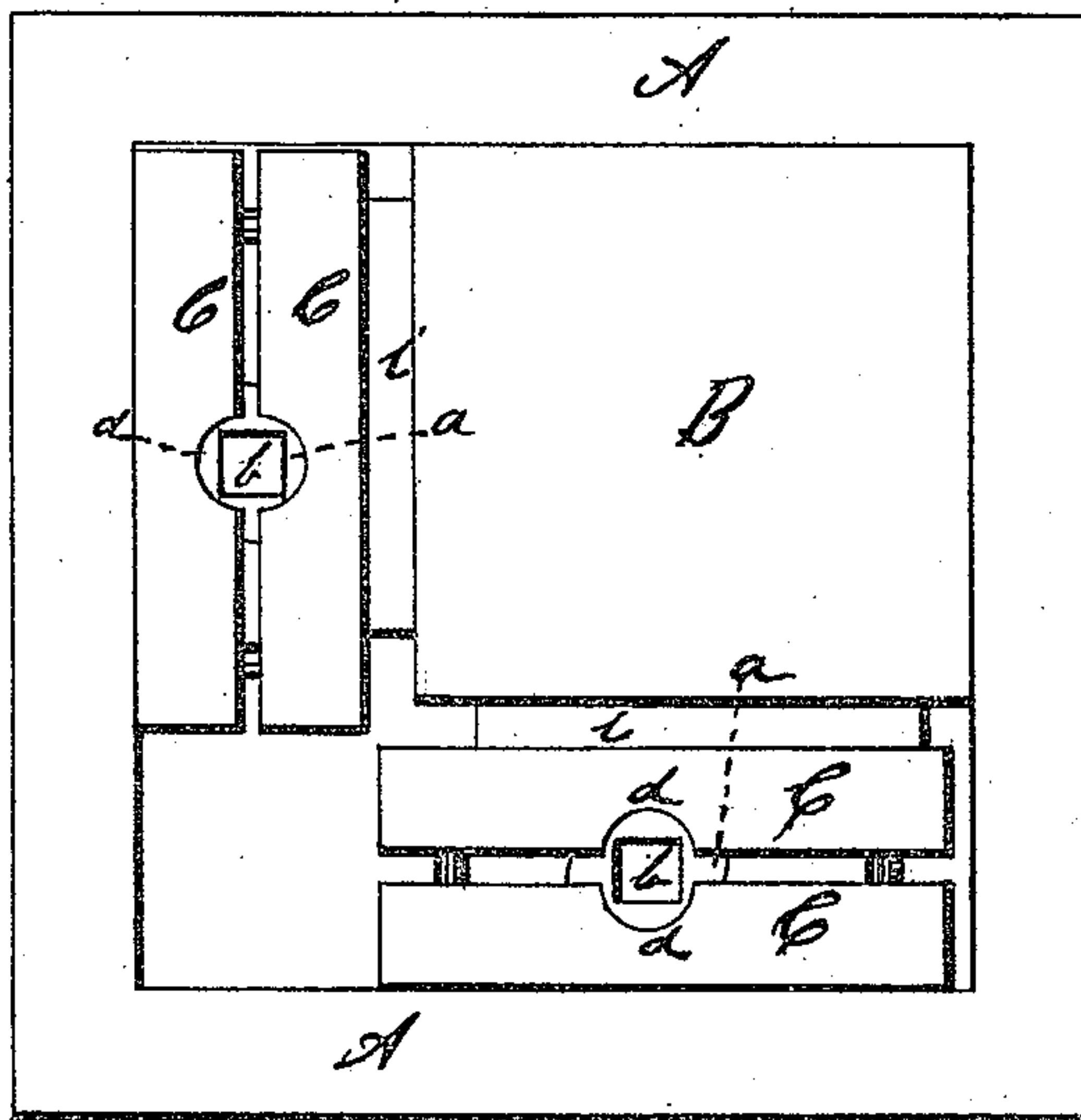
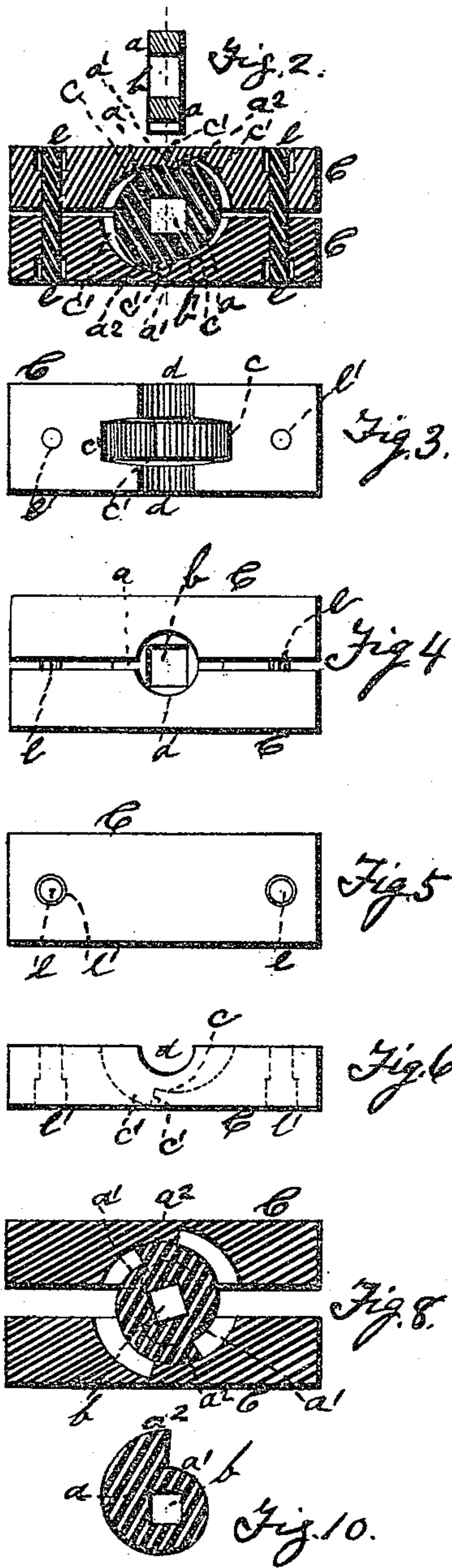


(No Model.)

W. WICKERSHAM.
PRINTER'S QUOIN.

No. 438,210.

Patented Oct. 14, 1890.



Witnesses
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WILLIAM WICKERSHAM, OF WORCESTER, MASSACHUSETTS.

PRINTER'S QUOIN.

SPECIFICATION forming part of Letters Patent No. 438,210, dated October 14, 1890.

Application filed March 29, 1888. Serial No. 268,910. (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 Printer's Quoins, of which the following is a specification, including the drawings as a part thereof.

The leading feature of my invention consists in a quoin having two plates or blocks provided with cavities in their adjacent sides adapted to receive the edges of a flat disk, in combination with a disk therein having one or more cams on its edge, the turning by a key of which disk in its own plane expands the quoin.

Referring to my drawings, Figure 1 shows a form locked by my quoin. Fig. 2 is a horizontal and central section, showing also a vertical section of the flat disk. Fig. 3 is a side elevation of one of the blocks, showing the cavity adapted to receive the edge of the disk which expands the quoin. Fig. 4 is a plan view of the quoin. Fig. 5 is a side elevation showing the rivets by which the two blocks are held together, preventing said disk from falling out. Fig. 6 is a top view of one of said blocks, showing the horizontal form by a dotted line of the cavity in its adjacent side to the other block in the quoin, adapted to receive the edge of said disk, and these blocks and their cavities are so formed, as herein shown and described, that when the two blocks are put together with their cavities on their adjacent sides inclosing one of said disks, having one edge of said disk in one of the blocks and the other edge in the other block, and the two blocks are closed together, including a disk having the cam or cams on its edges with their shortest elongation at right angles to the blocks, then by turning the disk with a key it will expand the quoin and continue to expand said quoin until the greatest elongation of said cams is at right angles to said blocks. Fig. 7 shows a key with a cross-section of the square part adapted to fit in the square hole in said disk, by means of which said disk is turned in expanding the quoin. Fig. 8 is a horizontal view of one of my quoins when expanded. Fig. 9 is a perspective view of my quoin. Fig. 10 shows a disk with only one cam on its edges.

In the description of the parts, A is the chase. B is the form. C C are the blocks. D is the key, having a square part b' adapted to pass into the square hole b in the disk a and to turn said disk when the form is to be locked. a is a disk having one or more cams on its edge. The inner portions of the operative surfaces of these cams are seen at $a' a'$. The outer portions of said operative surfaces are seen at $a^2 a^2$, Fig. 2. The smaller diameter of said disk a is from a' to a' , and the larger diameter is from a^2 to a^2 . These working edges of the disk a operate in the cavities $c c$ in the blocks C C to expand the quoin in the following manner: When the parts of the edges of said disk at $a' a'$ rest against the bottoms of the cavities $c c$, the quoin is closed, and when the disk is turned by the key D so that the parts of the edges of said disk at $a^2 a^2$ rest in the bottom of the said cavities $c c$ the quoin is expanded, so that in locking the form the closed quoin is placed between the chase A and the form B, and the square part of the key b' is inserted in the hole b in the disk, and the disk is turned until the quoin is sufficiently expanded to lock the form, as shown in Fig. 1, or is fully expanded, as shown in Fig. 8.

When a disk is used having only one cam extending entirely around its edge, then the disk is turned from the lowest portion of its operative edge to the highest portion to expand the quoin in like manner as the disk with two cams above described, except that the disk must be turned entirely round to fully expand the quoin; but commonly in practical use it will not have to be turned more than one-fourth of the way round to lock the form.

There is a portion of the cavity in the blocks C C at c' deeper than any other part, and which is occupied, as shown in Fig. 8, by the widest part of the disk a . This is to allow the largest part of the disk to move back to the point c' , giving it a further movement than it would otherwise have.

The pins $e e$ are fitted movably in the holes $e' e'$ in the ends of the blocks C C, and these holes are larger at their outer ends, and the larger parts of these holes are for the heads of the pins to work in, and while the middle parts of the pins fit closely in the inner parts

of the blocks to prevent either block from moving endwise without the other the heads of said pins prevent said blocks from separating only just far enough to allow the disks
5 to turn entirely round, yet secure said disks from leaving their spaces, so that the entire quoin is kept together, making only one picking up when it is required to put it in its place to lock the form. The disk with a single cam is shown at Fig. 10.
10

Expanding a quoin by screws or wedges or spirals is not new in the way these several devices have been applied. (See Torsch and Lee's patent, December 30, 1879, No. 223,192.)

15 This invention consists in providing one member thereof with concentric spiral projections and the other member thereof with correspondingly-shaped grooves in which the said projections are adapted to rest; or, in
20 other words, it consists in one member or small shaft having a projecting screw-thread or spiral on its end and the other member having a correspondingly-shaped concentric groove in the side of a plate adapted to receive
25 the said projection, so that when said shaft is

placed between two plates with the projecting screw end in the groove and then a bar inserted in the hole in said shaft and the shaft turned it will expand or contract the quoin. This is in its simplest form Torsch and Lee's
30 device. Now, I do not claim this or any other device in which a spiral is used in the sense in which they employ the term; nor do I claim any device in which a screw-thread or any part of a screw-thread is used to expand the
35 quoin; but

I claim as follows:

A printer's quoin consisting of two blocks C C, having in their adjacent sides horizontal cavities *c c* with cam-faces, in combination
40 with a disk *a*, seated in said cavities, and having one or more cams on its periphery, operating on the corresponding cams in said cavities in expanding or contracting the quoin, substantially as described, and for the pur-
45 pose set forth.

WILLIAM WICKERSHAM.

Witnesses:

J. E. DAY,

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