

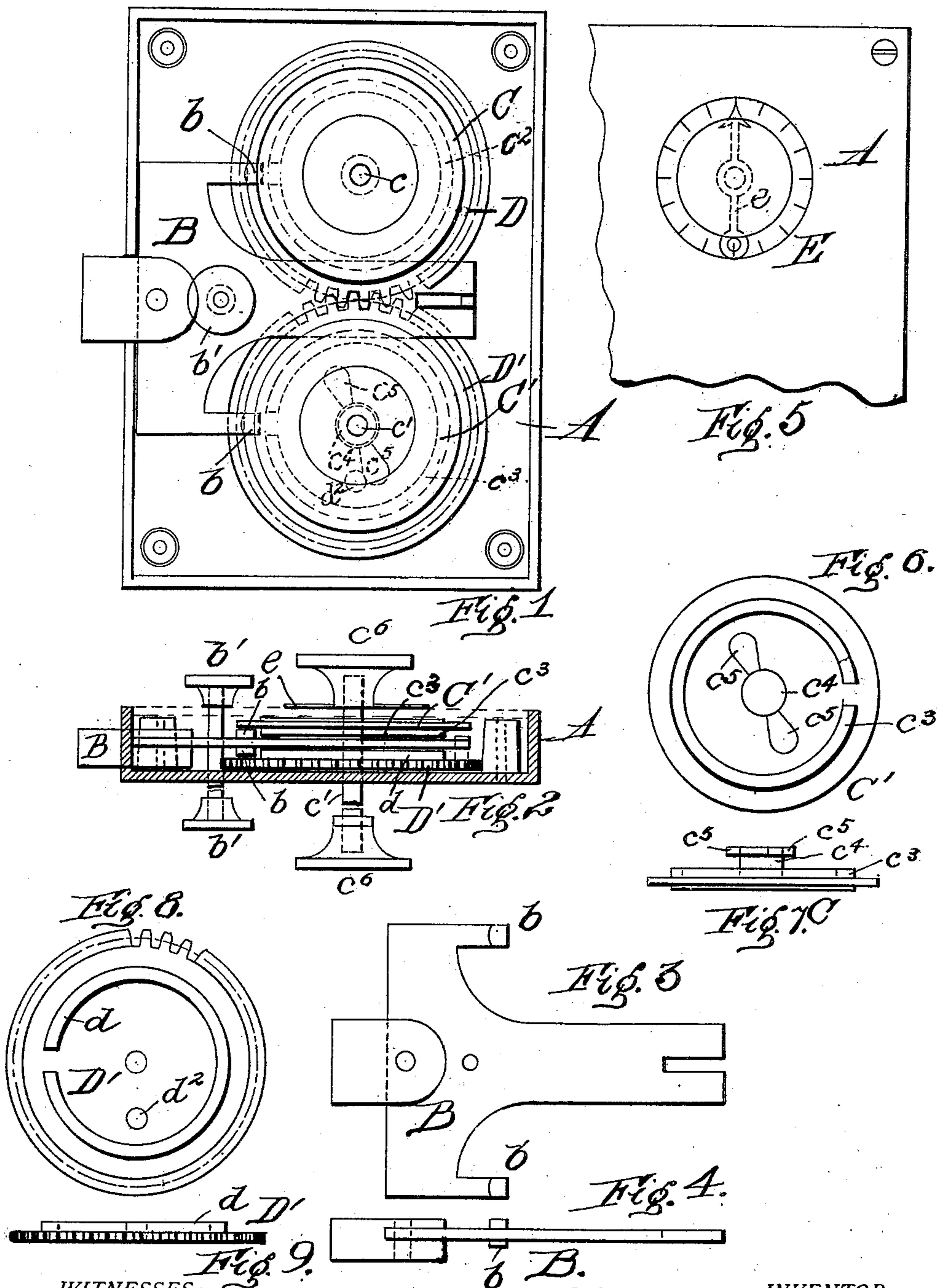
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LOCK.

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916,878.

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WITNESSES:

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UNITED STATES PATENT OFFICE.

THOMAS KNIGHT, OF ATLANTA, GEORGIA.

LOCK.

No. 916,878.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THOMAS KNIGHT, a citizen of the United States, and a resident of Atlanta, in the county of Fulton and State of Georgia, have made a certain new and useful Lock; and I do hereby declare the following to be a full, clear, and exact description of same, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to locks of the class known as combination, being the adaptation thereof in a novel form, to use on cabinet work and doors and the like, the invention consisting of the novel form of lock herein-after set forth.

The device is shown in the accompanying drawings as follows:

Figure 1 is an elevation of the device with the front-plate removed showing its interior. Fig. 2 is a central, horizontal section. Fig. 3 is a side elevation of the bolt. Fig. 4 is an edge view thereof. Fig. 5 is an illustration of the dial on the front or back plate or both. Fig. 6 is a side elevation of one of the tumblers. Fig. 7 is an edge view of said tumblers. Fig. 8 is a side view of one of the geared tumblers and Fig. 9 is an edge view thereof.

In these figures, like reference characters are uniformly employed in the designation of corresponding elements of construction.

A is the frame or casing and B is the bolt, either of which may be of any desired form of construction so long as the latter is mounted so as to slide in suitable guides and be provided with lugs b which enter the openings provided therefor in the annular flanges in the tumblers as will be now set forth.

C and C^1 are tumblers mounted on and secured so as to revolve with the shafts c and c^1 , respectively and D and D^1 are tumblers mounted revolubly upon the said shafts, respectively, although loosely mounted and rotatable independently of said shafts, these latter named tumblers, D and D^1 , being provided with gear-teeth completely around their peripheries which intermesh and cause the simultaneous rotation thereof. The shafts c and c^1 are rotatably mounted in the casing, and thereon, in the same plane and near one side-plate are mounted the afore-

said geared tumblers D and D^1 and near their opposite ends, in the same plane and near the other side-plate of the casing, are mounted the tumblers C and C^1 . On the inner or contiguous faces of the said tumblers C, C^1 , D and D^1 , are annular flanges c^2 and c^3 on the tumblers C and C^1 , respectively, and d on the tumblers D and D^1 . The tumbler C^1 , is provided with a hub c^4 on its side nearest the tumbler D^1 and on the extremity of this hub so as to lie substantially within the plane of the annular flange d of the tumbler D^1 are wings c^5 , extending substantially radially therefrom and within the said flange d of the said tumbler D^1 is a pin d^2 so set as to be interposed in the path of motion of the said wings c^5 and cause a temporary engagement between the tumblers C^1 and D^1 and indirectly also with the geared tumbler D. The annular flanges c^2 , c^3 and d are provided with notches, the geared-tumblers D and D^1 being so intermeshed that they will both present the said notches on the same side at once and the wings c^5 of the tumbler C^1 being so placed that when one of the said wings c^5 is in contact with the pin d^2 the notch in the annular flange c^3 thereon will be out of registry with the notches of the said tumblers D and D^1 , or, that is, in such a position that the lug b corresponding may not enter it. The tumbler C is merely, as afore-said, provided with the annular flange c^2 and is neither geared nor provided with wings, although said flange thereon is also provided with a notch, said tumbler C moving independently of the others and being the last one necessary to set to complete the opening adjustment of the tumblers.

Obviously no spring is required in this lock but the bolt B is operated in both directions by a knob b^1 or other equivalent device.

A dial E, the pointer e traversing which is secured to the shaft c and another to the shaft c^1 , is affixed to the front and back plates of the casing to facilitate setting the combination to open the lock. The said shafts may be provided with knobs c^6 for operating them. The "combination" may be changed at any time by simply moving the pointers upon their shafts so as to indicate a different line of the graduation when the notches are in proper registry to open.

To open this lock, the knob c^6 on the shaft c^1 is turned to the left until one of the wings c^5 comes into contact with the pin d^2 and then

further until the pointer corresponding shows the desired point on the dial, when the notches in the annular flanges d of both tumblers D and D^1 will be in the positions 5 shown in Fig. 1, whereupon the rotation of said shaft c^1 is reversed and the pointer brought to another graduation which indicates that the notch in the flange c^3 in tumbler C^1 is in registry therewith whereupon 10 the other knob, that is, the one on the shaft c is turned in either direction until its pointer shows the right point to bring the notch in the flange c^2 on the tumbler C into registry also, when the bolt may be withdrawn, the 15 lugs b passing freely into the four corresponding notches. An easily opened "day-latch" setting is provided by leaving wheels C^1 , D and D^1 , in their opening position and simply holding the bolt projected by the use 20 of the tumbler C alone.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is:—

In a lock, a casing and two parallel shafts rotatably journaled therein, two tumblers, 25 one of which is mounted on each shaft to rotate therewith and in substantially the same plane, two intermeshing, geared tumblers one of which is loosely mounted on each of said shafts, means for establishing 30 operative connection between one of said first-named tumblers and the geared tumbler on the same shaft, notched annular flanges on the adjacent faces of all of said tumblers and a bolt mounted in the casing 35 and provided with lugs adapted to enter said notches when in proper relative arrangement.

In testimony whereof, I hereunto set my hand in presence of two subscribing witnesses. 40

THOMAS KNIGHT.

Witnesses:

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S. M. WOOD.