

S. C. WEDDINGTON.

Improvement in Permutation Locks.

No. 120,472.

Patented Oct. 31, 1871.

Fig. 1.

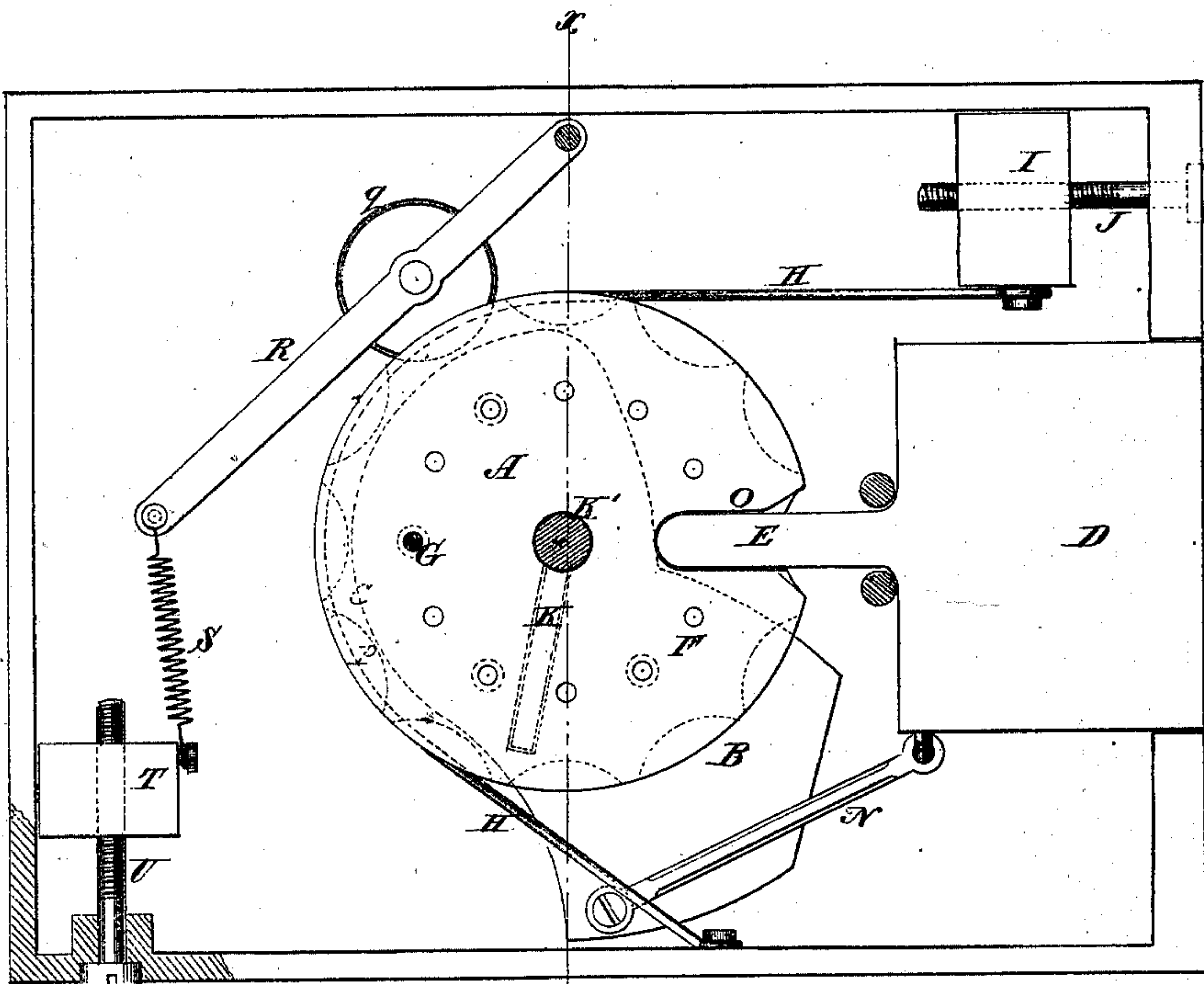


Fig. 3.

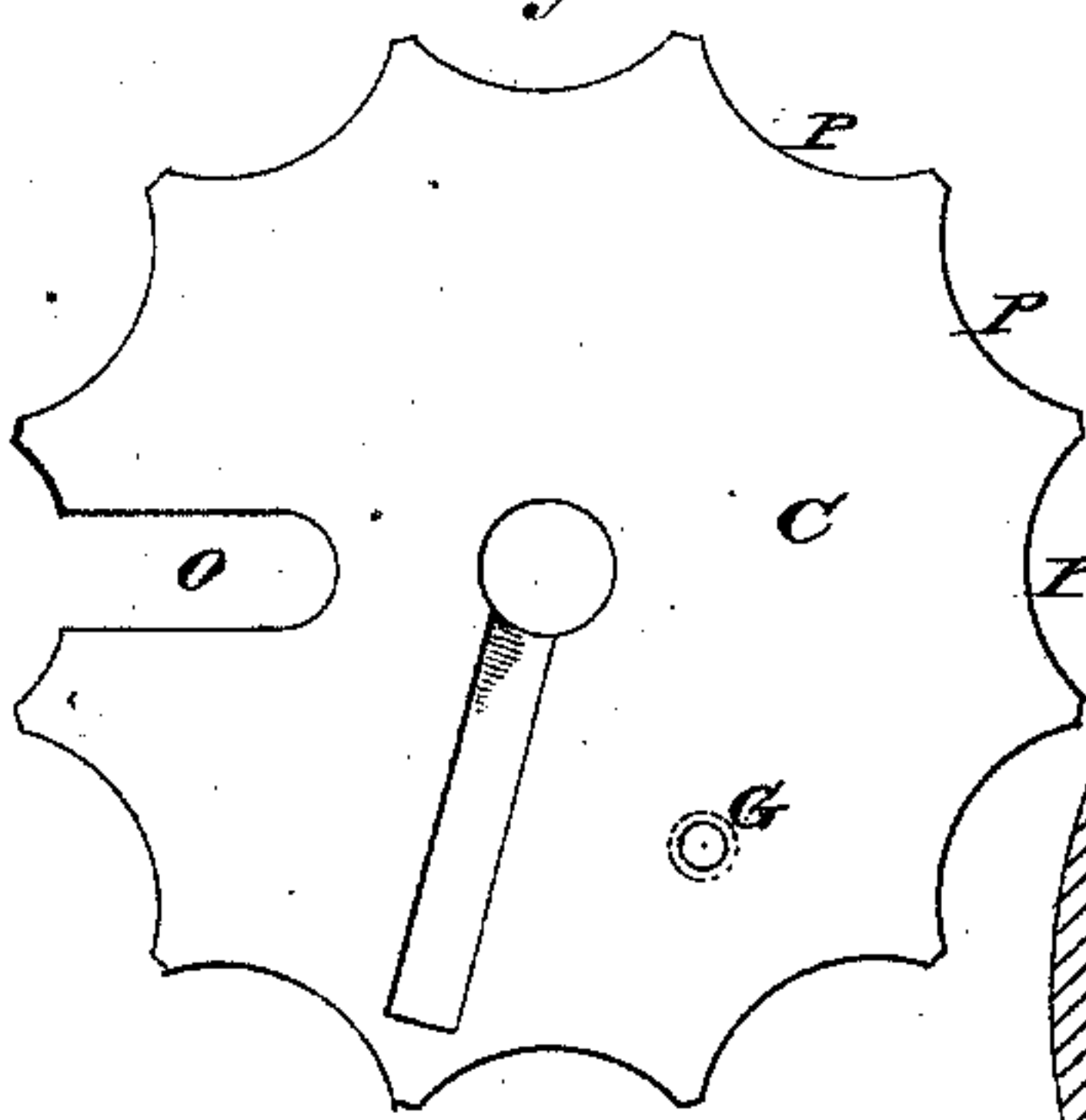


Fig. 2.

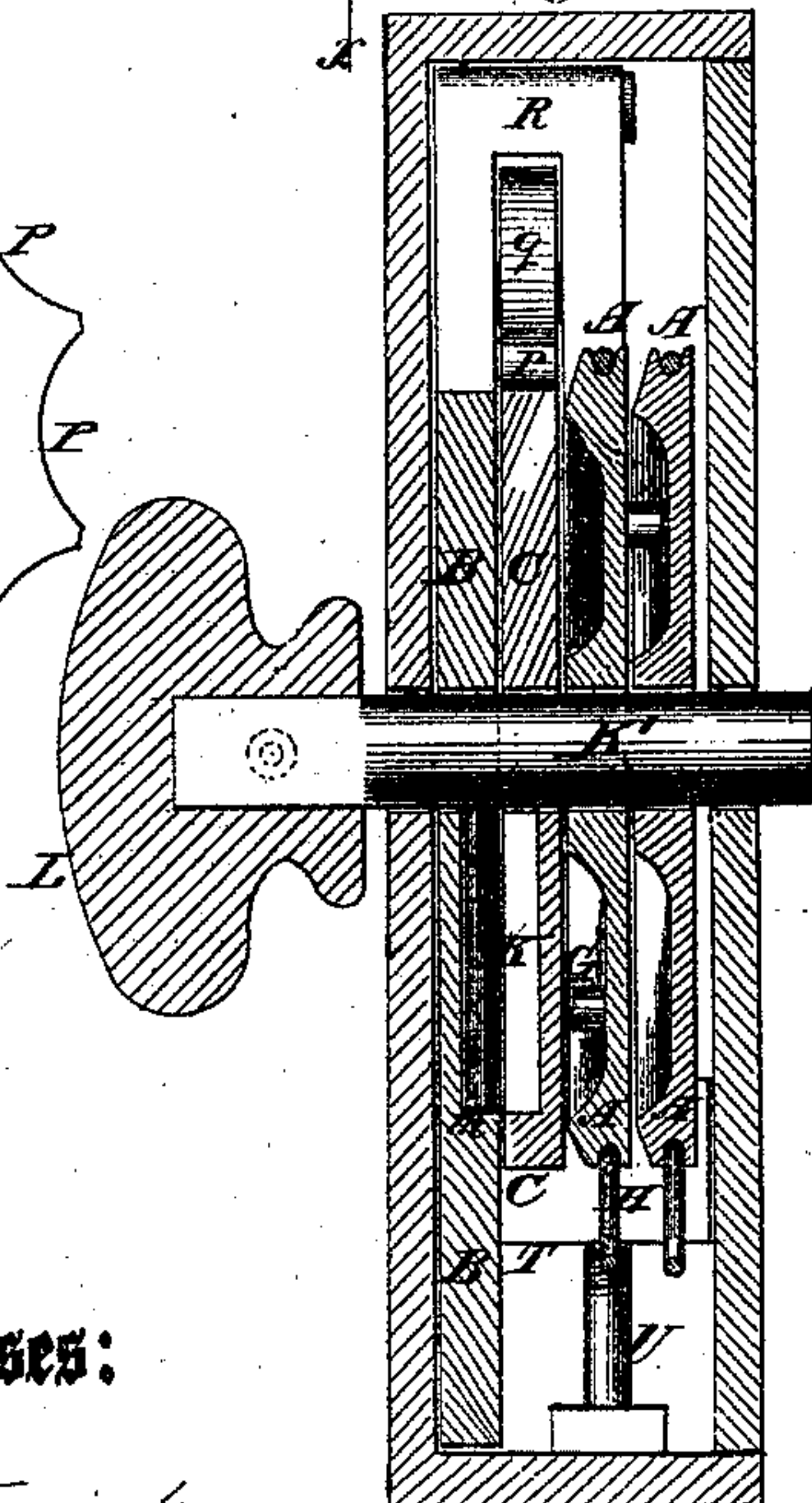
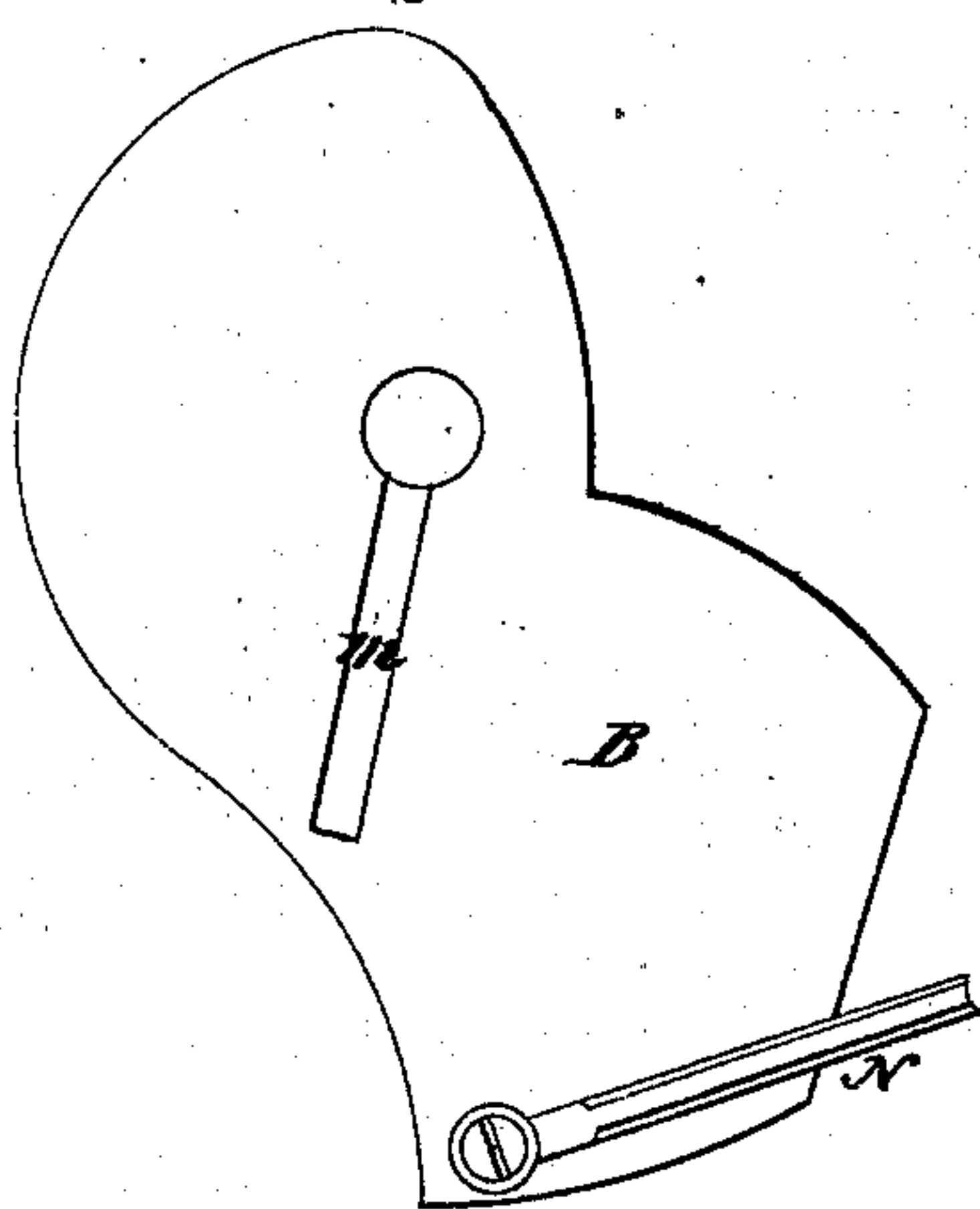


Fig. 4.



Witnesses:

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IMPROVEMENT IN PERMUTATION LOCKS.

Specification forming part of Letters Patent No. 120,472, dated October 31, 1871.

To all whom it may concern:

Be it known that I, SAMUEL C. WEDDINGTON, of Jonesborough, in the county of Grant and State of Indiana, have invented a new and useful Improvement in Combination Lock; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention is an improvement in locks of the permutation class; and consists essentially in the combination of a lever and adjustable block for varying the pressure on the rotating tumbler, as hereinafter described.

In the accompanying drawing, Figure 1 is a plan view of the lock. Fig. 2 is a cross-section of Fig. 1 taken on the line *x x*. Fig. 3 is a view of the shifting tumbler detached. Fig. 4 is a view of the bed-tumbler detached.

Similar letters of reference indicate corresponding parts.

A represents the combination tumblers, more or less in number of which may be used. B is the bed-tumbler. C is the shifting tumbler. D is the bolt. E is the stem of the bolt. The tumblers A are each provided with a circle of holes, F, with changeable pins G, and a groove around its periphery. Each groove has a wire, H, attached at one end to the case of the lock, and by the other end to the adjustable nut-block I on the screw J. These tumblers are kept in their proper positions by the tension of the wires, and the tension is increased or diminished by adjusting the nut on the screw. Changes in the combination are made by changing the positions of one or more of the pins in the holes of the tumblers A and C. K is an arm on the spindle *k'* of the knob L, by means of which the tumblers are turned and the bolt operated. M is a recess in the bed-tumbler, which receives the arm K and gives the arm a hold on the tumbler. This tumbler is of irregular form, one end reaching to near the edge of the case, to which is attached the rod N. The other end of the rod is attached to the bolt, as seen in Fig. 1. The bolt is actuated by means of the rod, as the tumbler is turned by means of the arm K. Each of the tumblers above the bed-tumbler is provided with a slot, O, which admits the stem E of the bolt when the tumblers are properly arranged. The shifting tumbler C has a recess in its under side,

which receives the arm K as the knob is pressed in, by which means the tumbler C and the tumblers A are turned and adjusted to the proper position for receiving the stem of the bolt. The form of the tumbler C is shown in Fig. 3. Its edge is cut into a succession of arcs of circles corresponding in number with the holes G in the tumblers A, and it is kept in position and the changes are indicated by means of the pulley *q*, which revolves in a mortise in the lever R. S is a spiral spring, confined at one end to the lever and at the other end to the adjustable nut-block T on the screw U. The tension of the spring and the bearing of the pulley on the tumbler is increased or diminished by adjusting the block T on the screw. When the tumblers are in position and the bolt has been thrown forward or outward the arm K passes from the recess in the bed-tumbler to that in C.

In moving or adjusting the tumblers A the arm K will be in the recess in C, and the tumblers A are put in position by turning the knob, the tumbler C serving as a dial, a single mark only for a starting point being necessary. As the tumbler C is turned a click will be heard as the pulley *q* passes from off the arcs P to another, or the friction will indicate its passage, an account of which is kept. The combination being known, the number of arcs indicates the position of the tumbler and brings the slots O in all the tumblers to one position. When this is done the knob is slightly drawn back so that the arm K engages with the recess in the bed-tumbler; then, by turning the knob, the bolt is drawn back and the door is unlocked. As before stated, there may be any devised number of tumblers A, for complicating the process of unlocking and increasing the combination of changes.

Locks upon this principle are adapted to nearly all the purposes for which locks are used.

The edge of the tumbler C may be serrated, or a click-wheel may be used.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The lever R, spring S, and adjustable block T for varying the pressure of the pulley *q* on the tumbler C.

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Witnesses:

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