

No. 681,560.

Patented Aug. 27, 1901.

P. MAGARO, No. 3.

LOCK.

(Application filed June 7, 1901.)

(No Model.)

Fig. 1.

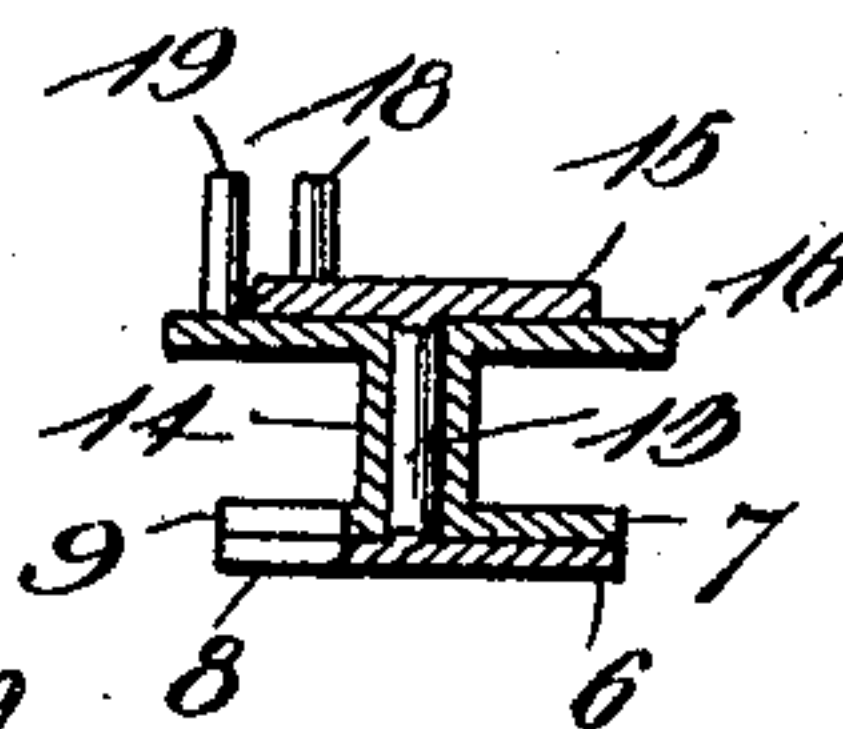
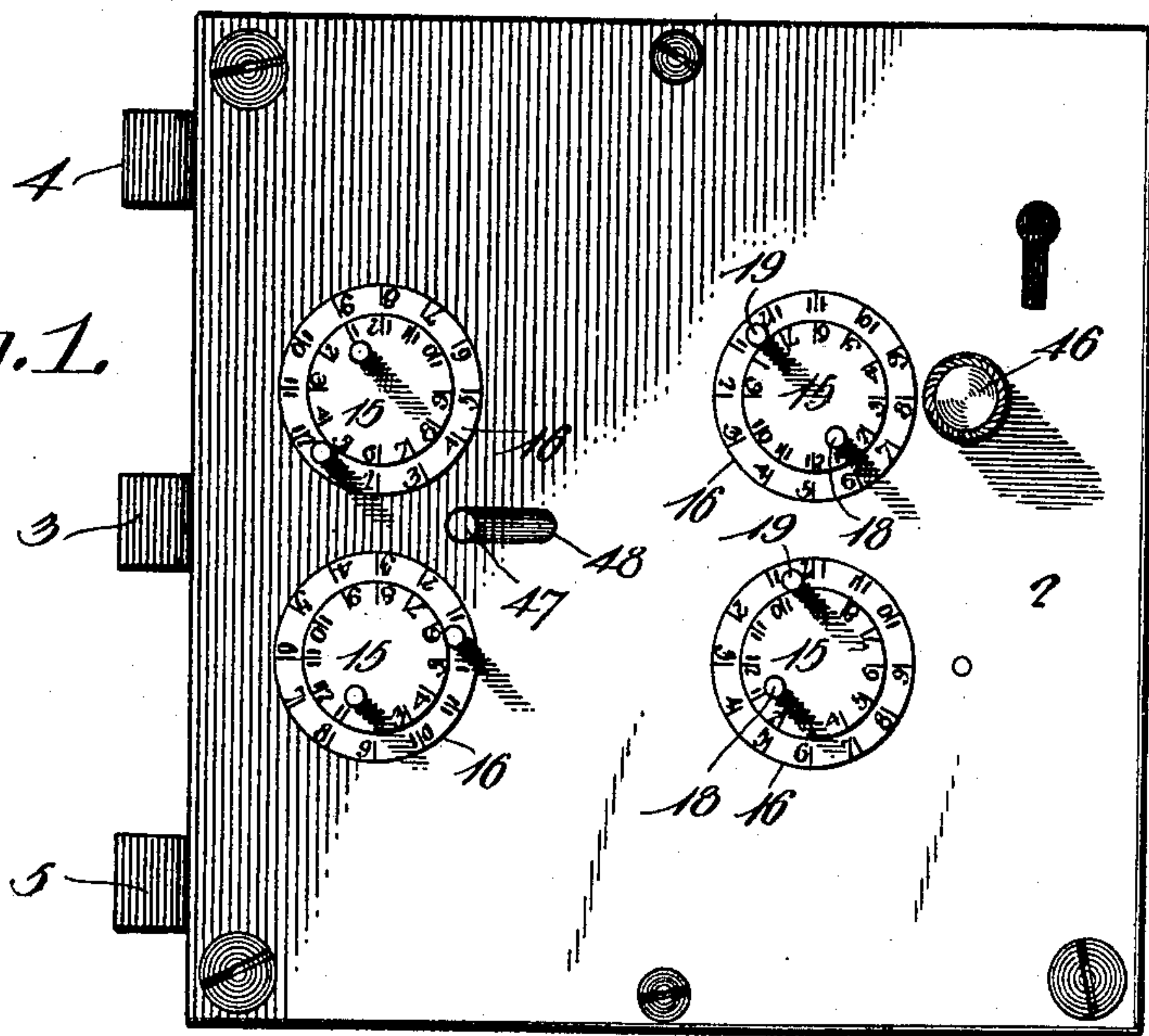
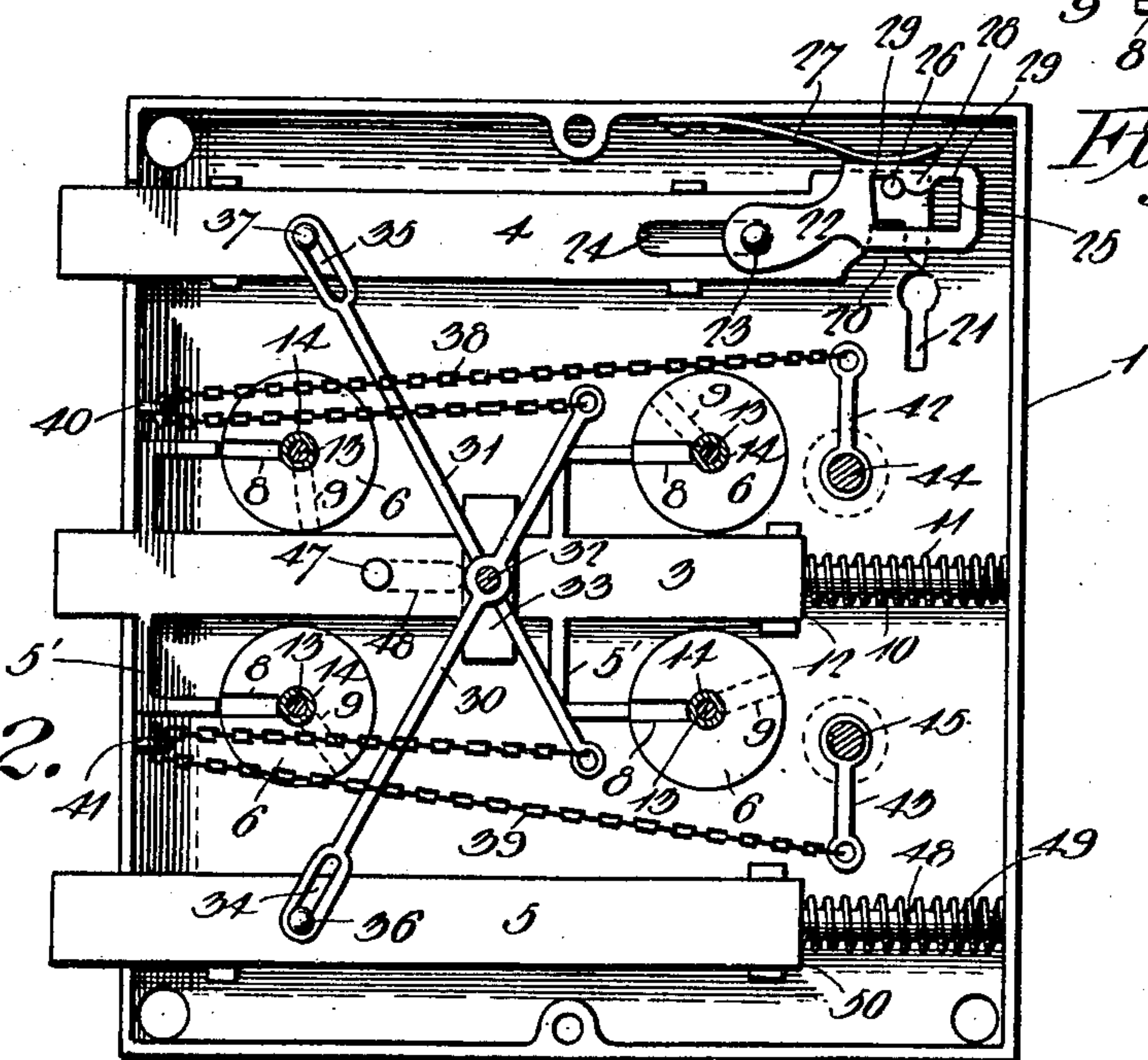


Fig. 3.

Fig. 2.



Witnesses

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UNITED STATES PATENT - OFFICE.

PETRO MAGARO, NO. 3, OF STEELTON, PENNSYLVANIA.

LOCK.

SPECIFICATION forming part of Letters Patent No. 681,560, dated August 27, 1901.

Application filed June 7, 1901. Serial No. 63,600. (No model.)

To all whom it may concern:

Be it known that I, PETRO MAGARO, No. 3, a citizen of the United States, residing at Steelton, in the county of Dauphin and State of Pennsylvania, have invented a new and useful Lock, of which the following is a specification.

The invention relates to improvements in locks.

10 The object of the present invention is to improve the construction of permutation-locks and to provide a simple and comparatively inexpensive one designed for use on doors, drawers, and the like and adapted to
15 be arranged to permit a door to be unlocked by a key or by the turning of a knob.

20 The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

25 In the drawings, Figure 1 is an elevation of a lock constructed in accordance with this invention. Fig. 2 is a similar view, partly in section, the face-plate being removed. Fig. 3 is a detail sectional view illustrating the manner of mounting the rotary dials and the tumbler-disks.

30 Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a lock-casing provided with a removable face-plate 2 and having an intermediate bolt 3 and upper and lower bolts 4
35 and 5, and the said bolts are slidably mounted in the casing and are adapted to be reciprocated to extend and retract them for locking and unlocking a drawer, door, or the like. The central bolt is provided with front and
40 rear approximately L-shaped arms 5', arranged in pairs and having their outer portions extending inward parallel with the bolt and located adjacent to front and rear tumbler-disks 6 and 7, disposed in pairs and located at opposite sides of the bolt 3, at the
45 front and rear portions thereof. The tumbler-disks 6 and 7 are provided with slots or recesses 8 and 9, adapted to register to provide a way for the inwardly-extending portions of the arms to permit the central bolt
50 to be moved inward. When the slots or

notches 8 and 9 register and are arranged in alinement with the inwardly-extending portions of the arms, as illustrated in Fig. 2 of the accompanying drawings, the central
55 bolt is adapted to be reciprocated. The disks are adapted to be rotated to carry their slots or recesses out of alinement with the arms, as indicated in dotted lines in Fig. 2, and when the slot of any one of the disks
60 is out of alinement with its respective arm the bolt will be locked against inward movement. The central bolt, which is mounted in suitable guides, is provided at its inner end with a shank 10, on which is mounted a coiled
65 spring 11, which is interposed between the shoulder 12 of the bolt 3 and the rear end of the casing. The spring 11 is adapted to hold the central bolt 3 normally extended. The tumbler-disk 6 is secured to a spindle 13, and
70 the other disk 7 is secured to a tubular spindle or sleeve 14, arranged on the inner solid spindle 13, as clearly shown in Fig. 3 of the accompanying drawings. The spindles extend through the face-plate of the casing and have
75 dials 15 and 16 connected to their outer ends. The dials, which are arranged on the exterior of the casing, are of different diameters, the outer one, 15, being smaller than the inner one, 16, to expose a portion of the latter at the circumference thereof, and each dial is provided
80 with an annular series of figures or other characters for indicating the position of the recesses of the tumbler-disks to enable the same to be brought into alinement. The dials are
85 shown rigid with the spindles, but they may be mounted thereon in any other suitable manner, and instead of being provided with eccentric projections or pins 18 and 19 they may be operated by any other suitable means.
90 The pins are arranged to enable the dials to be readily rotated.

The upper bolt 4, which is mounted in suitable ways or guides and which may be operated by a knob, as hereinafter explained, is
95 provided with a recess 20, located at its inner end and arranged at its lower edge adjacent to a keyhole 21 and adapted to be operated by a key. A tumbler 22 is pivotally mounted at its front end 23 by a pin or stud which
100 passes through a slot 24 of the bolt 4 and which is mounted on the casing. The tum-

bler, which has an opening 25 to receive a projection 26 of the bolt 4, has recesses for engaging the said projection, and it is held in engagement with the same by a spring 27, 5 located above the bolt and secured to the casing, as clearly shown in Fig. 1. The tumbler is lifted by the key in the ordinary manner to disengage it from the pin or projection 26 to permit the bolt to be reciprocated. The 10 portion 28 between the recesses 29 of the top of the tumbler is rounded to permit the bolt to be withdrawn from the interior by the means hereinafter described, and the bolt 4 may also be spring-actuated, if desired.

15 Mounted within the casing is a pair of levers 30 and 31, fulcrumed on a pivot 32 of a support 33, consisting of a loop through which the central bolt 3 passes. The levers are provided with inner short arms and outer 20 long arms, which have slots or openings 34 and 35, receiving pins or projections 36 and 37 of the bolts 4 and 5, and the levers are adapted to be oscillated to move the bolts 4 and 5 inward. The inner ends of the levers 25 are connected with chains 38 and 39, extending forward from the inner arms of the levers to the front of the casing and passing around pulleys or other suitable guides 40 and 41 and extending rearward to arms 42 and 43 of 30 spindles 44 and 45. The spindle 45 is provided at the inner side of the lock with a suitable knob, and the other spindle 44 has an exterior knob 46 to enable it to be operated from the exterior. The bolt 4 is operated 35 from the exterior by a key, and the interior knob is for the purpose of enabling it to be operated from within a house or other building without using a key. The central bolt is also provided with a pin 47, passing through 40 a suitable slot 48 of the casing and adapted to permit the central bolt to be readily reciprocated when the slots or recesses are in alignment. The lower bolt 5 is provided with a 45 shank 48, and a coiled spring 49, which is disposed on the shank, is interposed between the rear end of the casing and a shoulder 50 of the rear end of the bolt. The spring 49 is adapted to reciprocate the bolt 5 after the same has been actuated by the rotation of the 50 spindle 44. The spindle 44 may also be provided at its inner end with a head or other

suitable means for rotating it, and when the spindles are partially rotated their arms are oscillated and are adapted to draw the flexible connections between them and the levers 55 sufficiently to oscillate the latter. Instead of employing chains for connecting the arms with the levers any other suitable flexible connections may be provided.

It will be seen that the lock is simple and 60 comparatively inexpensive in construction, that it is strong and durable, and that it is adapted for use on doors, drawers, and the like.

What I claim is— 65

1. The combination of a casing, the central bolt having arms, the tumbler-disks provided with slots and located adjacent to the arms, means for operating the tumbler-disks, the 70 upper and lower bolts located at opposite sides of the said bolt, the levers fulcrumed between their ends and connected with the upper and lower bolts and adapted to reciprocate the same, and operating mechanism connected with the levers, substantially as 75 described.

2. The combination of a casing, a central bolt, upper and lower bolts, key-operated mechanism connected with one of the latter, the levers fulcrumed between their ends and 80 connected with the upper and lower bolts and adapted to oscillate the same, spindles, and flexible connections between the spindles and the levers, substantially as described.

3. The combination of a casing, upper and 85 lower bolts, levers fulcrumed between their ends and connected at their outer ends with the bolts and adapted to reciprocate the same, guides arranged at the front of the casing, spindles located at the back of the casing and 90 provided with arms, and flexible connections passing through the guides and extending from the levers to the arms of the spindles, substantially as described.

In testimony that I claim the foregoing as 95 my own I have hereto affixed my signature in the presence of two witnesses.

PETRO MAGARO, No. 3.

Witnesses:

A. HROWIS,

CHARLES M. STACKS.