

No. 864,394.

PATENTED AUG. 27, 1907.

N. TOBIAS.  
COMBINATION PADLOCK.

APPLICATION FILED SEPT. 20, 1906.

2 SHEETS—SHEET 1.

Fig. 2.

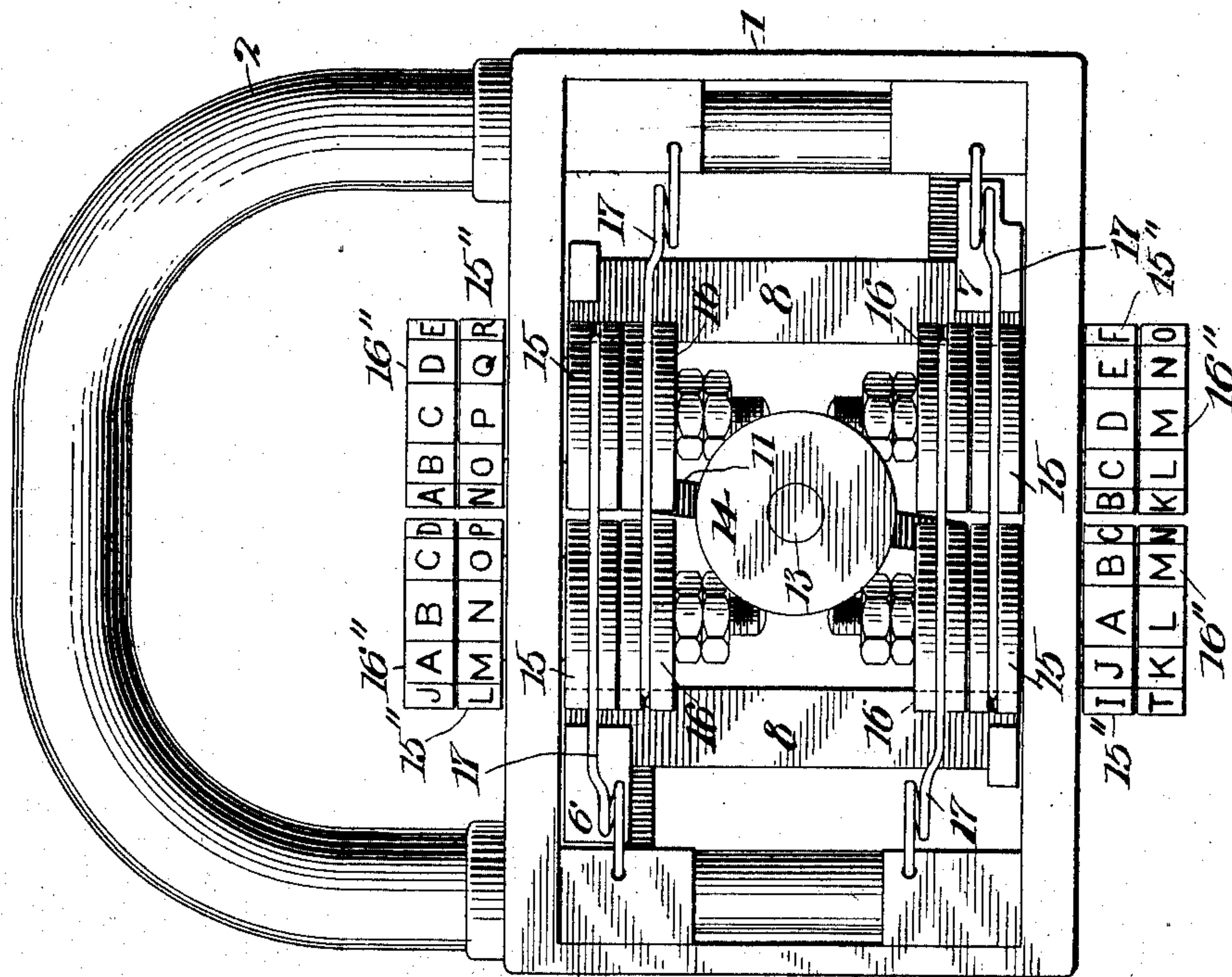
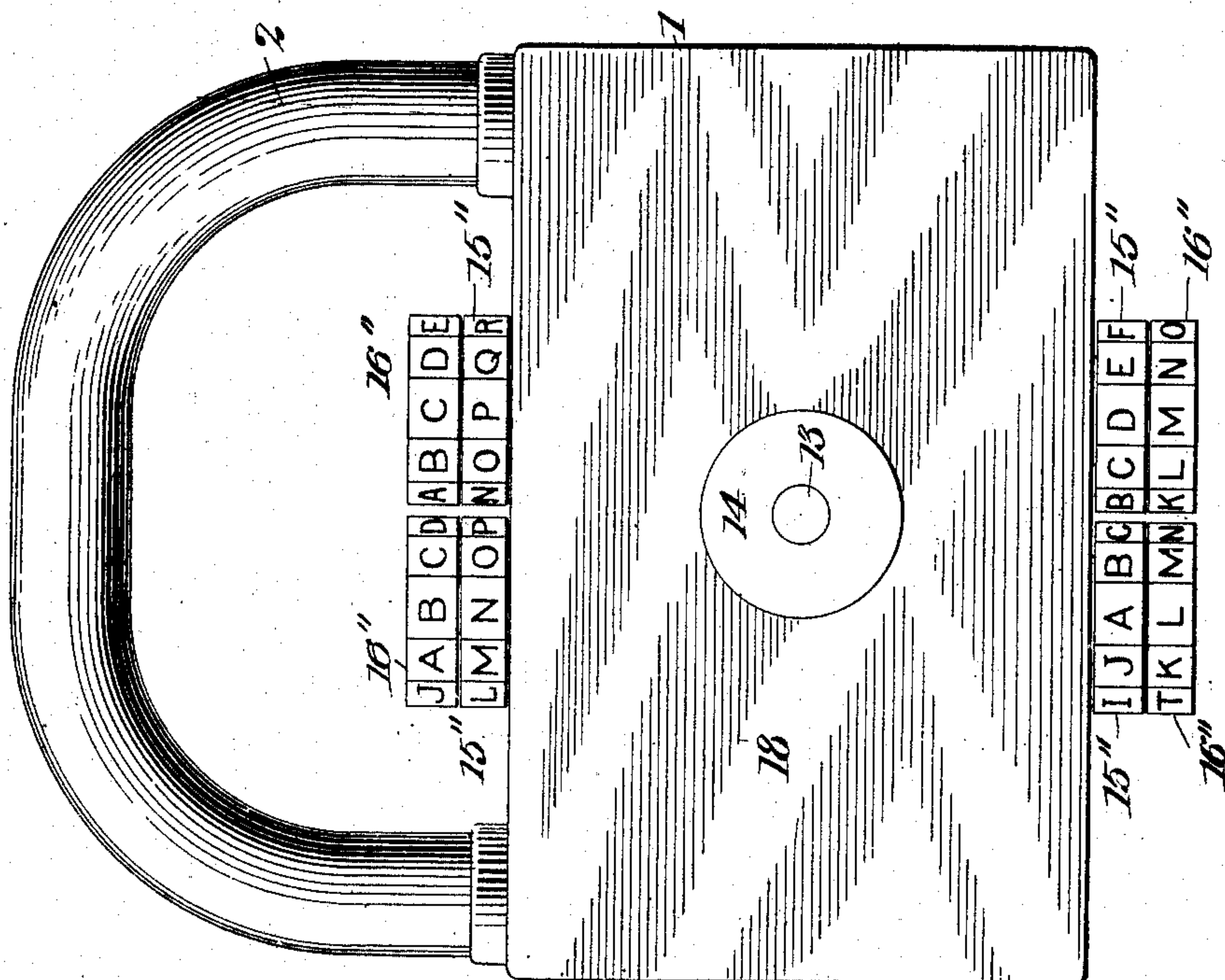


Fig. 1.



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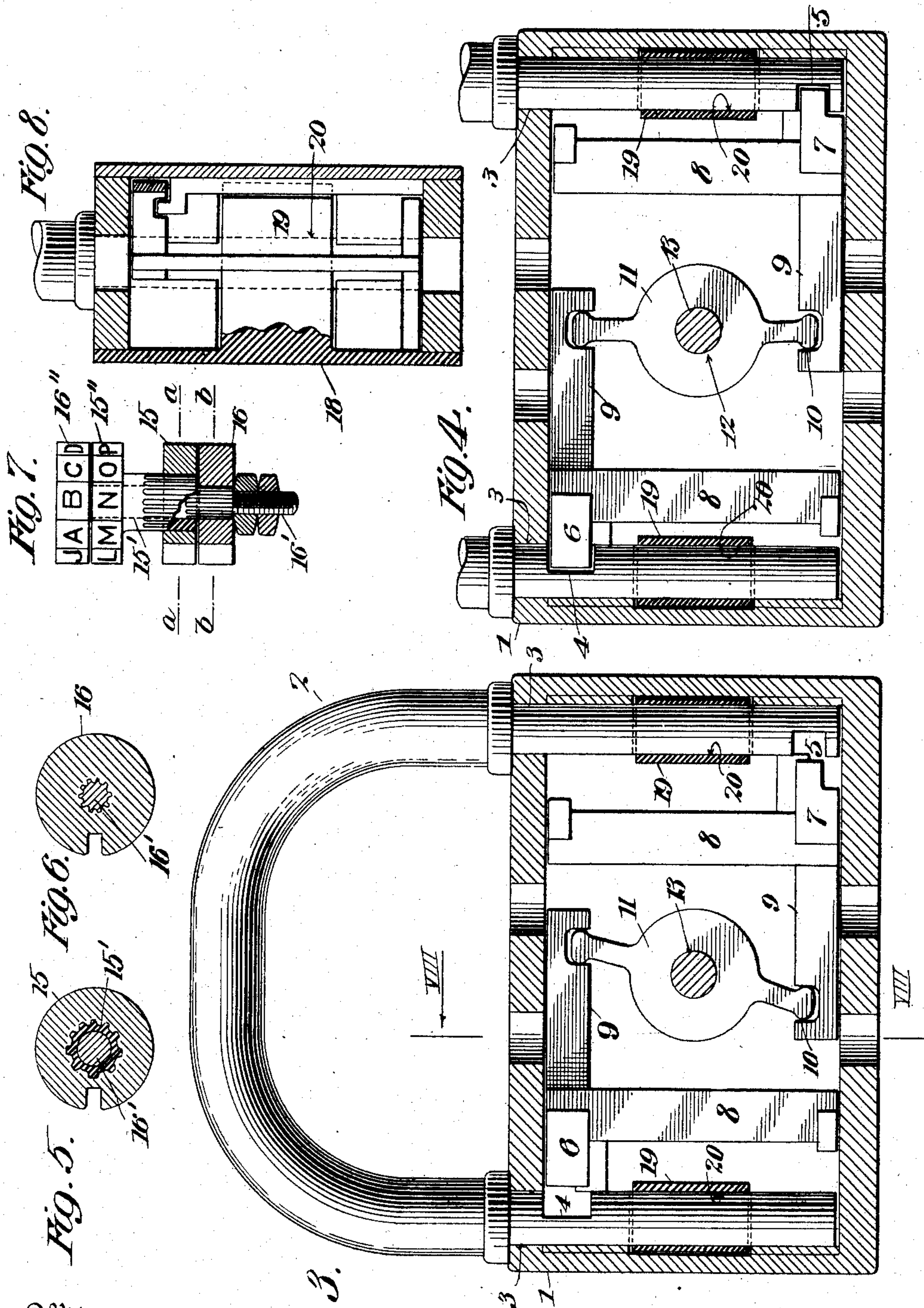
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# UNITED STATES PATENT OFFICE.

NEUMAN TOBIAS, OF KINGSTON, JAMAICA.

## COMBINATION-PADLOCK.

No. 864,394.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed September 20, 1906. Serial No. 335,350.

*To all whom it may concern:*

Be it known that I, NEUMAN TOBIAS, a subject of the King of Great Britain, residing at Kingston, in the Island of Jamaica, West Indies, have invented certain  
5 new and useful Improvements in Combination-Padlocks, of which the following is a full, clear, and exact description.

My invention relates to combination padlocks, the principal object being to provide a lock of simple and  
10 compact construction, which is very strong, and in which there is practically no chance of solving the combination by experiment or trial.

A further object of the invention is to provide a padlock in which the cover plate is readily removable  
15 when the lock is open, but in which the cover plate is securely fastened by the act of locking the device.

With these and other objects in view, the invention consists in the features of construction hereinafter set forth and claimed.

20 In the drawings: Figure 1 is a front view of a padlock embodying the principles of my invention; Fig. 2 is a view of the same with the cover plate removed; Fig. 3 is a sectional view taken on a central longitudinal plane, some of the parts being removed; Fig. 4 is a similar  
25 view showing the parts in their locking relation; Fig. 5 is a detail sectional view showing one of the notched disks; the section is taken on the line *a— a* of Fig. 7; Fig. 6 is a similar view of the other notched disk; this section is taken on the line *b— b* of Fig. 7; Fig. 7 is a de-  
30 tail side view partly in section of the notched and index disks; Fig. 8 is a sectional view on the line VIII—VIII of Fig. 3.

In carrying out my invention I make use of a box or housing in which is received a U-shaped shackle  
35 of steel or suitable material, and which is engaged by bolts within the box or casing, so as to be locked against withdrawal. These bolts are, however, movable by a knob or handle projecting from the casing whenever re-  
40 leased by the combination devices.

Referring now to the drawings in which like parts are designated by the same reference sign, 1 indicates the box or housing, and 2 denotes the U-shaped shackle adapted to be received in the holes 3 therein. The  
45 two legs of the shackle are notched at 4 and 5 on their interior surfaces, the location of said notches being conveniently near the extremity of one leg and at a point some distance removed from the extremity of the other.

6 and 7 indicate the locking bolts within the casing 1,  
50 of which 6 enters the notch 4, while 7 is guided into the notch 5 of the other leg. These bolts are respectively carried by bars 8, having extensions 9, extending along the interior walls of the casing.

10 denote notches in the extensions 9, which receive  
55 the extremities of a lever 11, centrally pivoted within

the casing. 13 designates a shaft, carrying a knob 14, by which this lever is turned.

The bars 8 have a movement toward and from one another by virtue of the lever connections above de-  
scribed together with the guiding extensions 9, which 60 keep the bars in proper parallel relation, on account of their engagement with the interior walls of the casing. In this movement the bars coöperate with the combination devices which form a feature of the invention.

I have shown four combination devices each extend- 65 ing through the wall of the casing, and having means by which they are set to operate. Each comprises a pair of disks 15 and 16, of which 15 is rotatable on a tubular shaft 15' extending through the casing and having an index disk 15'' thereon. The disk 16 is fixed to 70 a spindle 16' rotatable in the tubular shaft above mentioned and carrying an index disk 16'' at its extremity. The disks 15 and 16 are both notched at portions of their periphery, and said notches are capable of being brought into the path of one of the bars 8, so that the 75 bar enters said notches when they are properly alined. The notches may be moved into this alined relation by the index disks 15'' and 16'', without the casing. The springs 17 are illustrated as a convenient means for imparting frictional resistance to the disks, so that 80 they may be manipulated separately with greater convenience.

18 denotes the cover plate, which has lugs 19, projecting from its under face, which in turn are transversely recessed at 20, in the path of the legs of the 85 shackle 2. By virtue of this arrangement the cover plate is positively fastened in place whenever the shackle is in position.

The operation will be clear from the preceding description. It is merely necessary to insert the legs of 90 the shackle into place, and turn the knob 14, by which act the bars 8 are moved laterally away from one another, and the bolts 6 and 7 directed into their corresponding notches in the legs of the shackle. If any one of the index disks 15'' or 16'' are now turned, it is 95 impossible to withdraw the bolts from their engagement with the shackle by reason of the bars 8 being intercepted by one or another of the disks 15, 16. Not until all the notches of all the disks have been again properly alined, and the knob 14 turned can the shackle 100 be withdrawn. In the form of the invention shown where there are twenty divisions on each index disk, there are 25,600,000,000 ways of arranging the index disks, only one of which would be successful to release the keeper. It is evident that the possibility of this cor- 105 rect combination being found by trial and experiment is exceedingly remote.

What I claim, is:—

1. In a padlock, a casing having holes, a shackle having two notched legs adapted to enter said holes, a pair of 110



bolts movable into said notches, bars connected to said bolts and having a movement toward and from one another, a two-armed lever operatively connected to said bars, means for turning said lever, and four pairs of  
5 notched disks movable into the path of said bars to prevent movement thereof to withdraw the bolts.

2. In a padlock, a casing having holes, a shackle having two notched legs adapted to enter said holes, a pair of bolts movable into said notches, a two-armed lever  
10 having a limited angular movement and connected to said bolts, bars fixed to said bolts and having a movement perpendicular to the direction of their length and notched disks movable into the path of said bars to prevent movement thereof to withdraw the bolts.

15 3. In a padlock, a casing having holes, a shackle having two notched legs adapted to enter said holes, a pair of bolts guided to move in directions parallel and opposite to one another, means engaging both of said bolts to simul-

taneously move them in such directions, bars fixed to the bolts and extending in directions parallel to one another, 20 and a plurality of pairs of notched disks in the path of said bars.

4. In a padlock, a casing having a shackle, means for locking the shackle to the casing, a pair of bars having a movement perpendicular to the length thereof toward 25 one another for releasing said means, and a plurality of pairs of notched disks on separate but parallel axes for resisting movement of said bars until the disks are properly positioned.

In witness whereof, I subscribe my signature, in the 30 presence of two witnesses.

NEUMAN TOBIAS.

Witnesses:

FRANK S. OBER,  
A. W. PROCTOR.