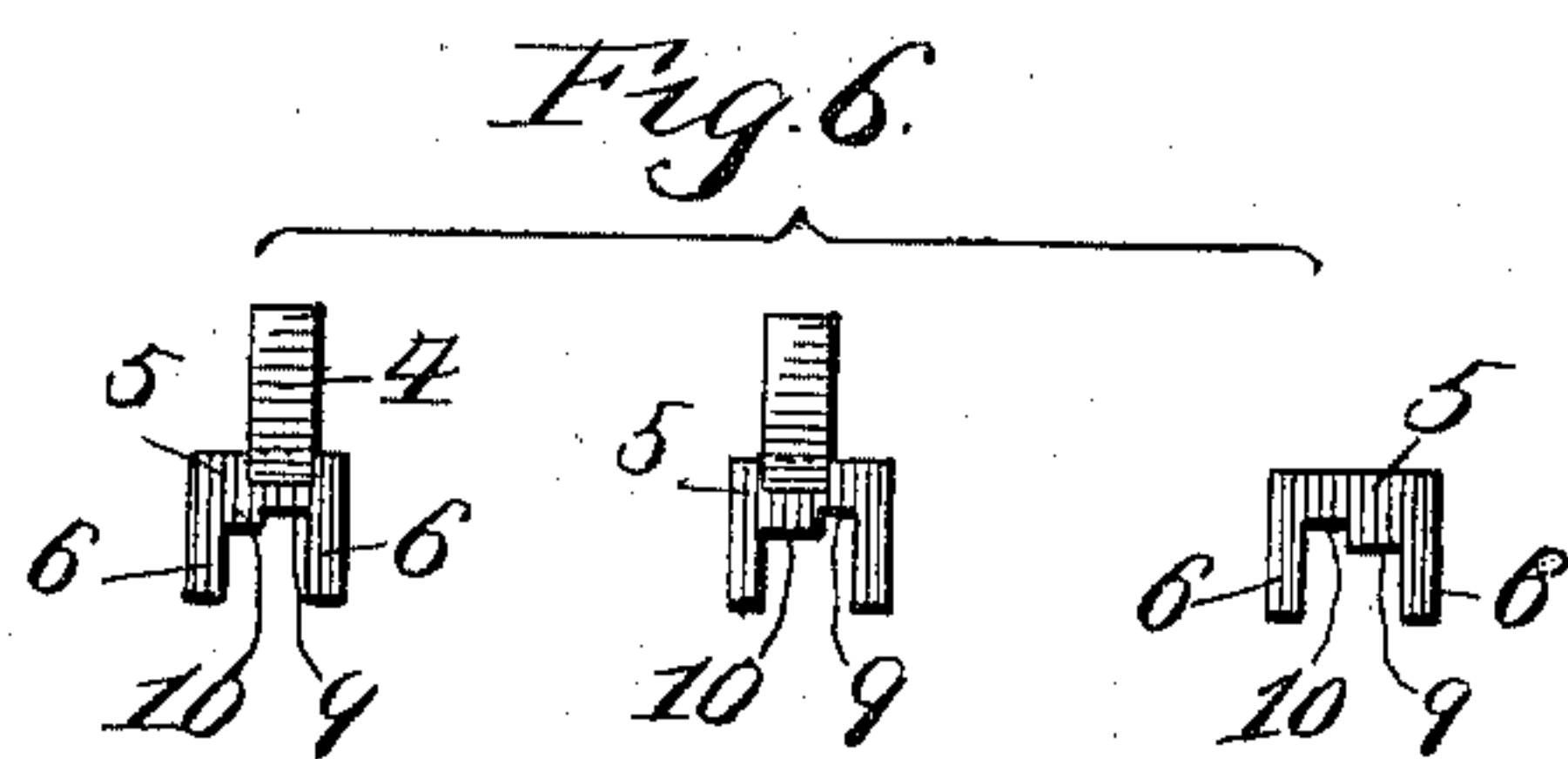
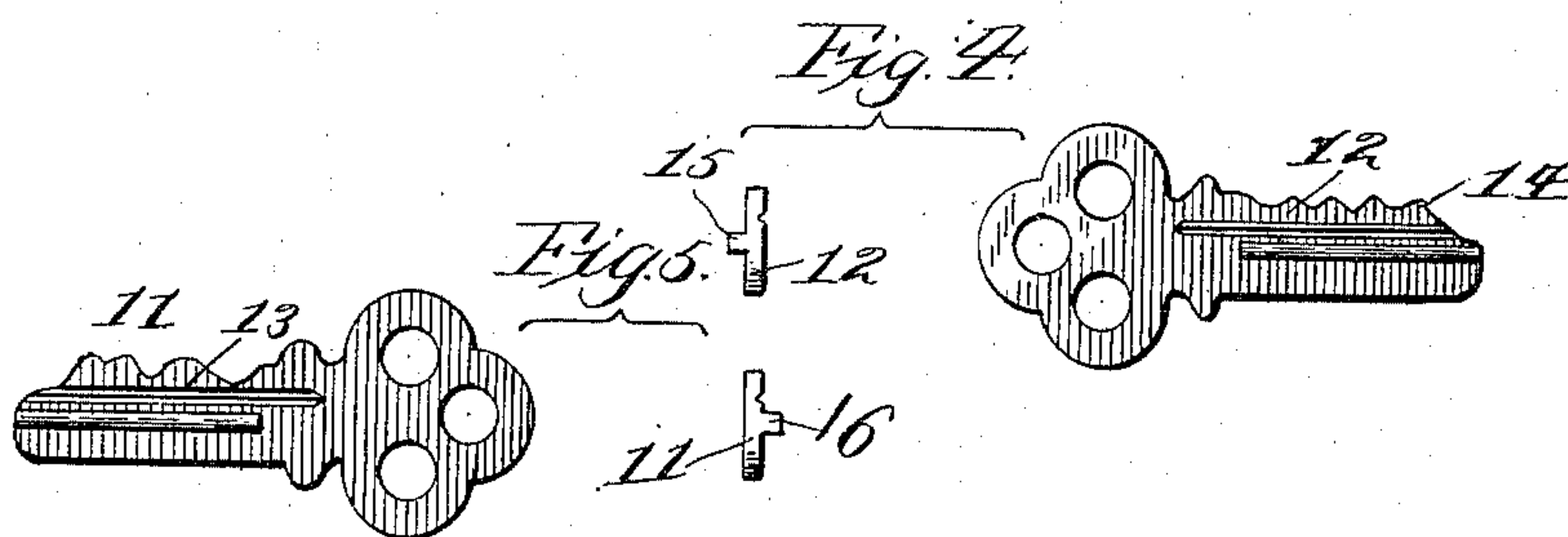
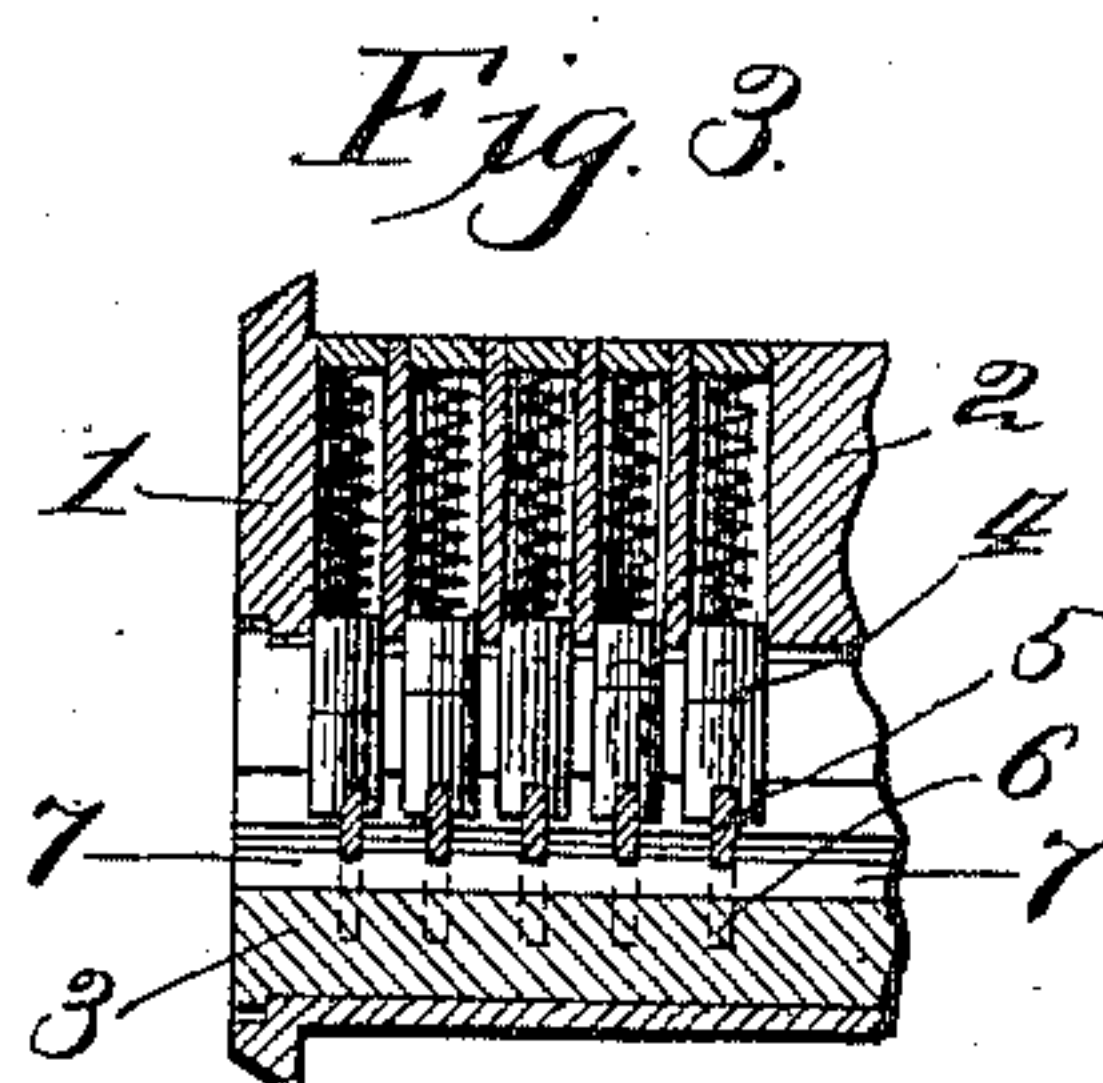
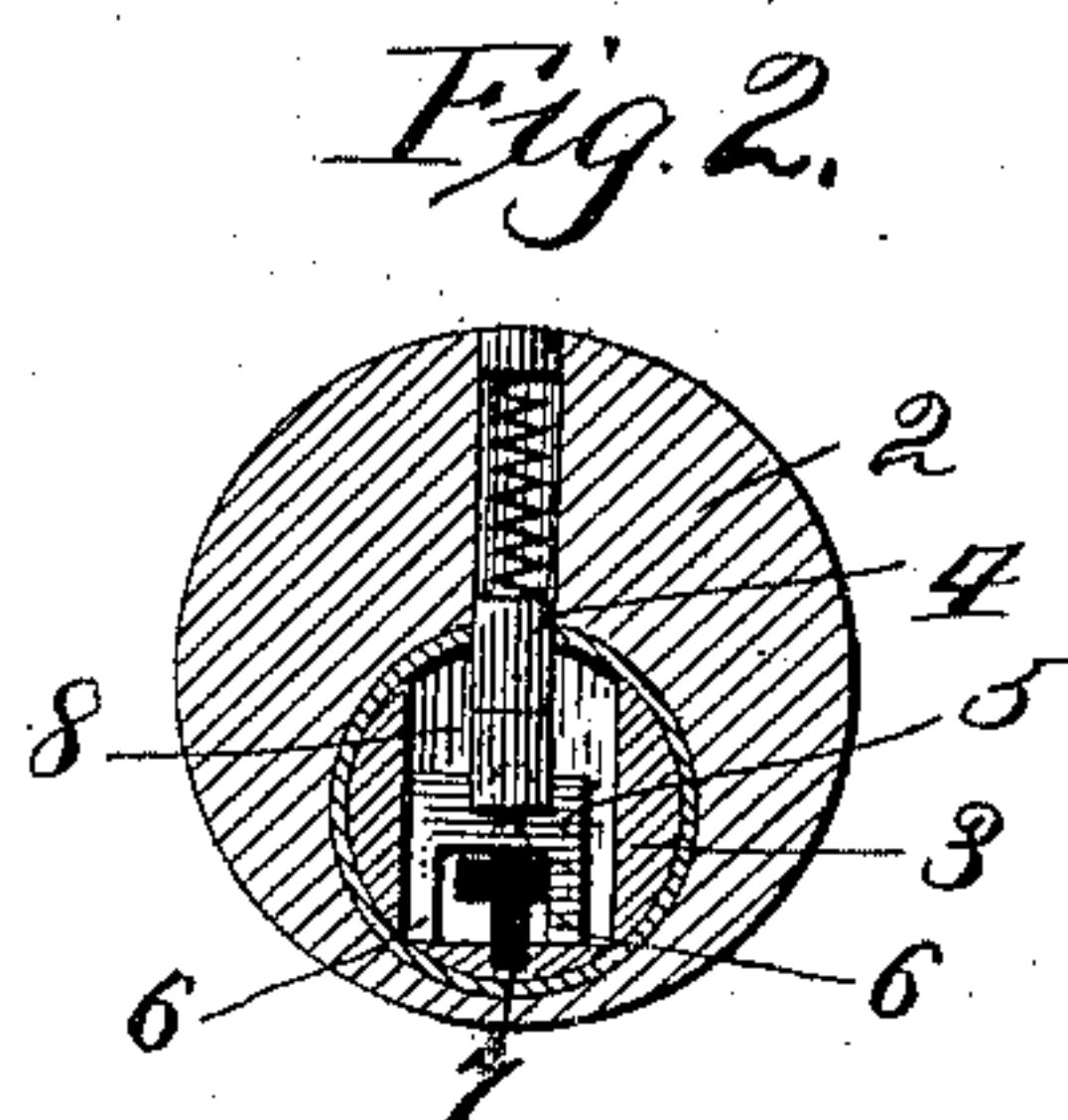
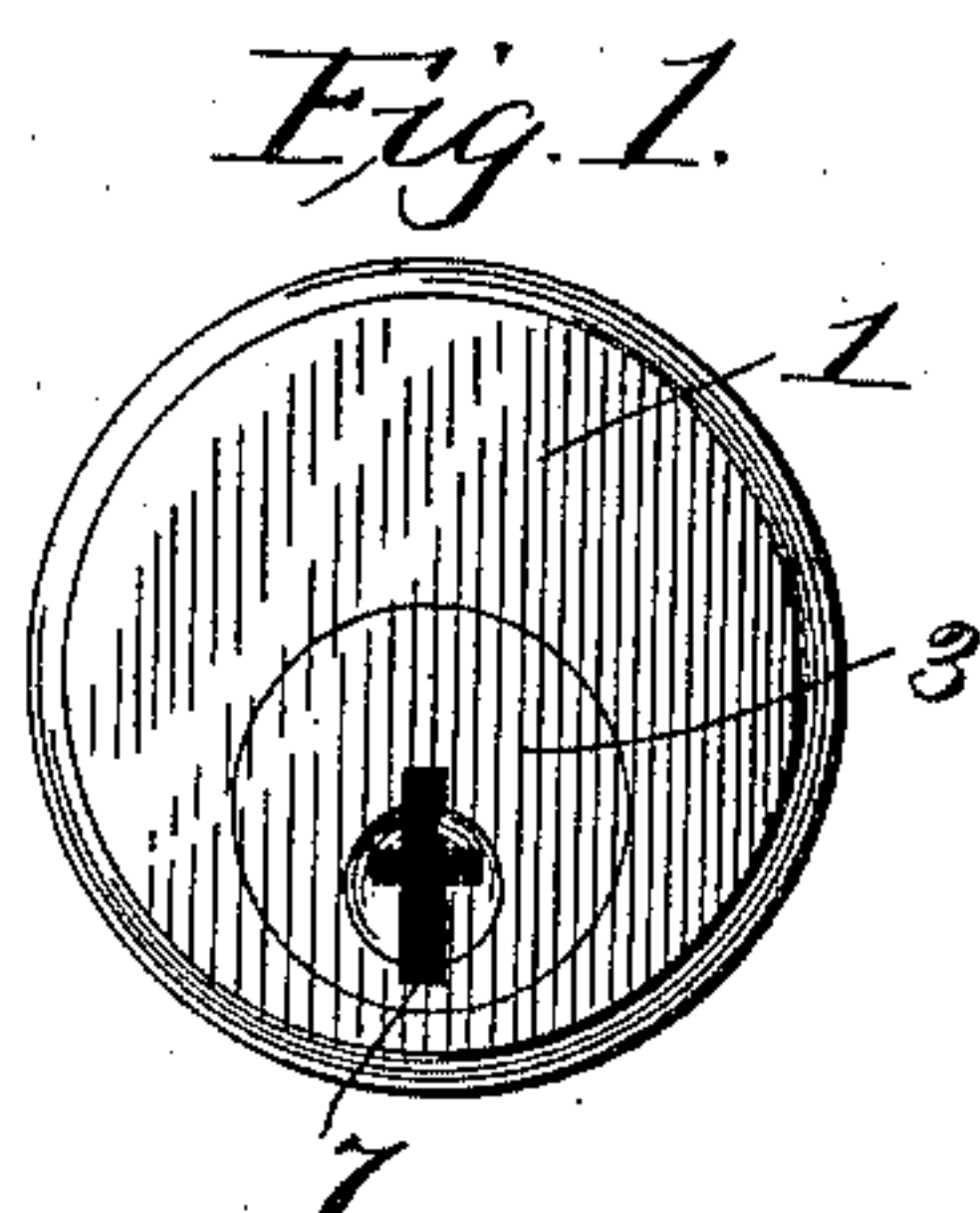


(No Model.)

W. H. TAYLOR.
PIN LOCK.

No. 567,624.

Patented Sept. 15, 1896.



Witnesses:
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Jas. W. White.

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UNITED STATES PATENT OFFICE.

WARREN H. TAYLOR, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE
YALE & TOWNE MANUFACTURING COMPANY, OF SAME PLACE.

PIN-LOCK.

SPECIFICATION forming part of Letters Patent No. 567,624, dated September 15, 1896.

Application filed December 7, 1895. Serial No. 571,420. (No model.)

To all whom it may concern:

By it known that I, WARREN H. TAYLOR, a citizen of the United States, and a resident of Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful improvements in Master-Key Locks, of which the following is a specification.

My invention relates to master-key systems for locks and is applicable especially to that form of lock employing a plug which is locked in a surrounding shell by means of tumblers until the latter are properly set by a key. It has heretofore been customary to set such locks to master-keys by dividing the tumblers into three parts, so that when any division coincides with the periphery of the plug it might turn to operate the lock. In my present system the tumbler is divided into two parts, while in engagement with the lower parts are slides, so constructed that two different keys may act upon them at different points, and free to move vertically and horizontally. The master-keys and change-keys are provided with oppositely-presented lateral ribs and have an edge bitted in the usual manner. The shape of the key at the forward end is such that the rib upon the side acts first upon the slide, and according as the rib is on one side or the other of the key it pushes the slide to the right or to the left, so that the bittings of the key will act upon the left or right of the slides. Now, as the two sides of each slide may be differently formed, it is evident that by making the proper combination between the bittings of the key and the points where said bittings bear upon the slides, the two keys differently bitted will each raise the slides, and consequently the tumblers, to the proper height to permit unlocking. This gives the foundation for a master-key system in which the slides may be so formed that one master-key operating, for example, upon the left of the slides of each lock, will open all of a series of locks, while the key which operates upon the right of the slides may be different in each lock.

My invention will be fully understood by reference to the accompanying drawings, in which—

Figure 1 is a front view of an escutcheon

in which is mounted a rotating plug having a keyhole adapted to receive either a master-key or a change-key as used in my present invention. Fig. 2 is a transverse section through the shell carried by the escutcheon and showing the relations of the pin-tumblers, the rotating plug, and the slides. Fig. 3 is an axial section of the same in the plane of the tumblers. Figs. 4 and 5 represent, respectively, a side elevation and section of one of the keys and a side elevation and section of the other key, these keys being intended for use the one as a master-key which is adapted to unlock any one of a certain series of locks, while the other key is intended for use as a change-key, of which there is one for each individual lock different from all the rest. Fig. 6 represents the different formations of the slides.

1 represents the escutcheon, in which is mounted the rotating plug, 3, which is normally locked against rotation by spring-pressed tumblers 4. These tumblers are in two parts, as is usually the case with a simple pin-tumbler lock, while beneath each is a laterally and vertically movable slide 5, with which the key engages to determine the position of the spring-pressed tumbler. The bearing-points of the key and the thickness of the slides together bear such a relation to the respective tumblers that when the proper key is inserted the line of division of all the tumblers is brought into coincidence with the periphery of the the turning plug. The slides work in vertical grooves 8, (shown in Fig. 2 and by dotted lines in Fig. 3,) these grooves being such as to permit the insertion of the slide in a diametric direction from the periphery of the turning plug. The lower portions of the tumblers may be notched over the upper edges of the slides, as shown in Figs. 2, 3, and 6. The form of the slides 5 is best illustrated in Fig. 6, where it will be seen each one is provided with two distinct bearing-points 9 and 10.

11 and 12 represent the two keys, (see Figs. 4 and 5,) and these keys bear upon their sides ribs 15 and 16. When a key is inserted in the hole 7, its rib 15 or 16 strikes one of the legs 6 of the slide and shifts the latter to one side or other. By this means the position of

the rib 15 or 16 determines which of the bearing-points 9 and 10 shall rest upon the edge of the key, and consequently what the form of the edge of said key must be in order to
5 bring the tumbler at the proper position to permit the plug to be turned. By thus employing a sliding part 5, having two bearing-points 9 and 10 in different planes, it becomes possible to have two different keys which will
10 control each lock. It is also possible to have the key with the rib on a given side control all of a series of locks, while another key with the rib on the other side controls but a single lock in that series, so that in keys having the
15 rib on that side there must be a special and distinct bitting for each lock. The location of the rib on the key gives ample distinction between blanks for master-keys and for change-keys, and I am thus enabled by my
20 present invention to accomplish all the results obtainable from the master-key system now in use. Moreover, the set of slides constitute a very cheap and economical element in the lock with which to effect changes in bittings.
25 Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent—
1. In combination with the tumbler of a lock, a slide through the medium of which
30 the tumbler is moved to unlocking position having two bearing-points each adapted to determine the position of the tumbler, and movable across the direction of the movement of the tumbler, whereby the position of said
35 slide must be determined in two directions before unlocking can take place.

2. A set or series of locks provided with tumbler-actuating slides which move across the direction of movement of the tumblers, said slides having two sets of bearing-points 40 so that one key may open every one of a series of locks by engaging with one set of the bearing-points while the other set of bearing-points in each lock are so constructed that only one key will set them so as to open the 45 lock, substantially as described.

3. In combination with a lock having tumbler-actuating slides movable across the direction of movement of the tumblers, said slides being formed with two sets of bearing-points, a pair of keys having different bittings on their edges, adapted to cooperate with the respective bittings in the lock and having oppositely-presented lateral ribs for engaging with the said tumbler-actuating 55 slides, so that each key upon being inserted, will so set the slides, that the bits on the edge of the key will set the tumblers for unlocking, substantially as described.

4. In a lock of substantially the character 60 specified, the combination of the tumbler-actuating slides, and a key provided with a rib or projection on its side and with bittings upon its edges, the two being in such relation that the rib will set the tumbler-actuating slides in such position that the bits will 65 properly set the tumblers, substantially as described.

WARREN H. TAYLOR.

Witnesses:

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