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S. SEGAL

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LOCK CYLINDER

Filed July 12, 1926

Fig. 1

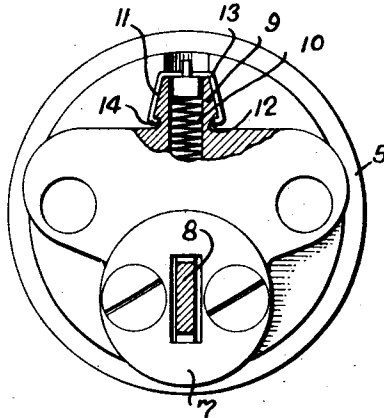


Fig. 2

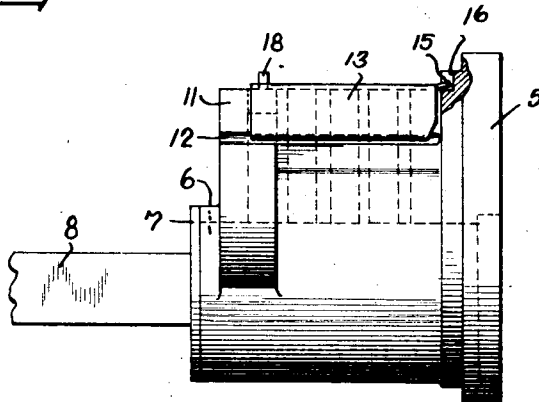
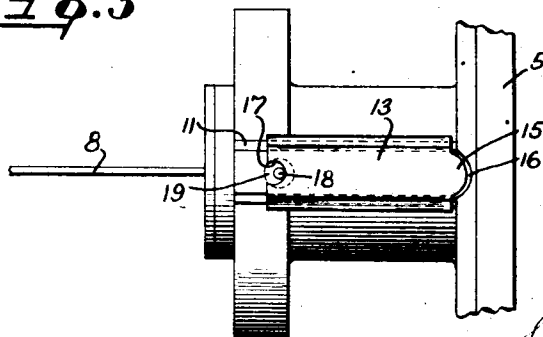


Fig. 3



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LOCK CYLINDER.

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This invention relates to an improved form of cylinder lock.

It is an object of the invention to provide a device of this character the parts of which will be few in number and may be readily manufactured and assembled by relatively inexperienced labor to reduce the cost of production.

It is a further object of the invention to provide a lock the parts of which will not become disarranged in use, and which parts, when desired, may be readily disassembled by a locksmith.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereinafter set forth, and the scope of the application of which will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention reference should be had to the following detailed description taken in connection with the accompanying drawings, in which:

Figure 1 is a rear view, partly in section, showing a lock embodying the improved construction of the present invention;

Fig. 2 is a side elevation thereof; and

Fig. 3 is a plan view.

In these views the numeral 5 indicates the body of the cylinder, which is provided in the usual manner with a bore for the reception of a rotatable plug 6, indicated in dotted lines, this plug having an enlarged head preventing its removal from the bore in one direction and, in the present embodiment, being prevented from movement in an opposite direction by having a washer 7 secured to its rear end; this washer retaining the tail-piece 8 of the lock against consequential movements with respect to the plug.

In locks of this nature the cylinder in each instance is formed with a rib 9, from the outer edge of which bores extend to the central bore of the cylinder body. These latter bores each house a spring 10, the lower end of which presses against a pin (not shown) cooperating with a tumbler (not shown) carried by the plug. Generally, it has been necessary heretofore, after an operator has properly positioned these parts, to apply a closing plate common to the upper ends of

the spring- and pin-housing bores, this plate being riveted or otherwise permanently secured in position, and this operation being performed by a comparatively skilled mechanic and requiring an appreciable amount of time for its accomplishment. In performing these operations it has also been a frequent occurrence for the plate to be improperly applied, necessitating either a removal and renewal thereof or a discarding of the cylinder, thus increasing the cost of production.

It will be noted that, according to the present embodiment of the invention the side faces of the rib 9 are preferably beveled or inclined toward each other, as has been indicated at 11, and adjacent its base this rib is formed with inwardly-extending grooves 12. A plate is employed for the purpose of closing the upper ends of the transversely-extending bores, which plate includes a strip 13 U-shaped in cross section, the outer ends of the arms of this strip being bent inwardly as at 14 in order to cooperate with the grooves 12. The forward end of the strip terminates in the form of an outwardly-extending tongue 15 projecting into a recess 16 formed in the rear face of the front plate of the cylinder, and the rear edge of this strip is formed with a notch 17 for the reception of a stud 18 of a pin 19. The latter in the present instance is mounted upon the upper end of the spring end and within the last transverse bore.

In using a lock embracing this construction the pins and springs are inserted in the bores thereof in the usual manner. Subsequently, an operator brings the tongue 15 to extend into the recess 16, the body of the strip 11 extending at an angle to the upper surface of the rib. Utilizing the surfaces of the tongue and recess as a fulcrum, the strip is now swung or moved downwardly toward the plane at which it confines the upper ends of the springs within the transverse bores. In such movement the arms of the strip will be forced apart by the wedge shape of the rib, and, incident to the inherent resiliency of the material of which the strip is formed, it will be understood that the ends 14 thereof will spring into the grooves 12 of the cylinder when the strip reaches its seated position. In such position the stud 18 of the pin 19 will extend into the notch 17, thus normally preventing a rearward movement on the part of the strip with respect to the cylinder.

If, however, an operator should desire to

remove the strip, this may be readily accomplished by simply pressing against the outer end of the stud 18 until it is forced into a plane below the inner face of the strip base, whereupon the strip may be slid along the grooves 12 and rearwardly of the cylinder in order to effect a detachment of the parts, it being understood that during such movement, and due to the fact that the tongue 15 preferably extends at an angle to the strip body, the springs within the transverse bores will be gradually relieved from the compression under which they are positioned within these bores and will not tend to snap out of these bores, as might otherwise be the case.

From the foregoing it will be appreciated that the objects of this invention have been accomplished, and since certain changes may be made in the above construction, and different embodiments of the invention could be made, without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrated and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention which as a matter of language might be said to fall therebetween.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A cylinder lock, including, in combination, a body formed with a spring- and pin-housing bore, and a recess upon its outer face, a plate to be moved to a position adjacent the outer end of the bore, and an extending portion forming a part of said plate to project into said recess when the plate is in such position to prevent relative movement between the plate and cylinder body.

2. A cylinder lock, including, in combination, a body formed with a spring- and pin-housing bore, and a recess upon its face, a plate formed of resilient material enclosing said bore when occupying a position adjacent thereto, and a projecting portion forming a part of said plate and extending into such recess to prevent relative movements of the parts.

3. A cylinder lock, including, in combination, a body, a rib forming a part thereof and having converging side faces, said body being formed with a spring- and pin-housing bore extending to the edge of said rib, and a plate substantially U-shaped in cross section, the base of said plate occupying a position adjacent the outer end of said bore to confine the spring and pin thereof, and the arms of said plate contacting with the side faces of the rib and being forced thereby in opposite

directions as the base of the plate is brought to bore-closing position, the ends of the plate arms being extended and the side faces of the rib being formed with recesses for the reception of such extended portions whereby to prevent relative movement of the parts.

4. A cylinder lock, including, in combination, a body formed with a spring- and pin-housing bore and said body having a recess, a plate enclosing the end of said bore, a tongue forming a part of said plate and extending into said recess, and means for preventing movement of said plate with respect to said body.

5. A cylinder lock, including, in combination, a body formed with a spring- and pin-housing bore and said body having a recess, a plate enclosing the end of said bore, a tongue forming a part of the plate body and extending at an angle thereto, said tongue entering the recess of said cylinder body whereby said plate may be swung toward the latter, and means for retaining said plate against movement with respect to said body when the latter reaches a position at which it closes the outer end of said bore.

6. A cylinder lock, including a body formed with a spring- and pin-housing bore, a plate lying adjacent said body and being formed with a notch in line with said bore, a stud positioned within said bore and extending into said notch, and means upon the outer face of said cylinder body for normally preventing movement of said plate with respect to the same.

7. A lock cylinder, including a body, a rib forming a part of the same and being formed with a spring and tumbler-housing bore extending to its outer edge and said rib being undercut adjacent the base edges thereof, a plate U-shaped in cross-section to be snapped over said rib with its arms lying straight and against the side faces thereof, and the ends of said arms being intumed to extend into undercut portions of the rib.

8. A lock cylinder, including, in combination, a body formed with a plug-receiving bore, and tumbler-housing bores extending from said plug bore to the edge of said body, a plate for closing the ends of said tumbler-housing bores, said plate acting to occupy such position by a swinging movement and being removable from such position by a sliding movement.

9. A cylinder lock including a body, a rib extending from said body, said body being formed with a plug bore and tumbler bores extending from said first named bore through to the upper edge of said rib, a plate covering the outer ends of said latter bores and lying adjacent the upper edge of said rib and extended portions forming a part of said plate and lying adjacent the side faces of said rib to engage within recesses formed at the base of such rib.

10. A cylinder lock including, in combination, a body formed with a plug bore, a rib extending from said body and formed with tumbler bores extending from its upper edge to said plug bore, a plate covering the upper edge of said rib and being formed with an opening and a spring-pressed pin disposed within one of said tumbler bores and extending into said opening to retain said plate. 15
11. A cylinder lock including a body, a rib forming a part of said body, said body being formed with a plug bore and further bores extending from such bore to the upper edge of said rib, said rib being tapered and formed with recesses adjacent its base and a plate U-shaped in cross section and bearing against the upper edge of said tumbler bores and having its edge portions extending into said recesses. 15

In testimony whereof I affix my signature.

SAMUEL SEGAL.