

May 8, 1951

LE ROY O'KANE
ANTIPICKABLE LOCK

2,552,012

Filed May 17, 1947

2 Sheets-Sheet 1

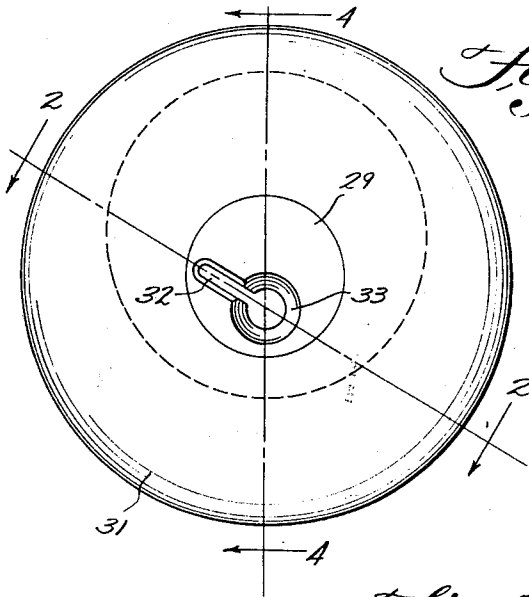


Fig. 1.

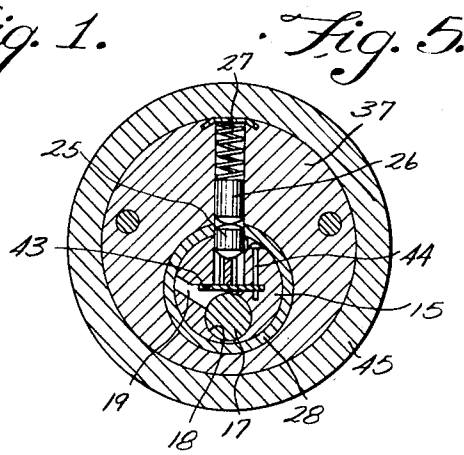


Fig. 5.

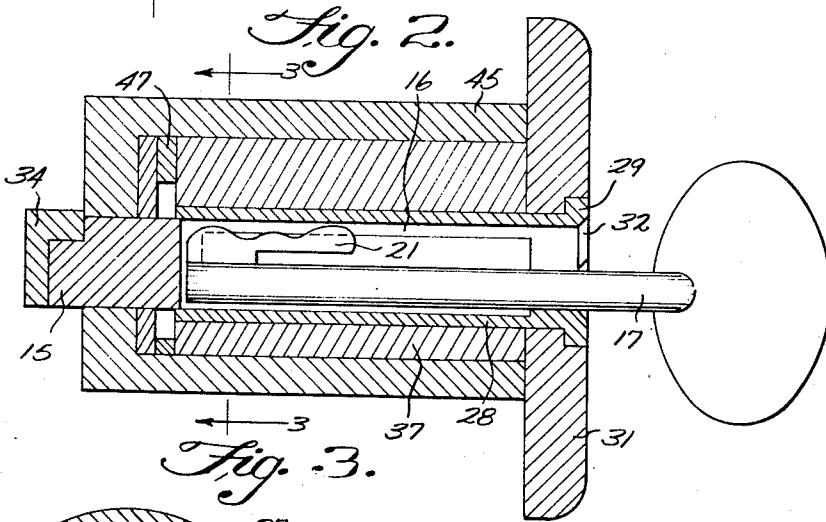


Fig. 2.

Fig. 3.

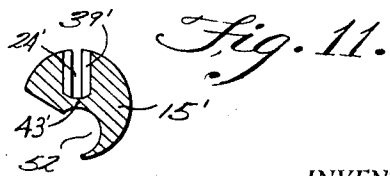
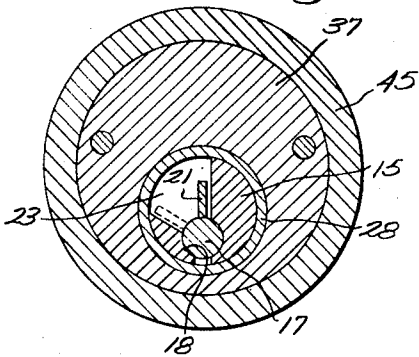


Fig. 11.

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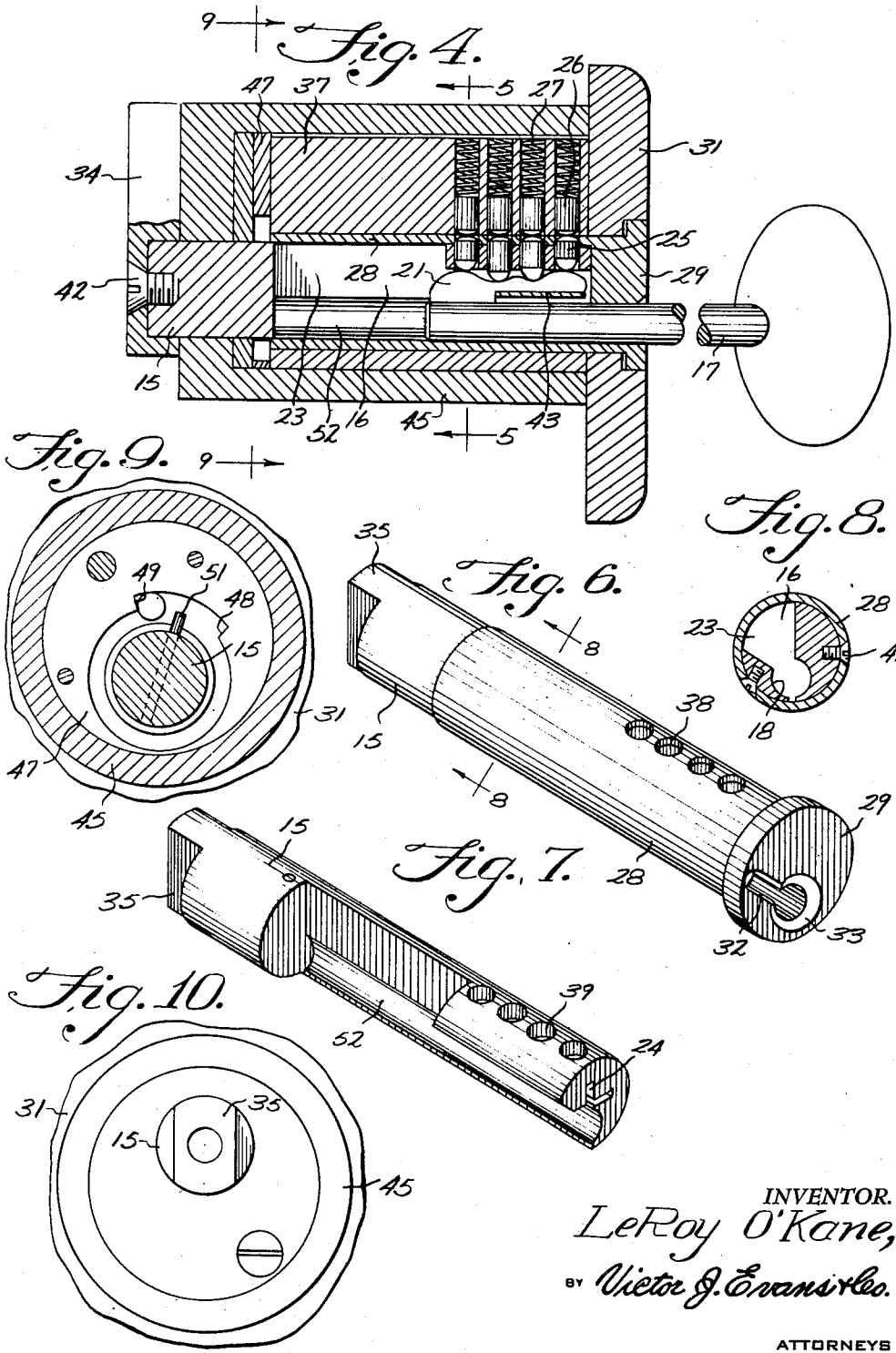
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LE ROY O'KANE
ANTI-PICKABLE LOCK

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,552,012

ANTI-PICKABLE LOCK

Le Roy O'Kane, Pittsburgh, Pa.

Application May 17, 1947, Serial No. 748,771

3 Claims. (Cl. 70-419)

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This invention relates to an anti-pickable lock.

It is an object of the present invention to provide a lock which cannot be readily picked by burglars and wherein there is provided internally of the lock a partition wall or shelf which prevents access to the tumbler pins and wherein a key passage is provided at an angle to the passage into which the tumbler pins extend whereby the key, upon being inserted, must be turned in order that it can register with a passage into which the tumbler pins extend.

Other objects of the present invention are to provide an anti-pickable lock which is of simple construction, inexpensive to manufacture and efficient in operation.

For other objects and for a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawing, in which

Figure 1 is a front elevational view of the lock,

Figure 2 is a longitudinal cross-sectional view taken on line 2-2 of Figure 1,

Figure 3 is a cross-sectional view taken on line 3-3 of Figure 2.

Figure 4 is a longitudinal cross-sectional view taken on line 4-4 of Figure 1,

Figure 5 is a transverse cross-sectional view taken on line 5-5 of Figure 4,

Figure 6 is a perspective view of the bolt looking upon one side thereof,

Figure 7 is a perspective view of internal parts of the bolt,

Figure 8 is a transverse cross-sectional view taken on line 8-8 of Figure 6,

Figure 9 is a transverse cross-sectional view taken on line 9-9 of Figure 4,

Fig. 10 is an end view of Fig. 4 with the lock member removed.

Figure 11 is a cross-sectional view of a modified form of bolt.

Referring now to the figures, 15 represents an internal key plug. This key plug has a longitudinal passage 16 into which a key 17 may extend. This passage 16 includes a part of round section 18 and a radially extending part 19 for receiving the radially extending portion 21 of the key 17. The rear part of the passage 16 is enlarged as shown in Figure 8 at 23 so that the key, once it has been extended far enough into the opening 16, can be turned so that the part 21 of the key can be axially aligned with a slot 24 whereby the key 17, as it is pulled outwardly, will cause the part 21 to enter the slot 24. The part

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21 of the key has the proper top edge and indentations so as to properly place the tumblers 25 whereby to raise the spring pressed plungers 26 against the action of their springs 27 so that they will be properly aligned to permit the key plug 15 and its sleeve 28 surrounding the same to be turned. The sleeve 28 is closed at its forward end as indicated at 29 so as to be fitted into a cover plate 31 on the front of the lock. This portion 29 has an opening 32 which is in continuation of the opening 16 for receiving the key. The front of the opening 32 is cut away or counter-sunk as indicated at 33 to facilitate the insertion of the key 17.

Once the tumbler pins 25 have been properly aligned with the key, the key plug 15 and the sleeve 28 can be turned whereby to cause a bolt releasing member 34 on a projection 35 of the key plug 15 to be turned so as to release the bolt parts of the lock, not shown. The plunger elements 26 are contained in a body part 37. Holes 38 in the sleeve 28 are adapted to normally receive the plungers 26. These holes are aligned with holes 39 in the key plug 15 containing the tumblers 25. The sleeve 28 is fixed to the key plug 15 by screws 41. The part 34 is fixed to the projection 35 by a screw 42.

Within the slot 24 there is extended a partition or shield 43 which is fixed against displacement by a fastening rivet 44. This shield 43 prevents one from picking the lock and requires that a special key be used in order that the part of the key 21 can be slid up over the shield 43. All of the parts thus far with the exception of part 34 are enclosed in a heavy casing 45.

Fixed against the end of the part 37 is a plate 47 having an opening with stop shoulders 48 and 49 for limiting the turning movement of the key plug 15. On the key plug 15 is an arm 51 which will abut the stop shoulders 48 and 49 whereby to limit the turning movement of the key plug.

In Figure 11 there is shown a slightly modified form of key plug 15¹, provided with holes 39¹ for the reception of tumbler pins, the holes being intersected by a longitudinal slot 24¹ corresponding in function to slot 24, but in top of the bolt. When this type bolt is used the shelf or partition 43 may be omitted since the transverse portion 43¹ of the plug below the slot 24¹ serves the same purpose and functions in the same manner.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope

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of the present invention, as defined by the appended claims.

I claim:

1. An anti-pickable lock comprising rotatable key plug means having a plurality of radially extending openings, tumbler pins in the radially extending openings, a part surrounding the key plug means in which the key plug means is rotatable and having plunger openings, plungers in said plunger openings of the part and alignable with the tumbler pins to depress them and at times to enter the tumbler pin openings to lock the key plug means against turning movement, a key passage extending longitudinally into the key plug means at an angle offset to the tumbler pins and having an enlargement in rear of the pins, to provide for the turning movement of a key having a radially extending part and insertable into the passage, said key plug means having a slot in communication with the enlargement of the passage and, aligned with the tumbler pins, whereby the radially extending part of the key can be inserted to a position to the rear of said tumbler pin openings and moved into said slot to raise the pins and plungers whereby the key plug means can be rotated.

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2. An anti-pickable lock as defined in claim 1, and a shield lying beneath and spaced from the tumbler pin openings and over which a portion of the radially extending part of the key must slide to operate the tumbler pins, the key being provided with a longitudinally extending slot in the radially extending part, open at the end towards the head of the key whereby the partial retraction thereof said portion will overlie the shield.

3. An anti-pickable lock as defined in claim 2 wherein the shield comprises an integral portion of the key plug means.

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REFERENCES CITED

The following references are of record in the file of this patent:

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