H. G. VOIGHT.

LOCK MECHANISM.

APPLICATION FILED AUG. 15, 1919.

1,338,053. Patented Apr. 27, 1920.

Fig. 1.

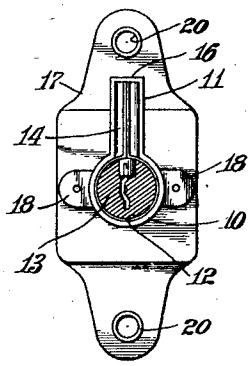


Fig. 2.

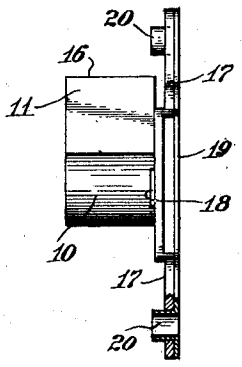


Fig. 3.

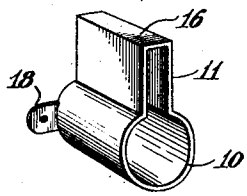


Fig. 4.

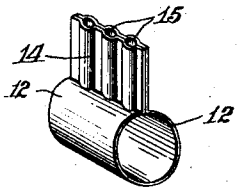


Fig. 6.

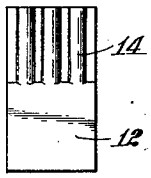


Fig. 7.

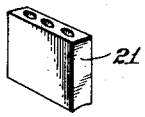
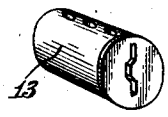


Fig. 5.



WITNESS

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LOCK MECHANISM.

1,338,053. Specification of Letters Patent. Patented Apr. 27, 1920.

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To all whom it may concern:

Be it known that I, HENRY G. VOIGHT, a citizen of the United States of America, residing at New Haven, Connecticut, have invented a new and useful Lock Mechanism, of which the following is a specification.

My invention relates particularly to improvements in what are commonly termed "cylinder" locks. It has been customary in the past to form the housing of these locks out of cast metal, such as brass, which it is necessary to finish, and in which it is necessary to drill the holes for the pin tumblers and otherwise resort to considerable machine work.

The main object of my invention is to construct the housing for the cylinder or plug and the pins of sheet metal, so as to avoid the necessity of much machine-work and so as to provide a strong and satisfactory mechanism at a minimum of expense.

In the preferred form the housing is formed from sheet metal such as steel and provided with a lining of non-corrosive metal such as brass which forms the bearing surface for the plug or cylinder and carries the springs and the outer ends of the pin tumblers. The housing may, however, be made of non-corrosive sheet metal and a separate insert provided for the springs and outer ends of the pin tumblers.

Figure 1 is a front view of a lock mechanism embodying the improvements of my invention, the face plate however being omitted.

Fig. 2 is a side view of the same.

Fig. 3 is a perspective view of one form of housing.

Fig. 4 is a perspective view of the lining.

Fig. 5 is a perspective view of a plug or cylinder adapted to be used with these parts.

Fig. 6 is a detail view of one-half of the lining.

Fig. 7 is a perspective view of a modified form of the insert for carrying the springs and outer ends of the pin tumblers.

The housing has the cylindrical body portion 10 for carrying the plug or cylinder part of the lock and the extension 11 for the springs and the outer ends of the pin tumblers.

The lining member in the preferred form is provided with a cylindrical or tubular portion 12 for the plug 13 and with an extension portion 14 having recesses 15 for the springs and pin tumblers. Any number of pin tumblers may be used and any cross section of any slot in the plug may be used. The top of the housing is closed as at 16 so as to form an outer abutment for the springs (not shown).

The housing is suitably secured to a base plate such as 17, for instance, by one or more lugs such as 18. An outer plate 19 may be employed in the particular type of lock shown and secured to the base plate by means of eyelets such as 20—20 formed integral with the outer plate.

The housing may be drawn and blanked out of sheet metal in the desired size and shape. The lining or the part which immediately carries the plug and the pin tumblers may be stamped or drawn out of sheet metal, either in one piece as shown in Fig. 4 or made in two parts like the part shown in Fig. 6. By making the housing of a cheaper metal such as steel, and forming the lining of a thin layer of non-corrosive metal such as brass which can be stamped into sharp and clean lines, the construction may be made at a minimum cost and yet in a workman-like manner.

As above indicated, the housing may be formed of non-corrosive metal and have the plug fit directly in the lower tubular or cylindrical part, and the springs and outer ends of the pin tumblers may be carried by an insert such as 21 formed of non-corrosive metal which may be either cast metal or extruded metal having the necessary recesses.

By "sheet metal" I mean of course any thin, rolled, or drawn metal as distinguished from cast metal.

I claim:—

1. In a cylinder lock, a housing formed of sheet metal having a tubular portion and having an extension, a rotatable plug member located in the tubular portion and a spring and pin carrying insert in said housing and coöperating with said plug member.

2. In a cylinder lock construction, a one-piece sheet metal housing having a tubular portion for the plug and an extension, a rotatable plug located in the tubular portion and a sheet metal insert in said housing for the outer ends of the pins.

3. In a cylinder lock construction, a sheet metal housing having a tubular portion and an extension therefrom closed at its outer end, a rotatable plug located in the tubular portion and an insert in said housing hav-

ing recesses for the springs and the outer ends of the pins, said housing acting as a closure for said recesses.

4. In a cylinder lock construction, a housing, a sheet metal insert forming a bearing for the plug and having a series of recesses for the pins.

5. In a cylinder lock construction, a housing having a tubular portion and an extension therefrom, a plug rotatable in said tubular portion and a sheet metal insert interposed between said plug and the tubular portion of the housing and having an extension with recesses for the pins.

6. In a cylinder lock construction, a housing having a tubular portion and an extension therefrom, a sheet metal insert having a tubular portion fitting in the tubular portion of the housing and having a pin tumbler carrying extension extending into the extension in the housing and a plug rotatable in the tubular portion of said insert.

7. In a cylinder lock, a housing having a tubular portion and extension chambered portion, a sheet metal lining in the tubular portion and an insert in the extension having recesses and a rotatable key plug in the lining in the tubular portion.

8. In a cylinder lock, a housing having a tubular portion and extension chambered portion, a sheet metal lining in the tubular portion and a sheet metal insert in the extension having recesses and a rotatable key plug in the lining in the tubular portion.

9. In a cylinder lock, a housing having a tubular portion and extension chambered portion, a sheet metal lining in the tubular portion and a corrugated sheet metal insert in the extension having recesses and a rotatable key plug in the lining in the tubular portion.

10. In a cylinder lock, a housing having a tubular portion and an extension, and a corrugated sheet metal insert in the extension having recesses for the springs and pins.

11. In a cylinder lock, a housing having a recess and an extension chamber therefrom closed at the outer end, an insert in the extension for the pins, a lining in the recess and a barrel rotatable in said lining.

HENRY G. VOIGHT.