No. 621,875. Patented Mar. 28, 1899.

H. G. VOIGHT.

PIN LOCK.

(Application filed Nov. 23, 1898.)

(No Model.)

Fig. 1.

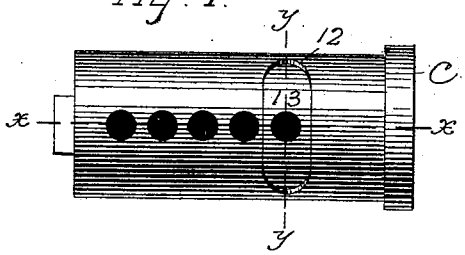


Fig. 2.

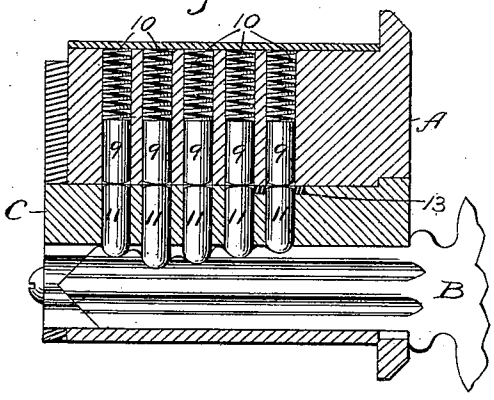


Fig. 3.

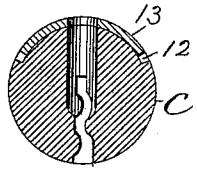


Fig. 4.

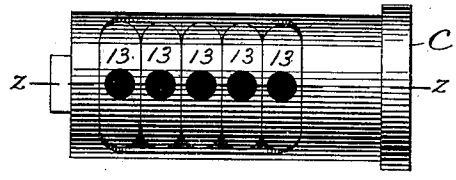


Fig. 5.

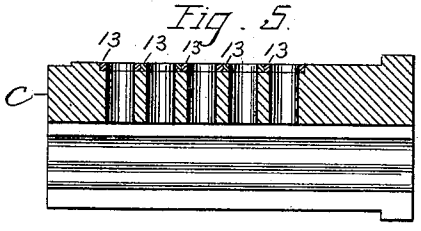


Fig. 6.

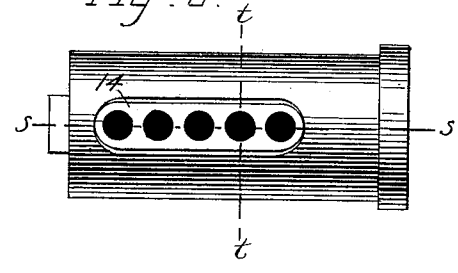


Fig. 7.

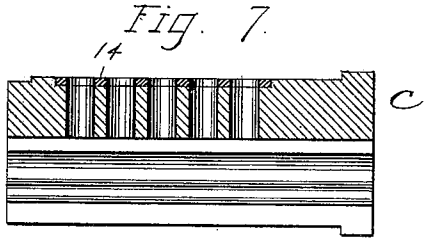
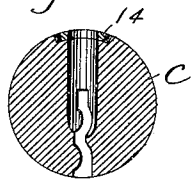


Fig. 8.



Witnesses
A. W. Stipek
Thomas S. Hall

Inventor
Henry G. Voight.
By James Shepard
Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HENRY G. VOIGHT, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO THE RUSSELL & ERWIN MANUFACTURING COMPANY, OF SAME PLACE.

PIN-LOCK.

SPECIFICATION forming part of Letters Patent No. 621,875, dated March 28, 1899.

Application filed November 23, 1898. Serial No. 697,262. (No model.)

To all whom it may concern:

Be it known that I, HENRY G. VOIGHT, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Pin Tumbler-Locks, of which the following is a specification.

My invention relates to improvements in pin tumbler-locks; and the object of my improvement is to provide simple and efficient means to prevent the lock from being picked.

In the accompanying drawings, Figure 1 is a plan view of the cylinder or plug of my pin tumbler-lock. Fig. 2 is a longitudinal section of said lock on the line *x x* of Fig. 1, together with the major part of a key. Fig. 3 is a transverse section of the cylinder or plug on the line *y y* of Fig. 1. Fig. 4 is a plan view of the cylinder or plug having five slide-plates instead of only one. Fig. 5 is a longitudinal section of the same on the line *z z*, Fig. 4. Fig. 6 is a plan view of the cylinder or plug having one slide-plate with five holes. Fig. 7 is a longitudinal section of the same on the line *s s* of Fig. 6, and Fig. 8 is a transverse section of the same on the line *t t*, Fig. 6.

The case or body A, the case-tumblers 9, springs 10, plug-tumblers 11, and key B are of an ordinary construction.

The cylinder or plug C is mainly of an ordinary construction, with its key-slot extending to the periphery of the cylinder on one side and with the tumbler-recesses on the opposite side thereof. It differs therefrom by having a shouldered recess 12 formed on that side having the usual tumbler-recesses and in having said recess partly filled with a perforated slide-plate 13, the edges of which plate at each end are opposed to the shoulders of the said recess, whereby said shoulders serve as stops to limit the movement of the slide-plate within the said recess. The hole in said slide-plate is of a size to fit the plug-tumblers the same as the regular holes for such tumblers fit them. This slide-plate has a slight movement in a rotary direction on the plug, which movement is limited by the ends of the plate coming in contact with the ends or stop-shoulders of the recess within which said plate is seated.

In an attempt to pick the lock the under side of the slide-plate and the bottom of the recess in which it lies make a false division for the tumblers, so that the said slide-plate is locked against rotation by the case-tumbler, and after the end of the recess and plate come together the plug is held against further rotation.

I have shown the cylinder or plug in Figs. 1 and 2 with only one slide-plate, but it is evident that there may be as many slide-plates as desired.

In Figs. 4 and 5 I have shown five slide-plates or one for every tumbler, and they are each the same as the one slide-plate of Fig. 1, and therefore I have given them the same reference-numerals. The one recess in the plug is made large enough to receive all of the slide-plates, which have their side edges resting against each other.

In Figs. 6, 7, and 8 I have shown a slide-plate 14 long enough to cover the five tumblers and provide said plate with five holes. This plate is also confined in a recess with a limited movement in the direction of rotation, and in addition thereto the plate may twist a little in an attempt to pick the lock and throw the holes slightly out of alinement with the tumblers.

In all of the variations shown the slide-plates are on that side of the cylinder which is opposite the slotted portion of the periphery of said cylinder and the outer face of the slide-plate is coincident with the periphery of the said cylinder, whereby whatever means may serve to limit the movement of the slide-plate relatively to the cylinder the cylindrical bore of the case serves as a common bearing for direct engagement with the outer face of the guide-plate, the periphery of the cylinder, and the back edge of the key. The slide-plates tend to prevent picking the lock by making a false division for one or more of the tumblers and locking the plug against rotation by the case-tumbler whenever such false division of one or more tumblers is made. With the proper key the tumblers all divide on the line between the inner wall of the case and the periphery of the plug—that is, the outer face of the slide plate or plates—the

same as they would if the plug and plates were all in one piece and as shown in Fig. 2.

It is apparent that some changes from the specific construction herein disclosed may be made, and therefore I do not wish to be understood as limiting myself to the precise form of construction shown and described, but desire the liberty to make such changes in working my invention as may fairly come within the spirit and scope of the same.

I claim as my invention—

1. In a pin tumbler-lock, the combination with a case and tumblers of the cylinder or plug having a shouldered recess on its tumbler side, and a perforated slide-plate loosely fitted within said recess with its edges opposed to the stop-shoulders of said recess, substantially as described.

2. In a pin tumbler-lock, the combination with a case having a cylindrical bore and case-tumblers, of the cylinder or plug in direct engagement with said bore, a perforated and loosely-fitted slide-plate on that side of the cylinder which is opposite its slotted periphery, the outer face of said slide-plate being coincident with the periphery of the said cylinder and bearing directly on the same cylindrical bore of the case, and means for limiting the movement of said slide-plate relatively to the rotary motion of the said cylinder, substantially as described.

HENRY G. VOIGHT.

Witnesses:
M. S. WIARD,
P. M. BRONSON.