

H. G. COLLINS.  
PADLOCK.  
APPLICATION FILED FEB. 24, 1911.

993,032.

Patented May 23, 1911.

Fig. 1.

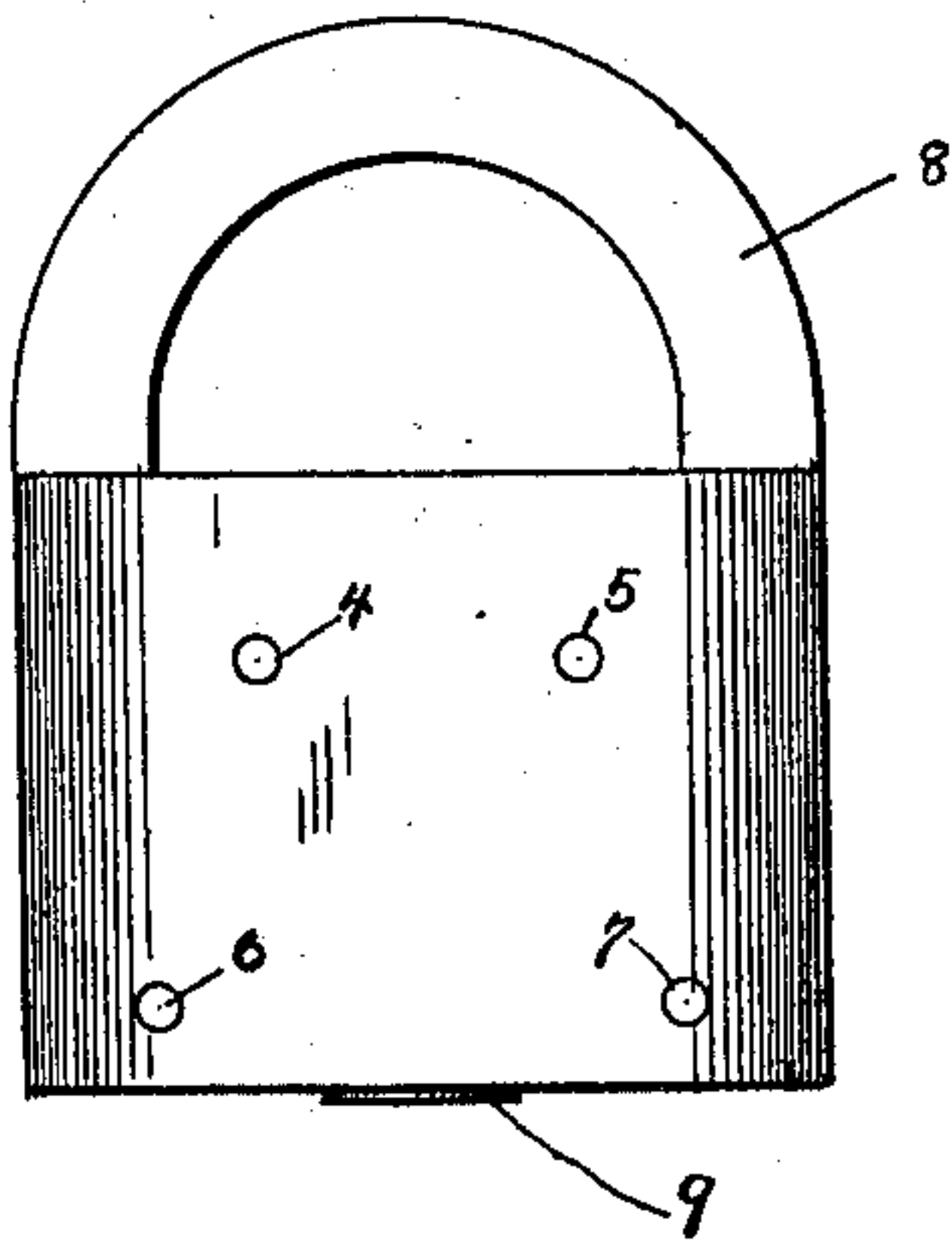


Fig. 2.

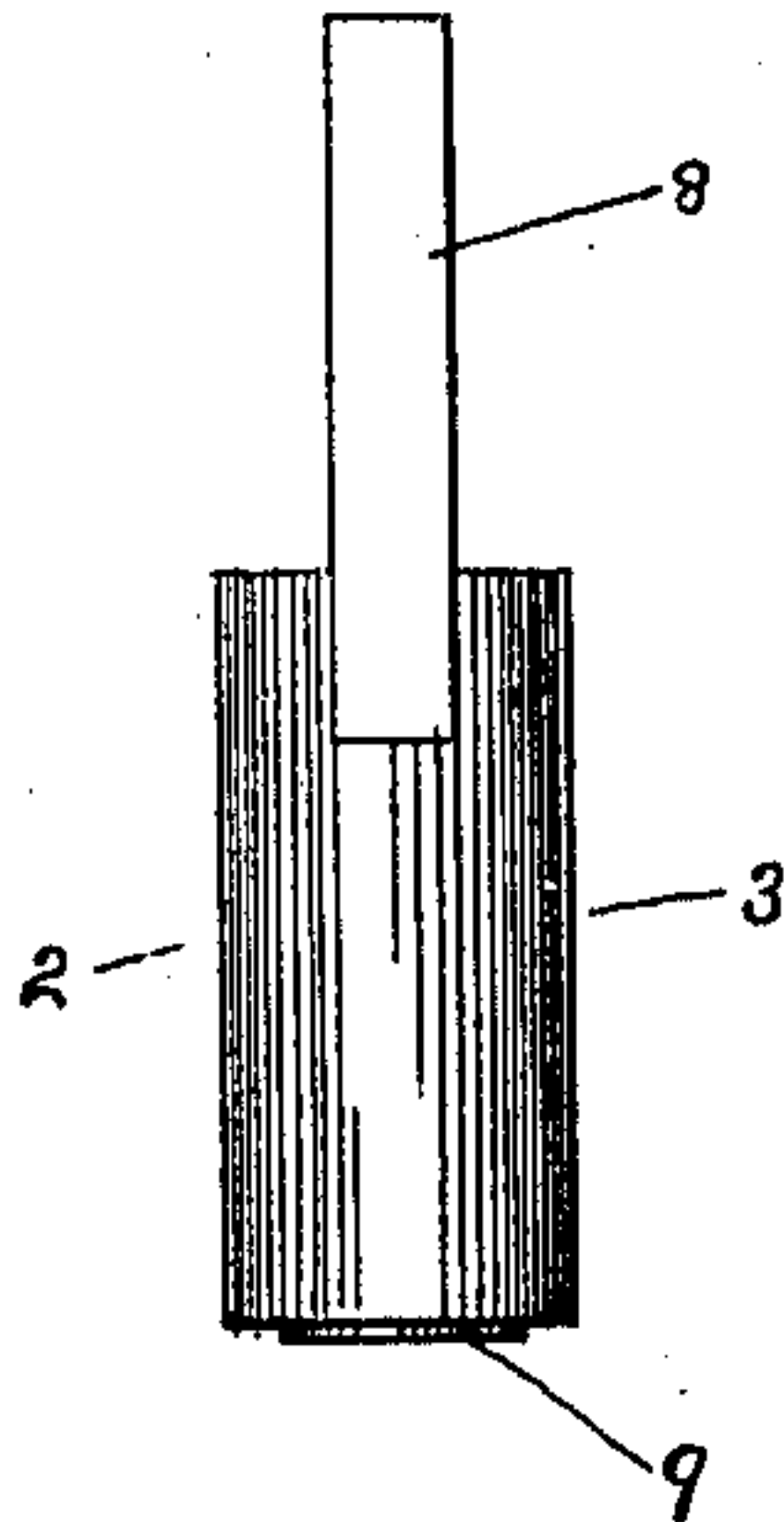


Fig. 3.

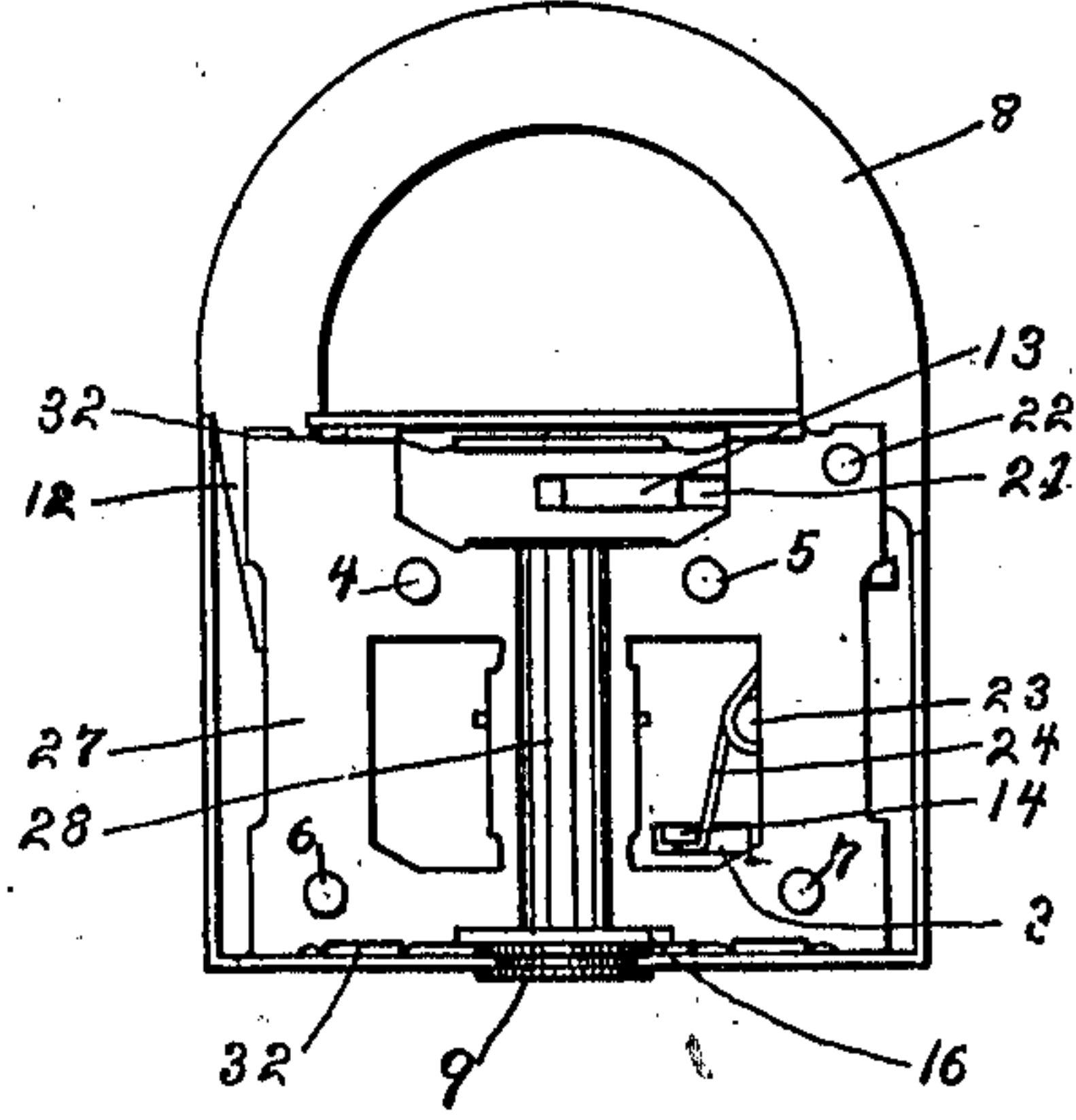


Fig. 4.

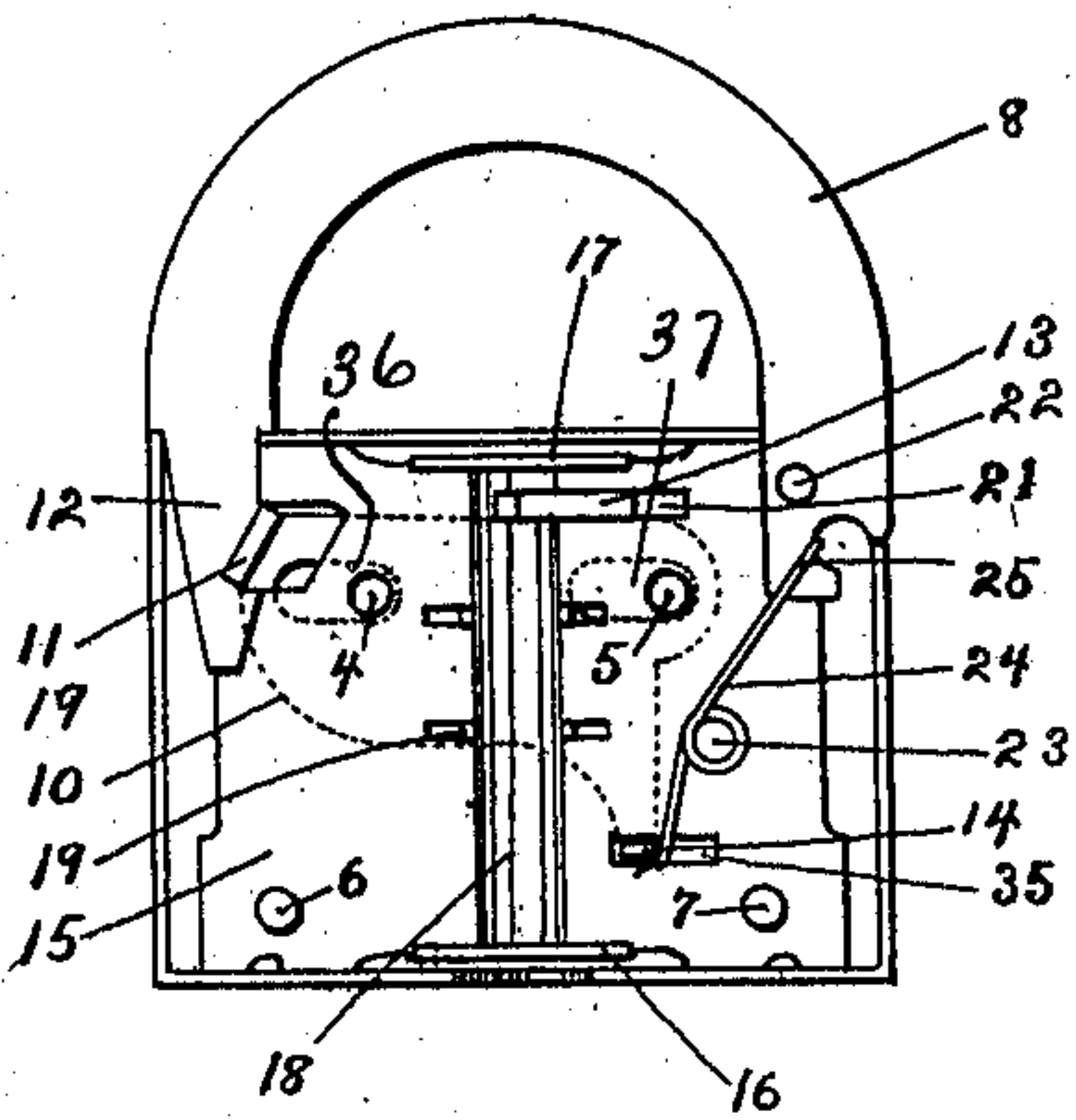


Fig. 6.

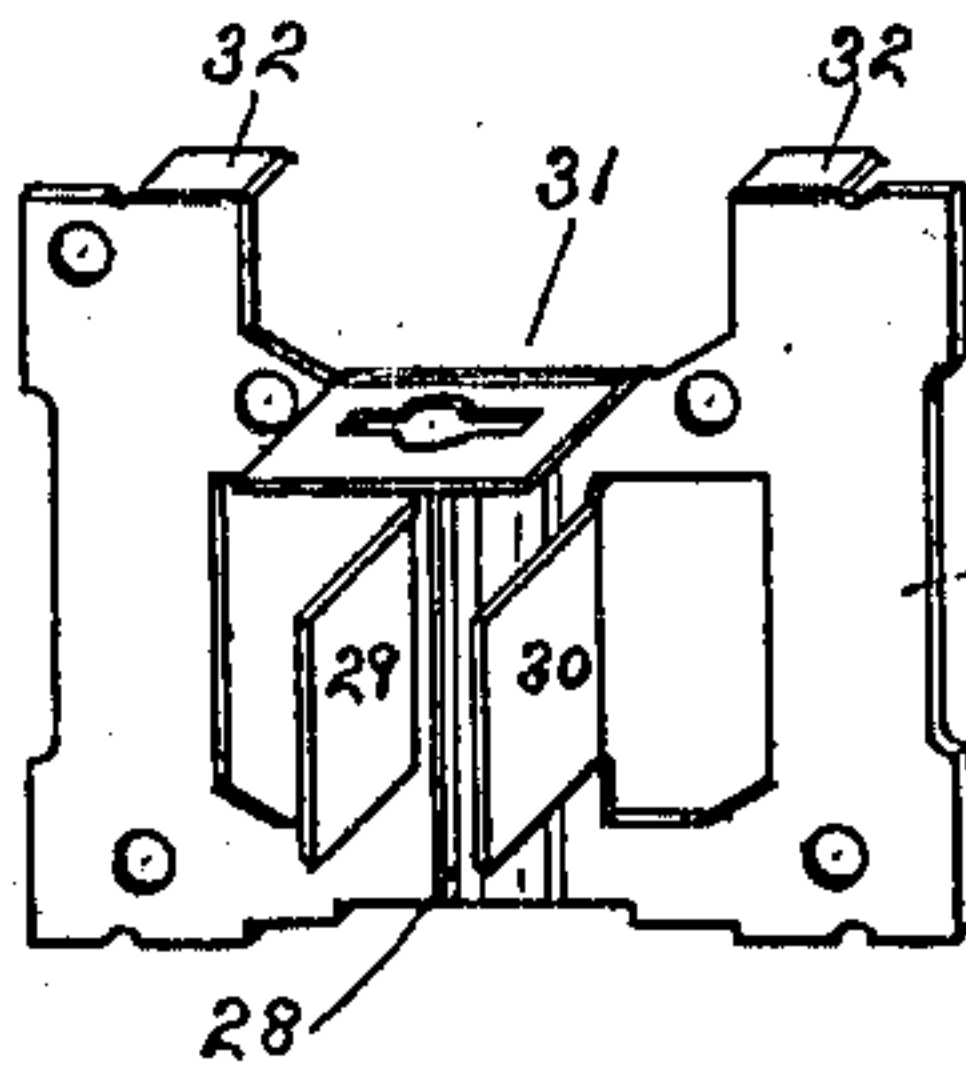


Fig. 5.

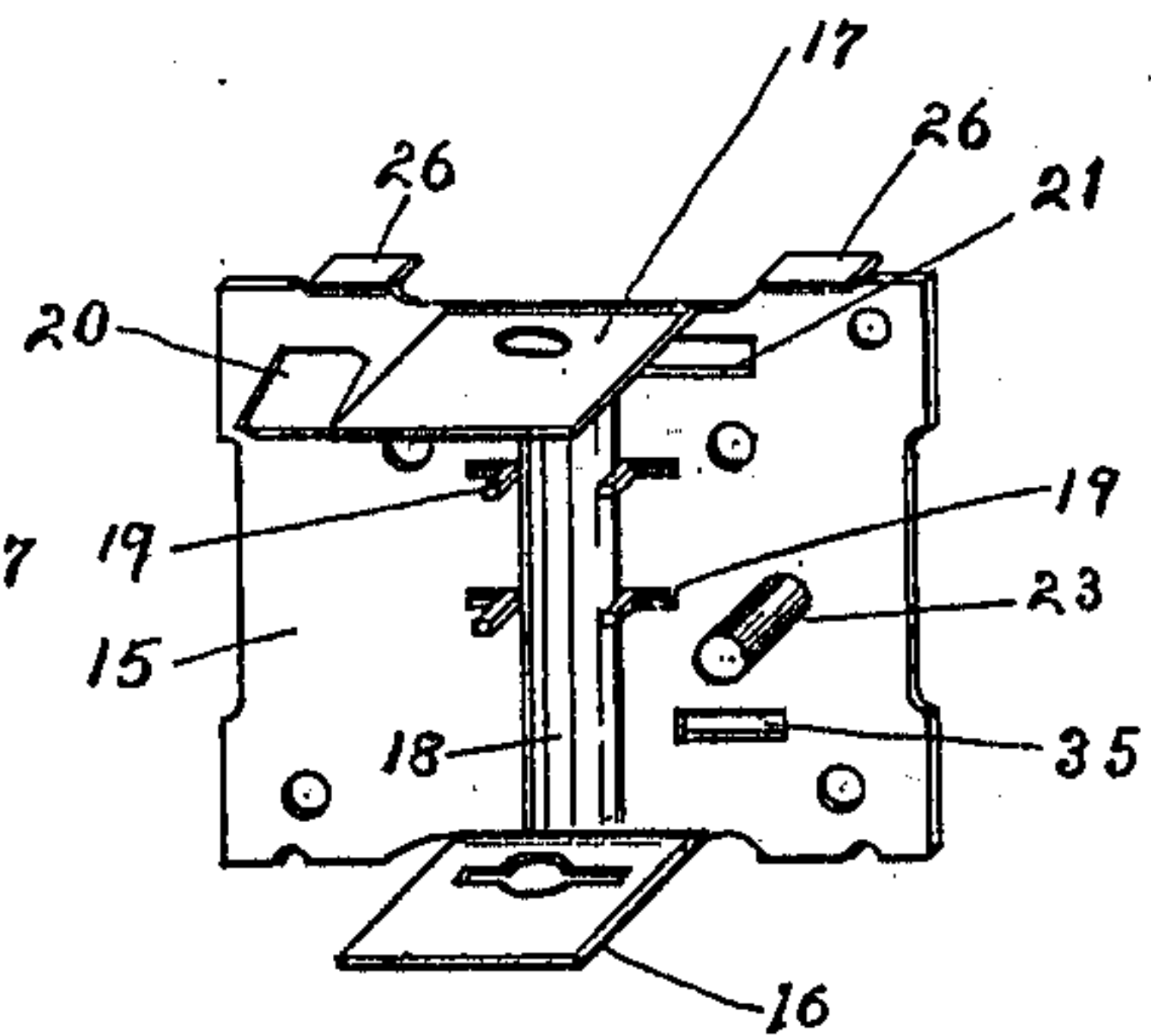


Fig. 7.

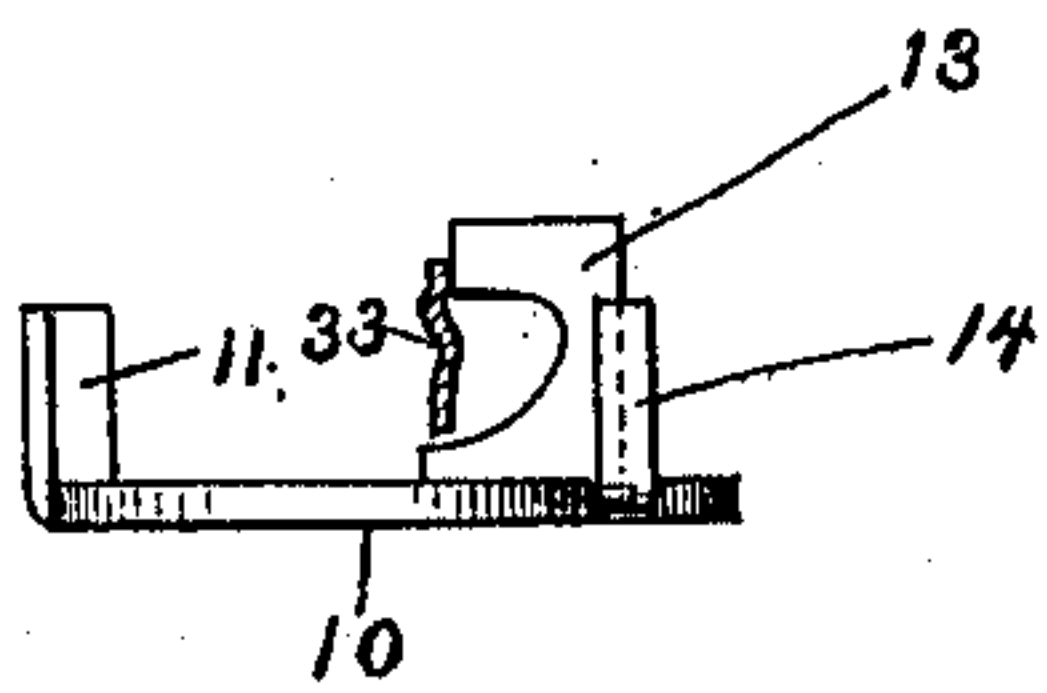


Fig. 8.

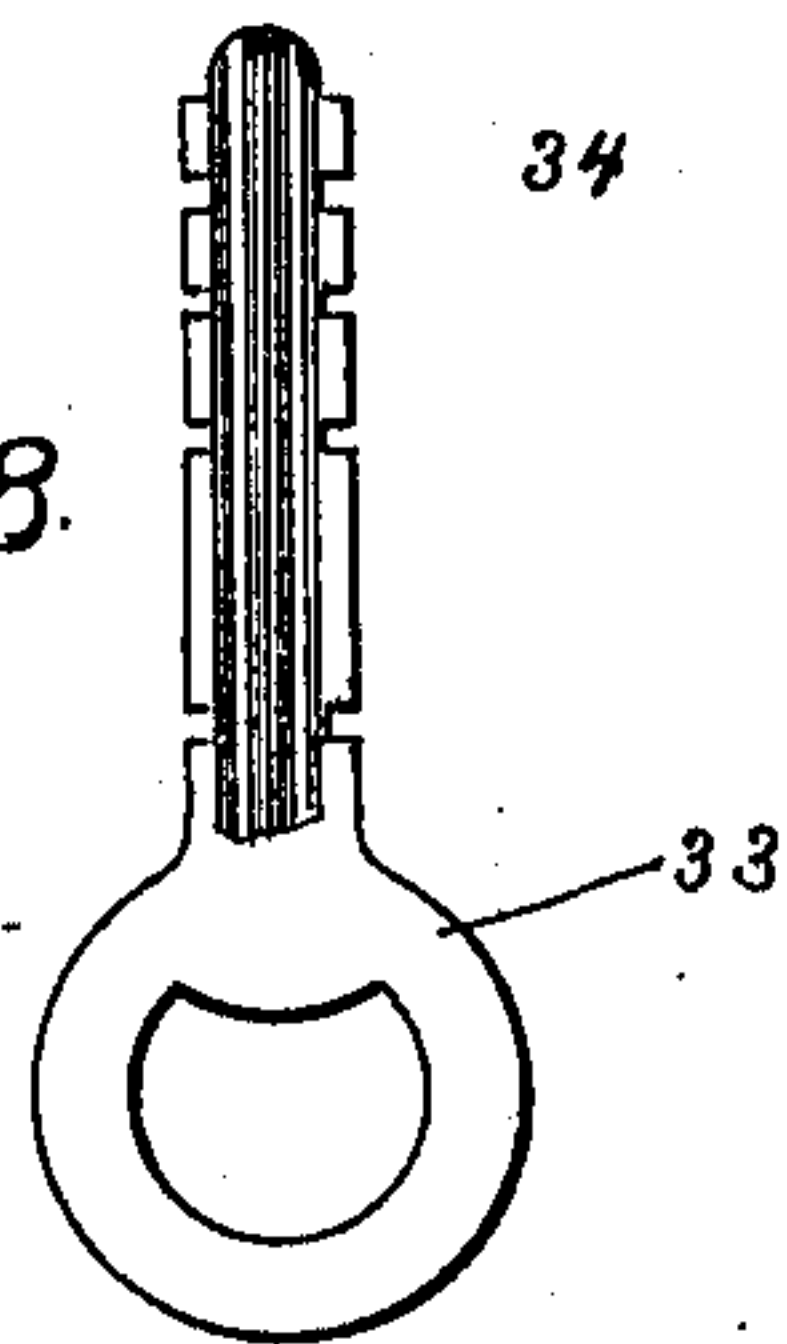
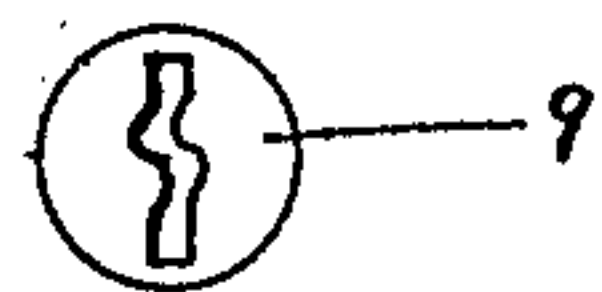


Fig. 9.



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# UNITED STATES PATENT OFFICE.

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## PADLOCK.

993,032.

Specification of Letters Patent.

Patented May 23, 1911.

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*To all whom it may concern:*

Be it known that I, HERBERT G. COLLINS, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Padlocks; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1 a face view of a padlock constructed in accordance with my invention. Fig. 2 a side view of the same. Fig. 3 a view with the cap removed. Fig. 4 a view with the cap and frame-plate removed. Fig. 5 a perspective view of the ward-plate, detached. Fig. 6 a view with the frame-plate detached. Fig. 7 an edge view of the locking slide detached. Fig. 8 a plan view of the key. Fig. 9 a plan view of the keyhole plate which is mounted in the bottom of the case.

This invention relates to an improvement in padlocks, particularly to the type in which the key is entered through the bottom of the casing.

The object of the invention is to construct not only the case, but also the internal mechanism from sheet metal; and the invention consists in the construction hereinafter described and particularly recited in the claims.

In carrying out my invention, I form the case from sheet metal in two similarly shaped shells one of which I will term the back 2, and the other the front 3. These shells are connected together by four rivets 4, 5, 6 and 7, and are provided with the usual notches for the shackle 8 and with semi-circular holes to receive the annularly grooved keyhole-plate 9 which is located in the center of the bottom of the case. Within the case is a transversely movable locking-slide 10 having a locking-nose 11 adapted to engage with the hook 12 of the shackle, and with an upwardly extending operating post 13 adapted to be engaged by the key as will be hereinafter described, and an integral stud 14 at its lower end. This slide is struck up from sheet metal and formed with slots 36, 37, to clear the rivets 4 and 5 by which it is guided. Over this

slide is a ward-plate 15 struck from sheet metal and perforated to clear the rivets 4, 5, 6 and 7, by which it is held in place. This ward-plate has an inwardly extending key-guide flange 16 at its lower edge and an inwardly extending key-supporting flange 17, and is formed with a longitudinal shallow groove 18 on opposite sides of which are wards 19 struck out from the body of the plate. This ward-plate is also provided with a clearance slot 20 for the locking-nose 11 and with a slot 21 for the operating post 13 and a slot 35 for the stud 14. This plate is perforated to clear a pin 22 on which the shackle 8 turns, and the plate carries a post 23 on which a wire spring 24 is mounted one end 25 engaging with the inner end of the shackle and the other engaging with the stud 14 and normally tending to open the shackle and throw the locking-slide into its locking position. This plate is also provided with rearwardly extending lugs 26 which support it away from the back 2 and give clearance for the slide 10. Also arranged within the case and parallel with the ward-plate 15 is a frame plate 27 struck up from sheet metal like the ward-plate and perforated for the passage of the rivets which hold it in place. This plate is also formed with a centrally arranged groove 28 with inwardly extending supporting flanges 29, 30, on opposite sides of the groove 28; with an inwardly extending key-supporting flange 31, and with outwardly extending lugs 32 which have a bearing against the inner face of the front 3. The key 33 is struck up from sheet metal preferably corrugated, and formed on opposite sides with notches or bits 34 corresponding in location to the location of the wards, or more strictly speaking, the wards 19 are arranged to correspond with the bitings of the key.

When the parts are assembled, the key is entered through the rotatable key-guide 9; and passing through the guide 16; between the flanges 29, 30; and through the key-supporting flange 31, the end of the key enters into the key-supporting plate 17. The grooves 18 and 28 give clearance between the ward-plate and frame-plate for the key to turn provided the key is one for which the lock is fitted. The key is therefore supported at opposite ends, and when turned the bits 34 clear the wards 19, and one side



of the key comes in contact with the key-operating post 13 moving it transversely so as to withdraw the locking-dog 11 out of the notch 12 in the shackle, allowing the spring 24 to throw the shackle open. When the key is removed or turned back, the spring 24 will return the locking-slide 10 so that the locking-dog 11 is in position to be engaged by the hook end of the shackle when the hook end is pressed back into the case.

It will thus be seen that I not only form a padlock with a sheet metal case but provide the same with a ward plate having integral wards all struck from sheet metal, and a frame plate also struck up from sheet metal and forming a key-way.

I claim:—

1. A padlock comprising a case, a shackle, a locking-slide within said case, a sheet-metal ward-plate carrying wards, and a sheet-metal frame-plate arranged parallel with the ward-plate, the said locking slide formed with a key-operated post extending through the ward-plate.

2. A padlock comprising a case, a shackle, a locking-slide within the case, said slide formed with a locking-dog and a key-operated post, a ward-plate arranged over said slide and formed with wards and with a key-guide, a key-supporting plate and a frame-plate arranged parallel with the ward-plate and provided with a key-supporting guide between which the key may be passed to engage with the key-operated post.

3. A padlock comprising a case, a shackle, a locking slide within the case, a ward-plate

arranged over said slide, said ward-plate formed with a longitudinally arranged groove, and with wards on opposite sides of the same, and a frame-plate arranged parallel with a ward-plate and formed with a longitudinally arranged groove in line with the groove in the ward-plate, said plates having supports for the key which is adapted to enter the lower end of the case and actuate said locking-slide.

4. A padlock comprising a case, a shackle, a locking-slide within the case, a sheet-metal ward-plate over said slide, said ward-plate formed with a longitudinal groove, and wards on opposite sides of said groove and with an inwardly projecting key-guide at the lower end, and a key-supporting plate at the upper end, a frame-plate arranged parallel with the ward-plate and formed with a vertically arranged groove in line with the groove in the ward-plate, and with inwardly extending flanges on opposite sides of said groove adapted to rest upon the ward-plate, the said frame-plate also constructed with a key-supporting plate and a spring, one end of which is engaged with the shackle and the other end with the locking-slide which is adapted to be moved by a key inserted through the bottom of the case.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

HERBERT G. COLLINS.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."