

C. A. LUTZ.

PADLOCK.

APPLICATION FILED MAY 3, 1909.

944,888.

Patented Dec. 28, 1909.

FIG. 1.

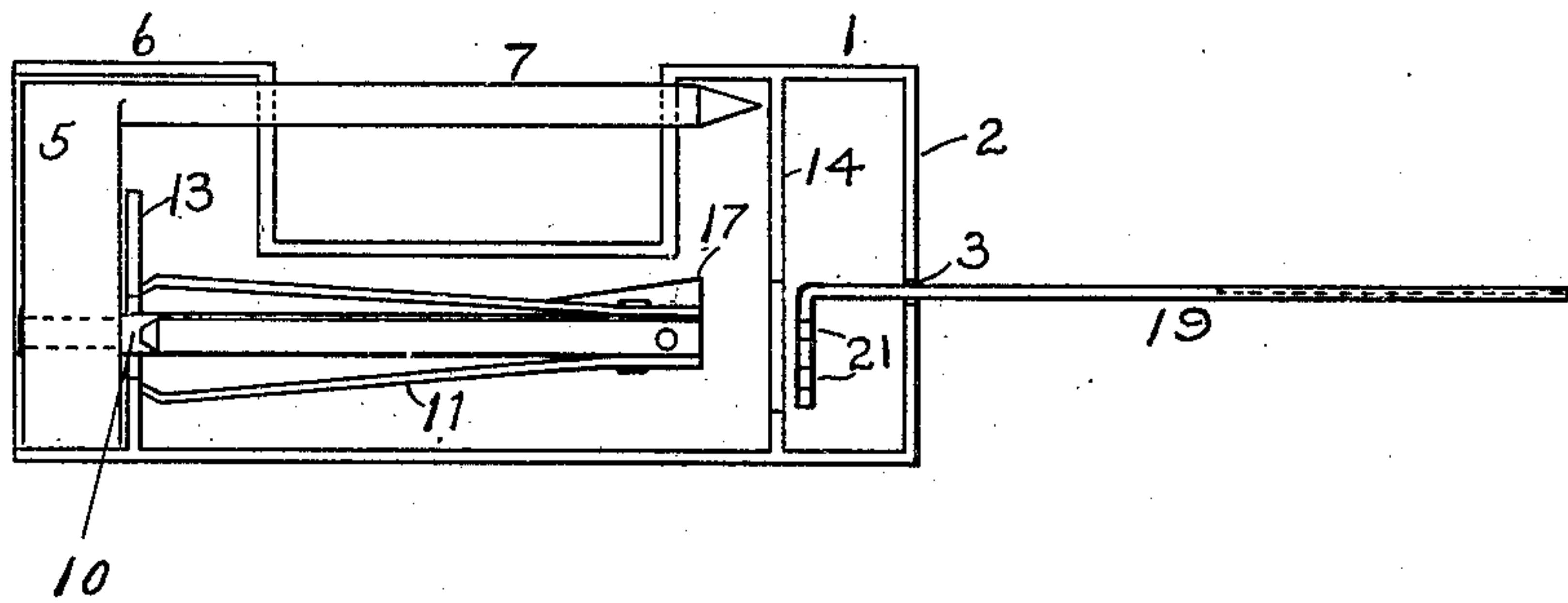


FIG. 2.

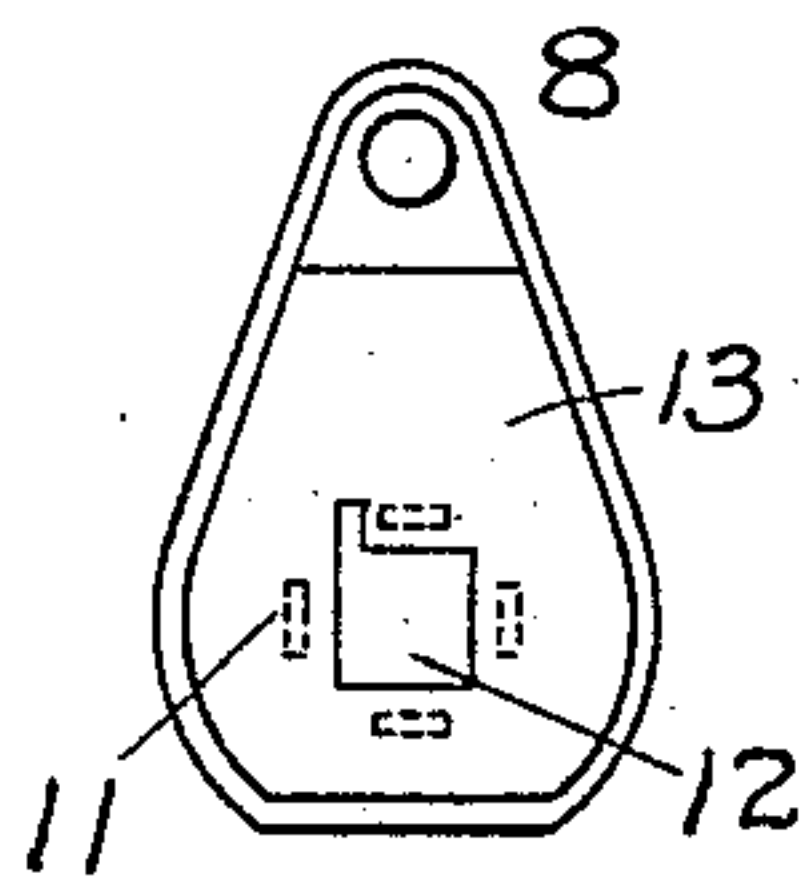


FIG. 3.

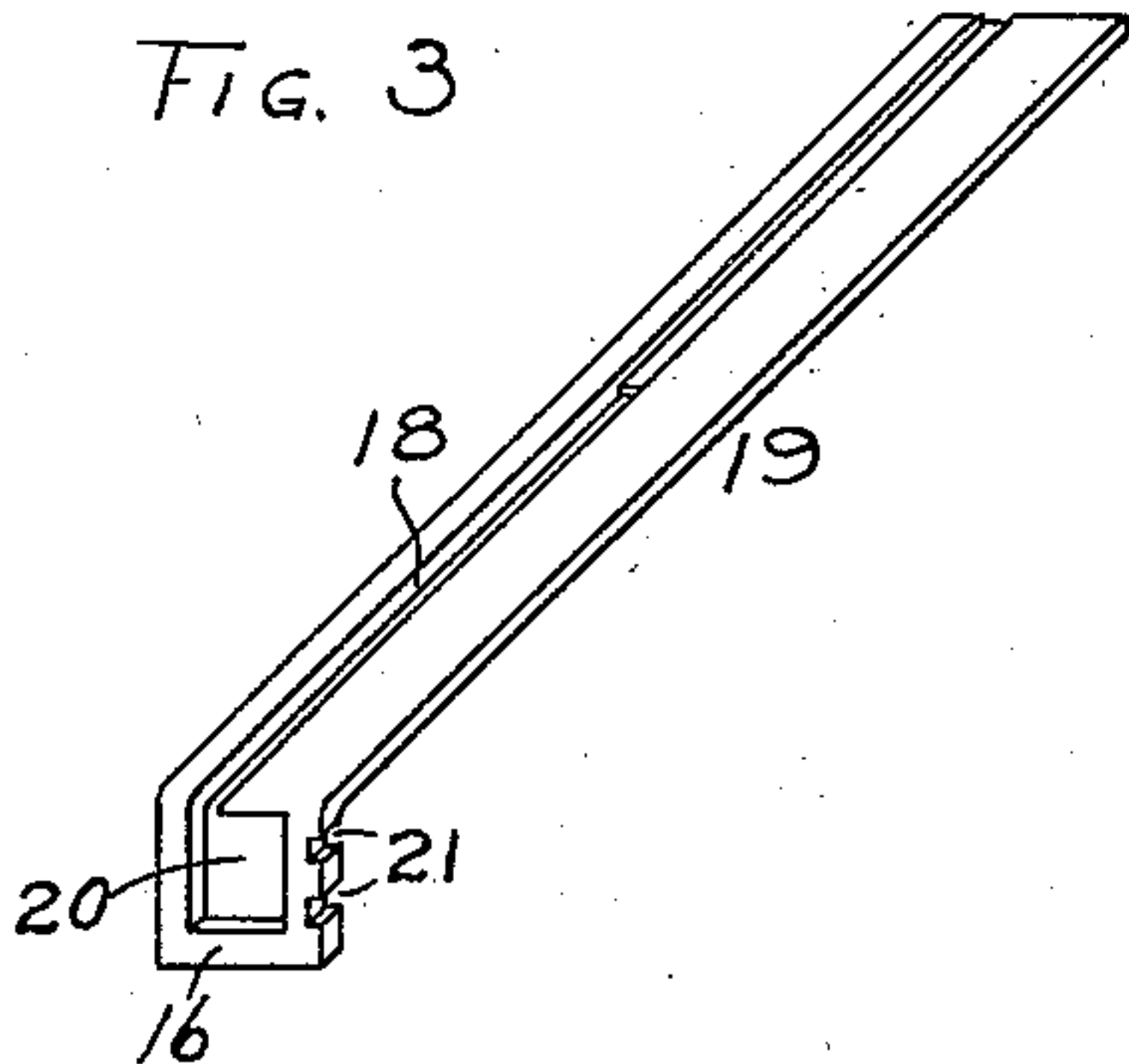


FIG. 4.

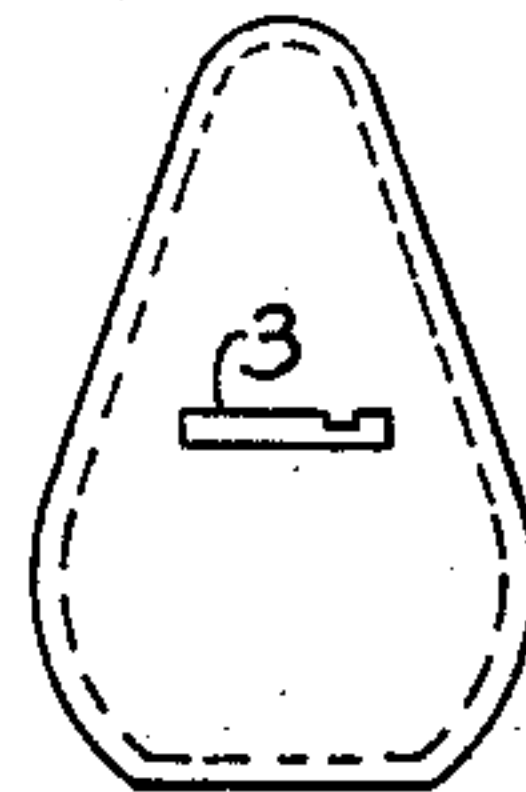


FIG. 5.

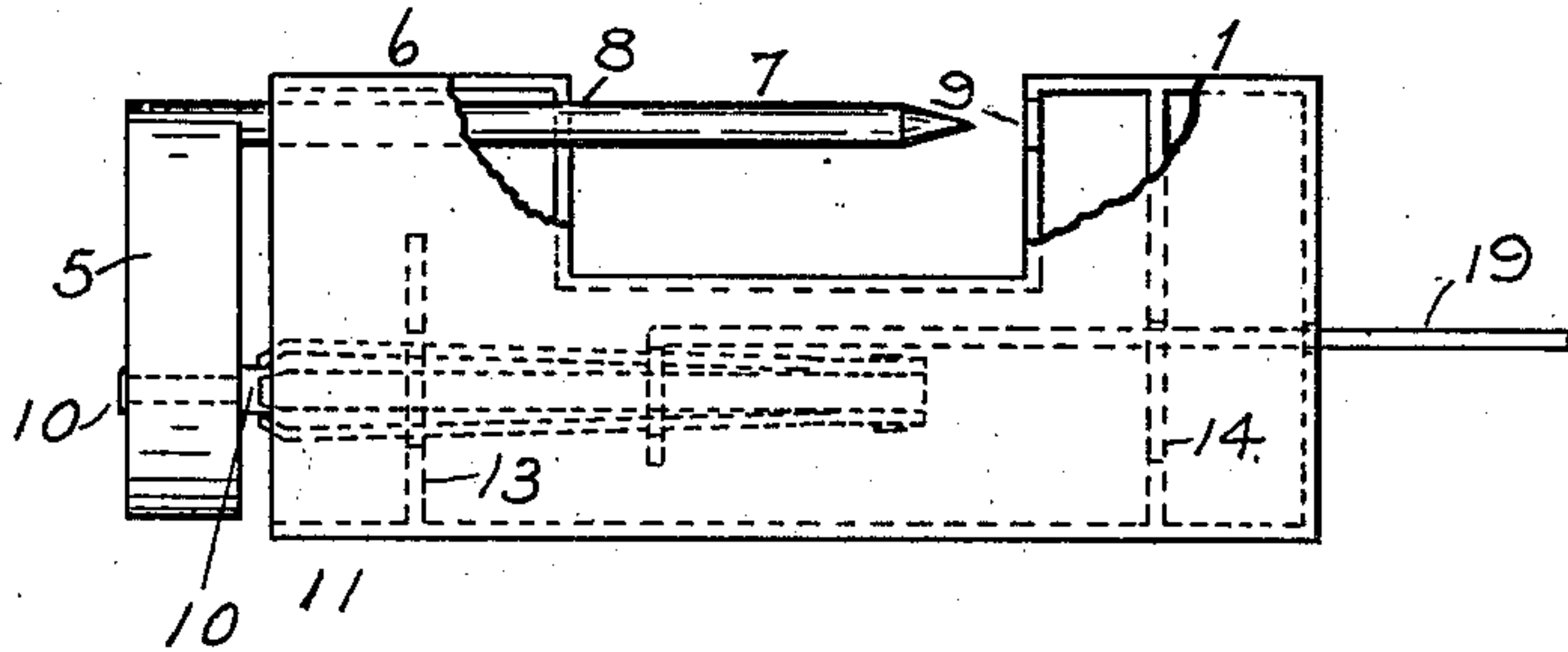
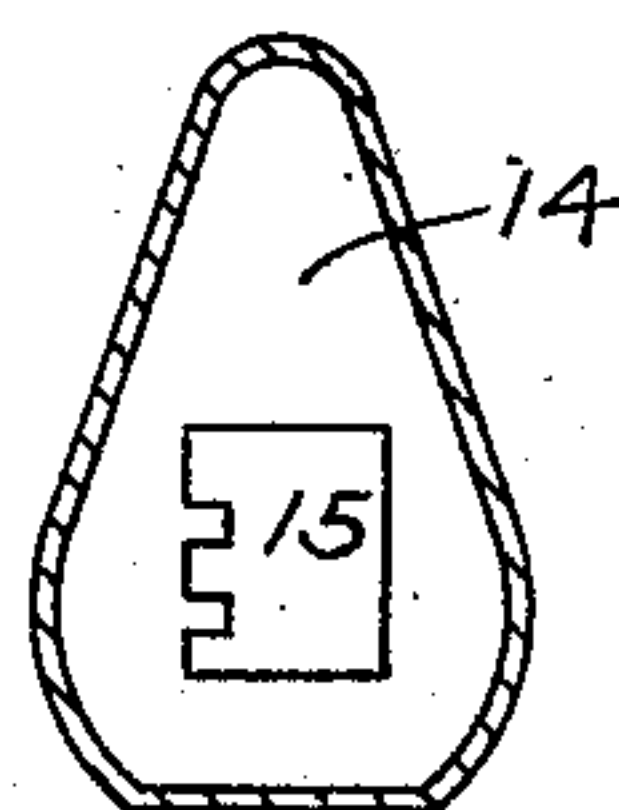


FIG. 6.



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# UNITED STATES PATENT OFFICE.

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## PADLOCK.

944,888.

Specification of Letters Patent.

Patented Dec. 28, 1909.

Application filed May 3, 1909. Serial No. 493,623.

*To all whom it may concern:*

Be it known that I, CHARLES ALBERT LUTZ, a citizen of the United States, residing at Lansing, in the county of Ingham and State of Michigan, have invented certain new and useful Improvements in Padlocks, of which the following is a specification.

My invention relates to padlocks, and its object is to produce a light, easily manipulated lock, and one that shall be difficult to pick. I attain these purposes by means of the device shown in the accompanying drawings, in which—

Figure 1 is a longitudinal elevation of my lock, the main body being in section. Fig. 5 is a view of the lock with the key in the position in which the bolt is released, and the bolt itself partially withdrawn. Fig. 3 is a view of the key; and Fig. 4 is an elevation of the end plate, 2, of Fig. 1; and Fig. 2 is a similar view of the locking plate, 13; and Fig. 6 is an elevation of the ward plate, 14.

In the drawings, 1, represents the main body of the lock, which is preferably of the longitudinal shape shown in the figure, the extremities having the cross-sectional form shown in Figs. 2 and 4. But it is manifest that this shape might be altered in many ways without departing from my invention. The end of the device in which the key is inserted is closed by a plate, 2, having formed in it a keyhole, 3, which may be of any desired shape. The locking device is formed of three parts, which may be integrally formed, or screwed together in any desired manner, a head, 5, adapted to fit in the tube formed by the extremity, 6, of the body, 1, a bolt, 7, and a locking bar, 10. Openings, 8 and 9, are formed in the body, to receive the bolt, 7. The bolt itself may be tapered as shown in Fig. 1, or as in Fig. 5, or of any other desired form that will permit its introduction into the openings intended to receive it. One or more locking springs, 11, are attached at or near the extremity of the locking bar, 10, adapted when compressed to pass through an opening, 12, in a locking plate, 13. This opening, 12, may be of any desired form adapted to permit the passage of the springs, 11. If desired, in order to secure additional safety against picking, a ward-plate, 14, may be inserted, having in it an opening, 15, of

any desired form, as shown in Fig. 6, and the outer edge of the bent extremity, 16, of the key, 19, may be adapted to fit this opening, as shown in Fig. 6. A bolt remover, 17, is attached to the extremity of the locking bar, 10. This piece may be if desired composed of the widened extremity of one of the springs, 11. A groove, 18, is cut in the key, adapted to receive the bolt remover, 17. This groove extends back to such a distance that the key, 19, can pass inward far enough to compress the springs, 11, so that they will pass through the opening, 12, before it will come in contact with the bolt remover, 17.

The operation of the device is as follows: The lock is locked by inserting the bolt, 7, and the locking bar, 10, in the openings, 8 and 12, respectively, and pushing the head inward until its outer extremity comes flush with the end, 6, of the main body of the lock. The springs, 11, will be compressed by the sides of the opening, 12, and will pass through the opening. As soon as they have done so, they will spring outward and occupy the positions shown in Fig. 1. The lock will then be locked and the bolt cannot be withdrawn. To unlock, the bent extremity, 16, of the key, is inserted in the keyhole, 3, and pushed inward. The key will first pass through the opening, 15, which it cannot do unless the wards on the exterior of the extremity, 16, correspond to the shape of the opening, 15. After passing through this it is then pushed inward until the opening, 20, in the extremity, 16, of the key, passes over the locking bar, 10, and compresses the springs, 11, sufficiently to pass through the opening, 12. At this point, the bolt remover, 17, will engage with the extremity of the groove, 18. The springs, 11, having been compressed so that they will pass through the opening, 12, the entire bolt and head will be pushed outward, as shown in Fig. 2, and can be readily withdrawn.

I claim as my invention and desire to secure by Letters Patent:

1. In a lock, in combination, parallel bars, a spring mounted on one of said bars, a main body provided with openings adapted to receive said bars and spring, a removing member on one of said bars, an elongated key member adapted at one end for releasing the spring to allow the withdrawal of the bolt and spring through said openings, said



key having means intermediate its ends for engaging the removing member and withdrawing the bolt.

2. In a lock, in combination, parallel bars, 5 a spring mounted on one of said bars, a main body provided with openings adapted to receive said bars and spring, a removing lug on one of said bars adjacent the rear end of the spring, a key having a slotted portion 10 adapted to pass over the lug to compress the spring and thereby release the bolt, the wall at the rear end of the slotted portion of the key engaging said lug to remove the bolt.

3. In a lock, in combination, parallel bars, 15 a spring mounted on one of said bars, a main body provided with openings adapted to receive said bars and spring, an offset bolt removing lug integral with said spring and means for compressing said spring and en-

gaging said lug to release and remove the 20 bolt.

4. In a lock, in combination, parallel bars, a spring mounted on one of said bars, and a recessed main body provided with openings adapted to receive said bars and spring, 25 means provided for compressing said spring so that it will pass outwardly through an opening in said main body, and a ward-plate located within said main body and provided with an opening adapted to fit said 30 means for compressing said spring, substantially as described.

In testimony whereof, I affix my signature in presence of two witnesses.

CHARLES ALBERT LUTZ.

Witnesses:

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