

J. J. MURPHY.  
 PADLOCK.  
 APPLICATION FILED MAY 24, 1909.

928,684.

Patented July 20, 1909.

Fig. 1

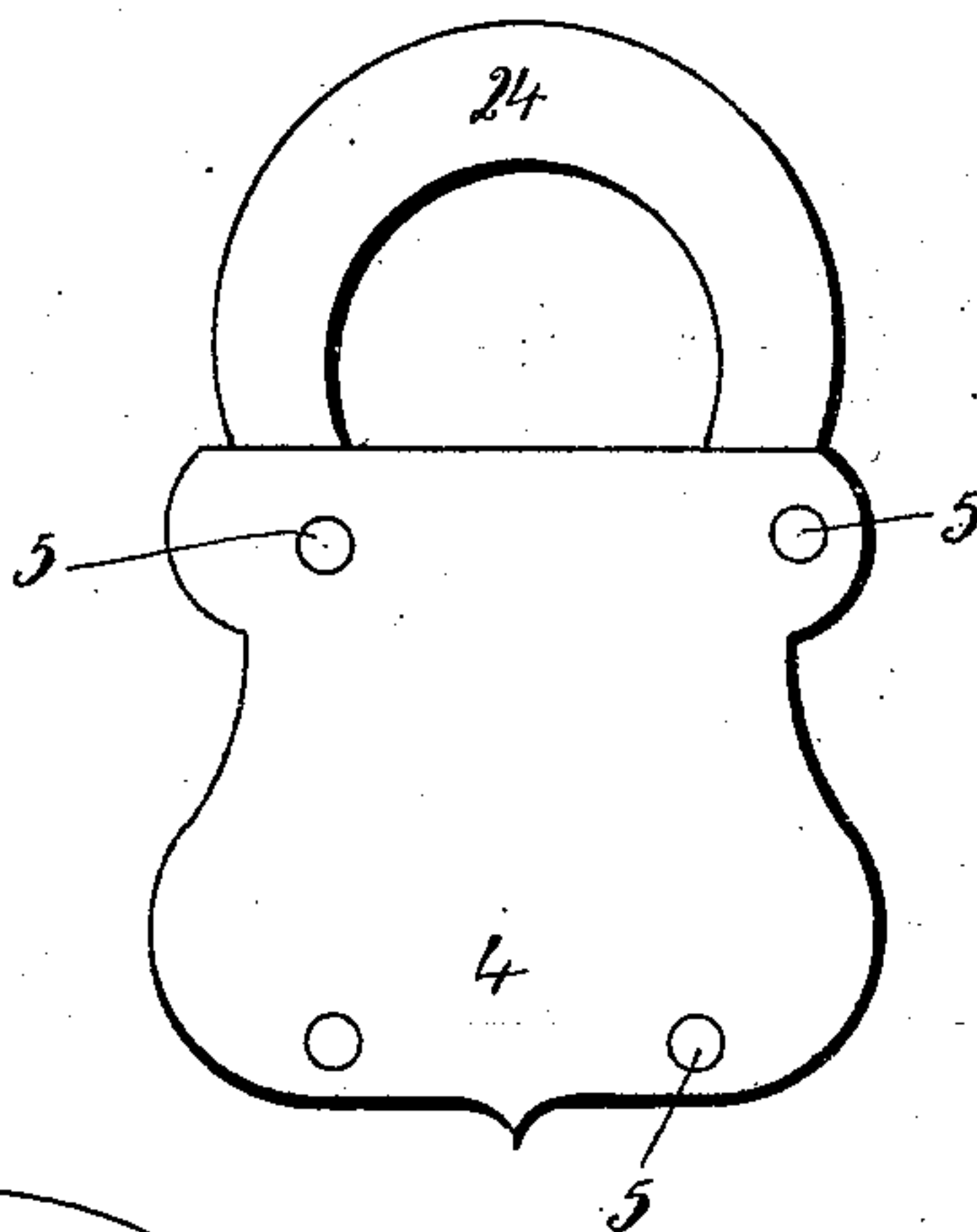


Fig. 2

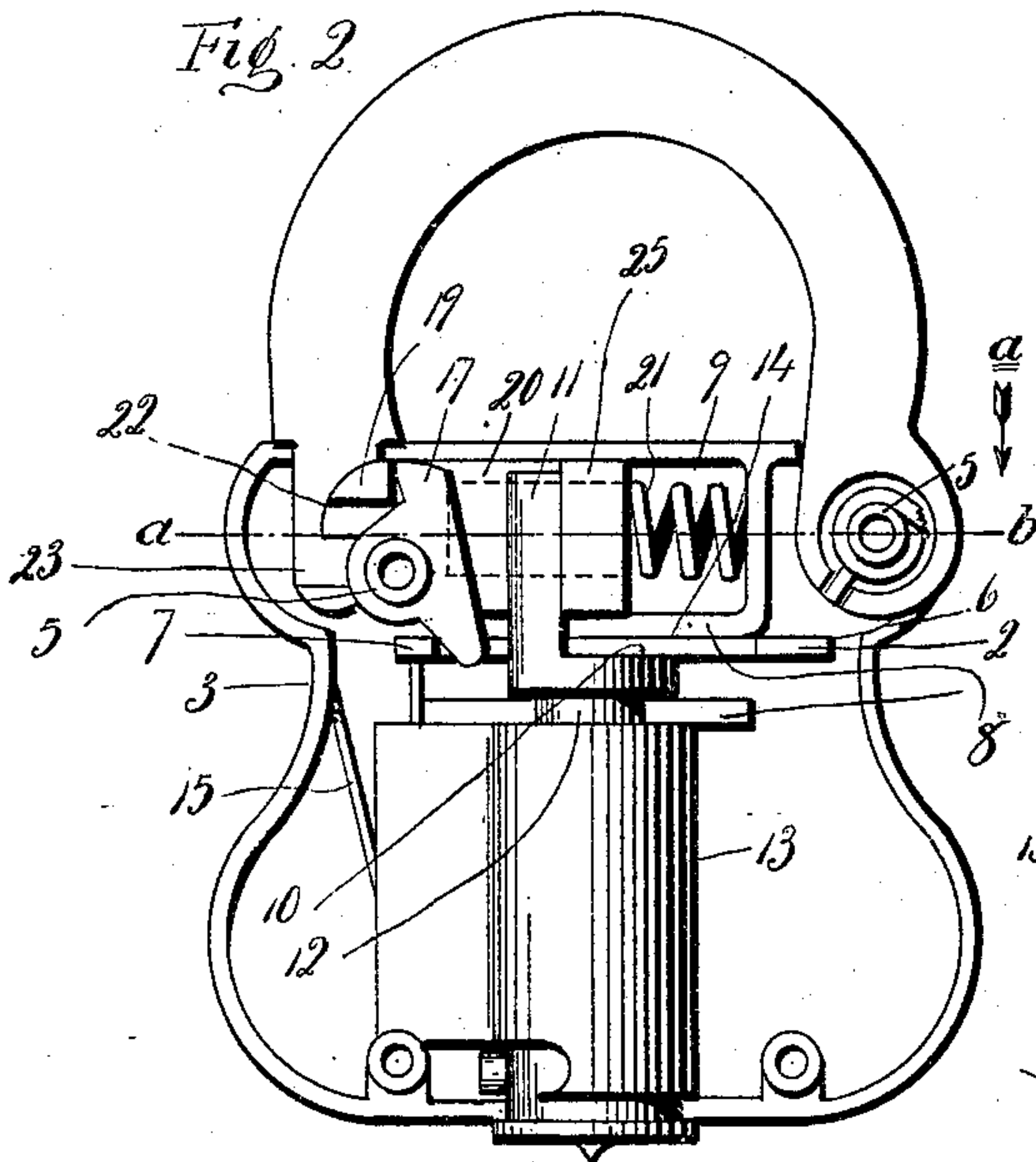


Fig. 5

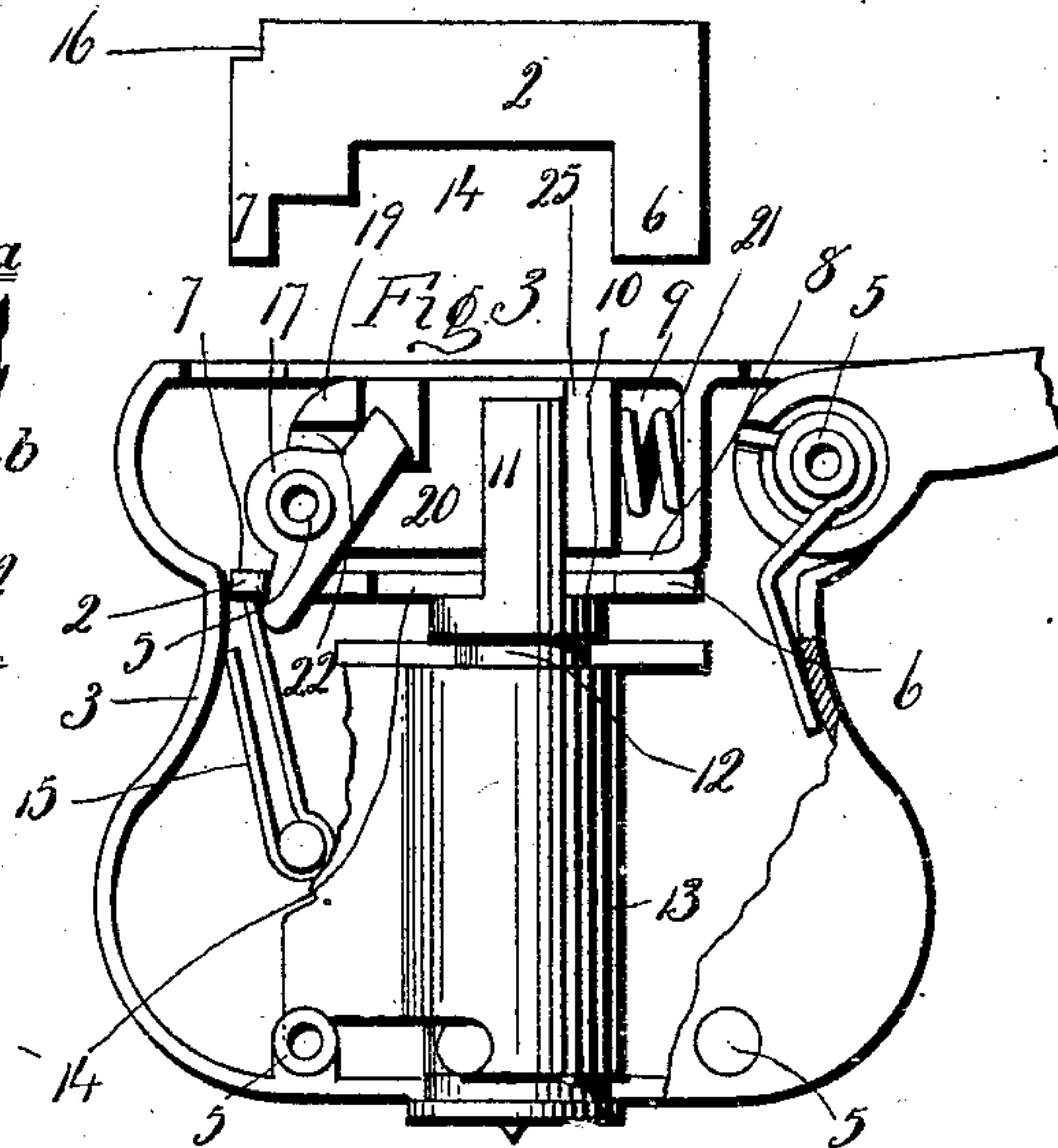


Fig. 4

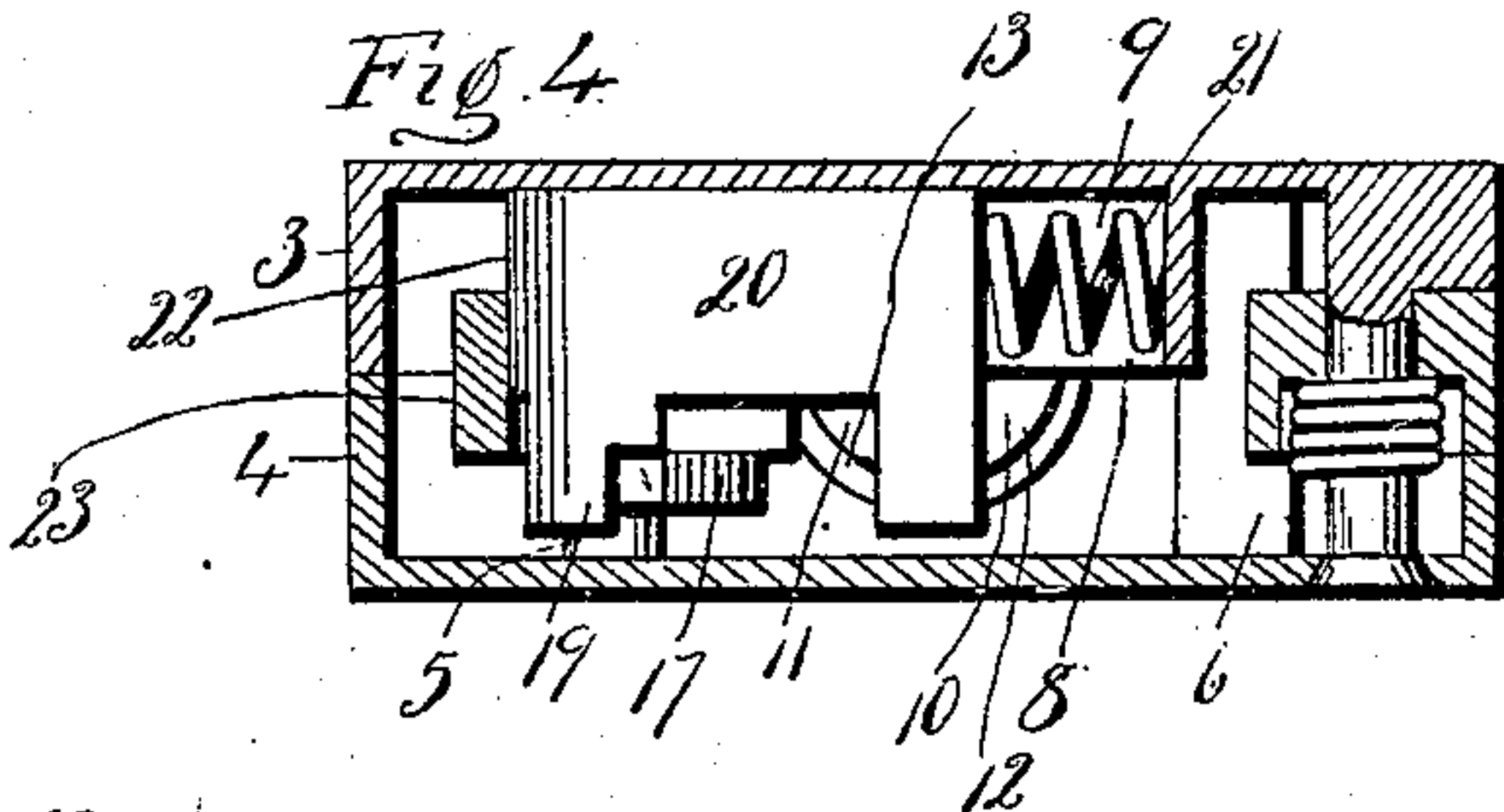
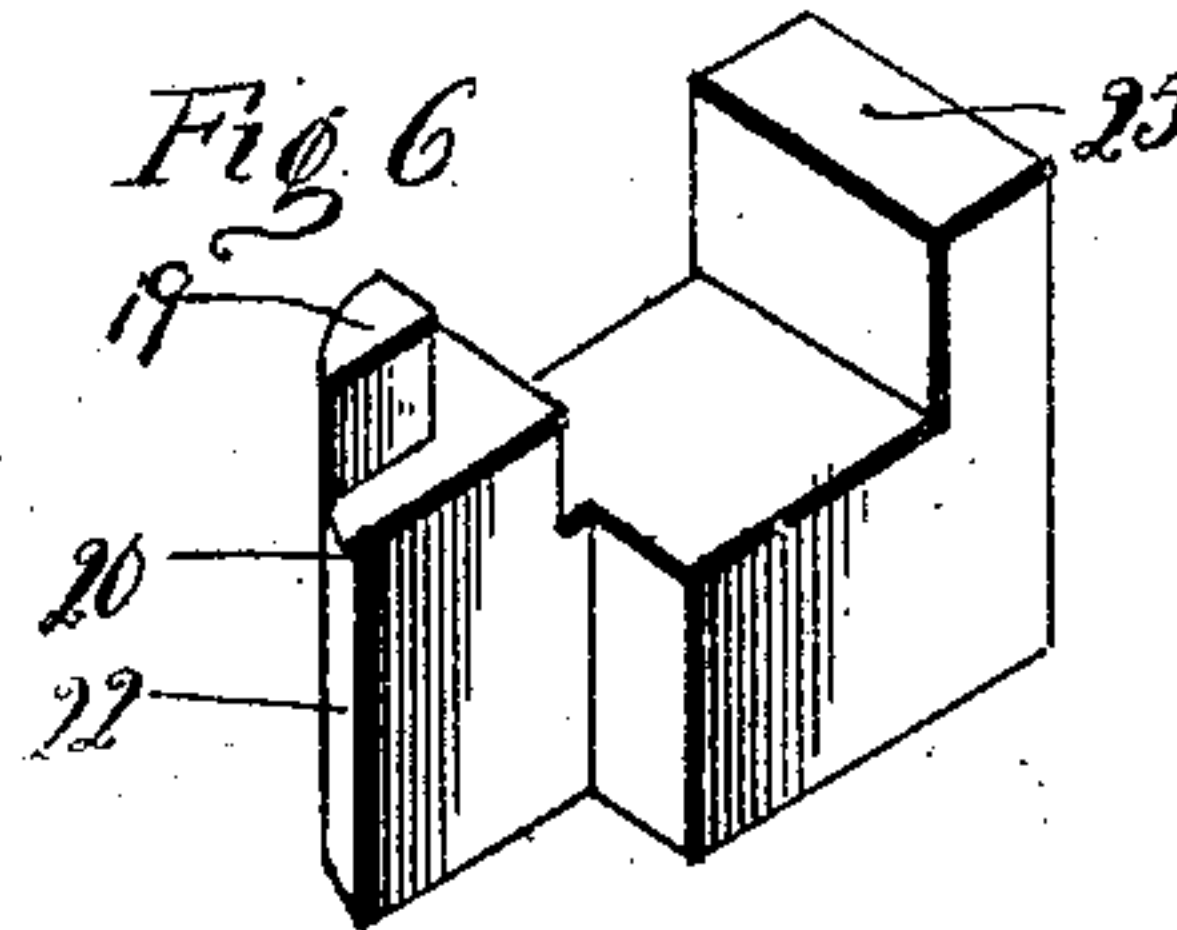


Fig. 6



Witnesses  
 C. J. Reed.  
 C. L. Weed

James J. Murphy  
 Inventor  
 by Seymour & Carey  
 Attys



# UNITED STATES PATENT OFFICE.

JAMES J. MURPHY, OF TERRYVILLE, CONNECTICUT, ASSIGNOR TO EAGLE LOCK CO., OF TERRYVILLE, CONNECTICUT, A CORPORATION.

## PADLOCK.

No. 928,684.

Specification of Letters Patent.

Patented July 20, 1909.

Application filed May 24, 1909. Serial No. 498,065.

*To all whom it may concern:*

Be it known that I, JAMES J. MURPHY, a citizen of the United States, residing at Terryville, in the county of Litchfield 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 characters 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 view in elevation of a padlock constructed in accordance with my invention. Fig. 2 a view thereof on a larger scale with the case-cover removed and the shackle shown in its closed and locked position. Fig. 3 a corresponding view with the shackle thrown into its open position and partly broken away. Fig. 4 a view of the lock in horizontal section on the line *a—b* of Fig. 2 and looking downward in the direction of the arrow *a*. Fig. 5 a detached view in side elevation of the drag. Fig. 6 a perspective view of the bolt.

My invention relates to an improvement in padlocks, the object being to provide a padlock at a trifling cost, with simple, reliable and durable means for preventing the bolt from being jarred so as to let go its hold of the nose of the shackle.

With these ends in view my invention consists in a padlock having certain details of construction and combinations of parts as will be hereinafter described and pointed out in the claims.

In illustrating my invention I have applied it to a pin-tumbler padlock, though I would have it understood that it is applicable to padlocks of other construction.

In carrying out my invention as herein shown, I employ a flat drag 2 arranged in a plane at a right angle to the vertical axis of the lock case which is composed of a body 3 and a cover 4 secured together by pillars 5. The lower edge of the drag rides upon the bottom of the case-body 3, while it is prevented from outward displacement by the engagement of its arms 6 and 7 with the inner face of the case-cover 4 as clearly shown in Fig. 4. The drag is supported in its reciprocating movement between the lower wall 8 of the bolt-chamber 9 and a

bearing-shoulder 10 formed at the base of the operating finger 11 of a plug 12 which is located in the usual manner within a rotatable pin-tumbler cylinder 13 which is mounted between the case-body and case-cover. The outer edge of the drag is formed with a clearance cut 14 as shown in Fig. 5, for the clearance of the operating finger 11 of the plug 12. A spring 15 located within the case-body 3 engages with a notch 16 in the drag and exerts a constant effort to move the same from left to right. The arm 7 of the drag is engaged by the outer end of a dog 17 pivotally mounted upon one of the pillars 5 by means of which the case-body and case-cover are secured together, the upper end of the dog being engaged by a lug 19 formed upon the bolt 20 which is located in the bolt-chamber 9 and provided with a helical spring 21 exerting a constant effort to move the bolt from right to left for the engagement of its nose 22 with the nose 23 of the shackle 24 which is of ordinary construction. At its inner end the bolt is provided with a heavy lug 25 with which the arm 11 of the plug 12 coacts.

It will be understood from the foregoing, that any movement of the bolt 20 from left to right, will cause the dog 17 to turn upon the pillar 5 and pull the drag from right to left against the tension of the drag-spring 13. On the other hand, any movement of the drag from left to right will act through the dog 17 to move the bolt from right to left. It follows that any blow upon the lock case tending to move the bolt from left to right, and hence tending to disengage its nose 22 from the nose 23 of the shackle 24, will also be participated in by the drag which will at the same time be moved from left to right with a force directly proportioned to its weight. But as has already been explained, when the drag moves from left to right, it acts through the dog 17 to move the bolt from right to left. Therefore the effort of the drag to move the bolt from right to left offsets and neutralizes any tendency of the bolt to move in the opposite direction, or from left to right, under the influence of a blow.

I claim:—

1. In a padlock, the combination with the bolt and shackle thereof, of a drag, and means for coupling the drag with the bolt



so that any movement of the bolt in the direction of disengagement from the shackle will be offset by an effort of the drag to move it in the opposite direction.

5 2. In a padlock, the combination with the shackle and bolt thereof, of a longitudinally movable drag, and a dog connecting the bolt and drag, whereby any movement of the bolt in the direction of disengagement from the  
10 shackle will be offset by an effort of the drag to move it in the opposite direction.

3. In a padlock, the combination with the shackle and bolt thereof, of a drag arranged to be laterally reciprocated in a plane at a  
15 right angle to the vertical axis of the lock, and means for coupling the drag with the bolt, whereby any tendency of the bolt to move in the direction of disengagement from

the shackle is offset by an effort of the drag to move it in the opposite direction. 20

4. In a pin-tumbler padlock, the combination with the shackle and bolt thereof, of a pin-tumbler cylinder and plug, a drag interposed between the plug and the bolt, and a dog connecting the drag and bolt, 25 whereby any tendency of the bolt to move from its locked to its unlocked position is offset by an effort of the drag to move it in the opposite direction.

In testimony whereof, I have signed this  
specification in the presence of two subscri- 30  
ing witnesses.

JAMES J. MURPHY.

Witnesses:

OTIS B. HOUGH,  
HARRY C. CLOW.