

J. J. MURPHY.  
 PERMUTATION WHEEL TUMBLER FOR LOCKS.  
 APPLICATION FILED APR. 6, 1908.

901,116.

Patented Oct. 13, 1908.

Fig 1

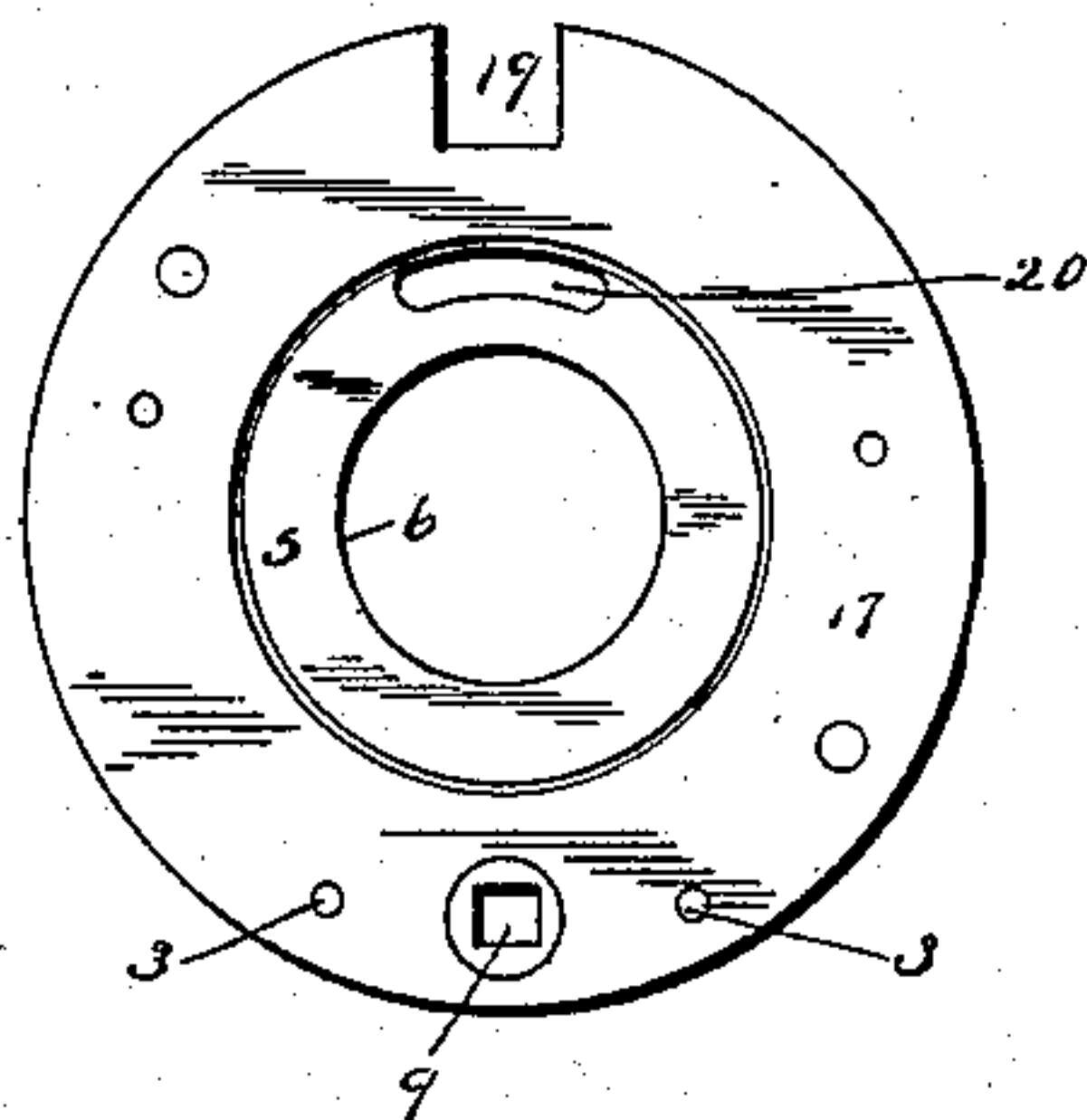


Fig 2

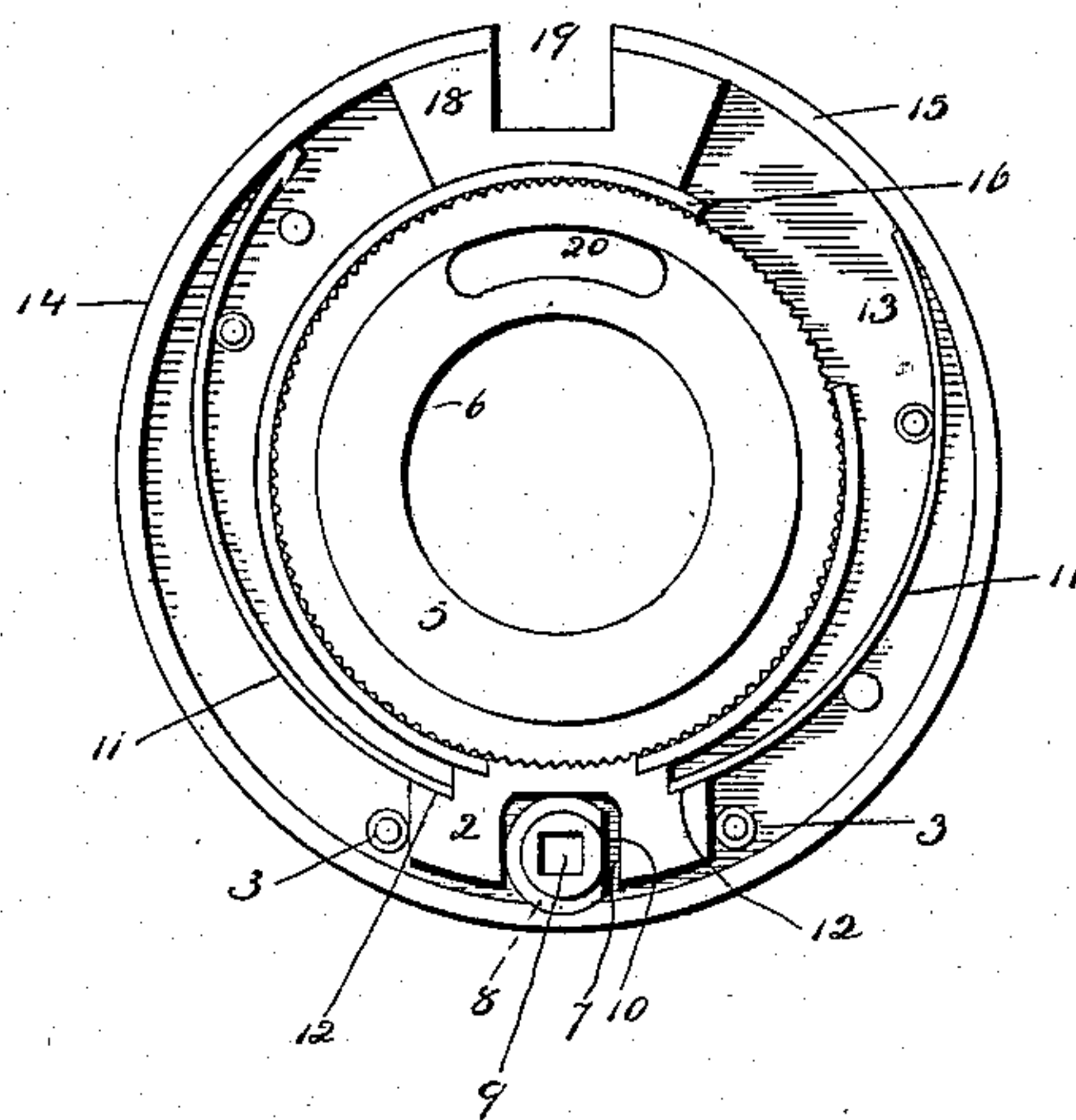
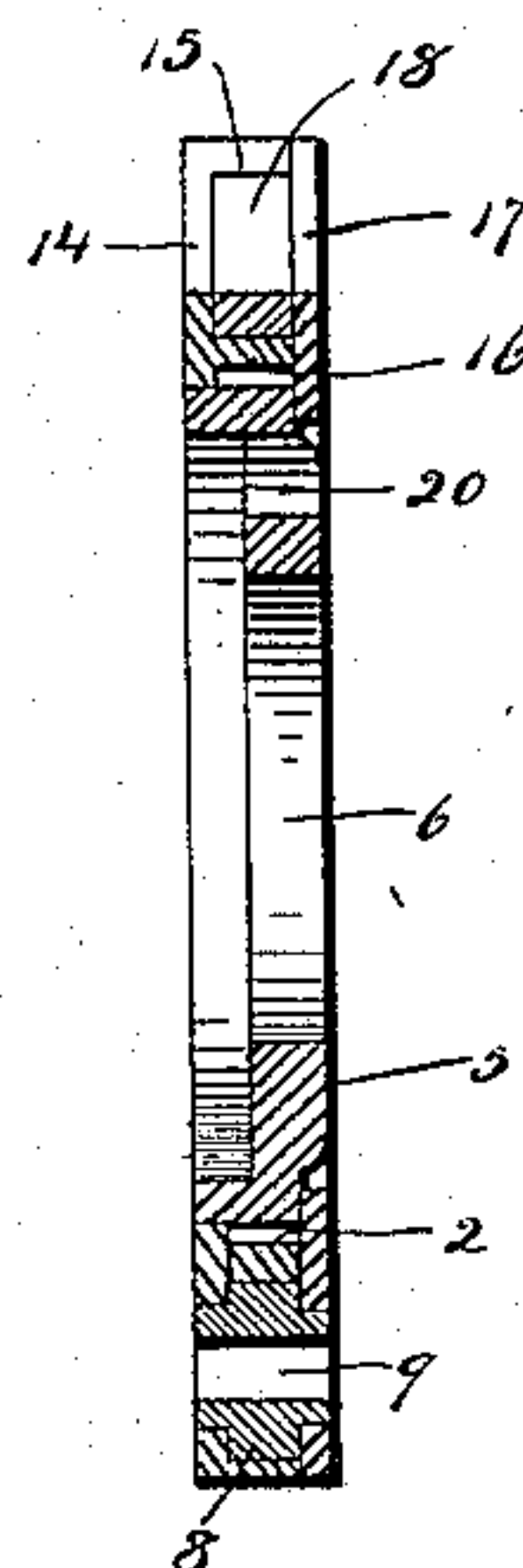


Fig 3



Witnesses  
 C. J. Reed  
 C. L. Reed

James J. Murphy  
 Inventor  
 by Seymour T. Case  
 Atty



# UNITED STATES PATENT OFFICE.

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

## PERMUTATION WHEEL-TUMBLER FOR LOCKS.

No. 901,116.

Specification of Letters Patent.

Patented Oct. 13, 1908.

Application filed April 6, 1908. Serial No. 425,465.

*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 Permutation Wheel-Tumblers for Locks; 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 is a detached view in elevation of my improved permutation wheel-tumbler. Fig. 2 a view thereof on a larger scale with its cap removed. Fig. 3 a view of the tumbler in vertical section on the scale of Fig. 2 but with its cap in position.

My invention relates to an improvement in permutation wheel-tumblers for locks of the type shown and described in United States Patent No. 858,744 granted July 2nd, 1907, on my application, the object of my present invention being to produce for use in such locks a wheel-tumbler constructed with particular reference to permanence of adjustment when set on any combination.

With these ends in view my invention consists in a permutation wheel-tumbler for locks as will be hereinafter described and pointed out in the claims.

In carrying out my invention as herein shown, I employ a radially movable segmental locking-dog 2 located between and guided by two short pillars 3 and having its inner edge toothed and concaved to conform in curvature to the curvature of the adjustable annular center 5 of the tumbler, the said center being formed with a bearing-opening 6 receiving a hub on which all of the tumblers are mounted but which is not shown. The dog 2 is formed with a large centrally arranged notch 7 leading into it from its convex outer edge and provided for the reception of a locking hub 8 having a square key-opening 9 and formed with a flat face 10 which is normally turned away from the bottom of the notch 7 which is engaged by the periphery of the hub as shown in Fig. 2 for positively holding the dog 2 at the limit of its inward movement in which position the teeth of the dog are engaged with those of the adjustable bearing center 5. When the hub 8 is turned so as to bring the face 10 opposite

the bottom of the notch 7 the dog 2 is free to be moved outward by means of its springs 11 the free ends of which enter corresponding notches 12 formed upon the inner face of the ends of the dog, these springs being located within the shallow annular chamber 13 of an annular tumbler-body 14 which is provided with an outer flange 15, a concentric inner flange 16 and a cap or plate 17 which rests upon these flanges and incloses the chamber 13. A segmental plate 18 located within the body 14 at a point directly opposite the lug 2 is formed with a locking notch 19 which receives the part of the lock employed to lock the wheel-tumblers. The adjustable center 5 is formed with a segmental slot 20 for the reception of the stud (not shown) forming another part of the lock as fully disclosed in my prior patent.

It will be understood that when the hub 8 is turned to engage its periphery with the bottom of the notch 7 in the dog 2, any swift turning and sudden stopping of the tumbler cannot possibly cause the dog to let go its hold upon the bearing center 5 so that the setting of the center 5 with respect to the tumbler 14 will be permanent, while at the same time it is very easy to set the tumbler to a new permutation by merely turning the hub 8 so as to bring its flattened face 10 into opposition with the bottom of the notch 7.

I claim:—

1. In a permutation wheel-tumbler for permutation locks, the combination with an annular chambered body, of an annular bearing-center located therein and having its periphery toothed, a radially arranged dog mounted in the body in position to engage with the teeth of the said bearing-center, a hub mounted in the said body and formed with a clearance face, and springs located within the chambered body and engaging with the dog for moving the same radially outward to release the bearing-center when the clearance face of the hub is brought into its clearance position.

2. In a permutation wheel-tumbler for permutation locks, the combination with an annular chambered body, of an annular bearing-center located therein and having its periphery toothed, a radially arranged dog mounted in the said body in position to engage with the teeth of the said bearing-center, a hub mounted in the said body, located within the said notch in the dog and formed



with a clearance-face, springs engaging with  
the ends of the dog for moving the same ra-  
dially outward to release the bearing-center  
when the clearance-face of the hub is brought  
5 into opposition with the bottom of the said  
notch in the dog, and means for guiding the  
dog in its radial movement.

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

JAMES J. MURPHY.

Witnesses:

R. J. PLUMB,  
OTIS B. HOUGH.