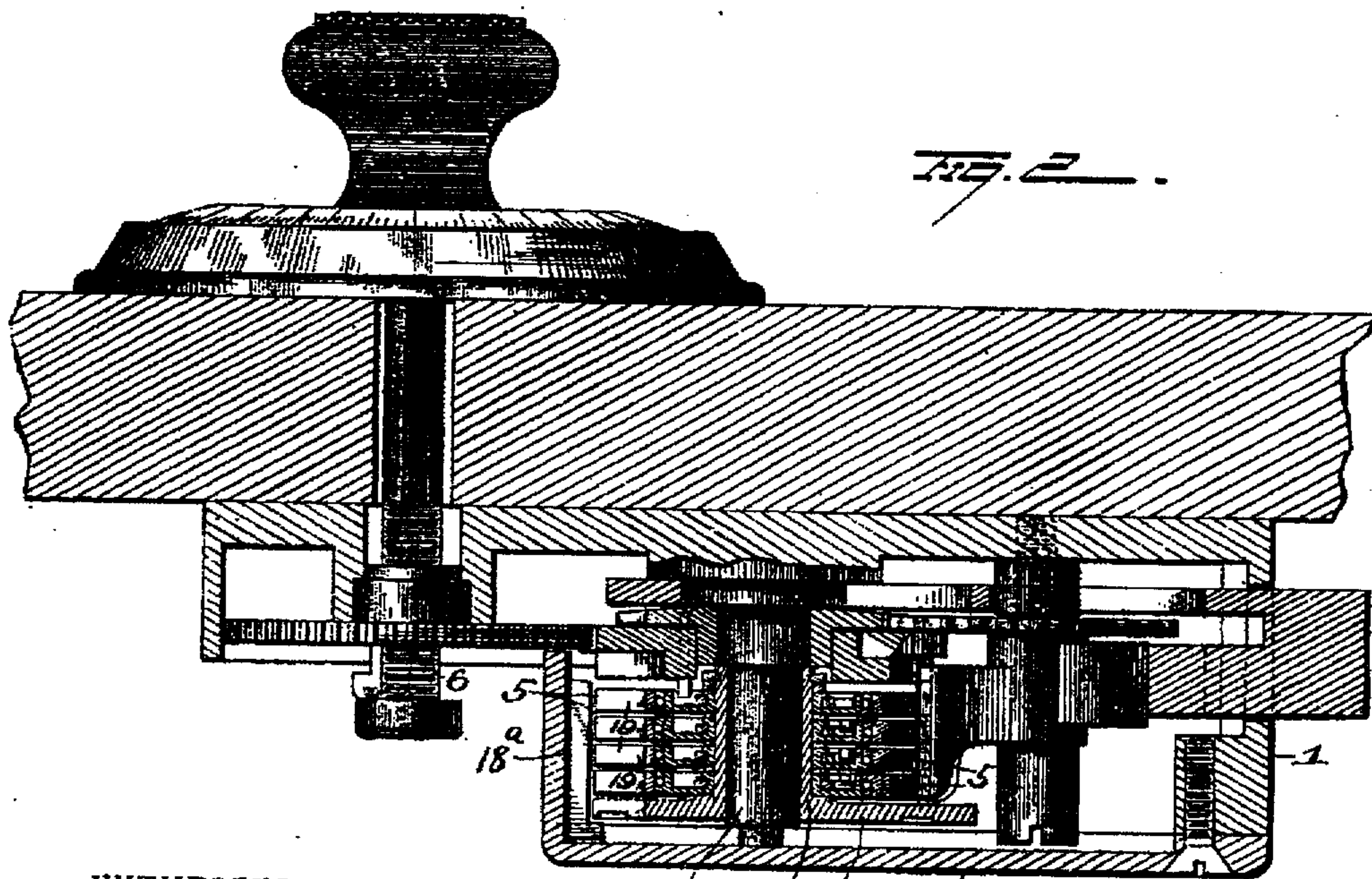
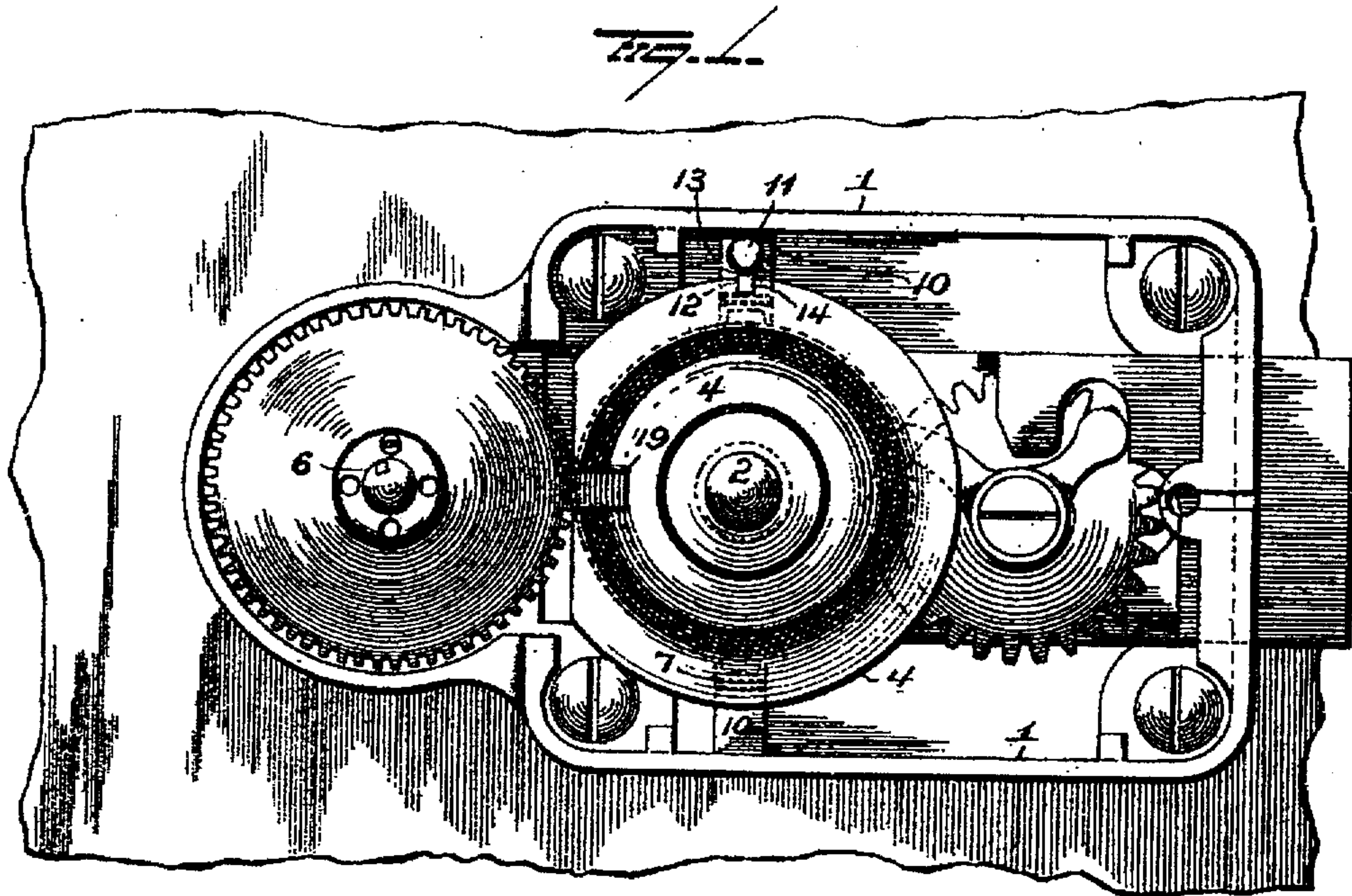


No. 874,807.

PATENTED DEC. 24, 1907.

W. H. TAYLOR.
COMBINATION LOCK.
APPLICATION FILED APR. 8, 1907.

2 SHEETS—SHEET 1.



WITNESSES
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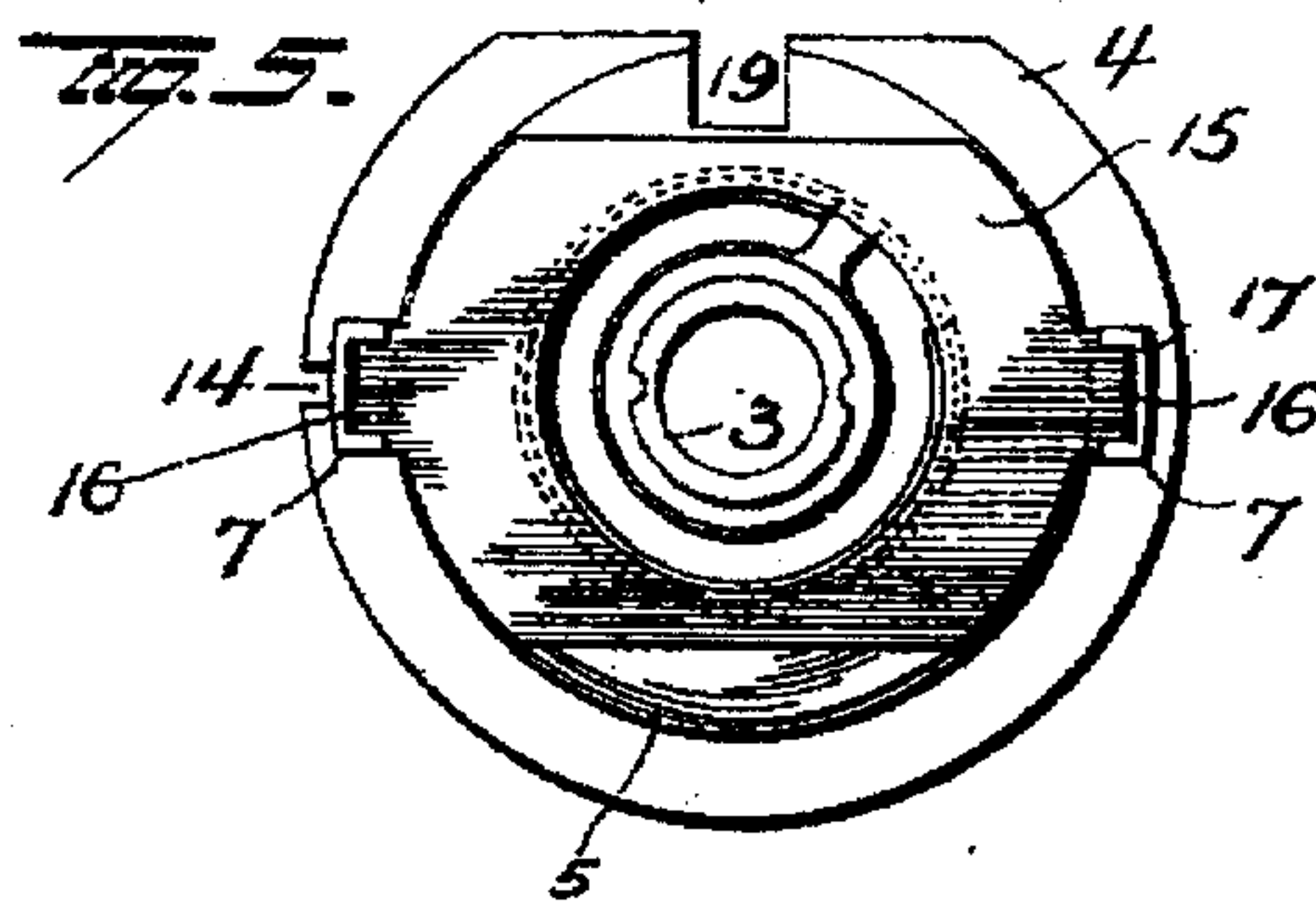
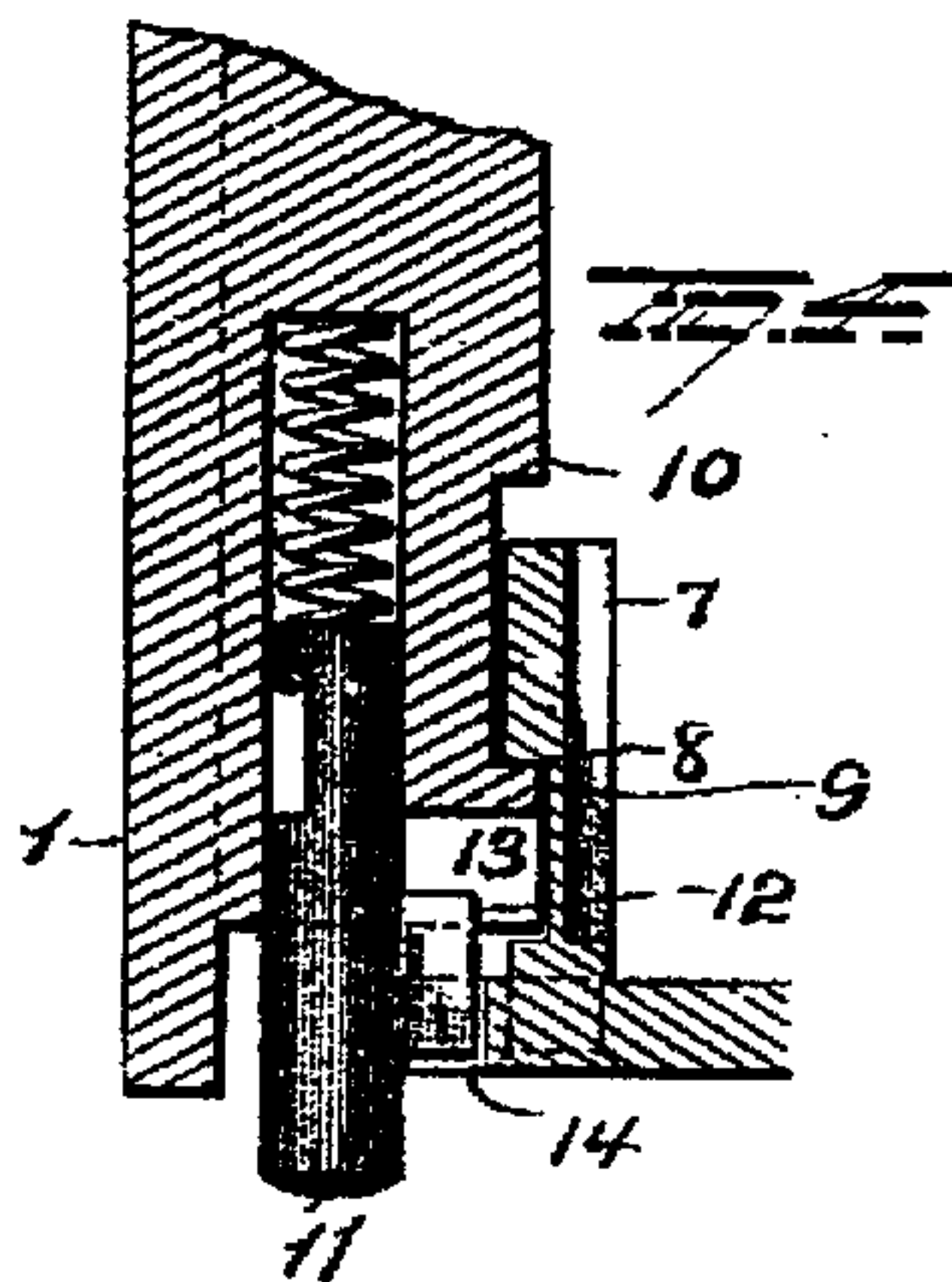
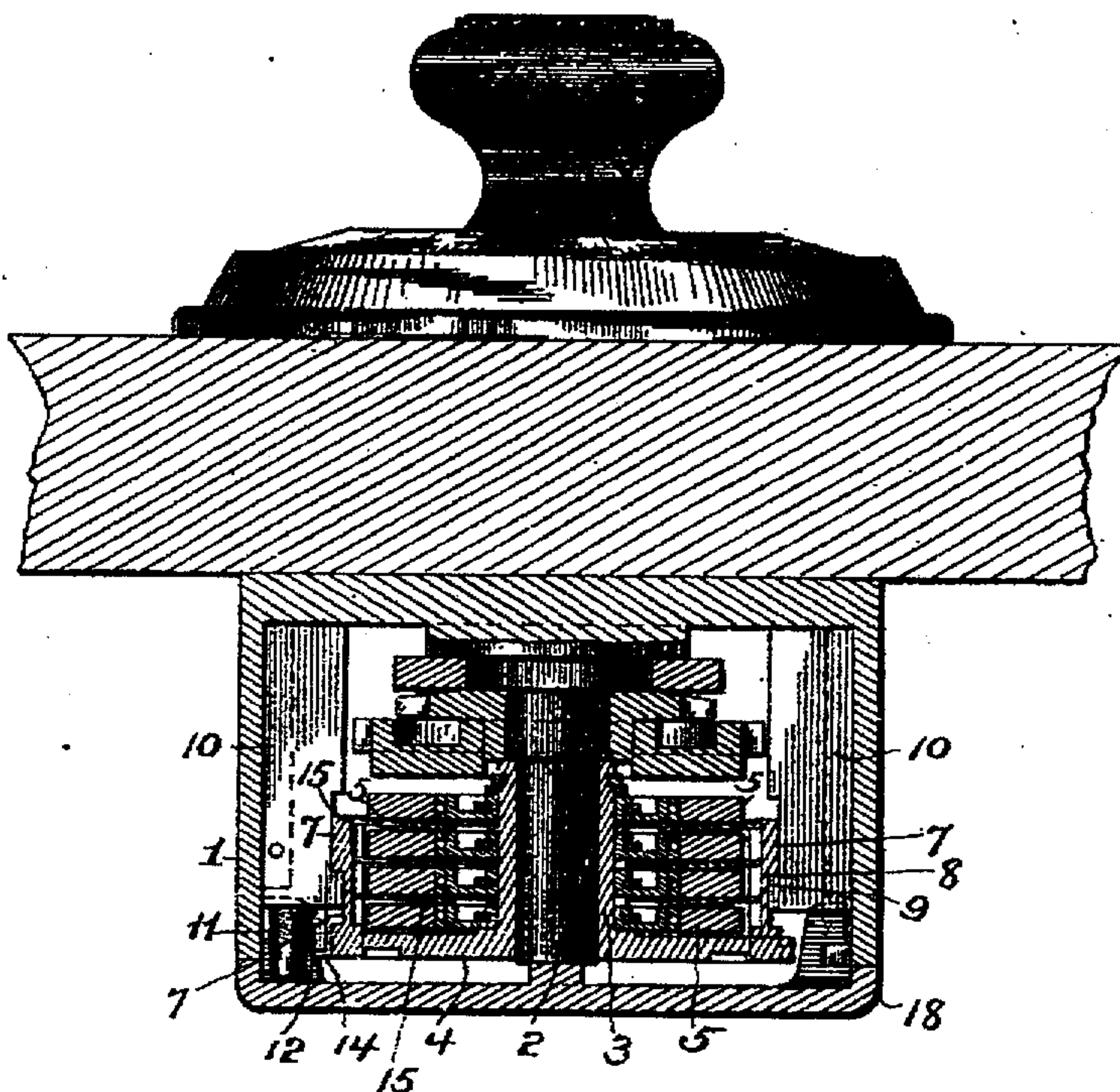
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2 SHEETS—SHEET 2.

Fig. 3.



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UNITED STATES PATENT OFFICE.

WARREN H. TAYLOR, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE YALE & TOWNE MANUFACTURING COMPANY, OF STAMFORD, CONNECTICUT.

COMBINATION-LOCK.

No. 874,807.

Specification of Letters Patent.

Patented Dec. 24, 1907.

Application filed April 8, 1907. Serial No. 366,977.

To all whom it may concern:

Be it known that I, WARREN H. TAYLOR, of Stamford, in the county of Fairfield and State of Connecticut, have invented certain
5 new and useful Improvements in Combination-Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it apper-
10 tains to make and use the same.

My invention relates to an improvement in combination locks, and particularly to means for detachably securing the nested tumblers and tumbler curb in place.

15 Heretofore it has been the usual custom to thread the tumbler post and screw the nested tumblers and curb in place thereon. This is objectionable owing to the difficulty experienced in getting the tumblers in proper
20 position and at the same time have the driving pin on the cam properly connected with the fly on the inner tumbler.

The object of my invention is to overcome the objection above noted, and provide simple and effective connecting means between
25 the lock casing and the tumblers, whereby the tumblers and curb properly nested, can be readily and quickly placed in proper position with relation to the parts with which they coöperate.
30

My invention consists in the parts and combinations of parts as will be more fully explained and pointed out in the claims.

In the accompanying drawings Figure 1
35 is a view in rear elevation of my improved lock the rear plate being removed. Fig. 2 is a view in longitudinal section the rear plate being in place. Fig. 3 is a view in vertical transverse section taken through the tumbler post, and
40 Fig. 4 is an enlarged view showing the spring latch mounted in the lock case and also showing a section of the curb, and Fig. 5 is a view of the sleeve and curb removed and showing the tumblers, interposed washers
45 and the seats for the tongues of the latter.

1 represents the lock case, and 2 the tumbler post having a plain face on which the sleeve 3 secured to the tumbler curb 4 is journaled. The tumblers 5 are mounted to
50 rotate, and are secured against movement endwise on the sleeve, and are rotated by the spindle 6 and connecting gearing in the usual and well known manner.

The tumbler curb 4 is provided with two
55 forwardly projecting lugs 7 each of which is

provided on its outer face with a shoulder 8 which engages a corresponding shoulder 9 on the lugs 10. These lugs 10 are secured respectively to the upper and lower sides of the lock case, and the shoulders thereon are
60 so located as to engage the shoulders 8 on the lugs projecting inwardly from the tumbler curb 4 and thus lock the sleeve 3 carrying the tumblers 5 against outward movement. The lug 10 located at the top of the case 1
65 is recessed to receive the spring pressed sliding pin 11 which latter is provided with a tongue 12 moving in a slot 13 formed in the lower face of said lug, and normally resting within a slot 14 in the tumbler curb 4.
70 With the tumblers 5 seated on the tumbler post 2 and the shoulders 8 on the lugs 7 of the curb 4, engaging the shoulders 9 on the lugs 10 on the case, and the curb 4 locked against rotation by the tongue 12, it will be
75 seen that the tumblers will be positively retained in their proper positions with relation to the parts with which they coöperate.

To release the curb 4 and tumblers 5, it is simply necessary to force the pin 11 forwardly, thus carrying the tongue 12 out of
80 the slot 14 in the tumbler curb 4, and leaving the latter free to be turned. By now turning the curb, the shoulders 8 on the lugs 7 thereof will be disengaged from the shoulder
85 9 of the lugs 10 on the case 1, which releases the nest of tumblers and curb and permits them to be removed, for changing or reassembling.

To replace the tumblers, the sleeve 3 is
90 placed on the post 2 and the curb 4 turned or partly rotated until the shoulders 8 engage the shoulders 9 and the tongue 12 enters the slot 14 in the periphery of the curb, thus locking the curb against any movement
95 on the post. This construction provides a very secure attachment and accurate adjustment between the driving cam and the inner tumbler.

It is customary in locks of this kind to locate washers between the tumblers so as to prevent a moving tumbler from moving the next adjacent tumbler by its frictional contact therewith. With the present construction the lugs 7 projecting from the curb provide convenient points for attachment of
100 these washers 15. Each washer is provided with tongues 16 which rest within grooves 17 in the inner faces of the lugs 7 and are thus prevented from turning and prevent
110

one moving tumbler from rotating an adjacent tumbler by frictional contact.

The cover plate 18 of the lock is substantially the same as shown in Reissue Patent No. 10,518 granted to E. Stockwell, August 26th, 1884 and is held in place and against removal by the tumblers as disclosed in said patent, consequently in order to get at the tumblers, it will be necessary to first set the tumblers, after which the back, or cover plate can be moved in the direction of the bolt, and when clear of the holding lugs can be lifted from the lock case. When the cover plate is in place it is held so by the engagement of the tongue 18 thereof with peripheries of the tumblers and it is only when the gates 19 in the tumblers are set to aline with the tongue 18, can the cover plate be moved in a direction to disengage same from the lock case.

It is evident that many slight changes might be resorted to in the relative arrangement of parts shown and described without departing from the spirit and scope of my invention hence I would have it understood that I do not wish to confine myself to the exact construction of parts shown and described, but,

Having fully described my invention what I claim as new and desire to secure by Letters-Patent, is:—

1. In a combination lock, the combination with a lock case and tumbler post, of a series of connected tumblers and a tumbler curb the latter being wholly within the lock case, means carried by said curb, engaging means on the lock case for locking the curb and tumblers in position on the post, and means for rotating the tumblers.

2. In a combination lock the combination with a lock case and tumbler post, of a series of assembled tumblers and a tumbler curb the latter being wholly within the lock case, means for holding said tumblers and curb on the post, means for preventing the curb from rotating and means for rotating the tumblers.

3. In a combination lock, the combination with a lock case and tumbler post, of a series

of nested tumblers and a tumbler curb mounted on said post, the said curb being wholly within the lock case means on the curb engaging means on the case for preventing the tumbler and curb from moving lengthwise of the post, a spring catch engaging the curb for preventing the latter from rotating on the post and means for rotating the tumblers.

4. In a combination lock the combination with a lock case and a tumbler post, of a series of nested tumblers and a tumbler curb mounted on said post, a shoulder on a part projecting from the curb engaging a shoulder on the case for preventing movement of the tumbler and curb endwise of the post, a spring catch for preventing rotation of the curb when the parts are assembled, and means for rotating the tumblers.

5. In a combination lock the combination with a lock case, and a tumbler post, of a series of nested tumblers and a tumbler curb mounted on said post, lugs projecting forwardly from said curb, washers interposed between the tumblers and engaging said lugs, means for locking said curb against movement in the direction of the length of the post, means for preventing the curb from rotating on the post, and means for rotating the tumblers.

6. The combination with a lock case and tumbler post, of a series of nested tumblers and a tumbler curb mounted on said post, lugs projecting forwardly from said curb, washers interposed between the tumblers and provided with tongues which rest in grooves in said lugs, means for preventing the curb from moving in the direction of length of the post, means for holding the curb against rotation on the post and means for rotating the tumblers.

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

WARREN H. TAYLOR.

Witnesses:

SCHUYLER MERRITT,
WILLIAM P. MOSELY.