

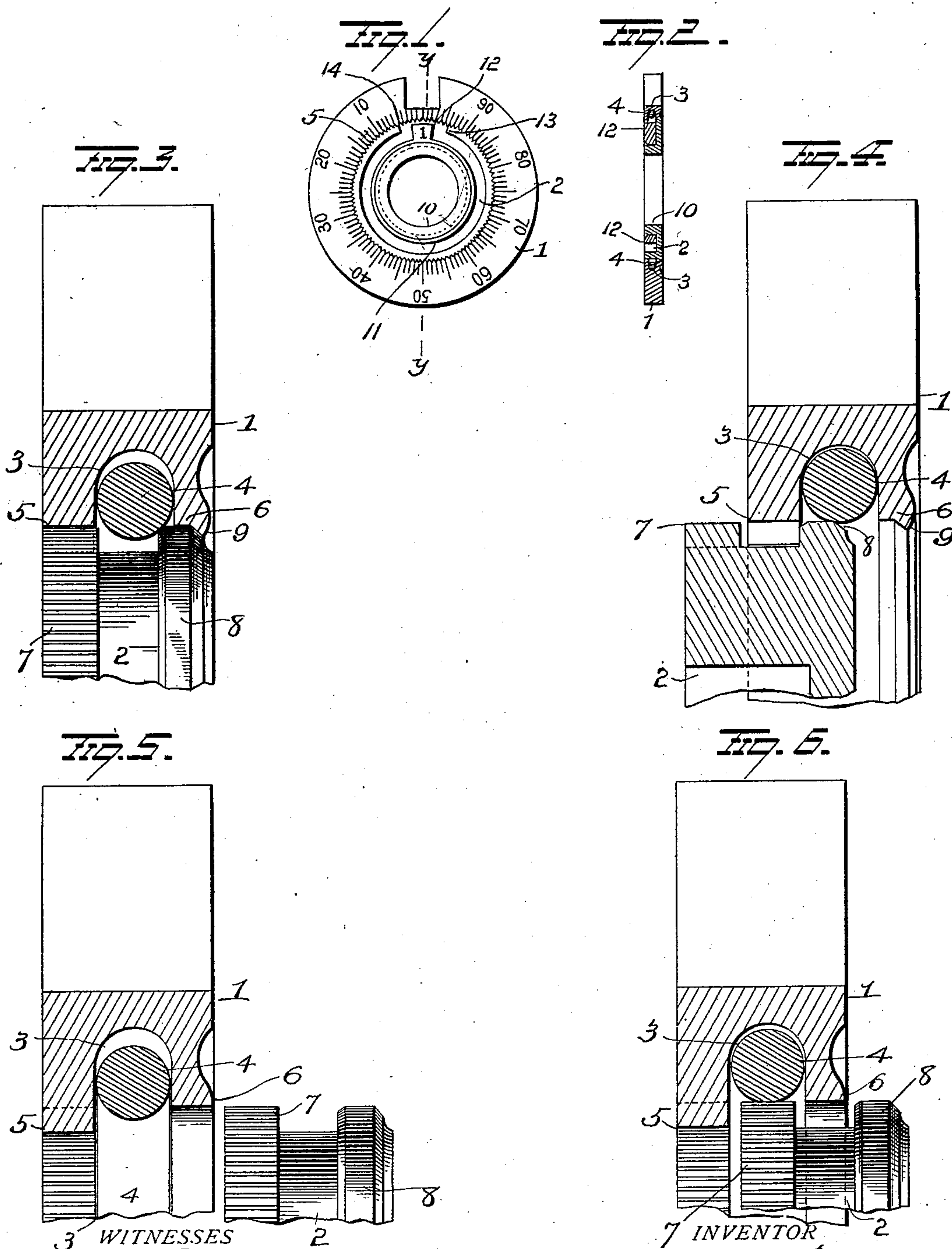
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W. H. TAYLOR.  
TUMBLER FOR COMBINATION LOCKS.

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NO MODEL.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

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## TUMBLER FOR COMBINATION-LOCKS.

SPECIFICATION forming part of Letters Patent No. 730,719, dated June 9, 1903.

Application filed February 9, 1903. Serial No. 142,559. (No model.)

*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 new and useful Improvements in Tumblers for 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 appertains to make and use the same.

My invention relates to an improvement in tumblers for combination-locks, the object being to provide a tumbler made up of sections whereby the positions of the sections may be changed with relation to each other, thus changing the number on which the particular tumbler is set; and it consists in a hand-changing combination-tumbler for locks so constructed that the center may be disengaged from the exterior ring sufficiently to be revolved for the purpose of changing the combination, but so constructed that the two parts may never be entirely separated.

In the accompanying drawings, Figure 1 is a view in elevation of the tumbler. Fig. 2 is a view in section of the same in the line  $y\ y$  of Fig. 1. Fig. 3 is an enlarged view in section of a portion of the tumbler on the line  $y\ y$  of Fig. 1. Fig. 4 is a similar view showing the sections in position for changing their relative positions, and Figs. 5 and 6 are similar views showing the manner of applying or inserting the inner section within the outer section of the tumbler.

The rotary tumbler, which is designed for combination-locks and which operates in the ordinary and well-known manner, is composed of an outer ring-section 1 and a central section 2, the latter fitting within the ring-section and secured therein against complete separation. The outer or ring section 1 is provided on its inner edge with an annular recess 3, within which is located the split locking-ring 4, the tendency of which is to confine the central section 2 centrally within the outer or ring section 1, but which can be expanded to permit the central section to be moved laterally sufficiently to change its position within the ring-section 1. This outer

section 1 is provided with annular flanges 5 and 6 on opposite sides of the recess 3, the flange 5 being notched or toothed, as shown in Fig. 1, while flange 6, as shown in Figs. 5 and 6, is plain.

The opening through the face of the outer section adjacent to flange 6 is of greater diameter than the diameter of the central section 2, while the opening in the other face of the outer section is of less diameter than a portion of the central section, so that when the central section is once introduced through the large opening and is locked therein by upsetting or spinning the flange 6 down so as to overlap the adjacent face of the central section, as shown in Figs. 3 and 4, the central section will be permanently locked within the outer section, so that the two parts can never be entirely separated without destroying the tumbler.

The inner section 2 is provided with the two peripheral flanges 7 and 8, the former of which is toothed or serrated, as shown, to mesh with the teeth or serrations of flange 5 of the ring-section 1, while flange 8 is plain and normally bears against the flange 6 of section 1.

When the two sections 1 and 2 of the tumbler are in their normal positions, as shown in Figs. 2 and 3, the split ring 4, which, as before explained, is seated in recess 3 of ring-section 1, contracts around the inner section and yieldingly holds the same in place, the split ring 4 bearing against the inner face or edge of flange 8 and yieldingly holding same against the downwardly-turned lip 9 formed by upsetting flange 6. By simply pressing against the face of the central section 2, adjacent to its flange 8, the split ring 4 will be expanded, thus allowing the central section to be moved laterally until the teeth or serrations 7 therein are disengaged from the teeth or serrations on flange 5, and when the parts are thus disposed, as shown in Fig. 4, the inner section is free to be turned within the outer or ring section 1, the flange 8 of the central section engaging the inner surface of flange 5 or the teeth thereon, thus preventing a complete separation of the two sections. The central section is provided on



its face adjacent to the toothed flange 7 with a recess and with a hub 10, on which is mounted a ring 11, carrying the lug 12, the ring resting within the recess in the face. This  
5 ring 11 is loose on the hub, and the lug 12, which is engaged by the pin of the adjacent tumblers, is free to move between the shoulders 13 and 14, formed by cutting away a small section of the toothed flange 7 of the  
10 central section 2.

From the construction as above described it will be seen that by removing the tumbler from the lock and disconnecting the central section 2 from the outer section 1, as shown  
15 in Fig. 4, the relative positions of the two sections can be changed or altered by revolving either section, thus changing the number on which that particular tumbler is set.

It is evident that numerous slight changes  
20 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  
25 exact construction shown and described; but,

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

1. A hand-changing combination-tumbler  
30 for locks comprising an outer ring-section, a central section, the said sections adapted to be disengaged for the purpose of changing the combination by a lateral movement of one of them, and coacting means on said sections for  
35 preventing their complete separation.

2. A hand-changing combination-tumbler for locks comprising an outer ring-section and a central section, the two sections each having intermeshing teeth, the latter adapted to be disengaged by a lateral movement of one  
40 of the sections, means for locking the two sections against complete separation, and means for normally holding the teeth of the sections in contact.

3. A hand-changing combination-tumbler  
45 for locks comprising an outer ring-section, a central section, the said sections adapted to be disengaged for the purpose of changing the combination by a lateral movement of one of them, coacting means on said sections for  
50 preventing their complete separation, and a split ring within the outer section and embracing the inner section for normally holding the two sections in their operative positions.  
55

4. A hand-changing combination-tumbler for locks comprising an outer ring-section and a central section the two sections each having intermeshing teeth, means for locking the  
60 two sections against complete separation, and a yielding ring for normally holding the teeth of the two sections in contact.

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

WARREN H. TAYLOR.

Witnesses:

SCHUYLER MERRITT,  
PATRICK KEEFFE.