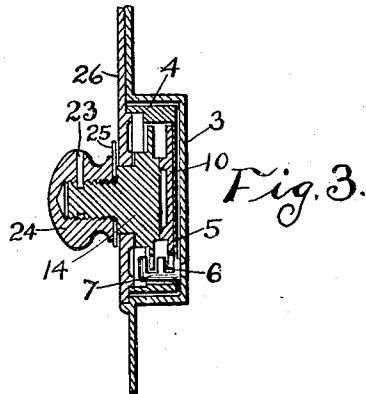
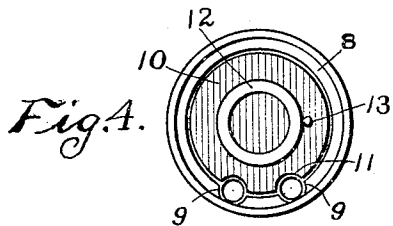
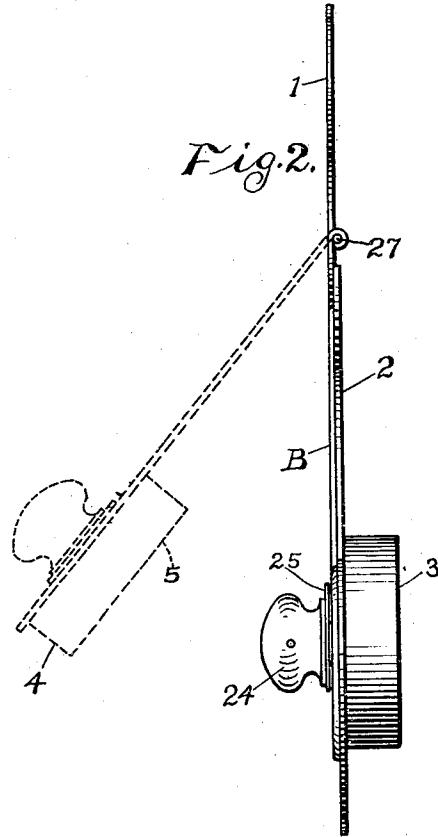
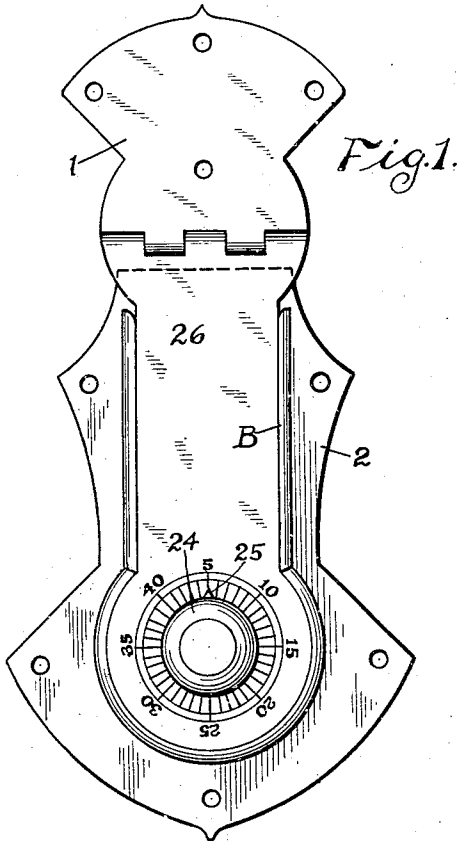


J. I. STEEN.
 LOCK.
 APPLICATION FILED OCT. 21, 1916.

1,251,129.

Patented Dec. 25, 1917.
 2 SHEETS—SHEET 1.

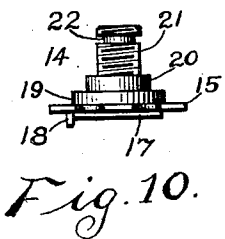
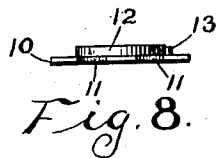
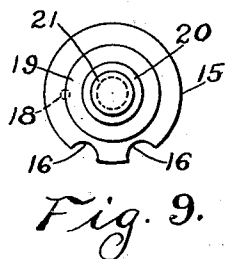
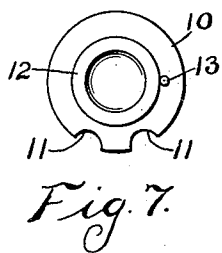
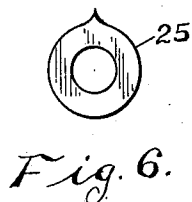
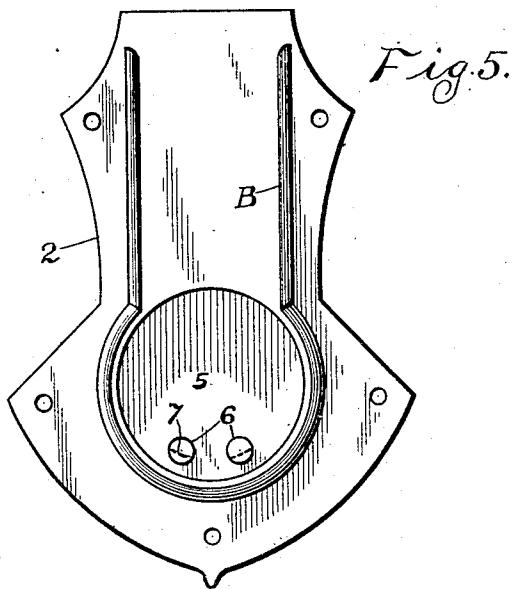


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1,251,129.

Patented Dec. 25, 1917.
 2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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LOCK.

1,251,129.

Specification of Letters Patent. Patented Dec. 25, 1917.

Application filed October 21, 1916. Serial No. 126,937.

To all whom it may concern:

Be it known that I, JOHN I. STEEN, a citizen of the United States, residing at Waukegan, in the county of Lake and State of Illinois, have invented certain new and useful Improvements in Locks, of which the following is a specification.

This invention relates to improvements in locks of the keyless type and one object is to produce a lock of this class adapted particularly for use on trunks. A further object is to produce a lock of this type that is neat in appearance, simple in construction and cheap to manufacture. With the foregoing and other objects in view the invention consists in the combination and arrangement of parts to be hereinafter fully described in this specification, pointed out in the appended claim and illustrated in the accompanying drawings which form a part of the specification and in which—

Figure 1 is a face view of the lock.

Fig. 2 is an edge view of the same, the dotted lines showing the lock in open position.

Fig. 3 is a vertical sectional view through the lock.

Fig. 4 is a front view of the lock casing mechanism with the tongue and connections raised.

Fig. 5 is a front view of the base plate.

Fig. 6 is a plan view of the indicator.

Fig. 7 is a top plan view of the rotary tumbler.

Fig. 8 is a side elevation of Fig. 7.

Fig. 9 is a plan view of another rotary tumbler.

Fig. 10 is a side elevation of Fig. 9.

Like reference characters denote corresponding parts throughout the several views.

The reference numeral 1 denotes a leaf designed to be secured to the top of a trunk and the numeral 2 denotes a base plate to be secured to the body of the trunk. The base plate is formed with an annular bulged portion or casing 3 adapted to receive an annular cap 4, the closed end or base 5 of said cap being designed, when the lock is locked, to abut the casing 3. The base of said cap is apertured to receive the pins 6, two in number, which are carried by the casing 3, said pins each being formed with two grooves 7 to permit rotation of the tumblers. The cap 4 is formed, further, with an annular shoulder 8 which is formed with two recesses 9 with which the said pins 6 may register. Loose within the cap 3 is a rotary tumbler 10 formed with two marginal recesses 11 to permit its withdrawal over the said pins 6 and with an annular shoulder 12 spaced away from its outer edge. A lug 13 is formed upon said tumbler beside the shoulder 12.

A second tumbler 14 comprising a base ring 15 formed with marginal recesses 16, two in number to permit its withdrawal over the said pins 6, is provided. Beneath the ring 15 is an annular shoulder 17 adapted to rest directly upon the annular shoulder 12 of the tumbler 10 and a lug 18 depending below said ring 15 is adapted for engagement with the lug 13 of said tumbler 10. The tumbler 14, further, comprises the stepped annular portions 19, 20 and the threaded stem 21, which rises from the annular portion 20, and is formed with the annular groove 22 adapted to register with a slot 23 in the interiorly threaded knob 24 when the knob is in position upon said stem. The slot 23 is adapted to receive a small pin (not shown) which will engage with the grooved portions of the stem to prevent the accidental removal of the knob. The stem 21 carries the indicator 25 which rests upon the annular portion 20 and is held in position by the said knob and is adapted for registration with any of the numbers arranged in a circle upon the face of a tongue 26 which is hinged at 27 to the leaf 1 and which is apertured to permit its passage over the stem 21 to the annular portion 19 to allow it to rest upon the portion 20 against which it is retained by the said knob 24; said tongue thereby carrying the cap, indicator and tumbler 14.

In Figs. 1 and 2 and in Fig. 3, full lines, the lock is shown locked. To unlock the same the operator turns the knob 24 which turns the tumbler 14 which, through the medium of lugs 13 and 18, turns the tumbler 10 and also the indicator 25 which, through the medium of the numbers upon the tongue 26, will indicate the position of the rotary tumblers and when the same are in such position as to permit their removal from engagement with the pins 6, or in other words when said tumblers are in such position as to afford a clearance for the pins 6 the tumblers, cap 4 and tongue 26 may be moved

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away from the base plate 2 which operation opens the lock.

The operator may make or change the combination of the lock as follows: First the tumbler 10 is dropped into position upon the base 5 of the cap 4. The knob 24 and tumbler 14 have, of course, been removed. When the marginal recesses 11 in the tumbler 10 are opposite the apertures in the base 5 of said cap the operator places a pencil or other small instrument through one of those openings and through one of the registering recesses 11 to prevent temporarily, the rotation of the tumbler. He now places the tongue 26 and tumbler 14, carrying the indicator 25, upon the tumbler 10 and takes a reading of the indicator upon said tongue and the number with which the indicator registers will be one of the numbers of the lock combination. He now rotates the knob 24 until the lug 18 of tumbler 14 engages with the lug 13. The recesses 16 in tumbler 14 are now in alinement with the recesses 11 of tumbler 10 and the operator now takes a second reading by means of the indicator upon the tongue 26 and this number will be the second number of the lock combination. By withdrawing his pencil from the opening in the base 5 he may now turn the knob 24 and the lock is locked. To unlock it, it is but necessary to turn the indicator first to the first number of the combination and then turn it back to the second number of the combination when the recesses in both tumblers will be found to register with the pins 6 and the lock is unlocked and may be readily opened. A rib B formed on the base plate serves as a buffer for the tongue 26.

What is claimed is:—

A lock of the type described, including a base plate provided with a casing having spaced apart grooved pins extending within itself, an annular cap carried by a hinged tongue and adapted to be received by said casing and to be held thereby, said cap, having an annular shoulder having peripheral recesses with which said pins are adapted to register, a rotary tumbler loose within said cap and having marginal recesses for its clearance of said pins, and having an annular shoulder spaced away from its outer edge, said loose tumbler having a lug adjacent said shoulder, a second tumbler positioned in said cap and comprising a ring formed with marginal recesses for its clearance of said pins, said second tumbler also having an annular shoulder spaced from said ring and adapted to rest directly upon the annular shoulder of the first referred to tumbler, said second tumbler having a lug adjacent said ring and adapted for engagement with the lug of said loose tumbler, said second tumbler having, in addition to a stepped peripheral contour, also a threaded stem received within an internally threaded knob, means for the retention of the latter against turning, and an indicator positioned upon said stem for registering with graduations upon said tongue.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two subscribing witnesses.

JOHN I. STEEN.

Witnesses:

JOHN S. SIKENE,
A. L. HENDEE.