B. LERBACK.

PERMUTATION LOCK.

APPLICATION FILED MAY 23, 1913.

1,136,820. Patented Apr. 20, 1915.

Fig. 1.

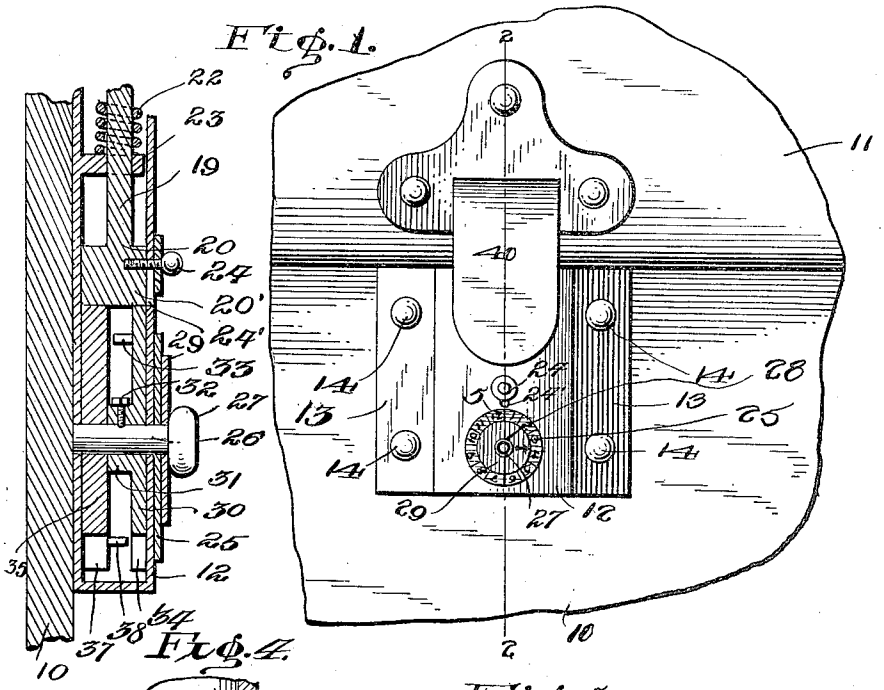


Fig. 4.

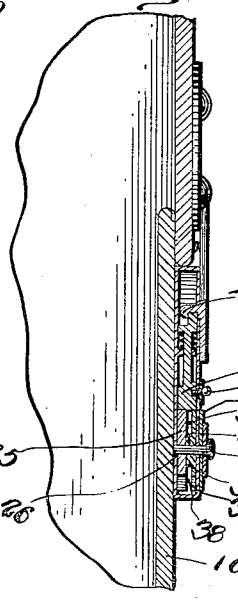


Fig. 5.

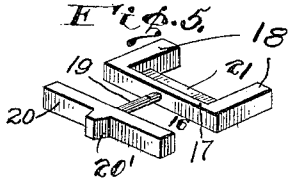


Fig. 2.

Fig. 3.

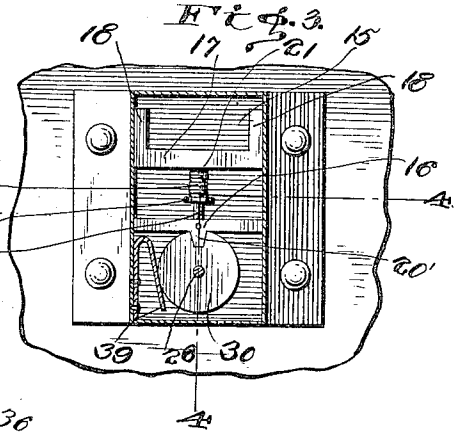
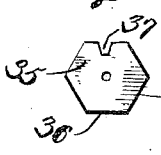


Fig. 6.



Witnesses

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BERNHARD LERBACK, OF MANDAN, NORTH DAKOTA.

PERMUTATION-LOCK.

1,136,820. Specification of Letters Patent. Patented Apr. 20, 1915.

Application filed May 23, 1913. Serial No. 769,513.

To all whom it may concern:

Be it known that I, BERNHARD LERBACK, a subject of Norway, residing at Mandan, in the county of Morton and State of North Dakota, have invented certain new and useful Improvements in Permutation-Locks, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to locks and has special reference to that class of locks that are used on trunks, suitcases, etc.

The object of this invention is to provide a combination lock that will be as efficient as the ordinary key locks that are used on trunks and suitcases.

Another object of this invention is to provide a combination made of the minimum number of parts.

With these and other objects in view this invention consists in general of certain novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described, illustrated in the accompanying drawings, and specifically claimed.

In the accompanying drawings: Figure 1 is a front elevation of my improved lock mounted on a trunk, suitcase etc. Fig. 2 is a vertical section taken on line 2—2, Fig. 1. Fig. 3 is a front elevation showing a part of the lock in section. Fig. 4 is an enlarged section taken on line 4—4, Fig. 3. Fig. 5 is a perspective view of the locking frame used in this improved lock. Fig. 6 is a front elevation of one of the disks used with this device.

Referring to the accompanying drawings by reference numerals, 10 indicates a portion of the body of the trunk, suitcase or other receptacle and the cover portion of the receptacle is shown indicated by 11. A casing 12 providing laterally extending wings 13 through which the securing means 14 pass has a pocket formed therein. Slidably mounted in the pocket 15 of the casing is the locking frame 16 which has a U-shaped head 17 at its upper end. The vertically extending members 18 of said head have their outer faces resting flat against the sides of the pocket 15 which prevents a wabbling of the locking frame. Connected to the head 17 by the rod 19 is the base 20 which has its end faces resting against the sides of the pocket so as to brace the locking frame in said pocket. Formed on the under face of the base 20 is a downwardly projecting locking lug 20'. A locking lip 21 is formed at the outer face of the horizontal member of the U-shaped head of the locking frame. Wound around the connecting rod 19 is a coil spring 22 which rests against the under face of the head 17 and a bracket 23 that is formed in the casing and is provided with an opening through which the rod 19 passes. In this manner it will be seen that the spring will normally urge the locking frame upwardly and will thereby cause the device to be held in such a manner as to easily engage the hasp 40 when it is desired. An operating pin 24 passes through the slot 24' formed in the casing 12 and engages the base 20 whereby the locking frame may be moved downwardly when the combination has been worked.

Mounted on the outer face of the casing 12 is a circular dial 25 which has a series of numerals on its face. A shaft 26 is rotatably carried by the casing and has an operating knob 27 at its outer end. An indicator 28 is provided for on the bearing disk 29. The shaft 26 carries a primary disk 30 that is provided with a collar 31 through which the screw 32 passes to hold the disk 30 fixedly upon the shaft 26. An inwardly extending pin 33 is carried by the inner face of the primary disk 30 for the purposes hereinafter described. The primary disk is also provided with a notch 34. Loosely carried by the shaft 26 at its inner end is an auxiliary disk 35 having a plurality of flattened sides 36. This loosely mounted disk also has a notch 37 and a forwardly extending pin 38. The auxiliary disk being loosely mounted upon the shaft 26 allows the disk to easily rotate when so desired or may remain in one position when it is desired to allow the same to remain stationary. In order to retard the rotary movement of the primary and auxiliary disks there are provided a pair of flat springs 39 secured to the casing which bear upon the outer peripheries of the disks. Secured to the top or cover 11 of the receptacle is an ordinary hasp 40 which is provided on its inner face with a catch which engages the lip 21 of the locking frame.

When the device is in a locked position as shown in Fig. 2 to unlock the same or move the locking frame downwardly so as to disengage the lip 21 and the catch 41 of the hasp 40 the shaft 26 is rotated by means of the knob 27 whereby the locking disk 30

will be moved until the pin 33 engages the pin 38 of the auxiliary locking disk 35. This disk 35 is then rotated until the notch 37 has come into alinement with the lug 20′. It is of course obvious that this position may be known since the person who knows the combination can refer to the particular number to which the indicator carried by the bearing disk should point and by rotating the shaft so as to allow this indicator to point at the number, the operator will know that the auxiliary disk is in alinement with the lug 20′. When the auxiliary disk has assumed this position it will remain the same as the spring 39 will prevent the same from turning on the shaft 26. The shaft is then rotated in the opposite direction, whereby the pins will become disengaged. When the primary disk has been turned far enough as shown by the indicator, the operator will know that the notch in the primary disk is registering with the notch in the auxiliary disk, the knob 24 is then pushed downward, thus bringing the lug 20′ in the alined notches and the hasp may be swung outwardly thereby unlocking the cover.

It is obvious that many minor changes may be made in the form and construction of this invention without departing from the material principles thereof and it is therefore not wished to confine the invention to the exact form herein shown and described, but it is wished to include all such as properly come within the scope claimed.

What is claimed is:—

1. A device of the class described comprising a casing having a pocket, a locking frame positioned within said pocket, said locking frame comprising a U-shaped head extending transversely across said pocket, a rod carried by the lower portion of said head, a base carried upon the lower end of said rod and extending transversely across said pocket, said base and head bearing upon the side portion of said casing whereby said locking frame will be held against wabbling and will be allowed to slide freely within said casing, a spring carried upon said rod, said spring being adapted to exert an upward pressure upon said head whereby said locking frame will be normally urged upwardly, a lug formed upon the lower portion of said base, means engaging said lug for locking said frame in the upper portion of said casing, said frame being adapted to engage a hasp.

2. A device of the class described comprising a casing having a pocket, a locking frame positioned within said pocket, said locking frame comprising a U-shaped head, a rod depending from said head, a base carried upon said rod, said base and head fitting snugly upon the side portions of said casing, a spring mounted upon said rod, said spring engaging a portion of said casing and engaging said head for normally urging said locking frame upwardly, said casing provided with a slot in its forward portion, a pin passing through said slot and engaging said base whereby said locking frame may be moved when the device is unlocked, means for releasably holding said frame in a locked position, said frame being adapted to engage a hasp.

3. A device of the class described comprising a casing having a pocket, a locking frame positioned within said pocket, said locking frame comprising a U-shaped head extending transversely across said pocket, a rod carried by the lower portion of said head, a base carried upon the lower end of said rod and extending transversely across said pocket, said base and head bearing upon the side portion of said casing whereby said locking frame will be held against wabbling and will be allowed to slide freely within said casing, a spring carried upon said rod, said spring being adapted to exert an upward pressure upon said head, whereby said locking frame will be normally urged upwardly, a lug formed upon the lower portion of said base, permutation disks rotatably carried within said pocket, said disks provided with notches formed in their outer peripheries, said disks being adapted to be rotated so as to cause said notches to register with each other in alinement with said lug, whereby the lug may be moved into said notches when it is desired to move the locking frame, said frame being adapted to engage a hasp when in a locked position.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

BERNHARD LERBACK.

Witnesses:
I. N. STEEN,
H. J. TAVIS.