

985,495.

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## Witnesses

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# UNITED STATES PATENT OFFICE.

WALTER A. BAILEY, OF PAULSBORO, NEW JERSEY.

COMBINATION-PADLOCK.

985,495.

Specification of Letters Patent.

Patented Feb. 28, 1911.

Application filed August 17, 1910. Serial No. 577,644.

*To all whom it may concern:*

Be it known that I, WALTER ALFRED BAILEY, a citizen of the United States, residing at Paulsboro, in the county of Gloucester and State of New Jersey, have invented certain new and useful Improvements in Combination-Padlocks, of which the following is a specification, reference being had to the accompanying drawings.

This invention is an improved padlock and consists in the construction, combination and arrangement of devices hereinafter described and claimed.

One object of the invention is to effect improvements in the construction of the bolt and to combine therewith means for limiting the endwise movement thereof.

Another object is to effect improvements in the construction and combination of the locking bolt and the locking disks.

In the accompanying drawings—Figure 1 is partly a side elevation, and partly a vertical central longitudinal sectional view of a combination padlock constructed in accordance with my invention. Fig. 2 is a transverse sectional view of the same, on the plane indicated by the line *a—*a** of Fig. 1. Fig. 3 is a similar view on the plane indicated by the line *b—*b** of Fig. 1. Fig. 4 is a detail elevation of the bolt, and Fig. 5 is a detail sectional view of one of the locking disks.

The body 1 of my improved combination padlock is preferably made of brass and of a single piece, and comprises a pair of substantially cylindrical ends 2, 3 and a bar 4 which connects them together, and the ends of which are united eccentrically thereto. The shackle 5 which is preferably of the form here shown has one end pivotally mounted in a recess in one side of the end portion 2 by means of a pivot pin or rivet 6. The free end of the shackle operates in a recess 7 in the outer side of the end portion 3 of the body, and the said shackle is provided near its free end with an opening 8. The bolt 9 is cylindrical in form and is provided at one end with a diametrically enlarged head 10 adapted to be readily grasped in order to operate the bolt, and that portion of the bolt near the head operates in a cylindrical opening in the end portion 2 of the body. The opposite end of the bolt operates in a shallow cylindrical opening 11<sup>a</sup> in the inner side of the end portion 3 of the body, and is provided on op-

posite sides with parallel arms 11, 12. The arm 11 constitutes a guide for the bolt and prevents the latter from turning axially. Said arm operates in an opening 13 in the end portion 3 of the body. The arm 12, when the shackle is closed, and the bolt is in locking position, passes through the opening 8 near the free end of the shackle, and serves to lock the shackle as will be understood. On one side of the bolt near the head thereof, is a spline 14 which constitutes a guide element for the bolt, and operates in a groove 15 in the end portion 2 of the body, and coacts with the said groove to prevent said bolt from turning. On the same side of the bolt with the spline 14 are a plurality of studs 16 which form notches 17 between them, and also form a notch 19 between one of them and the arm 12. A stop pin 20 extends transversely through the end portion 2 of the body and also through the notch 18, and hence serves to limit the extent of the longitudinal movement of the said bolt as will be understood. The end portion 2 of the body has a concave outer face portion 21 which affords clearance for the thumb and fore finger and enables the head of the bolt to be readily grasped and hence facilitates the operation of the bolt. On that portion of the bolt which is between the end portions 2, 3 of the body, are a series of permutation disks 22, each of which is peripherally knurled and is also provided with a peripheral series of designating numerals, letters or other designations. Each of the said disks has a central cylindrical bore through which the bolt extends, and is provided in one side with an enlarged counterbore 23 thereby providing an annular internal flange 24 in one side of which is a groove or notch 25 for the reception of one of the studs 16. The said disks being revolvably mounted on the bolt when they are all disposed in such relation as to cause their grooves or notches 25 to aline with the studs 16 and clear said studs, the bolt may be moved endwise as may be required to engage it with, or disengage it from the shackle. When anyone of the disks is turned so that the grooves 25 thereof are out of alinement with the studs 16, it follows that the said studs will be engaged by the flanges 24 of the disks and the bolt thereby locked against endwise movement. It will be understood that one of the designations on the periphery of each disk will corre-



spond with the groove 25 thereof, and hence only a person acquainted with the combination will be enabled to turn the disks to the position required to enable the bolt to be  
5 operated.

I claim:

In a lock of the class described, the combination of a body, a shackle pivoted at one end to said body, a bolt and locking disks,  
10 the said bolt being mounted for longitudinal movement in the body, and provided at one end with an arm for engagement with the free end of the shackle, and also with an arm operating in an opening with which  
15 the body is provided to prevent the rotation of, and to also guide the said bolt, said bolt and body being respectively provided also with a spline, and a spline receiving groove, the said bolt being further provided with

studs spaced apart, and also spaced from 20 and alining with said spline and said locking arm, a stop pin extending transversely through the body and operating in the space between said spline and one of said studs to limit longitudinal movement of said bolt, 25 and the said disks being each provided with a bore for the reception of the bolt, a counter-bore to clear the studs, and a notch or groove in the annular flange formed by said counter-bore, and for the reception of one 30 of said studs, for the purpose set forth.

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

WALTER A. BAILEY.

Witnesses:

O. W. SHEETS,

WM. I. DONALDSON.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

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