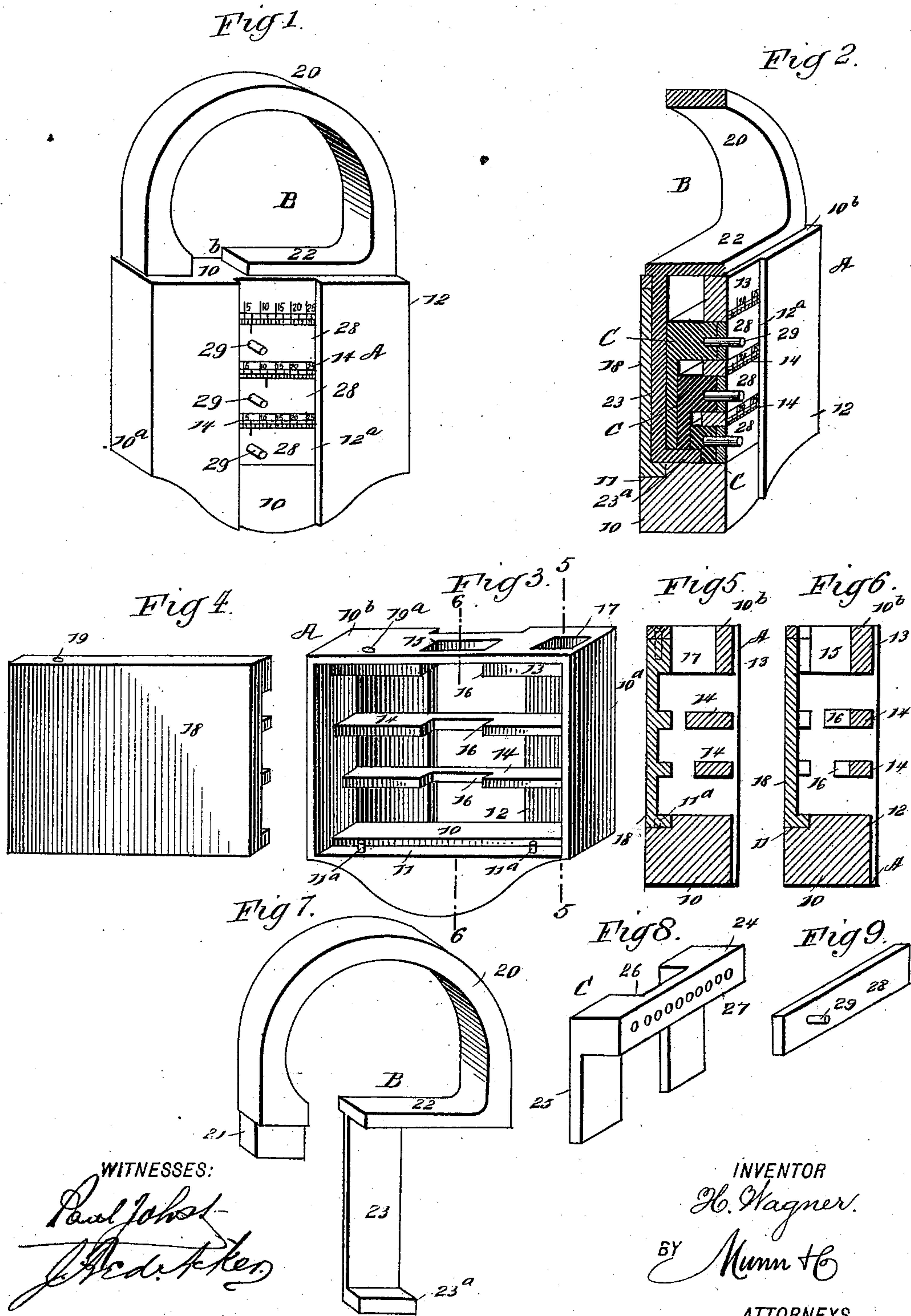


(No Model.)

H. WAGNER.
PERMUTATION PADLOCK.

No. 534,534.

Patented Feb. 19, 1895.



WITNESSES:

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PERMUTATION-PADLOCK.

SPECIFICATION forming part of Letters Patent No. 534,534, dated February 19, 1895.

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To all whom it may concern:

Be it known that I, HERMANN WAGNER, of Quinnesec, in the county of Dickinson and State of Michigan, have invented a new and
5 useful Improvement in Locks, of which the following is a full, clear, and exact description.

My invention relates to an improvement in locks, and particularly to an improvement in
10 locks of the combination type and adapted as padlocks, trunk and desk locks, or for similar purposes.

The object of the invention is to produce a lock of the above character which will be ex-
15 ceedingly simple, durable and economic, and which will likewise be exceedingly safe, being provided with a combination which when set will require considerable skill to discover if the combination be not known.

20 The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying
25 drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the lock
30 viewed from the front. Fig. 2 is a central longitudinal vertical section through the lock. Fig. 3 is a perspective view of the lock casing with the back plate removed. Fig. 4 is a perspective view of the back plate of the casing.
35 Fig. 5 is a vertical section taken through the casing, practically on the line 5—5 of Fig. 3, the back plate of the casing being included in the section. Fig. 6 is a similar section taken essentially on the line 6—6 of Fig. 3 the back
40 plate of the casing being included in the section. Fig. 7 is a perspective view of the keeper of the lock. Fig. 8 is a perspective view of one of the locking slides; and Fig. 9 is a perspective view of the combination slide
45 forming a portion of the locking slide.

In carrying out the invention the casing A may be made in any desired shape, but ordinarily it is somewhat rectangular in general form, as shown in Fig. 3. The said casing is
50 provided with a solid bottom 10, closed sides 10^a, a top 10^b integral with or firmly attached

to the sides, and a front 12, provided with a preferably central opening 12^a extending through from top to bottom. The back of the casing is open, and in the bottom portion of the
55 back a longitudinal recess 11 is produced, in which pins 11^a are usually placed. At the top of the casing a bar 13 is formed at the front, made integral with the top and front face of the casing. This bar crosses the opening
60 12^a in the front of the casing, and at suitable intervals between the top bar 13 and the bottom 10 of the casing a series of longitudinal partitions, shelves or slide-ways 14 is located within the casing at the front, each of them
65 crossing the said front opening 12^a; and upon the front faces of the partitions 14 and the top bar 13, scales of numbers, figures or designs are produced, forming a key for a combination.
70

In the central portion of the top of the casing an opening 15 is made which is usually square, and in the central inner edge of the top bar 13 and partitions 14, corresponding
75 recesses 16 are formed, the recesses and openings being in vertical alignment. In the arrangement of the partitions 14 the uppermost one is the widest, the partitions becoming narrower as they approach the bottom. A second opening 17, is likewise made in the top
80 of the casing at one side of the opening 15.

The back plate 18 of the casing may be and usually is provided upon its inner face with partitions which correspond to those in the casing, but they do not meet the casing par-
85 titions when said plate is in place. The back plate is likewise provided with apertures in the bottom portion thereof to receive the pins 11^a in the back lower portion of the casing; and an aperture 19, is usually made in the
90 top of the back plate near one end, which when the said plate is in position in the casing will register with a similar aperture 19^a made in the top of the casing, and by passing a screw into these two apertures, as shown in
95 Fig. 5, the back plate is securely locked to place.

The keeper B is illustrated in Fig. 7. This keeper comprises a shackle 20, terminating at one end in a reduced square section 21,
100 adapted to enter the opening 17 in the casing, which is of like contour. The opposite end

of the shackle is provided with an inwardly extending bar member 22, and from the inner extremity of this bar member a tongue 23, is downwardly projected, terminating at its lower end in a lip 23^a at a right angle to the tongue proper.

In the manipulation of the shackle the tongue and its lip are passed down through the opening 15 in the casing and the recesses 16 in the partitions and between the abutments or guiding lugs (see Fig. 6) of the back 18 until the lip shall rest upon the bottom of the casing, as shown in Fig. 2. The bar member 22, will then rest upon the top of the casing and will cover the screw which has been placed in the aperture 19^a and utilized to secure the plate 18 in position, and the reduced section 21 of the shackle will have entered the casing opening 17.

In connection with the shackle and the casing, a series of locking slides C is employed. In the drawings three of these slides are illustrated as being used, and three scales are produced upon the front of the casing, two partitions only being located within the same. These locking slides are angular in cross section, comprising an upper or head member 24 and shank members 25 which are flush with one side edge of the head, extending downwardly therefrom. Both the head and shank members of a slide are provided with an opening 26, extending from top to bottom, the opening being of sufficient size and of such shape as to permit the passage through the slide of the tongue 23 of the keeper and its lip 23^a. A series of apertures 27 is produced longitudinally in the outer face of the head section of each locking slide. In connection with each locking slide a combination slide 28 is employed. This combination slide is adapted for engagement with the apertured face of the locking slide, and is provided with a pin 29 which extends beyond both sides of the combination slide, being adapted to enter any one of the apertures 27 in the locking slide. The shank members of the locking slides are graduated in length. One slide, the longer one, has its head member placed between the uppermost partition 14 and the top bar 13, being held to slide in the ways thus provided, and its shank members (see Fig. 8) extend downward and abut the lip 23^a of the keeper tongue. The next shorter locking slide is placed between the lower partition 14 and the upper one, having sliding movement in this position; and the lower end of this shank is in advance of the upper locking slide and likewise engages with the lip of the keeper tongue, while the lower and shorter locking slide is held to travel between the lowermost partition 14 and the bottom of the casing, its shank resting upon the latter, while its head rests upon the lip of the keeper tongue. This lower slide has the apertures 27 produced in the face with which its shank is connected, since it is placed in just a reverse position to the other slides, as clearly shown in Fig. 2.

A combination slide is placed in engagement with the apertured portion of each locking slide prior to the locking slides being placed in position in the casing, being so placed when the plate 18 is removed from the casing; and the pins 29 of the combination slide are then placed in an aperture of a locking slide, the outer face of the combination slides being flush with the scale surfaces appearing at the opening 12^a in the front of the casing.

When all of the locking slides have been adjusted in the casing in a manner to bring their openings 26 in registry, and likewise in registry with the tongue and lip of the keeper, the latter may be drawn out from the casing, and only then. After, however, the keeper has been placed in the casing in proper position and the slides have been shifted in a careless manner, the keeper cannot be withdrawn until the combination is formed or known, and the combination is obtained by placing the pin of each combination slide in for example a different aperture of its locking slide, and noting the numbers on the scales to which the pins must be moved to bring the apertures 26 of different slides in registry over the tongue of the keeper to permit of the withdrawal of the latter. The combination may be changed at any time by removing the plate 18 from the lock.

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

1. In a lock of the padlock type, a casing having a series of slideways and provided with openings in the slideways and in the casing proper, a keeper provided with a tongue, said tongue being adapted to enter said openings within the casing, and locking slides having movement in the ways in the casing and locking engagement with the tongue, each slide being provided with releasing openings for the tongue, and a combination slide adjustably carried by each locking slide, as and for the purpose set forth.

2. In a lock of the padlock type, the combination with a casing containing horizontal slide-ways, locking slides arranged in such slide ways, a shackle having a tongue provided with a lip at its lower end, and a back plate for the casing, having guiding lugs for said tongue, as shown and described.

3. In a lock of the padlock type, the combination, with the keeper, and a casing having a removable back and horizontal slideways, and made open at the middle of its front, of locking slides adapted for such slideways, and combination slides arranged in front of and parallel to the locking slides, and provided with pins which enter holes in the latter and project in the front opening of said casing, as shown and described.

4. In a lock of the padlock type, the combination, with a casing having slide-ways therein and a scale upon one of its faces, and a keeper comprising a shackle and a tongue

having a lip at an angle thereto, the tongue
and lip of the keeper being capable of enter-
ing the casing, of locking slides having slid-
ing movement within the casing, the said
5 slides being adapted to travel over and en-
gage with the lip of the keeper tongue, each
slide having an opening which when brought
in registry with the said tongue will permit
of its removal from the casing, and a combi-

nation slide adjustably connected with each
locking slide, the said combination slide be-
ing moved relatively to the scales to produce
a release of the keeper, as and for the purpose
set forth.

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Witnesses:

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