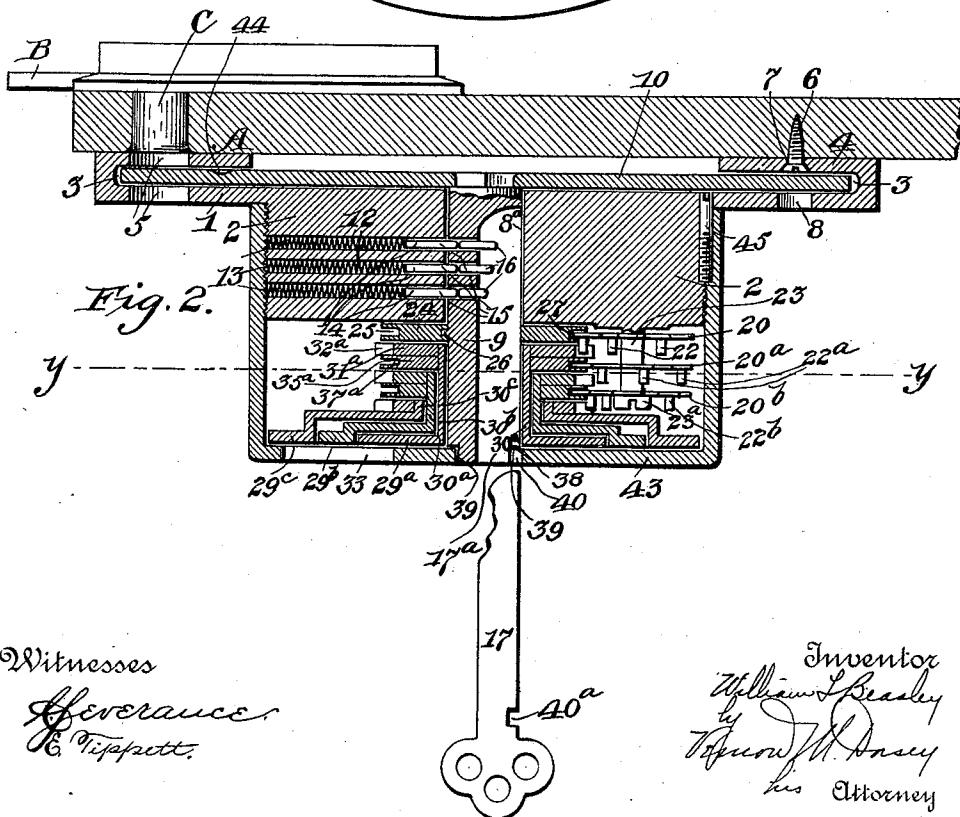
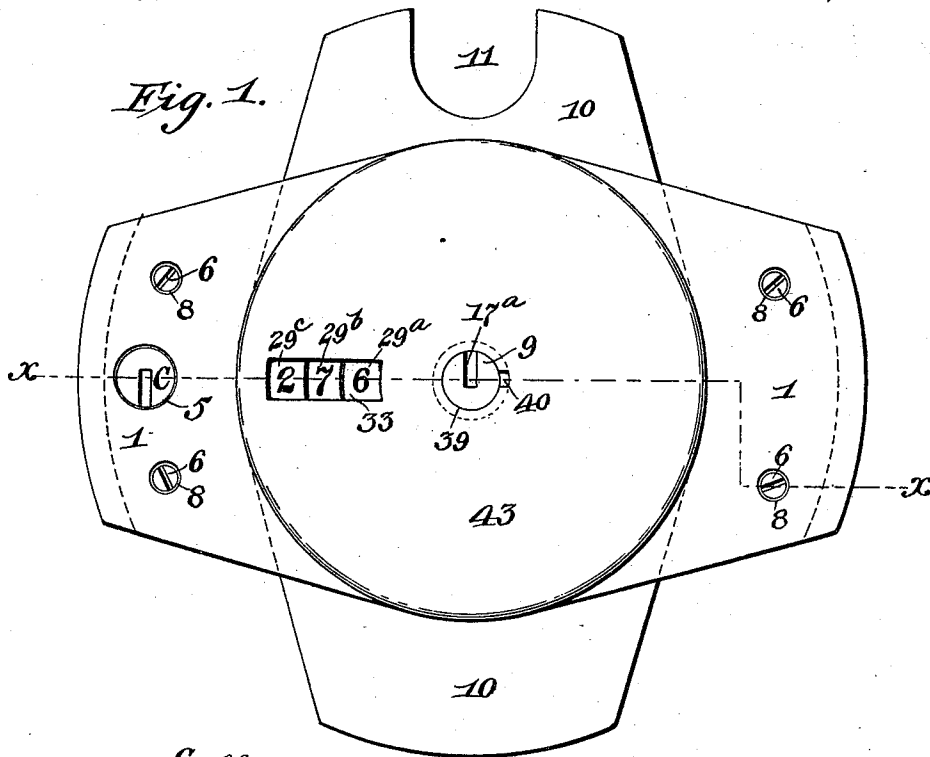


W. F. BEASLEY.
KEYHOLE GUARD.

No. 499,502.

Patented June 13, 1893.



Witnesses

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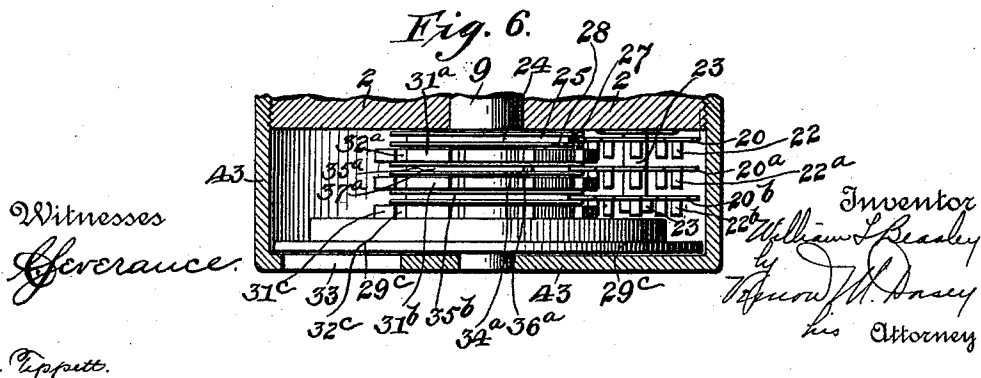
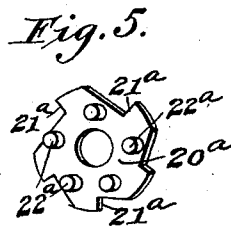
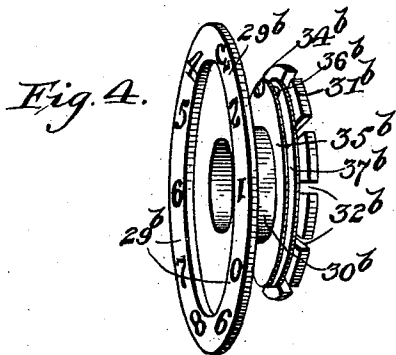
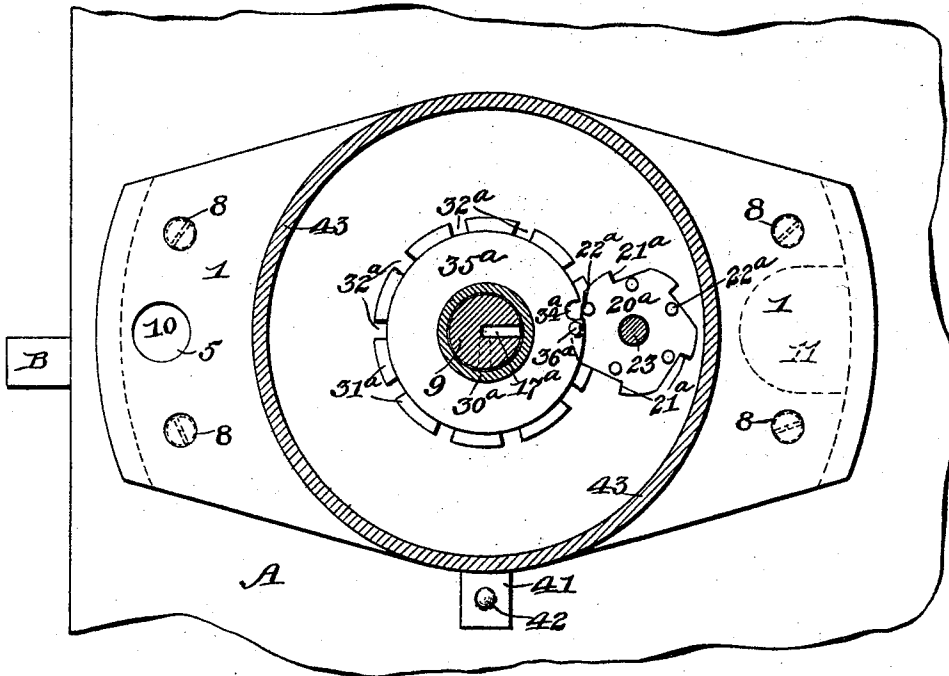
Inventor
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Fig. 3.



UNITED STATES PATENT OFFICE.

WILLIAM F. BEASLEY, OF BALTIMORE, MARYLAND.

KEYHOLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 499,502, dated June 13, 1893.

Application filed February 13, 1893. Serial No. 462,112. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. BEASLEY, a citizen of the United States, residing at Baltimore, Maryland, have invented certain new and useful Improvements in Keyhole-Guards; 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 certain new and useful improvements in key-hole guards, and it consists in means for locking a cover plate over the key hole, and for registering or indicating each movement of the said plate from over the key-hole permitting the insertion of a key in such a manner as to unlock the drawer, box, compartment, &c., to which it is applied, whereby it will be necessary to insert one key to release the cover plate to be so rotated as to uncover the key hole, which rotation will be registered, and to insert another key in the key-hole so uncovered to actuate the locking mechanism proper. The device hereinafter referred to, which is adapted to be readily placed on any door, drawer, &c., without disturbing the locking mechanism already thereon, is especially adapted to be used on safe-deposit boxes, safes, &c., when it is desirable that the door, &c., shall only be opened by the co-operation of two persons, each of whom has a separate key, the registering mechanism actuated by the cover plate, affording a means whereby either of the key holders may detect any actuation of the locking mechanism during their absence.

For these purposes my invention more particularly consists in the construction, arrangement and combination of the several parts of which it is composed, as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings, in which corresponding parts are designated by similar marks of reference, Figure 1 is an elevation of a key hole guard constructed in accordance with this invention, the key-hole being shown as uncovered. Fig. 2 is a horizontal section on line X X thereof, the key-hole being shown as covered. Fig. 3 is a vertical transverse section on line Y Y of Fig. 2. Fig. 4 is a detail view of one of the indi-

cating disks and notched wheel and grooved collar connected therewith. Fig. 5 is a detail view of the floating wheel adapted to engage with the wheel and collar shown in Fig. 4. Fig. 6 is a detail view of the indicating mechanism and actuating means thereof.

The base plate 1 is elongated, and has rounded ends, a circular boss 2 being centrally formed on its forward face, and serving as the housing of the locking mechanism of the cover plate. The ends of the base plate are thickened and grooves 3 are cut in the thickness thereof on their inner sides forming inwardly turning flanges 4, which rest on the face of the piece to be locked, which in the accompanying drawings is shown as a door A, provided with a locking bolt B, actuated in any desired manner by a key inserted in a cylinder C projecting through the thickness of the door, it being obvious that any desired form of locking mechanism for the door or its equivalent may be used.

As shown in the drawings the cylinder C or its equivalent passes through the door in the rear of the face plate, and under one end thereof, the said face-plate, and flange 4 thereof being apertured, as at 5 in line with the said cylinder or its equivalent, while the face-plate is secured to the door or its equivalent, by screws 6 passing through holes 7 in the flange 4, the screws being inserted and removed through apertures 8 in the ends of the face-plate in alignment with the holes 7 in the flanges. A central bore 8^a is formed in the boss 2 and face plate 1, concentric to the latter, through which a barrel 9 passes, the barrel projecting in front of the boss and in the rear of the face-plate.

The cover plate 10 is secured on the rear of the barrel, which is squared and upset thereon, the said cover plate having substantially the same shape as the face plate, but being smaller, it lying behind the face plate, its ends passing through the grooves 3 therein. One end of the cover plate is forked, it having a central notch 11, which, when the cover plate is properly rotated, passes over the cylinder C or its equivalent, which is thus left uncovered for the insertion of the key, the normal or locked position of the cover plate being that in which the solid end thereof lies

over the cylinder or its equivalent, thus closing the key hole, while at the same time the heads of the screws 6 will be concealed and protected by the corners of the cover plate, which projects into the grooves 3, and slide over the flanges 4 in which the screws are contained, a spring 41 being secured on the door or its equivalent, a pin 42 being formed in the spring to arrest the cover plate against unintentional locking, the pin 42 engaging a recess 44 in the plate, when the latter is in the position as shown in Fig. 1.

In order to lock the cover plate against unauthorized rotation, a series of holes 12 are drilled within the boss 2, radially, projecting from the central bore 8^a, and in the other and inner ends respectively of these holes are placed spiral springs 13 and pins 14, the latter of which are adapted, when the cover plate is in a position to cover the cylinder C or its equivalent, to be pushed by the former into corresponding holes 15 in the barrel 9, thus locking the latter against rotation. In order to unlock the barrel, pins 16 of different lengths are inserted in the holes 15 of the barrel 9, and are adapted, upon the insertion of a proper key 17 in the slot 17^a of the barrel to be shoved outwardly a sufficient distance to cause the inner ends of the pins 14 to be flushed with the surface of the barrel, thus liberating the latter and permitting the cover plate to be turned.

When it is desired to apply a registering mechanism to record the rotations of the cover plate from the position in which it covers the cylinder C or its equivalent, I do so by mounting upon the barrel 9 a series of indicating disks 29^a, 29^b and 29^c, which are actuated by floating wheels 20, 20^a, 20^b the said floating wheels, each consisting of a disk having any desired number of peripheral shoulders 21, 21^a, 21^b, and having projecting from its forward face between each two peripheral shoulders a pin 22, 22^a, 22^b all of the said floating wheels being journaled on a post 23 projecting forwardly from the boss 2, the post 23 being in the rear of the indicating disks and terminating in the rear thereof, and having a screw 23^a, which prevents the displacement of the floating wheels. A collar 24 having a peripheral groove 25 therein is secured on the barrel 9 by a stud 26, whereby the said collar is caused to revolve with the said barrel, the groove in the said collar receiving a portion of the periphery of the first of the said floating wheels, a pin or projection 27 being contained in the groove in the said collar, and being adapted upon a rotation of the barrel, and thus of the collar, to come in contact with a shoulder on the floating wheel, and to throw the latter forward, the position of the projection 27 upon the collar being such that the floating wheel will be thrown upon the initial movement of the barrel from its locked position, while a recess 28 is formed in the periphery of the collar, immediately in the rear of the projection 27, into which recess the pin

22 on the floating wheel 20 is adapted to pass when the latter is thrown.

In the drawings three indicating disks 29^a, 29^b, 29^c are shown, each of which consists of a disk proper 29^a, 29^b and 29^c, having the numerals from 0 to 9 impressed on the forward face thereof, at equal intervals apart, the disks being nested, the one within the other, while a sleeve 30^a, 30^b and 30^c is secured to the center of the rear face of each of the respective disks, the said sleeves being concentrically mounted on each other and on the barrel. The inner sleeve 30^a extends a sufficient distance to the rear, to terminate immediately in front of the collar 24, on the barrel, and has on its exterior end a wheel 31^a, provided with ten notches 32^a in its periphery, into which the pins 22 on the first floating wheel 20 are adapted to engage the said floating wheel 31^a being adjacent to the collar 24, so that upon each movement of the barrel from its locked position, throwing the floating wheel 20, the wheel 31^a will be thrown through the space of the notch by means of a pin 22 of the floating wheel, the disk 29^a being at the same time thrown through a proportionate arc (one tenth) and bringing the succeeding number thereon below a slot 33 in the casing 43, to be hereinafter more fully described.

Secured on the sleeve 30^a immediately in front of the wheel 31^a is a collar 35^a, similar to the collar 24, and having a projection 36^a in the groove 37^a thereof, in such a position to throw the second floating wheel (20^a) upon the disk 29^a being moved from the position in which the numeral 9 shows through the slot 33 to the position in which the numeral 0 is seen, while a recess 34^a is formed in the periphery, in the rear of the projection, similar in construction and operation to the recess 28 in the collar 24, the pins 22^a on the wheel 20^a passing therein to throw and engage the notched wheel 31^b on the end of the second sleeve 30^a, the said wheel 31^b being adjacent to the collar 35^a, and being similar to the wheel 31^a.

On the sleeve 30^b in front of the wheel 31^b is secured a collar 35^b similar to the collar 35^a, and receiving in similar manner the third of the floating wheels (20^b).

It is evident that any number of indicating disks 29^a may be used and connected with the collars 35^a, 35^b, 35^c and wheels 31^a, 31^b and 31^c, each wheel representing ten times the value of the wheel nested therein, the only difference being that the outer or last disk need not have a collar 35^a, 35^b, 35^c secured thereto, (as is shown in connection with disk 29^c, in the drawings) as it throws no floating wheel, the floating wheels being used exclusively to actuate the succeeding disk.

The three disks 29^a, 29^b and 29^c, shown in the drawings, represent units, tens, hundreds, respectively, and it will be seen that upon each completed revolution of each wheel from the position in which 9 is seen through the

slot to that in which the zero is seen, the surrounding disks, will be thrown the distance between the two successive marks thereon.

Instead of placing the pins 27 and 36^a, 36^b, 5 and 36^c in the collars 24 and 35^a, 35^b, and 35^c, respectively in the positions before stated, a plurality of them may be irregularly placed on any or all of the collars, as is described in another application, serially numbered 10 459,517, filed on the 24th of January, 1893, by me in the United States Patent Office, while the marks upon the disks and the number of notches in the wheels 31^a, 31^b and 31^c may be varied as stated therein, while the above described construction of the registering mechanism may be applied to register the rotations of any form of locking devices, especially as 15 that shown in an application executed by me, entitled improvement in door locks.

20 The shell 43 which is circular in cross section, has its rear end secured over the boss 2, it projecting forward therefrom, and covering the registering mechanism; it being prevented from being unscrewed by locking 25 screws 45 inserted at different points between the boss and shell, and entering from the rear of the face-plate, the screws being thus protected from withdrawal until the face-plate is removed from the door, &c., which is prevented, while the cover plate is in a position to cover the key hole, and it is thus obvious that while the key hole is covered, it will be impossible to tamper with the registering mechanism. The central aperture 35 39 is cut in the face of the shell, and receives the reduced end of the barrel, 9, when the shell is secured upon the boss, and the said aperture 39, being notched at 40 in such a position as to be in line with the slot 17^a in the barrel when the latter is in a locked position, and the shell is screwed fully home, the key having a notch 40^a therein, into which the side of the aperture 39 passes upon a rotation of the key, thus locking it within the 45 slot of the barrel except when the barrel is in a locked position, and preventing its withdrawal except when in that position, thus reducing to a minimum the danger of the cover plate being inadvertently left in any position except the locked one. The face of the 50 shell has a radial slot 33 cut therein, near the aperture 39, through which the marks upon the indicating disks may be seen, the shell itself, serving if desired, as a handle for the door, &c., while it will be noted that disks occupy the entire forward end thereof.

It is obvious that by inserting the key in the slot in the barrel, the latter will be unlocked, permitting the cover plate to be 60 turned to such a position as to uncover the cylinder C or its equivalent, (by preference until the pin 42 enters the recess 44,) when the door, &c., may be unlocked by inserting a key in the cylinder, the register being actuated by the beginning of such a movement. 65 The key may be then withdrawn from the cylinder C, after it has relocked the door, &c.,

when the cover plate may be rotated through the proper extent to again cover the cylinder C, when the key in the barrel may again be 70 withdrawn, locking the cover plate in position, the forked ends of the cover plate preventing any mistake by which the cover plate might otherwise be left in a position covering the cylinder C, but at the same time being 75 unlocked.

Having described my invention, what I claim is—

1. The combination in a key hole guard, of a plate adapted to cover a key hole, and a registering mechanism actuated by the rotations 80 of the said plate from the said covering position, substantially as described.

2. The combination in a key hole guard, of a rotating plate adapted to cover a key hole, 85 locking mechanism locking the said plate in a position to cover the said key hole, and a register actuated by the rotations of the said plate from its locked position, substantially as described. 90

3. The combination in a key hole guard of a face plate having apertures therein to receive screws, a rotating cover plate pivoted in the said face plate, and adapted in its rotation to cover the key hole and the said apertures at the same time and to uncover them, 95 and a register actuated by the rotations of the said plate from its said covering position, substantially as described.

4. The combination in a key hole guard, of 100 a face plate having apertures therein to receive screws, a rotating cover plate pivoted in the said face plate, and adapted in its rotation to cover the key hole and the said apertures at the same time and to uncover them, 105 a lock adapted to secure the said cover plate in the said covering position, and a register actuated upon a rotation of the said cover plate from its locked position, substantially as described. 110

5. The combination in a key hole guard, of a face plate having inwardly projecting flanges upon its ends, the said flanges and face plate being apertured in alignment with each other, 115 a cover plate pivoted within the said face plate and rotating between the said apertures in the flanges and face plate and over the key hole and adapted to cover them at the same time, and a register actuated by a rotation of the said cover plate from its said covering position, substantially as described. 120

6. The combination in a key hole guard, of a face plate having inwardly projecting flanges upon its ends, the said flanges and face plate being apertured in alignment with each other, 125 a cover plate pivoted within the said face plate and rotating between the said apertures in the flanges and face plate and over the key hole and adapted to cover them at the same time, a lock adapted to secure the said cover 130 plate in its said covering position, and a register actuated by a rotation of the cover plate from its locked position, substantially as described.

7. The combination in a key hole guard, of a face plate having inwardly extending flanges upon its ends, the said flanges and face plate being apertured in alignment with each other, 5
 5 a boss projecting from the said face plate, a barrel passing through the said boss, locking pins contained in the said barrel and boss and adapted to lock the latter, and a cover plate secured on the said barrel and adapted 10
 10 in its rotations to pass over the key hole and between the apertures in the face plate and flanges thereon at the same time, substantially as described.

8. The combination in a key hole guard, of 15
 15 a face plate having a circular boss upon the forward face thereof, a barrel projecting through the said boss, a cover plate secured on the said barrel and adapted to cover and uncover the key hole, locking mechanism contained in the said boss adapted to engage the 20
 20 said barrel, a shell having a circular cross section mounted on the said boss, and a registering mechanism contained in the said shell and adapted to be driven by the said 25
 25 cover plate, substantially as described.

9. The combination with a barrel having a head thereon, a circular housing through which the said barrel centrally passes, a shell having a circular cross section mounted in the 30
 30 said housing and surrounding a part of the said barrel, locking mechanism contained in the said housing adapted to engage the said barrel, a series of disks having designating marks thereon situated in the forward end of 35
 35 the said shell, a sleeve secured to each of the said disks, the said sleeve being concentric to each other and to the barrel, a notched wheel and a projection secured on each of the said sleeves, a projection secured on the said bar- 40
 40 rel, and a series of floating wheels, mounted behind the said disks and within the said shell, each of the said floating wheels being thrown by one of the said projections and engaging the adjoining notched wheel, substan- 45
 45 tially as described.

10. The combination in a key hole guard,

of a face plate having inwardly projecting flanges upon its ends, and a circular boss projecting from its forward face, a barrel passing through the said boss, a cover plate secured 50
 50 on the said barrel and adapted in its rotation to pass between apertures formed in the said face plate and the flanges thereon, and to simultaneously cover the key hole, locking mechanisms contained in the said boss and adapted 55
 55 to engage the said barrel, a shell having a circular cross section mounted on the said boss and surrounding a part of the said barrel, a series of disks having designating marks thereon situated in the forward end of the said shell, 60
 60 a sleeve secured to each of the said disks, the said sleeve being concentric to each other and to the barrel, a notched wheel and a projection secured to each of the said sleeves, a 65
 65 projection secured to the said barrel, and a series of floating wheels mounted behind the said disks and within the said shell, each of the said floating wheels being thrown by one of the said projections and engaging the ad- 70
 70 joining notched wheel, substantially as described.

11. The combination in a key hole guard, of a rotary barrel, a cover plate secured on the said barrel and rotated thereby over the 75
 75 key hole, a series of disks, having designating marks thereon, a sleeve secured to each of the said disks, the said sleeves being concentric to each other, a notched wheel and projection secured on each of the said sleeves, a projec- 80
 80 tion secured on the said barrel, and a series of floating wheels, having pins projecting therefrom, each of the said floating wheels being thrown by one of the said projections, and engaging the adjoining notched wheel, and a shell containing the said wheels and 85
 85 disks, substantially as described.

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

WILLIAM F. BEASLEY.

Witnesses:

VERNON M. DORSEY,
 ELEANOR TIPPETT.