

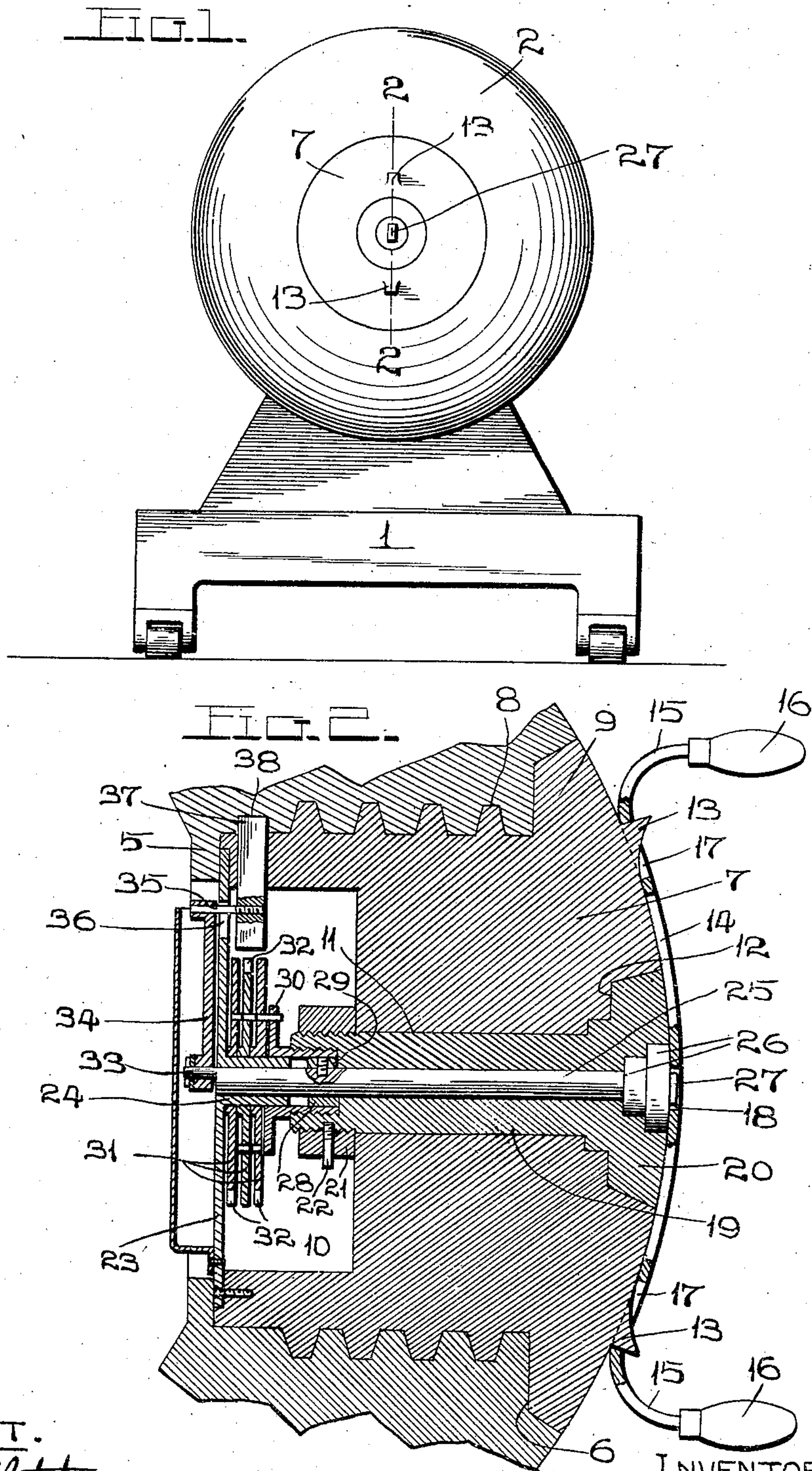
No. 869,220.

PATENTED OCT. 29, 1907.

J. M. ALLEN.

SAFE.

APPLICATION FILED AUG. 17, 1908.



ATTEST.

L. J. Fletcher.

E. M. Harrington.

INVENTOR.
JAMES M. ALLEN.

BY *Nigdon Longan.*
ATTY'S.

UNITED STATES PATENT OFFICE.

JAMES M. ALLEN, OF ST. LOUIS, MISSOURI, ASSIGNOR OF TWO-FIFTHS TO CHRISTIAN F. SCHNEIDER, OF ST. LOUIS, MISSOURI.

SAFE.

No. 869,220.

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed August 17, 1906. Serial No. 330,998.

To all whom it may concern:

Be it known that I, JAMES M. ALLEN, a citizen of the United States, and a resident of St. Louis, Missouri, have invented certain new and useful Improvements in Safes, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates generally to safes having detachable doors, and particularly to the means employed for placing said doors in position and removing them therefrom.

To the above purposes, my invention consists in certain novel features of construction and arrangement of parts, which will be hereinafter more fully set forth, pointed out in the claims, and illustrated in the accompanying drawings, in which:—

Figure 1 is a front elevation of a safe of my improved construction; Fig. 2 is an enlarged vertical section taken on the line 2—2 of Fig. 1.

Referring by numerals to the accompanying drawings:—1 designates a suitable base which supports the body 2 of the safe, which body is in the form of a hollow sphere, and provided in its front side with a cylindrical opening 3, and formed in the surface of said opening is a screw thread 4. An inwardly projecting flange 5 is formed at the inner end of this opening 3, and formed around the outer end thereof is an annular groove or recess 6.

The door of my improved safe comprises a cylindrical block 7, provided on its exterior with a thread 8, which corresponds with the thread 4, and formed integral with the outer edge of the door is a flange 9, which snugly fits within the annular groove 6. When this door 7 is tightly screwed into the door opening 3, the inner end of said door bears against the flange 5, and the outer face of said door is curved to conform to the curvature of the exterior surface of the body 2 of the safe.

Formed in the rear end of the door 7 is an annular chamber 10, and passing through the center of said door from said chamber to the outer face of the door is a cylindrical opening 11, the outer end of which is enlarged as indicated by 12 to form a shoulder 12.

Formed integral with the exterior surface of the door 7 on opposite sides of the opening therethrough is a pair of lugs 13, which are for the purpose of receiving a handle utilized for screwing and unscrewing the door from the body of the safe. This handle comprises a spring plate 14 bent to conform to the exterior surface of the door, the ends of which plate are bent outwardly, as designated by 15, and provided with handles 16.

Formed in the spring plate are apertures 17, so located as to receive the lugs 13, and formed in the center of the plate is an aperture 18.

Arranged for rotation in the cylindrical opening 11 is a tubular shaft 19, the outer end of which is provided with a flange 20, which snugly fits within the enlarged outer end of said opening 11, and which bears against the shoulder 12. The end of the shaft 19 which projects into the chamber 10 is exteriorly threaded and receives a nut 21, the same being locked to said shaft by a pin 22 passing through said nut, and entering the shaft. Fixed to the rear end of the door 7, and inclosing the chamber 10, is a plate 23, and formed in the center thereof is a bearing 24. Arranged for rotation in the cylindrical shaft 19 is a shaft 25, the rear end of which is journaled in the bearing 24, and the forward end of which is provided with a plurality of flanges 26 which engage against shoulders formed at the forward end of the opening through the tubular shaft 19. Formed integral with the outer end of this shaft 25 is a short lug 27. Fixed on this shaft 25, adjacent its rear end, is a ring 28, which bears against an annular shoulder 29 formed in the rear end of the shaft 19.

Fixed to the rear end of the shaft 19 is a disk 30, and arranged for rotation upon the bearing 24, immediately to the rear of said disk 30, is a series of larger disks 31, in the edges of which are formed notches 32 which are adapted to coincide with one another when said disks are shifted to a certain position following the rotation of the disk 30 and the shaft 19. These disks form no part of my invention, as various means can be employed as a combination to be manipulated by the rotation of the shaft 19.

Formed on the rear end of the shaft 25 is an eccentrically arranged pin 33, and journaled thereon is the lower end of a link 34, the upper end of which carries a pin 35, which passes through a vertically disposed slot 36 formed in the disk 23, and said pin engages in a vertically moving bolt 37, which passes through the edge of the door surrounding the chamber 10, and normally engages in a recess 38 formed in the body of the safe 2.

When the door of my improved safe is closed, the exterior surface thereof coincides with the surface of the exterior body of the safe, and as said door and the shafts 19 and 25 are formed so as to fit perfectly in their respective openings, there are no cracks or interstices into which an explosive could be forced, and said door and shafts could not be forced inwardly owing to the arrangement of the flanges on their outer ends bearing against the corresponding shoulders.

The disks 31 are so turned as that the notches 32 therein are out of alinement, and, therefore, the bolt 37 cannot be withdrawn from the notch 38 owing to its lower end striking against the edges of the disks 31.

To open the safe, the person having the combination places the thumb and fingers upon the flat outer face of the tubular shaft 19, and by pressing thereon en-

gates said surface with a sufficient degree of friction to enable said tubular shaft to be rotated so as to bring the disks 31 into positions so that the notches 32 are brought into alinement with one another immediately below the bolt 37. The lug 27 is now engaged, and the shaft 25 is rotated one-half a turn, so that the pin 33 is swung into a lower position, and this movement draws the link 34 downwardly and correspondingly draws the bolt 37 from the notch 38. The spring handle is now engaged on the lugs 13 of the door, and the same is unscrewed from the body 2 of the safe.

A safe of my improved construction is very strong and durable, and the door when opened can be swung around to one side of the safe in an out-of-the-way position.

The liability of opening a safe of my improved construction by unauthorized persons is reduced to a minimum, owing to the fact that the peculiar construction of the door and the lock operating means leaves no cracks or crevices in which an explosive might be placed, and said door and lock operating devices are provided with shoulders on their outer end to prevent their being forced inwardly by pounding, and there

are no projections on said parts on which to fix drills and similar tools.

The locking devices shown in Fig. 2 of the drawings are not claimed in this application, but are claimed in an application filed by me February 28, 1907, Serial No. 359,785.

I claim:—

1. The combination with a safe having an opening therein, of a door constructed to screw into said opening, lugs integral with the front face of said door, and a handle detachably mounted on said lugs for manipulating said door; substantially as described.

2. The combination with a safe, having an opening therein, of a door constructed to screw into said opening, means whereby said door is locked to the safe, lugs integral with the exterior of the door, and a flat spring handle adapted to be positioned on the front of the door and provided with apertures to receive the lugs; substantially as described.

In testimony whereof, I have signed my name to this specification, in presence of two subscribing witnesses.

JAMES M. ALLEN.

Witnesses:

M. P. SMITH,
E. L. WALLACE.