

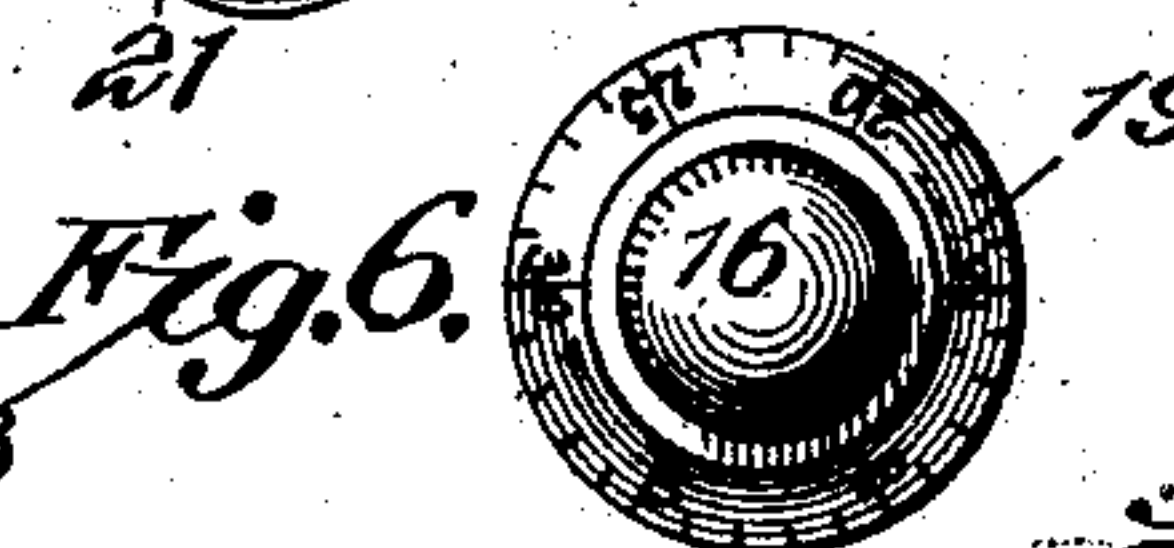
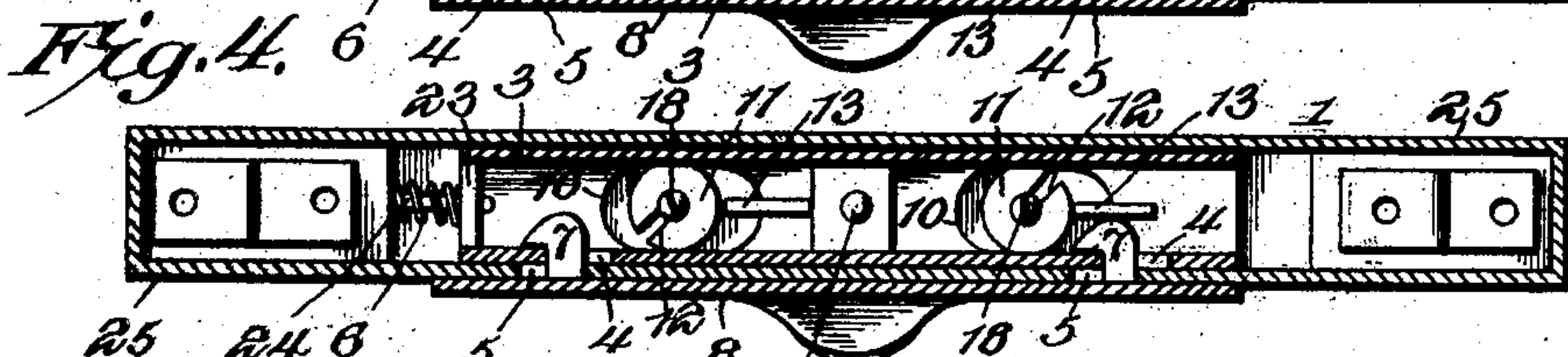
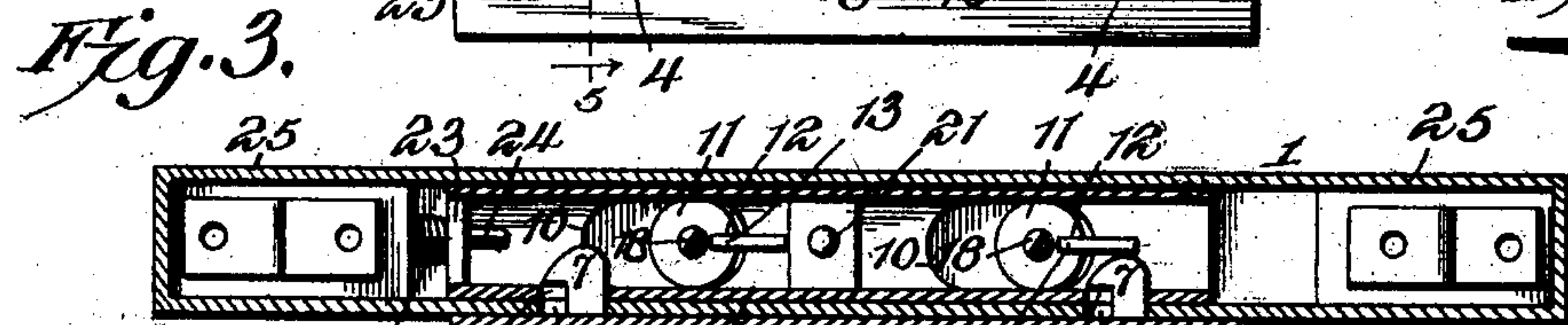
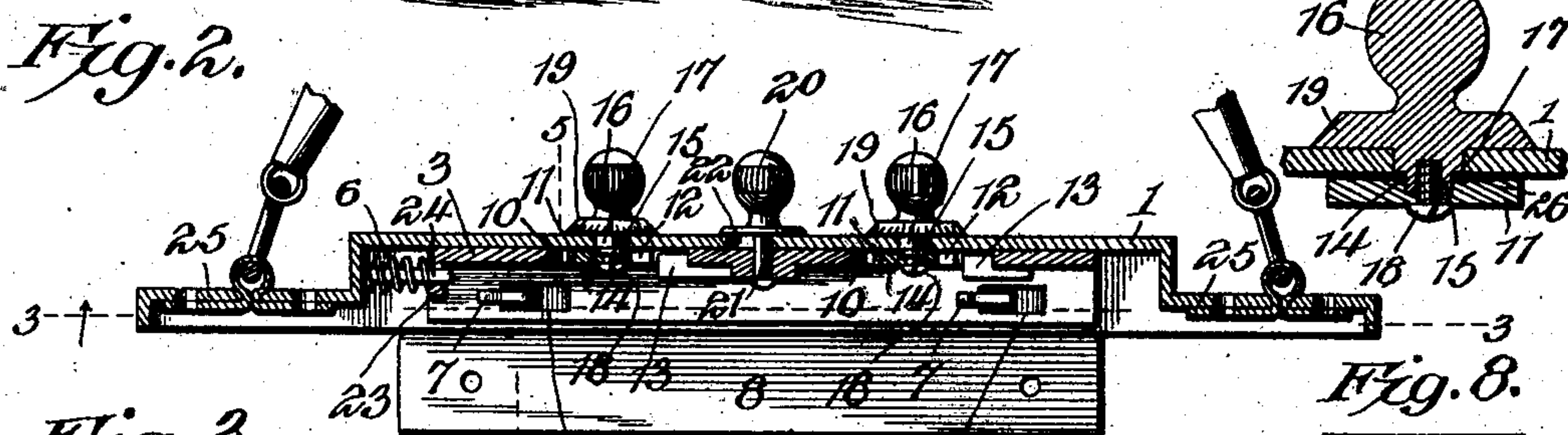
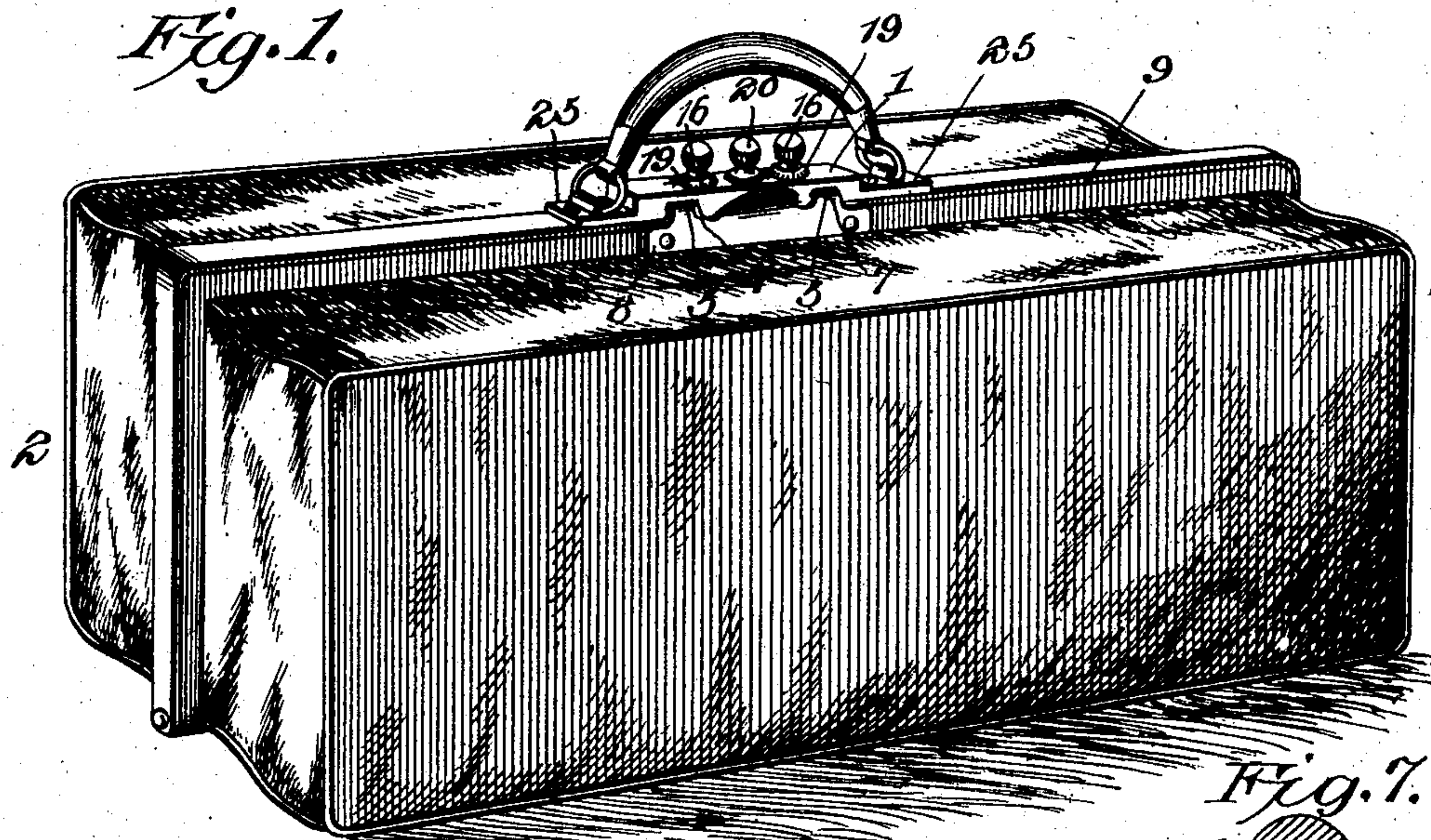
No. 741,639.

PATENTED OCT. 20, 1903.

N. S. EMERT.
PERMUTATION LOCK FOR VALISES, &c.

APPLICATION FILED MAR. 4, 1903.

NO MODEL.



Witnesses
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PERMUTATION-LOCK FOR VALISES, &c.

SPECIFICATION forming part of Letters Patent No. 741,639, dated October 20, 1903.

Application filed March 4, 1903. Serial No. 146,126. (No model.)

To all whom it may concern:

Be it known that I, NILS S. EMERT, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented a new and useful Permutation-Lock for Valises, Bags, &c., of which the following is a specification.

The invention relates to improvements in permutation-locks for valises, bags, satchels, and the like.

The object of the present invention is to improve the construction of permutation-locks and to provide a simple, inexpensive, and efficient one of great strength and durability adapted to be readily applied to a valise, bag, satchel, or the like and capable of effectually preventing the same from being surreptitiously opened and capable of being quickly operated by a person in possession of the combination.

The invention also has for its object to provide a permutation-lock of this character adapted when the tumblers are in position to permit the slide or bolt to be reciprocated to operate as a spring-catch for holding the sides of a valise, bag, or satchel in their closed position.

With these and other objects in view the invention consists in the construction and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the claims hereto appended, it being understood that changes in the form, proportion, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a valise provided with a permutation-lock constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the lock. Fig. 3 is a horizontal view on the line 3 3 of Fig. 2, the slots of the tumblers being in alinement to permit the valise to be opened. Fig. 4 is a similar view, the slots of the tumblers being out of alinement. Fig. 5 is a vertical sectional view on the line 5 5 of Fig. 2. Fig. 6 is a detail view of one of the graduated dial buttons or knobs. Fig.

7 is a detail sectional view illustrating the manner of connecting the slotted tumblers to the graduated buttons or knobs. Fig. 8 is a detail view of one of the resilient disks or washers for preventing the tumblers from accidentally rotating.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a channeled lock-casing constructed of suitable metal and designed to be mounted on one side of a valise 2; but it may be applied to satchels, bags, and various other receptacles. The lock-casing, which is rectangular in cross-section, is provided with parallel sides, and it forms a guide for a channeled slide or bolt 3. The channeled slide or bolt is rectangular in cross-section to conform to the configuration of the lock-casing, and it is provided at one side with slots 4, adapted to register with similar slots 5 of the adjacent side or lock-casing and normally held out of register by a spring 6. The slots 5 of the lock-casing are adapted to receive hooks 7 of a hasp-plate 8, and the latter is mounted on one side of the valise 2, as clearly shown in Fig. 1. The hasp-plate and the lock-casing are secured to the sides or members of the metal frame 9 of the valise, and the spring-actuated slide or bolt is adapted to be automatically engaged by the hooks 7 when the valise is closed, the hooks 7 being beveled, as shown, to permit them to reciprocate the slide or bolt against the action of the spring 6.

The slide or bolt is provided at its top with slots or openings 10, in which are arranged rotary tumblers 11, mounted on the lower face of the top of the lock-casing and provided with slots 12, adapted to be brought into register to receive projections or flanges 13 of the slide or bolt. The projections or flanges of the slide or bolt are disposed longitudinally thereof, and when the slots of the tumblers are arranged in alinement, as illustrated in Fig. 3 of the drawings, the bolt or slide is adapted to be reciprocated to bring the slots 4 and 5 into register to permit the hooks of the hasp-plate to be removed from the lock-casing. When the valise is closed,

the slots are turned out of register, as illustrated in Fig. 4 of the drawings. The solid portions of the tumblers are located in the path of the lugs or projections of the slide or bolt, and the latter is locked in engagement with the hooks of the hasp-plate. The projections or flanges 13 may be formed integral with the slide or bolt, or they may be secured to the same in any desired manner.

Each slotted tongue is provided with a central polygonal recess 14 to receive a polygonal portion 15 of a graduated dial button or knob 16, which is also provided with an annular bearing portion 17, fitting in an opening of the top of the lock-casing. The stem of the dial button or knob is provided with a threaded socket for the reception of a screw 18, which passes through a perforation at the bottom of the recess of the tumbler. By this construction the tumbler is adapted to be readily removed to change the combination. The knob or button 16 is provided with a knurled or corrugated portion to enable it to be readily rotated, and it has an annular flange 19, provided with graduations and numbers, as clearly shown in Fig. 6. Any suitable characters may be employed in connection with the graduations, and a suitable point or indicator is arranged on the exterior of the lock-casing adjacent to each of the graduated buttons or knobs to coöperate with the said graduations. A centrally-arranged knob or button 20 is connected with the slide or bolt by means of a stem 21, extending through a slot 22 of the top of the lock-casing and suitably secured to the slide or bolt, as clearly shown in Fig. 2. The slide or bolt is preferably provided with a central enlargement or boss at the point where the stem of the central knob or button is attached; but the bolt or slide may be strengthened by a separate piece, as will be readily understood. The central knob or button, which may be either smooth or knurled, is adapted to be readily grasped to reciprocate the slide or bolt.

The slide or bolt is provided at one end with a perforated flange 23, receiving a guide-pin 24, on which the spring 6 is mounted, and the said spring is interposed between the perforated flange 23 and the adjacent end wall of the lock-casing. The lock-casing is preferably provided with reduced extensions 25, receiving the ends of a suitable grip or handle and secured by suitable fastening devices to the valise.

The graduated buttons or knobs are adapted to be readily rotated to arrange the slots of the tumblers in alinement, and when the slots of the tumblers are thrown out of alinement it will be impossible for any one not knowing the combination to open the lock.

In order to prevent the tumblers from accidentally rotating, a resilient disk 26 is interposed between each of the tumblers and the top of the lock-casing, as clearly illustrated

in Figs. 7 and 8 of the accompanying drawings. The resilient disk 26, which is provided with a central opening to receive the stem of the dial button or knob, is substantially concavo-convex and is flattened when applied in position. Sufficient friction is thereby created to prevent the dial button or knob from accidentally rotating.

What I claim is—

1. A lock of the class described comprising a casing provided at one side with a slot or opening to receive the engaging portion of a hasp, a spring-actuated slide or bolt mounted for reciprocation in the casing, a series of tumblers arranged to engage and release the slide or bolt, graduated exteriorly-arranged operating means connected with the tumblers, and an exteriorly-arranged knob rigid with the slide or bolt and arranged in alinement with the said operating means, substantially as described.

2. A lock of the class described comprising a casing provided at one side with an opening to receive the engaging portion of a hasp, a spring-actuated slide or bolt having an engaging portion located adjacent to the said opening, tumblers arranged to engage and release the slide or bolt, exterior graduated buttons connected with the tumblers, and an exteriorly-arranged button disposed in alinement with the graduated buttons and connected with the slide or bolt for moving the same against the action of the spring, substantially as described.

3. A lock of the class described comprising a casing provided at one side with an opening, a reciprocating slide or bolt arranged within the casing, a spring for actuating the slide or bolt, projections carried by the slide or bolt, a plurality of slotted tumblers arranged in the path of the projections, and exteriorly-arranged means for rotating the tumblers and for moving the slide or bolt against the action of the spring, said means consisting of a series of buttons presenting substantially the same appearance, one of the buttons being held against rotation, substantially as described.

4. A lock of the class described comprising a casing, a channeled slide or bolt guided in the casing, and provided at one end with a perforated flange, a spring engaging one end of the slide or bolt, a pin fixed to the casing and extending from one end of the same through the perforated flange and supporting the spring, a plurality of tumblers arranged in the path of the slide or bolt and means for operating the tumblers, substantially as described.

5. A lock of the class described comprising a casing having lateral openings and provided at the top with a slot, a reciprocating slide or bolt provided at one side with engaging portions and having top openings, projections extending from the slide or bolt at the top openings thereof, slotted tumblers

mounted on the top of the casing in the open-
ings of the slide or bolt, knobs or buttons
connected with the tumblers, and a knob or
button having a stem extending through the
5 slot of the casing and connected with the slide
or bolt, substantially as described.

In testimony that I claim the foregoing as

my own I have hereto affixed my signature in
the presence of two witnesses.

NILS S. EMERT.

Witnesses:

F. W. WHITNEY,
L. S. YOUNG.