

No. 627,361.

Patented June 20, 1899.

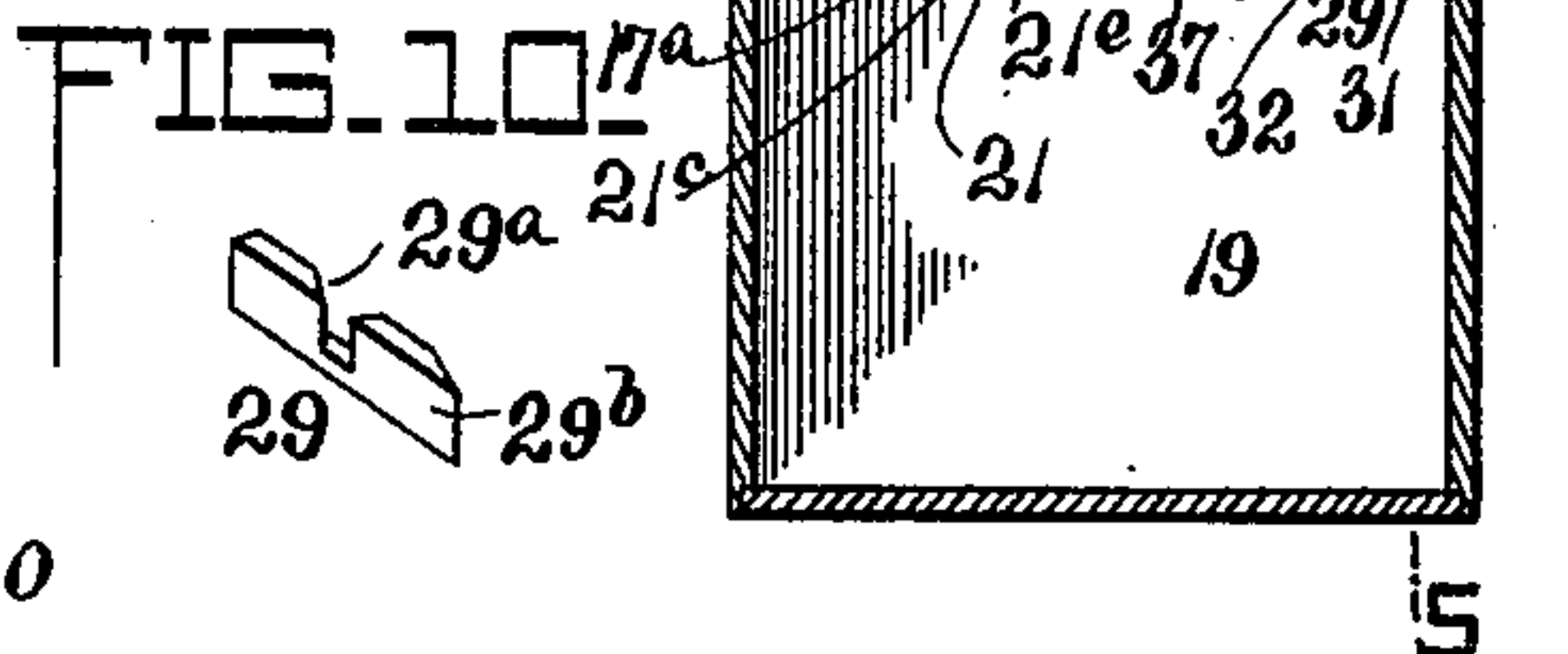
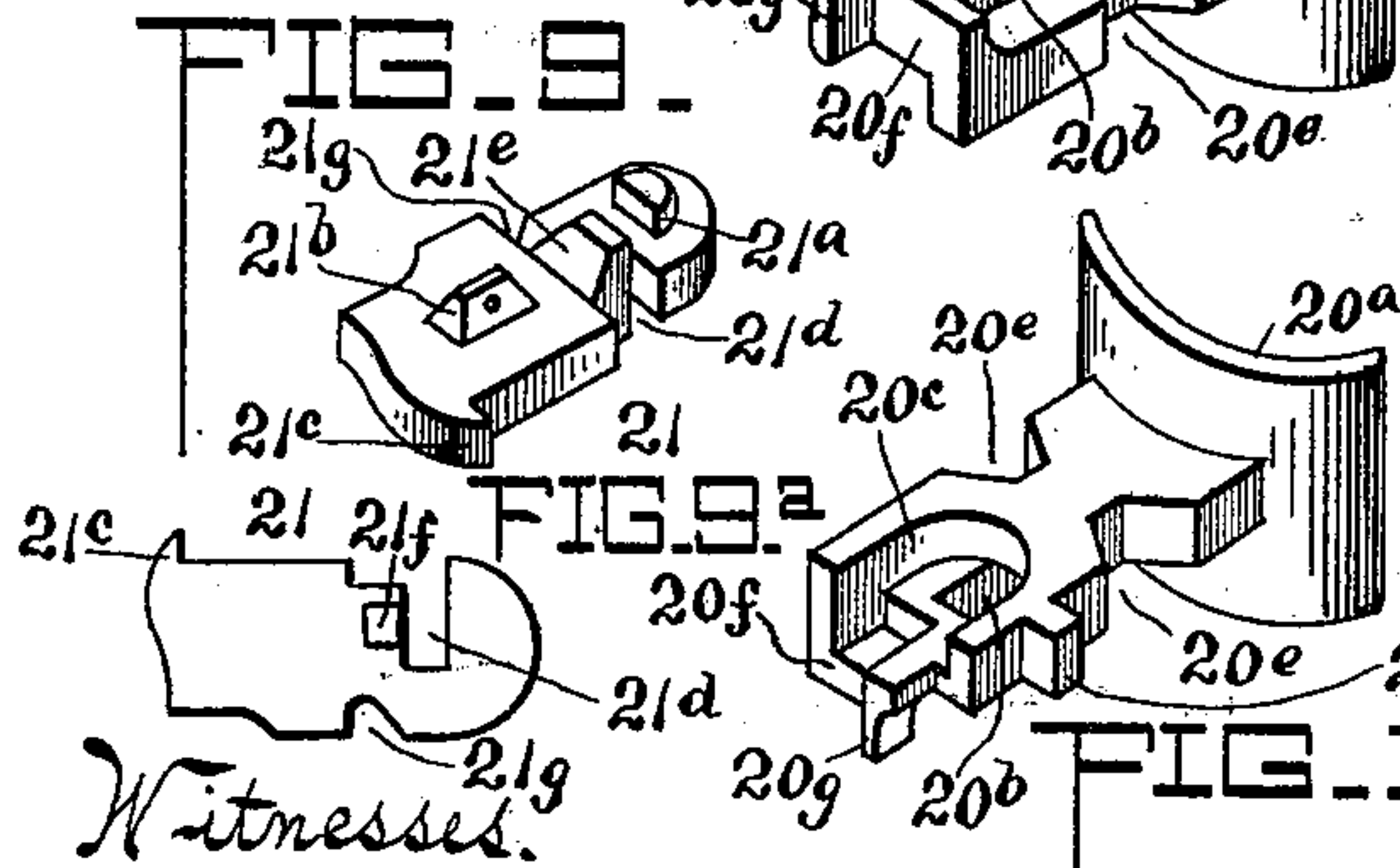
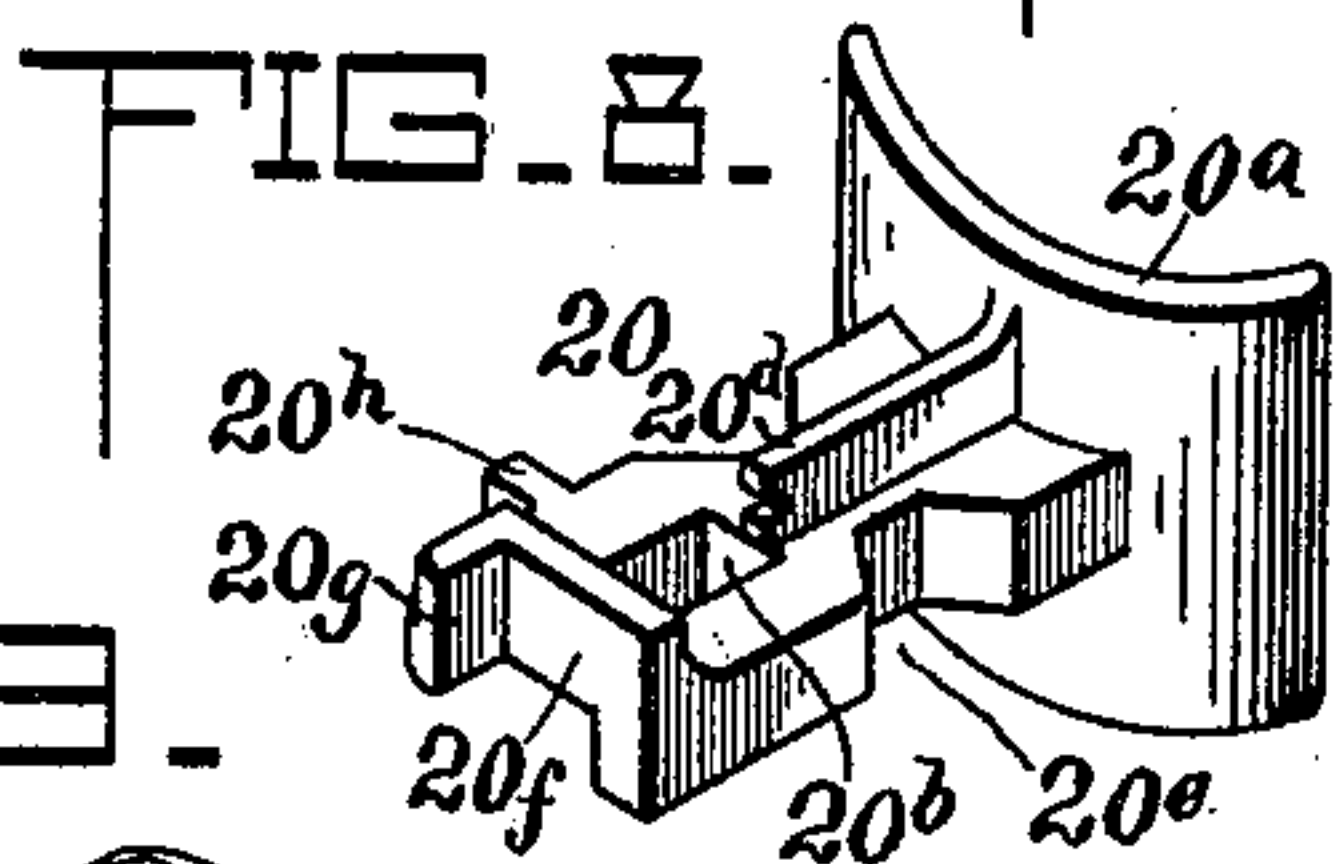
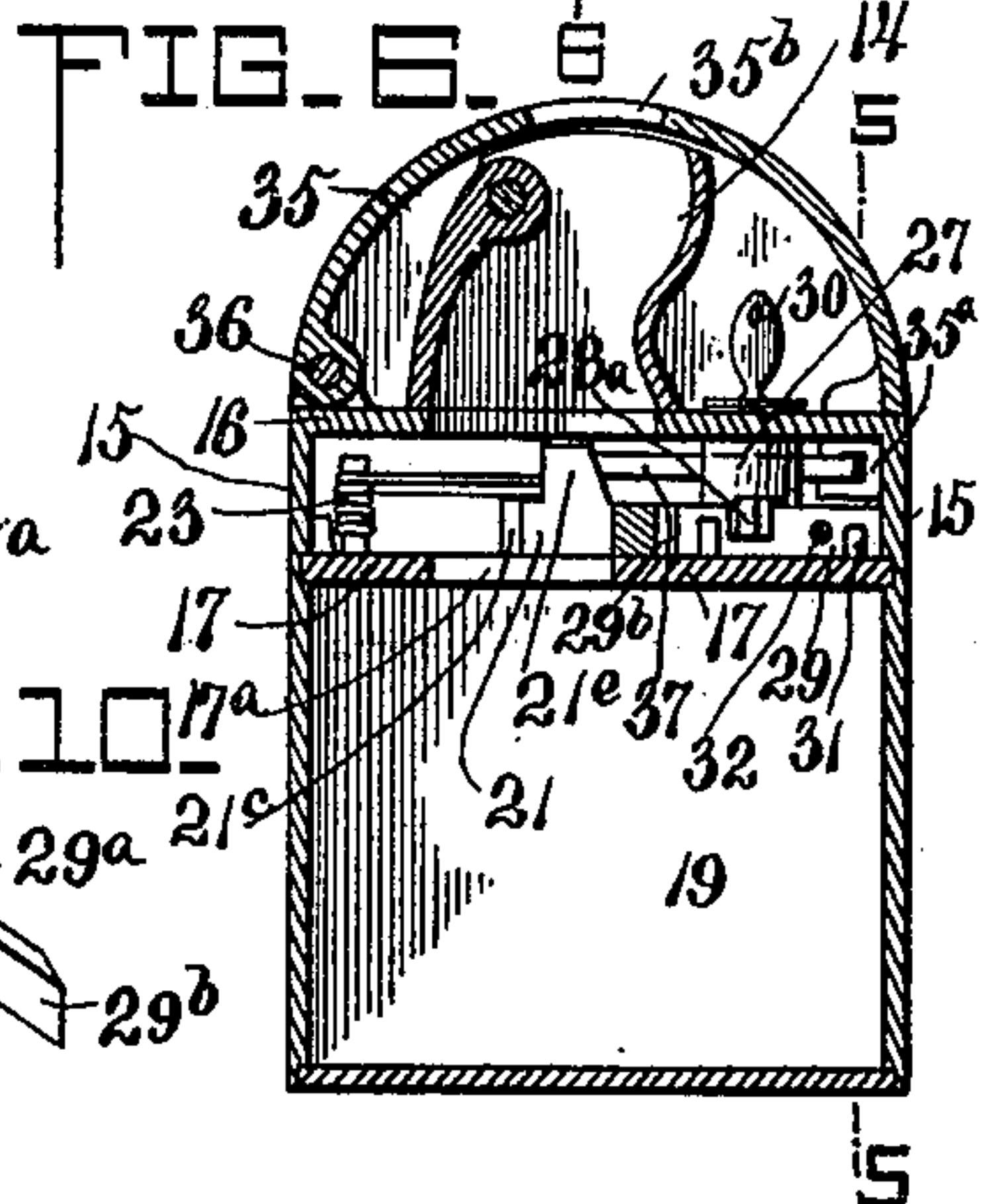
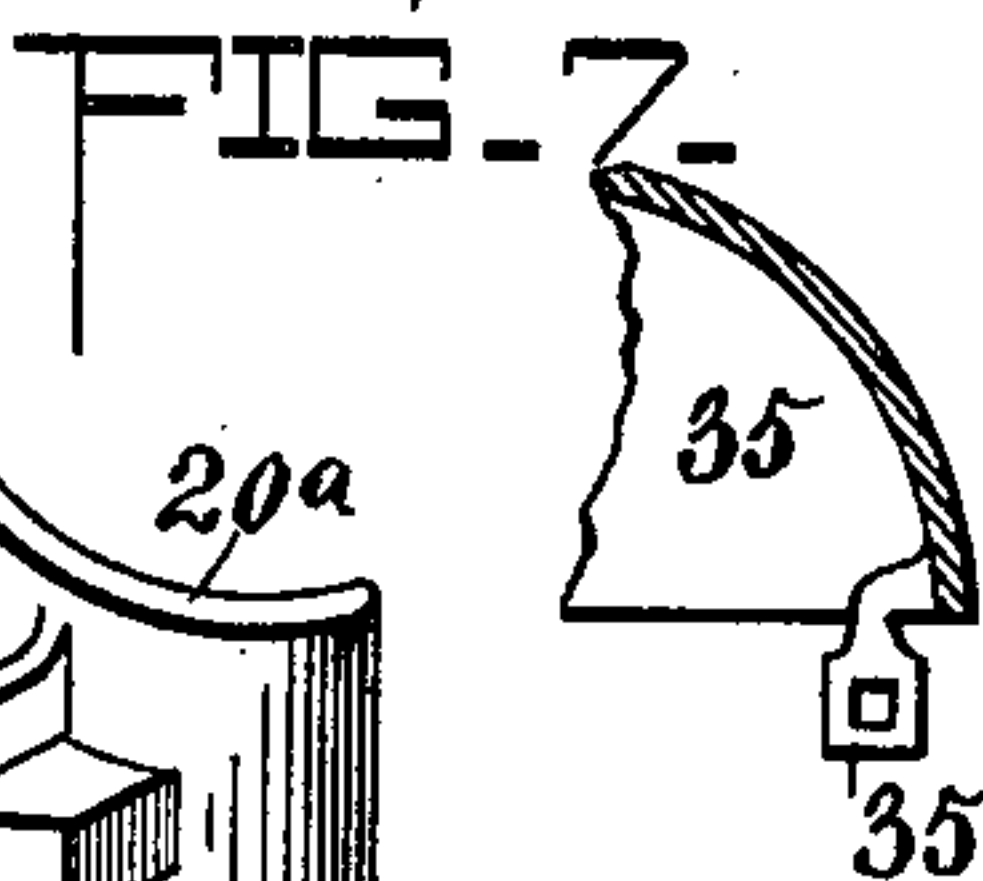
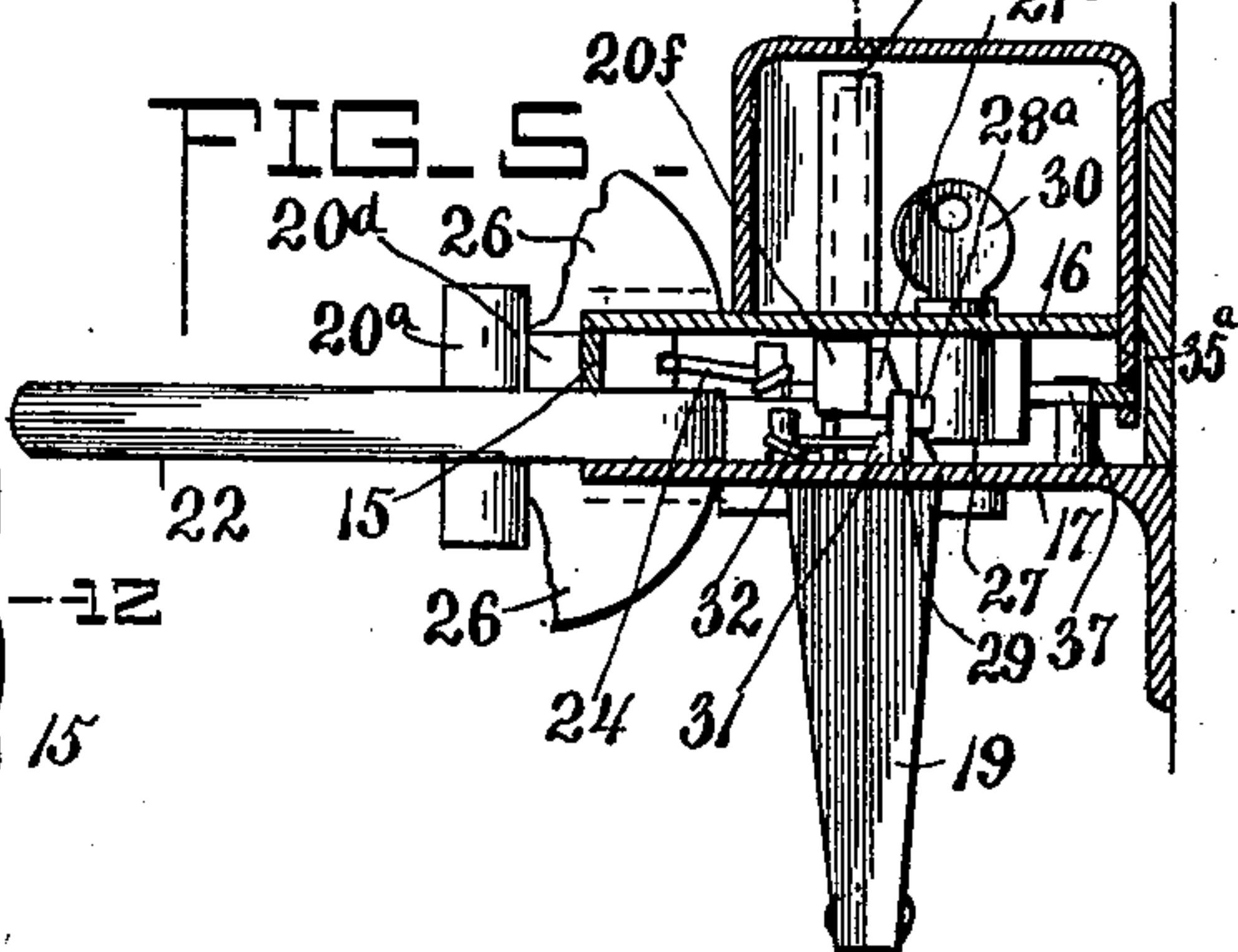
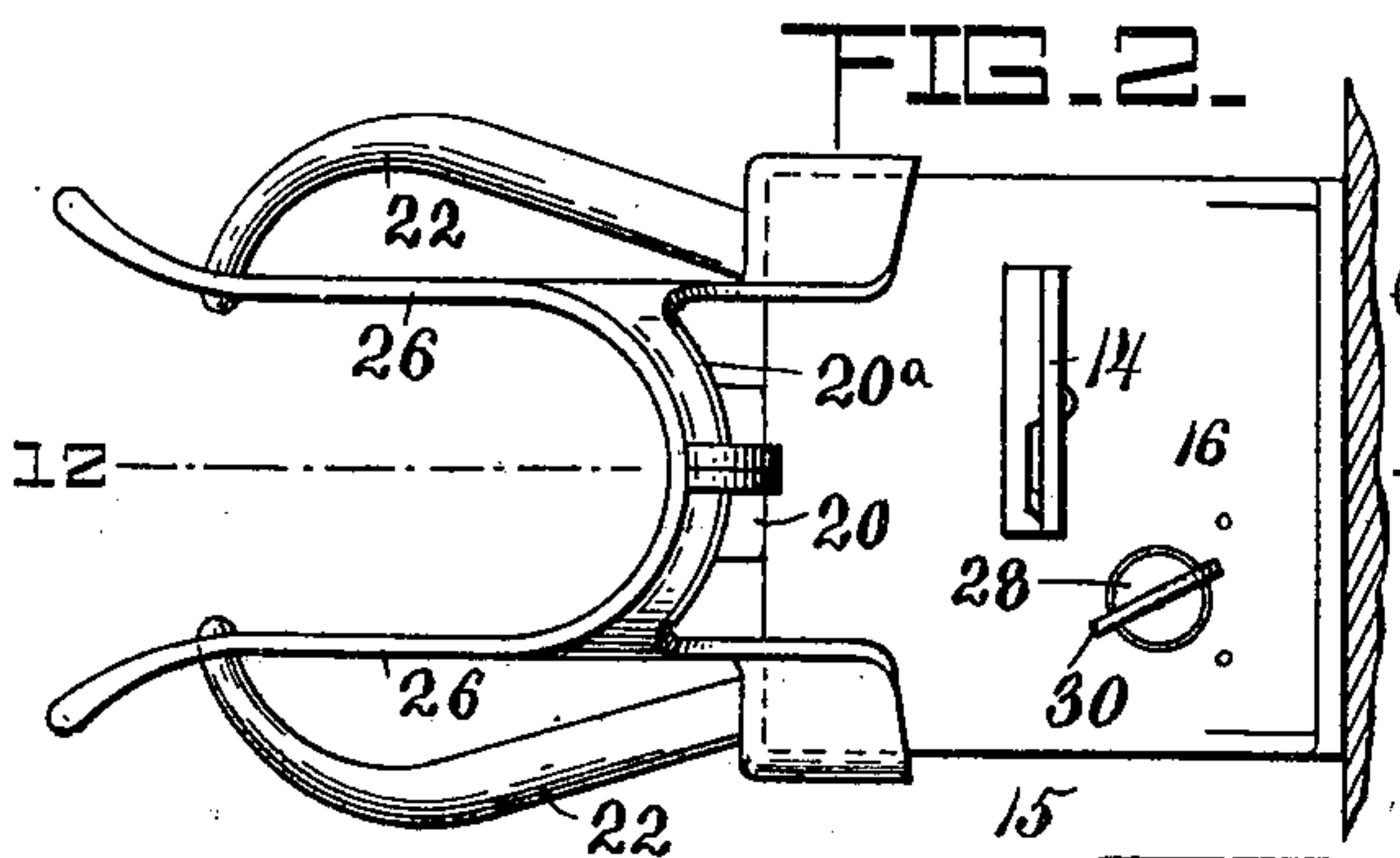
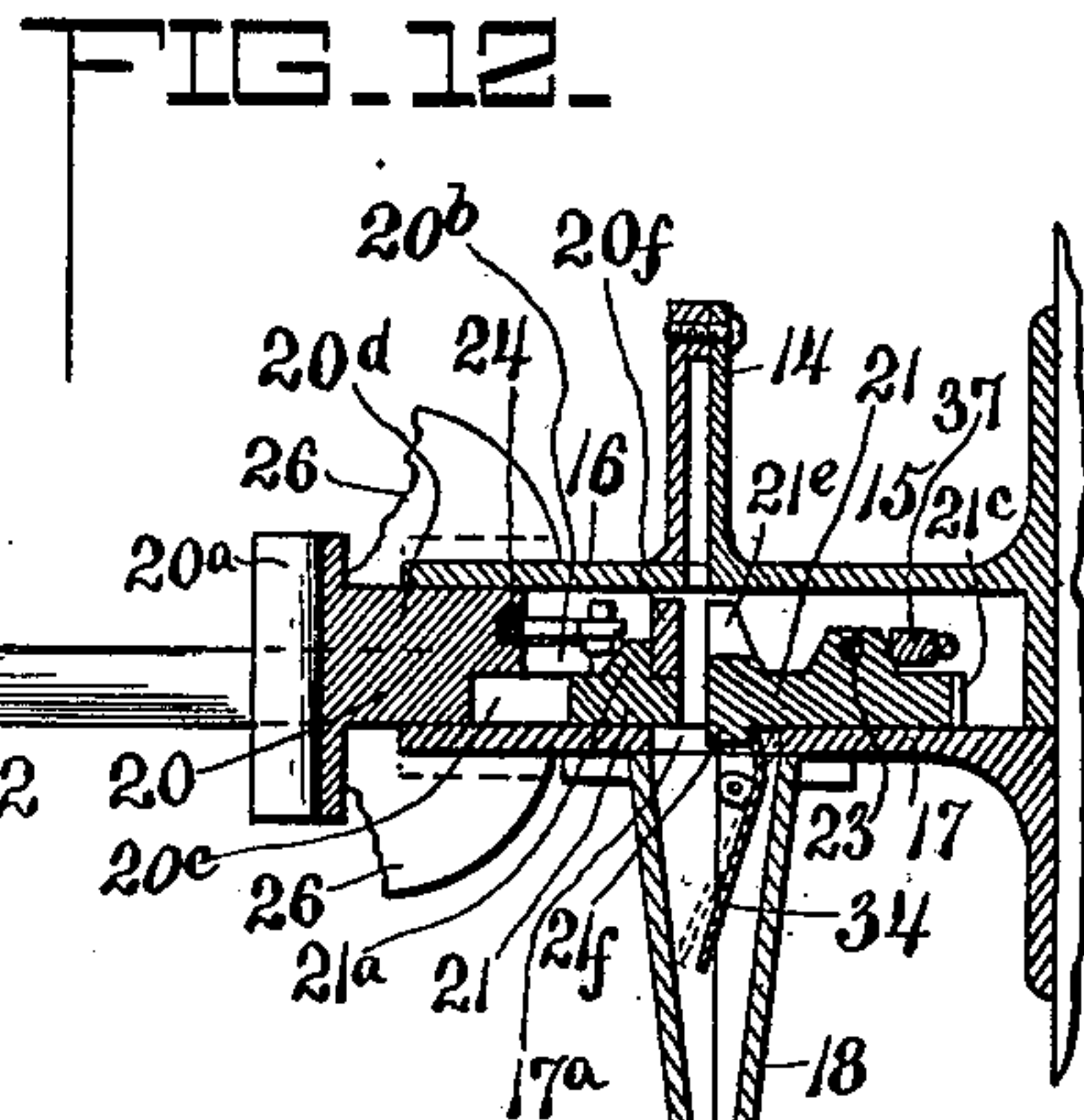
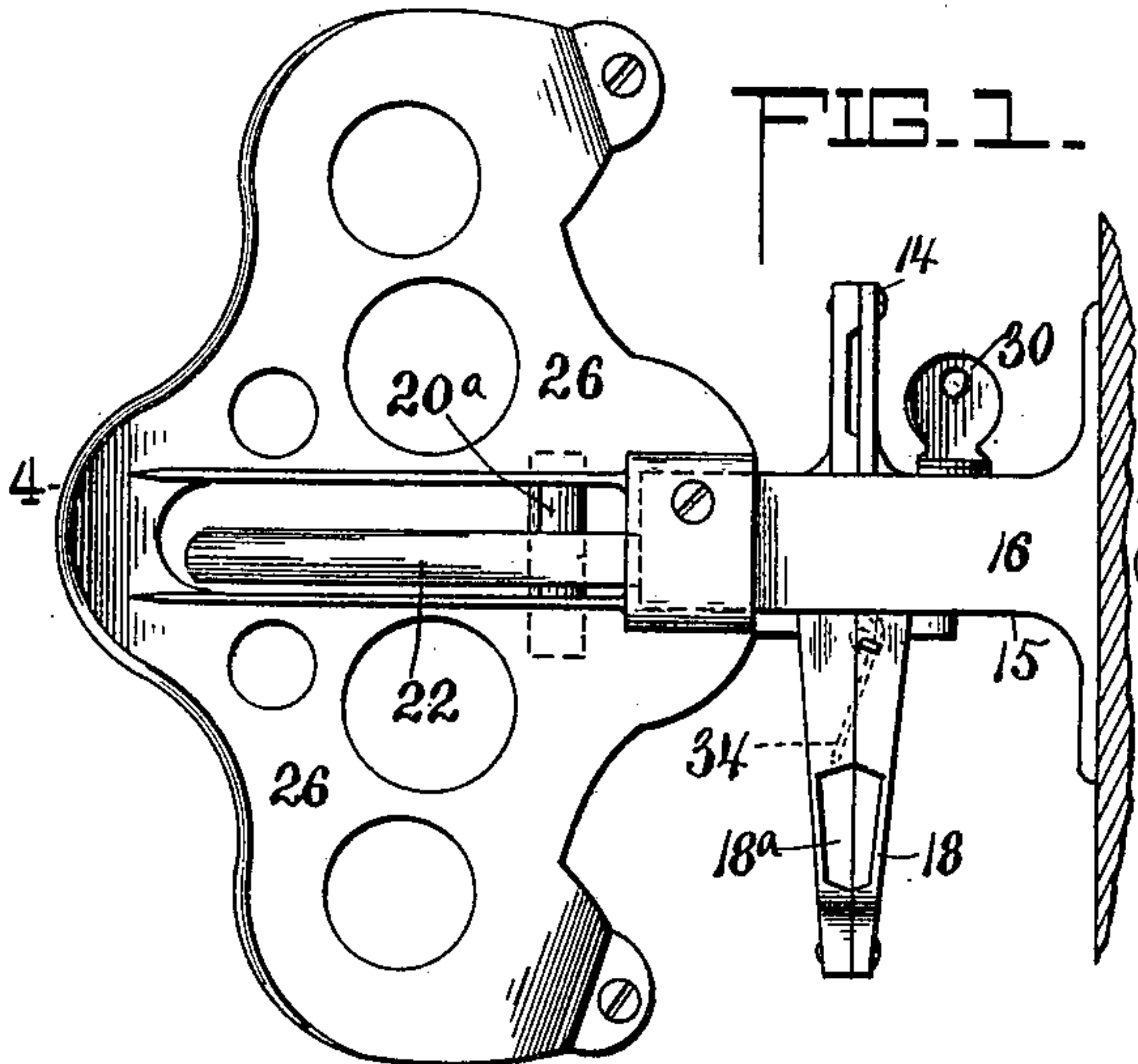
W. T. SUMMERS.

COIN CONTROLLED HOLDING AND LOCKING DEVICE.

(Application filed Feb. 28, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses.

W. E. Allen.
Walter Allen

Inventor.
William T. Summers.
By Knight Bros.
Attys.

No. 627,361.

Patented June 20, 1899.

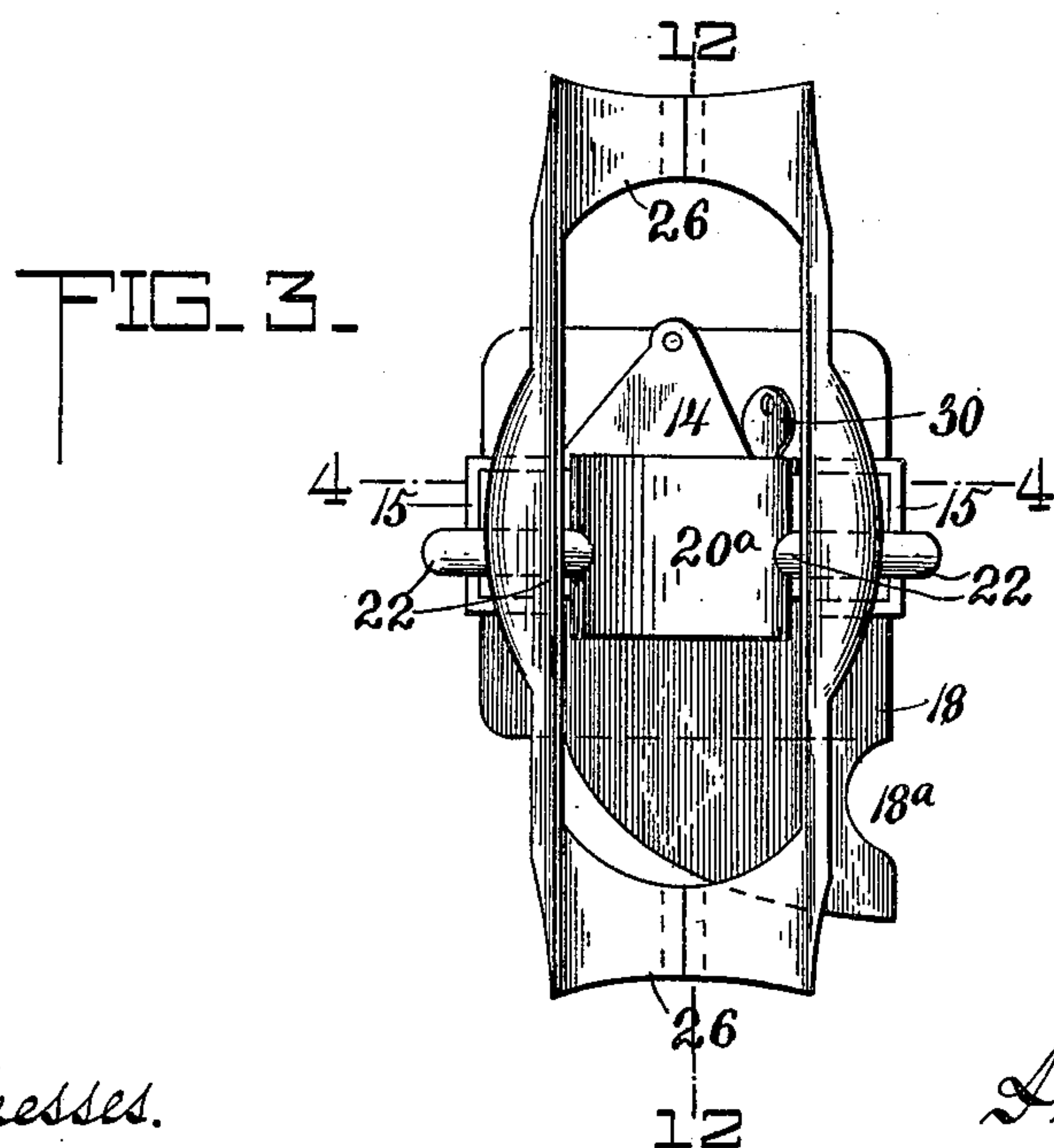
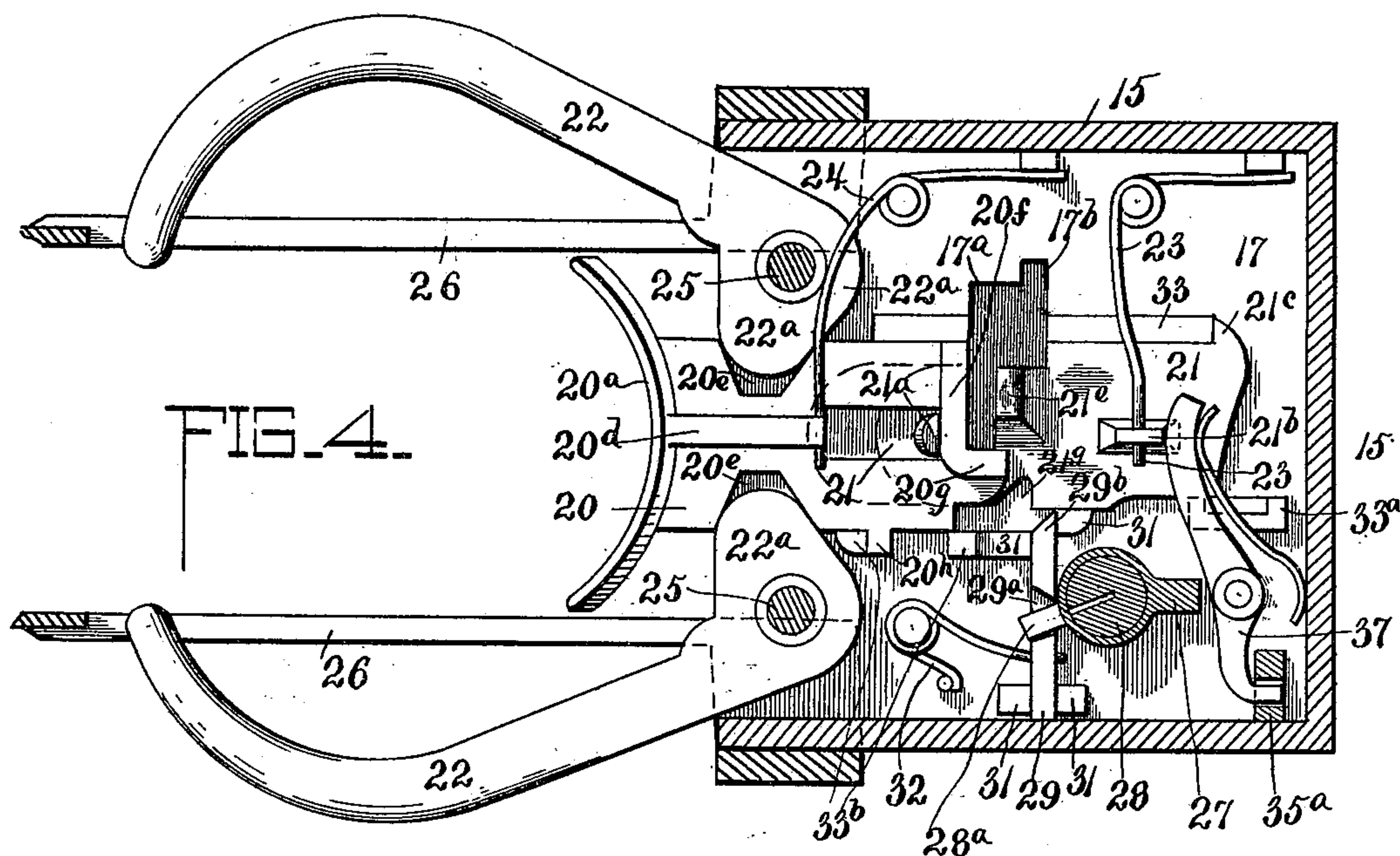
W. T. SUMMERS.

COIN CONTROLLED HOLDING AND LOCKING DEVICE.

(Application filed Feb. 28, 1898.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses.
W. E. Allen.
Walter Allen

Inventor.
William T. Summers.
By Knight & Co.
Attys.

UNITED STATES PATENT OFFICE.

WILLIAM T. SUMMERS, OF ST. PAUL, MINNESOTA, ASSIGNOR TO THE SUMMERS MANUFACTURING COMPANY, OF COLUMBUS, OHIO.

COIN-CONTROLLED HOLDING AND LOCKING DEVICE.

SPECIFICATION forming part of Letters Patent No. 627,361, dated June 20, 1899.

Application filed February 28, 1898. Serial No. 672,086. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. SUMMERS, a citizen of the United States, and a resident of the city of St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Coin-Controlled Holding and Locking Devices, of which the following is a specification.

My invention relates to improvements in those coin or check controlled holding and locking devices which are provided with a pair of pivoted arms or jaws for embracing or encircling an object, with an actuating-plunger through the medium of which the arms or jaws are operated, and with a lock and a key whereby the plunger is secured in its inner position and released.

My improvement comprises a device for guiding the object into position, a device for embracing or encircling the object, a device for closing and opening the embracing or encircling device and utilizing a coin, check, or the like in rendering it operative, a device for receiving and delivering or depositing the coin, check, or the like, a device for locking and releasing the closing and opening device, a device for retaining the coin, check, or the like until the closing and opening device is released, and a device for concealing the lock and protecting the key until the coin, check, or the like is inserted and the closing and opening device is actuated.

My invention consists in novel features of construction, as hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved coin-controlled holding and locking device, the cover for the lock and key being omitted. Fig. 2 is a plan view thereof. Fig. 3 is a front elevation of the same. Fig. 4 is a horizontal section, on a larger scale, on the line 4 4, Figs. 1 and 3. Fig. 5 is a vertical longitudinal section on the line 5 5, Fig. 6, and showing the cover for the lock and key. Fig. 6 is a vertical transverse section on the line 6 6, Fig. 5. Fig. 7 is a vertical transverse section of a corner of the cover, showing the keeper.

Fig. 8 is a perspective view of the outer member of the two-part actuating-plunger looking at the inner end thereof. Fig. 9 is a perspective view of the inner member of the two-part actuating-plunger looking at the upper side thereof from the inner end. Fig. 9^a is a bottom view thereof. Fig. 10 is a perspective view of the lock-bolt looking at the lock side thereof. Fig. 11 is a perspective view of the outer member of the two-part actuating-plunger inverted and looking at the inner end thereof. Fig. 12 is a vertical longitudinal section of the holding and locking device on the line 12 12, Fig. 2, the cover for the lock and key being omitted.

15 represents the casing containing the locking mechanism, having a top plate 16 and a bottom plate 17. The top plate is surmounted by a receiving chute, duct, or conduit 14 for a coin, check, or the like, and the bottom plate supports a discharge-chute 18, which is suspended therefrom and has an opening 18^a, through which the coin is delivered to the user after being utilized to render the actuating-plunger operative; or if the coin is to be retained for the owner of the device I employ a suitable receptacle 19, in which the coin is deposited. The bottom plate 17 is formed with an opening 17^a, in which the coin is supported beneath the receiving-chute, and with a side extension 17^b to the opening, through which the coin falls when pushed sidewise thereover. The actuating-plunger is formed of two members—an outer member 20, extending through the casing and having a bearing-plate 20^a, and an inner member 21. The inner member 21 is adapted to slide between ways or guides 33 and 33^a on the bottom plate 17 of the casing and is formed with a vertical lug 21^a, which extends into a longitudinal slot 20^b in the outer member 20, so as to permit a limited relative movement between these members while bringing the one under the control of the other, in the sense that the inner member 21 when locked, as hereinafter explained, will hold the outer member 20 inward sufficiently to prevent the retaining or encircling arms or jaws 22 from opening to release the article which has been inserted. The outer member is formed with a cavity 20^c, fitting over the adjacent end of

the inner member 21, the slot 20^b being formed above this cavity, so that the outer member is adapted to slide freely for a distance over the inner member, being guided and limited in this movement by the coacting lug 21^a and the slot 20^b already referred to. The inner member 21 is held normally in its forward position by a spring 23 engaging in a lug 21^b, while said movement is restricted by a lip 21^c coming against the end of the way or guide 33, which acts as a stop. The outer member is likewise held in its forward position by a spring 24, engaging a ridge 20^d; but as the inner member cannot move forward as far as the outer member, by reason of the lip 21^c, the two members will normally retain separated positions. The bearing-plate is concave, so as to conform to the rim or tire of a wheel or other object to be secured. The retaining-arms 22 are curved and pivoted by pins 25 within the casing and are each formed with an inward projection 22^a, engaging in cavities 20^e in the sides of the outer member of the actuating-plunger. When the outer member is in its forward position, the arms will be open; but when the outer member is pushed in the outer sides of the cavities, acting on the projections 22^a, will close the arms. Thus it will be understood that if the felly of a wheel of a vehicle or the rim or tire of a riding-wheel be pressed against the concave bearing-plate 20^a the outer member 20 of the actuating-plunger will be pushed inward, and this inward movement will throw the arms together and cause them to enclasp and hold the object inserted.

26 are cheek-plates attached to the casing to provide a guide to the article introduced to the holding and locking device and in the case of a riding-wheel will serve to support the same laterally.

21^d is a recess in the inner member 21 of the actuating-plunger registering with the opening 17^a in the bottom plate 17 of the casing.

21^e is a transverse lug projecting upward from alongside the recess 21^d, while a transverse lug 20^f projects upward from the inner end of the member 20.

20^g is a rearwardly-extending lug located at right angles to the transverse lug 20^f and past the transverse lug 21^e of the inner member. The distance between the lug 20^g and the opposite end of the opening 17^a in the bottom plate is less than the diameter of the coin which is to be employed with the holding and locking device to render the apparatus effective, so that when such coin is dropped down through the chute 14 it will rest between the two lugs 20^f and 21^e and be supported by the lug 20^g and the outer wall of the opening 17^a. The extension 17^b of the opening 17^a permits the coin to escape at the completion of the stroke of the actuating-plunger.

27 is the lock, having a rotatable cylinder 28, provided with a radial arm 28^a, extending into a recess 29^a of a lock-plate 29, the inclined inner end 29^b of the latter projecting

against the side of the inner member 21 of the actuating-plunger. The location of the recess 29^a in the lock-plate 29 is so gaged that the radial arm 28^a will be held off at an angle by the lock-plate 29 when the latter is in its outer position, so that the key 30 will likewise be held at an angle to the casing and be thereby prevented from being removed from the casing so long as the lock-plate 29 is held in its outer position. The lock-plate is guided by lugs 31 on the bottom plate and adapted to enter a recess 21^g in the inner member 21 and is provided with a spring 32 to hold it inward, with its inclined inner end 29^b resting against the side of the inner member 21 when the latter is moved outward.

20^h is a lateral projection on the side of the outer member, moving between stops 33^b on the bottom plate of the casing, to limit the throw of the outer member as well as to assist in guiding it in its movement.

21^f is a pendent lug on the outer part of the inner member, whereby a swinging coin-retaining plate 34 is oscillated to the position shown in dotted lines to arrest the coin as it drops through the opening extension 17^b in the bottom plate and retain it until the actuating-plunger is released, when the coin-retaining plate assumes its normal pendent position and the coin is delivered or deposited.

35 is a cover hinged at one side by a pintle 36 to the top of the casing. The cover is formed with a keeper 35^a, which projects downward into and through the top plate of the casing, where it is adapted to be engaged by a spring trip-lever 37 to lock the cover in its closed position. The cover conceals the lock and key and is provided with a coin-slot 35^b. The trip-lever 37 projects past the inner member 21 of the actuating-lever and is adapted to be thrown backward to release the keeper 35^a when the inner member is actuated.

The casing 15 and its attachments are connected by any suitable means to a post, frame, or other structure.

It will be seen that my holding and locking device is particularly adapted for securing riding-wheels temporarily when not in use and is effective only by the insertion of a coin, check, or the like of a certain predetermined size.

The receptacle for the coin, check, or the like may be of any desired form, either to retain the coin, check, or the like or return it to the depositor or to the user, as the device may be employed in any way desired. One method of using the device requires that the owner of the object to be held shall deposit a coin temporarily while the key is in the possession of the user, which for the time being becomes the user's check for the object, and the user receives the coin back again when the key is returned and inserted in the lock to release the object.

Another method of using the device is to deposit the coin in payment for the care of the object.

The cover 35 is preferably provided with a spring to hold it normally closed and to automatically close it when released after the key is inserted to release the object.

5 The operation of the device is as follows: When arranged, as shown, with the arms 22 open, the key 30 is held irremovable. If a riding-wheel be inserted without first dropping a coin, check, or the like into the receiving-chute, the outer member 20 will be moved inward and its inner end will slide over the adjacent end of the member 21, but without moving the latter. The arms 22 will be thrown together around the rim and tire; but the 10 spring 24 will throw the outer member 20 and the arms 22 out again when the pressure of the operator is removed from the wheel. Thus it will be understood that the wheel will not be locked or the key or cover released if a 20 coin, check, or the like is not inserted. If, however, a coin, check, or the like be introduced before the wheel is inserted, it will drop down into its place between the lugs 20^f and 21^e and rest upon the outer wall of the opening 17^a and against the lug 20^g and provide 25 an engaging piece or a "coupling" between the members 20 and 21, so that when the bearing-plate 20^a is moved inward by the pressure of the operator on the wheel the inner member 21 will be carried along by the outer member 20 until the recess 21^h of the inner member 21 passes the end 29^b of the lock-plate 29, 30 when the latter will be thrown inward by the spring 32 and cause the end 29^b to engage in the recess 21^h and "lock" the inner member 21 in its inward position, the lug 21^a likewise locking the outer member 20 and preventing 35 its return forward and likewise also holding the arms 22 in their closed position enclapsed around the rim and tire of the wheel. At the same time the lug 21^b engages the latch-lever 37 and withdraws it from its keeper 35^a and releases the cover 35. Thus the insertion of the coin, check, or the like causes the "locking" mechanism to become effective, and it 40 is not effective unless a coin, check, or the like is inserted. The inward movement of the lock-plate carries the arm 28^a of the lock-cylinder 28 around with it, and thus turns the lock-cylinder 28 with it and releases the 50 key 30, which the owner of the wheel will retain as a check for the release of the wheel.

When the wheel is to be released, it is only necessary to raise the cover 35 and insert the 55 key 30 and turn it slightly, thereby causing the arm 28^a to draw the lock-plate 29 out of the recess 21^h and permit the springs 23 and 24 to throw the actuating-plunger forward and the arms 22 outward. This action again locks 60 the key 30 in the lock 27, so that it cannot be again removed until another coin, check, or the like is inserted, and at the same time releasing the coin, check, or the like, which drops through the discharge-chute 18 or into 65 the receptacle 19, as the case may be.

Having thus described my invention, the

following is what I claim as new therein and desire to secure by Letters Patent:

1. A coin-controlled holding and locking device comprising arms adapted to embrace 70 or enclose an object, a two-part plunger adapted to close and open the arms and having its members normally spaced apart and adapted to be coupled by a coin, check or the like which provides an engaging piece, to render 75 the device operative, a receiving-chute for guiding the coin, check, or the like in place between the members of the plunger, a casing having an opening in which the coin, check, or the like is supported and an extension 80 to the opening through which the coin, check or the like is dropped when the plunger is actuated, a locking mechanism released by the plunger, and a cover concealing the locking mechanism until the coin, check or 85 the like is inserted and the plunger is actuated; substantially as described.

2. A coin-controlled holding and locking device comprising arms adapted to embrace 90 or enclose an object, a two-part plunger adapted to close and open the arms and having its members normally spaced apart and adapted to be coupled by a coin, check, or the like which provides an engaging piece to render 95 the device operative, a casing having an opening in which the coin, check or the like is supported and an extension to the opening through which the coin, check, or the like is dropped when the plunger is actuated, a locking 100 mechanism released by the plunger, and means for retaining the coin, check, or the like until the plunger is released; substantially as described.

3. A coin-controlled holding and locking device comprising means for retaining an article 105 inserted, an actuating-plunger controlling said retaining means, and locking mechanism engaging and also controlled by the actuating-plunger; said actuating-plunger being formed of two members effective to lock 110 the locking mechanism only when a coin, check or the like, is introduced between the members, substantially as herein explained.

4. A coin-controlled holding and locking device comprising means for retaining an article 115 inserted, an actuating-plunger controlling said retaining means and movable under pressure of the article inserted, and a locking mechanism engaging said actuating-plunger when the latter is moved to locked position; said actuating-plunger consisting of two 120 abutting members having their ends formed to receive a coin, check, or the like between them, and one of said members being movable into locked position by the other member only through the medium of the interposed coin, check, or the like, substantially 125 as herein explained.

5. A coin-controlled holding and locking device comprising means for retaining an article 130 inserted, an actuating-plunger controlling said retaining means, consisting of two

members one of which is moved by the insertion of the article and the other of which is moved by the member first named when a coin, check or the like is inserted between the members, and a key-operated locking mechanism engaging the member last named when it is moved through the medium of said coin, check or the like; the key controlling the locking mechanism and released by the movement of said locking mechanism into engagement with the actuating-plunger; substantially as and for the purposes set forth.

6. A coin-controlled holding and locking device comprising retaining means, the two-part actuating-plunger for controlling said retaining means, moved by the insertion of the article, a locking mechanism controlled by said actuating-plunger only when a coin is present, and adapted to be operated by a key which is released by the movement of the locking mechanism to locked position, and a coin-retaining means which drops the coin by the movement of the actuating-plunger to unlocked position after it is released through the insertion of the key; whereby the key is released only by insertion of the coin and the coin is released by the return of the key; substantially in the manner explained.

7. A coin-controlled holding and locking device comprising retaining means, a two-part actuating-plunger controlling the retaining means and constructed for coöperation through an interposed coin, key-operated locking mechanism for said actuating-plunger which is actuated only by the thrust of the actuating-plunger through the medium of the coin, a cover for the key, and a locking device for the cover also released by the thrust of the actuating-plunger through the medium of the coin; substantially in the manner and for the purposes set forth.

8. A coin-controlled holding and locking device comprising retaining means, the actuating-plunger controlling the retaining means and comprising two abutting members having an opening between them to receive a coin through the medium of which the inner member may be actuated by the outer member, a key-operated locking device engaging the inner member of the actuating-plunger, a cover for said key, and a locking-catch for said cover which is engaged by the inner member of the actuating-plunger and released by the movement of the latter to locked position; substantially as set forth.

9. A coin-controlled holding and locking device comprising retaining means, the actu-

ating-plunger comprising two members having overlapping ends and formed with abutting projections spaced apart to receive a coin between them, and suitable key-operated locking mechanism moving into engagement with the inner member of the said actuating-plunger when the latter is moved to locked position by the outer member through the medium of the coin; substantially as set forth.

10. A coin-controlled holding and locking device comprising retaining means, a coin-chute, an actuating-plunger controlling the retaining means and comprising two members having ends abutting in proximity to said chute, a bottom which intercepts the passage from the chute, and suitable locking mechanism for the actuating-plunger, the bottom being provided with an opening over which the coin is moved as the actuating-plunger reaches locked position and which permits the escape of the coin from the actuating-plunger; substantially as explained.

11. A coin-controlled holding and locking device comprising an actuating-plunger engaged by the introduction of the article to be locked, and comprising two members formed with abutting ends and having a limited relative movement, and a locking mechanism engaging the inner member when moved to locked position, retaining-arms engaged by the outer member, a coin-chute located above the abutting ends of the members of the actuating-plunger and independent springs for forcing the respective members of the actuating-plunger outward; substantially in the manner and for the purposes set forth.

12. A coin-controlled holding and locking device comprising the two-part actuating-plunger formed with two members having overlapping and abutting ends which engage by means of a projection on one member and a slot in the other member which permits limited relative movement between them, a locking mechanism engaging the inner member when moved to locked position by the outer member, retaining-arms engaged by the outer member, and a coin-chute intersecting the space between the abutting ends of the said members; all substantially as and for the purposes set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIAM T. SUMMERS.

In presence of—

C. N. WOODWARD,
W. B. STOUT.