

H. E. WOOD.

HANDCUFF LOCK.

APPLICATION FILED JUNE 19, 1908.

930,013.

Patented Aug. 3, 1909.

FIG. 1.

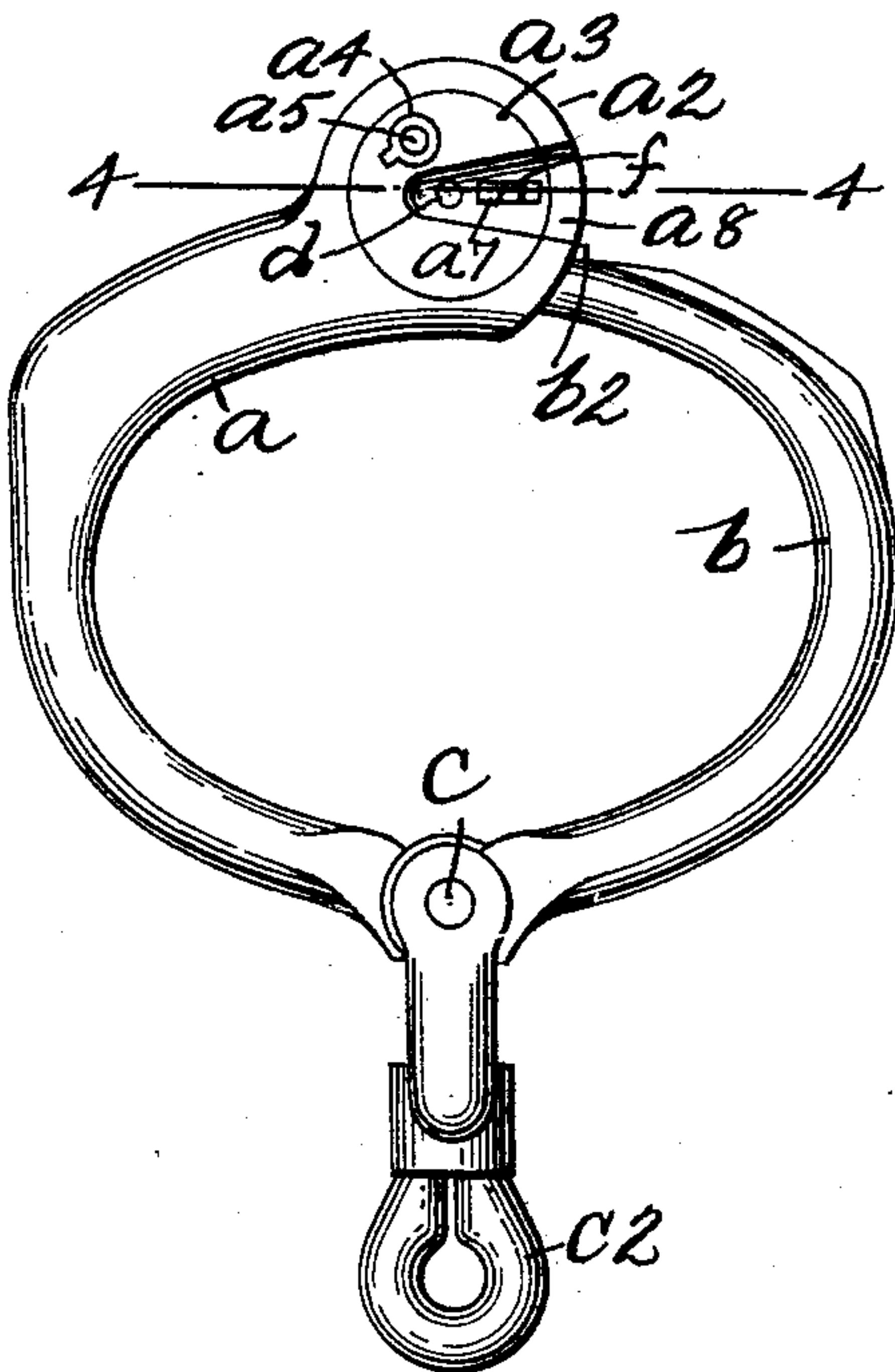


FIG. 2.

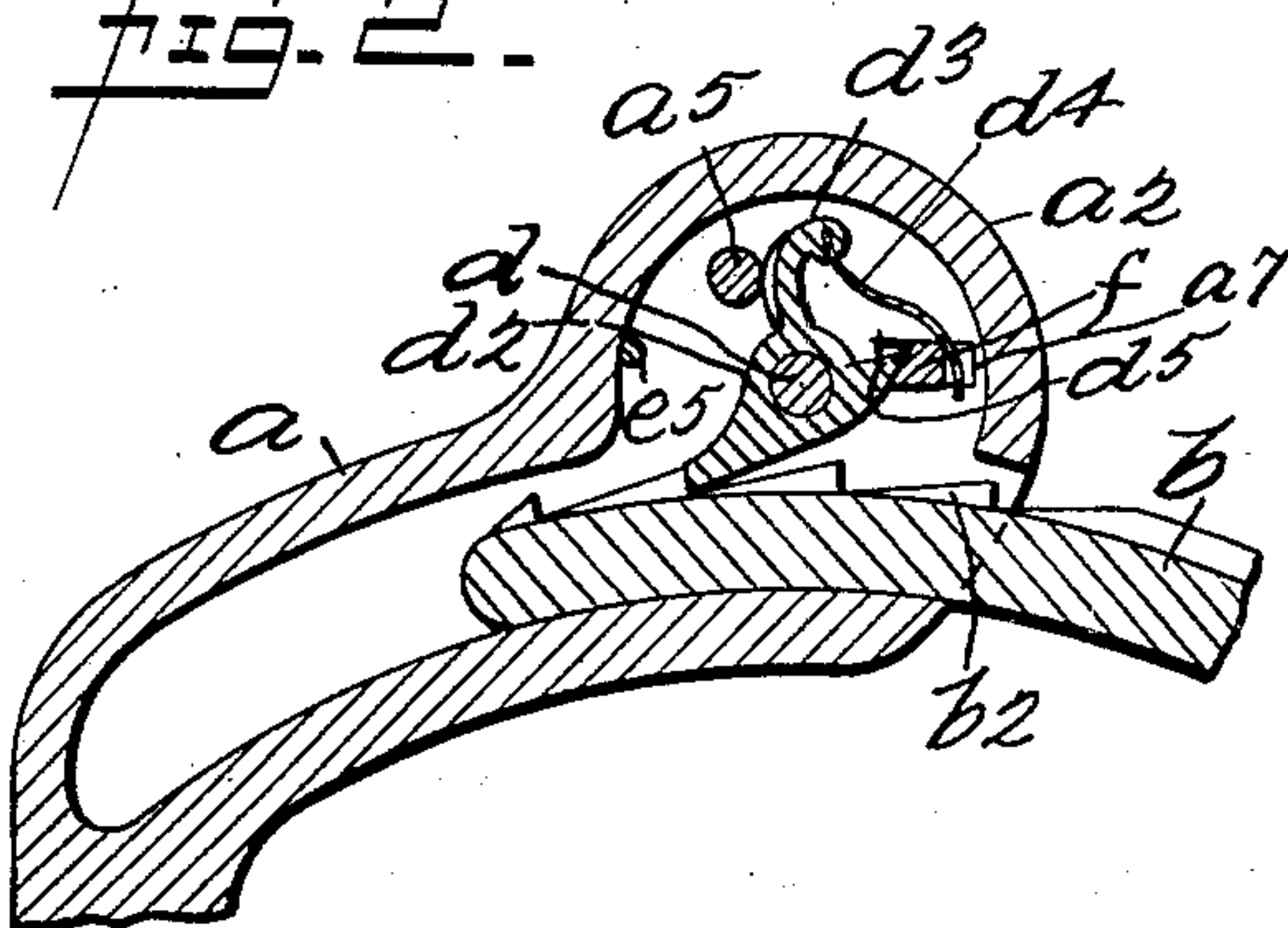


FIG. 3.

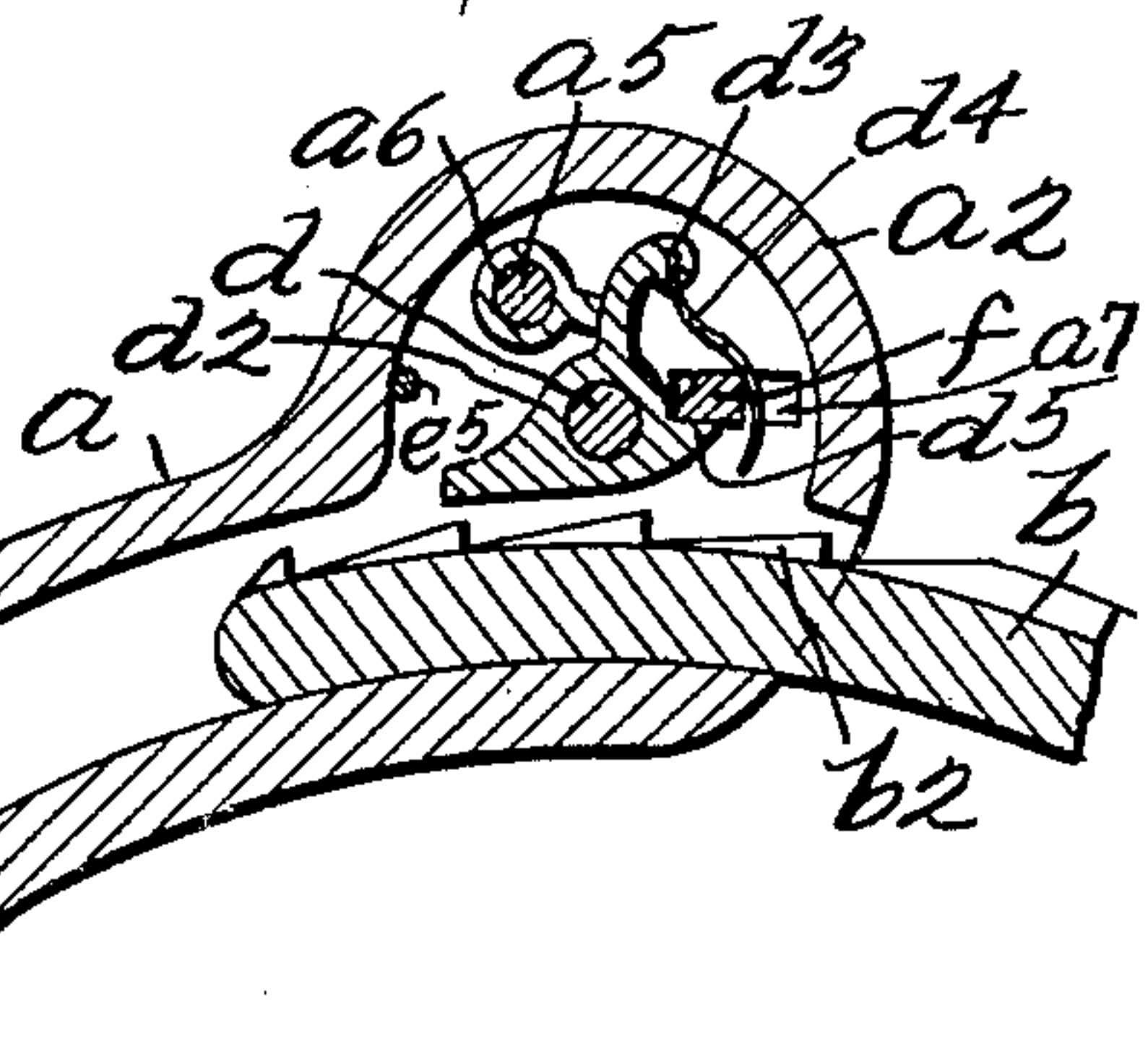


FIG. 4.

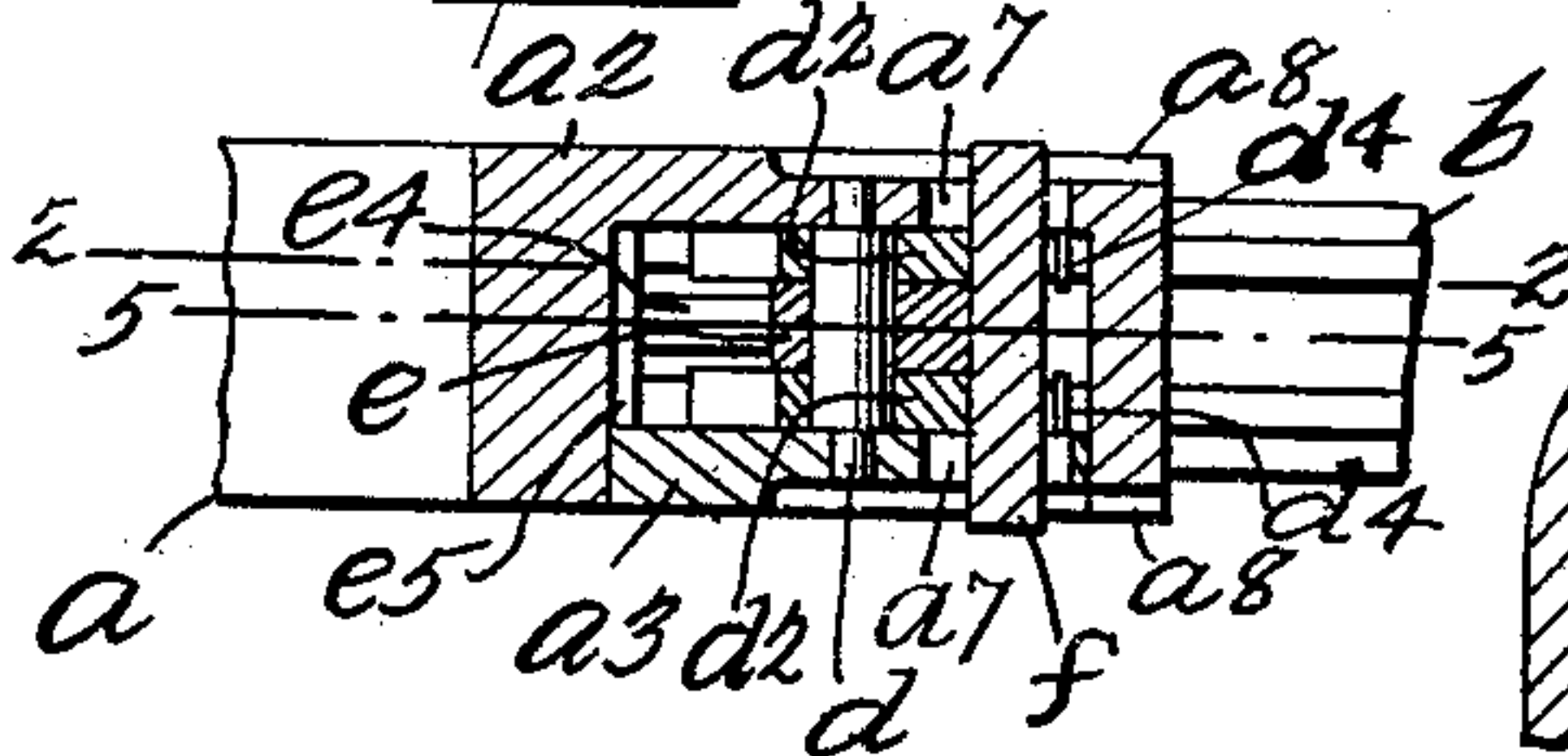
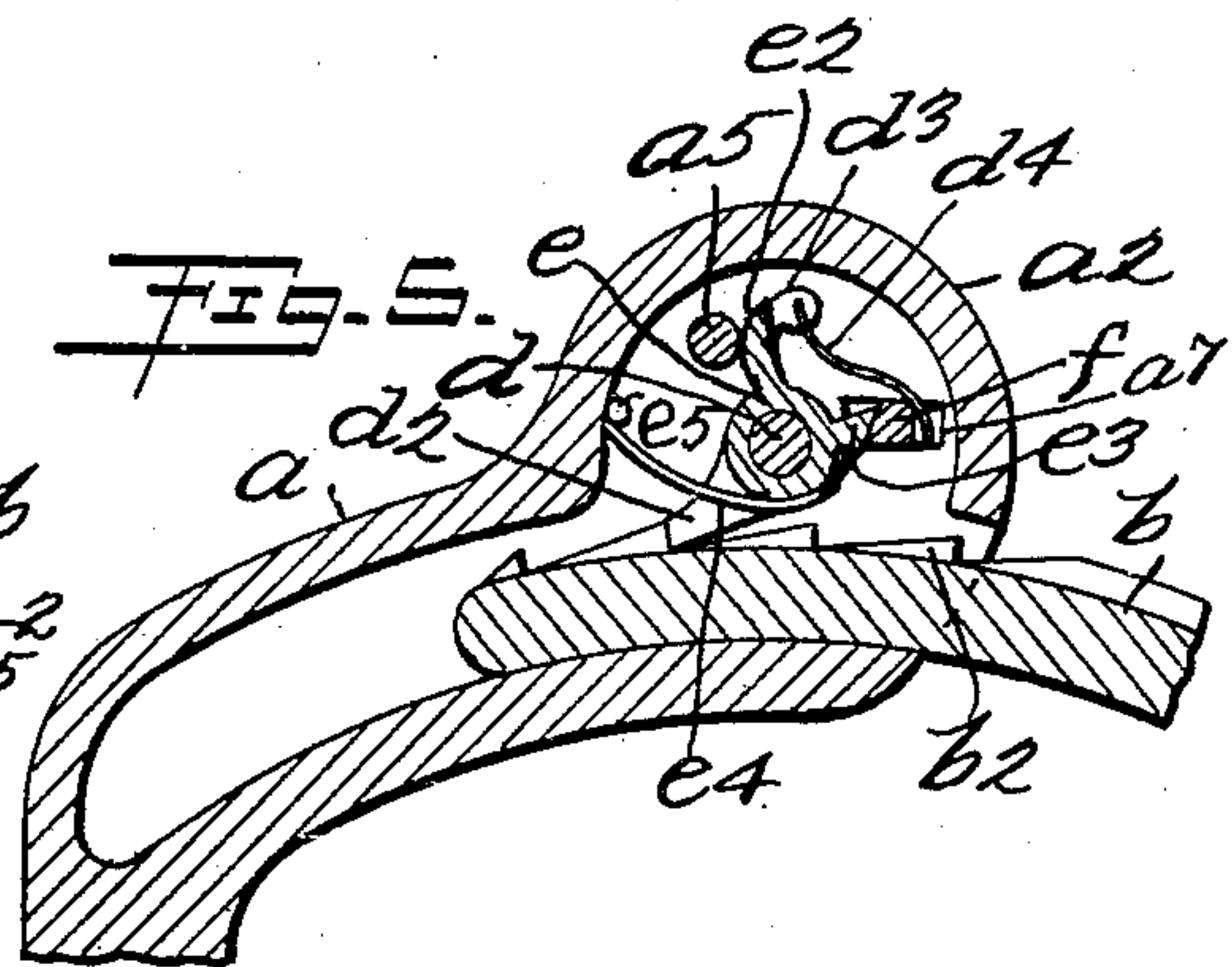


FIG. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

HENRY E. WOOD, OF BLOOMFIELD, NEW JERSEY, ASSIGNOR TO TOWER & LYON COMPANY,
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HANDCUFF-LOCK.

No. 930,013.

Specification of Letters Patent.

Patented Aug. 3, 1909.

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To all whom it may concern:

Be it known that I, HENRY E. WOOD, a citizen of the United States of America, and residing at Bloomfield, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Handcuff-Locks, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to handcuffs and the object thereof is to provide a lock therefor which may be made inoperative when desired so that the handcuff may be carried in a closed position without being locked and which may be quickly and positively locked without the use of a key when in this position; a further object being to provide the said handcuff with the usual spring lock for instant use from an open position and which provides independent locking devices whereby either one may be operative if the other should become inoperative; a further object being to provide a lock for handcuffs in which the key may be turned in either direction, before, during, or after the unlocking movement, without danger of breakage of either the key or the lock; a further object being to provide means whereby the said lock cannot be opened without a key, either by an exterior blow or by the insertion of blades, wires or the like and also to provide means whereby the handcuff cannot be accidentally locked when in an unlocked and closed position and a still further object being to provide a handcuff which is simple in construction and use, which is positive in action, which is composed of few parts and cannot therefore readily get out of order and in which the key acts upon the locking devices, exteriorly thereof, and not therethrough, as is usual.

My invention is fully described in the following specification, of which the accompanying drawings form a part, in which the separate parts are designated by the same reference characters in each of the views, and in which:—

Figure 1 is a view of a handcuff, constructed according to my invention, in a closed position; Fig. 2 is a sectional view through the lock mechanism, on the line 2—2 of Fig. 4; Fig. 3 is a similar view, with the parts in a different position; Fig. 4 is a sectional plan view taken on the line 4—4

of Fig. 1; and Fig. 5 is a view, similar to Fig. 2, taken on the line 5—5 of Fig. 4.

In the drawings forming a part of this application, I have shown a handcuff comprising the usual socket member *a* and ratchet member *b* pivotally joined at *c* and provided with a swivel *c*² for the chain which joins a pair of the handcuffs, said member *a* having an enlarged lock chamber *a*² covered by a cover *a*³ and into which the member *b* passes in the usual manner, said member being provided with teeth *b*² preferably arranged in two parallel and independent lines with a channel between them, as is clearly shown in the drawings.

The cover *a*³ is provided with a key hole *a*⁴ about a key post *a*⁵ secured in the chamber *a*² and upon which a key *a*⁶ rotates, said key being of the usual leaf variety, and said lock chamber is also provided with oppositely arranged slots *a*⁷ and with channels or grooves *a*⁸ at said slots and the use of which will be pointed out.

Arranged centrally of the lock chamber *a*² is a shaft or post *d* upon which are rotatably mounted two locking pawls *d*² and which engage corresponding rows of ratchet teeth *b*² in the use of the device, each of said pawls having an arm *d*³, in which is secured a spring *d*⁴, and with a pointed or inclined projection *d*⁵, extending backwardly from the pawl shoe or nose, the arms *d*³ being adapted to strike against the key post *a*⁵ when the handcuff is in an open position but being forced away therefrom upon the insertion of a key into the lock and rotation thereof, the leaf member of the said key engaging both the arms of both pawls and giving a movement thereto in accordance with the necessary movement of the nose of said pawls to clear the teeth *b*². Also rotatably mounted upon the post *d*, between the pawls *d*², is a collar *e* provided with an arm *e*², corresponding to the arms *d*³, and with a projection *e*³ in all respects similar to those, *d*⁵, described, said collar being also provided with a plate spring *e*⁴ bearing against a pin *e*⁵ whereby the arm *e*² is normally held against the key post *a*⁵.

Extending entirely across the lock chamber *a*² and movable in the slots *a*⁷ is a block or latch *f* having an inclined edge corresponding to and bearing against the inclined projections *d*⁵ and *e*³, the springs *d*⁴ being so bent as to force the latch *f* toward

the pawls and also to force the said pawls into engagement with the ratchet member b and the arms d^3 against the key post a^5 and permitting sufficient movement of the said pawls to slide over the teeth b^2 thereby producing the spring lock effect of the usual handcuff but if greater movement be given the pawls, by means of the key a^6 , the projections d^5 and e^3 pass the edge of the latch f and said latch is forced thereover by the springs d^4 into the position shown in Fig. 3, thereby holding the pawls out of engagement with the teeth b^2 and the member b may be freely moved and the handcuff closed but not locked. When the handcuff is in this condition and it is desired to lock the same, all that is necessary is to place the thumb and finger upon opposite ends of the latch f and withdraw the same from the pawls and which are then free to be moved to their locking positions, shown in Fig. 2, by the springs d^4 , and the device is locked and cannot be opened without the key, and it will be observed that, when the handcuff is locked, one of the teeth b^2 completely closes the entrance to the socket member a and the latch f , as shown in Fig. 4, is preferably provided with small plates which serve as covers for the slots a^7 to prevent the insertion of wires or the like in order to open the handcuff, said slot covers not being designated by reference characters as they are very small and to prevent confusion.

The function of the collar e and connected parts, is to prevent opening the handcuff by means of exterior blows or sudden movements tending to dislodge the pawls out of their engagement with the ratchet teeth which is possible and frequently occurs in the forms of construction now in use but, because of the lightness of the said collar and the tendency of the spring e^4 to maintain the said collar in its normal position, if the latch f be drawn backwardly and the pawls be temporarily dislodged, the projection e^3 , not having been moved, prevents the latch from passing into the position, with relation to the pawls, shown in Fig. 3, to hold the pawls out of locking position, and said pawls immediately pass into their locking positions again as the movement thereof is for but an infinitesimal period of time and the ratchet member must be in an inward position beyond its locked position to permit the clearance of the pawls therewith and thus the handcuff cannot be opened except by the proper key.

It will be obvious that various changes in and modifications of the form of construction shown and described may be made within the following claims and,

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A handcuff, comprising a ratchet member, a socket member for the reception thereof, a locking device in said socket member for normal engagement with said ratchet member, a key for breaking said engagement, means for maintaining said disengagement when so broken and means for preventing the action of said maintaining means when said locking device is operated otherwise than by said key.

2. A handcuff, comprising a ratchet member, a socket member for the reception thereof, a pawl in said socket member in normal engagement with said ratchet member, a key adapted to bear exteriorly on said pawl to disengage the same, a latch for maintaining said disengagement, and a spring forcing said pawl into engagement with said ratchet member and forcing said latch against said pawl.

3. A handcuff, comprising a ratchet member, a socket member a pawl in said socket member in normal engagement with said ratchet member, a key adapted to bear on said pawl to disengage the same, a latch for maintaining said disengagement and a spring secured to said pawl and bearing upon said latch and serving to force said pawl against said ratchet and said latch against said pawl.

4. A handcuff, comprising a ratchet member, a socket member a pawl in said socket member in normal engagement with said ratchet member, a key for breaking said engagement, a latch for maintaining said disengagement and a spring actuated device bearing against said latch and preventing complete inward movement thereof to maintain said pawl in a disengaged position when the latter is moved otherwise than by said key.

In testimony that I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses this 18th day of June 1908.

HENRY E. WOOD.

Witnesses:

T. D. HALLIWELL,
W. M. TOWER.