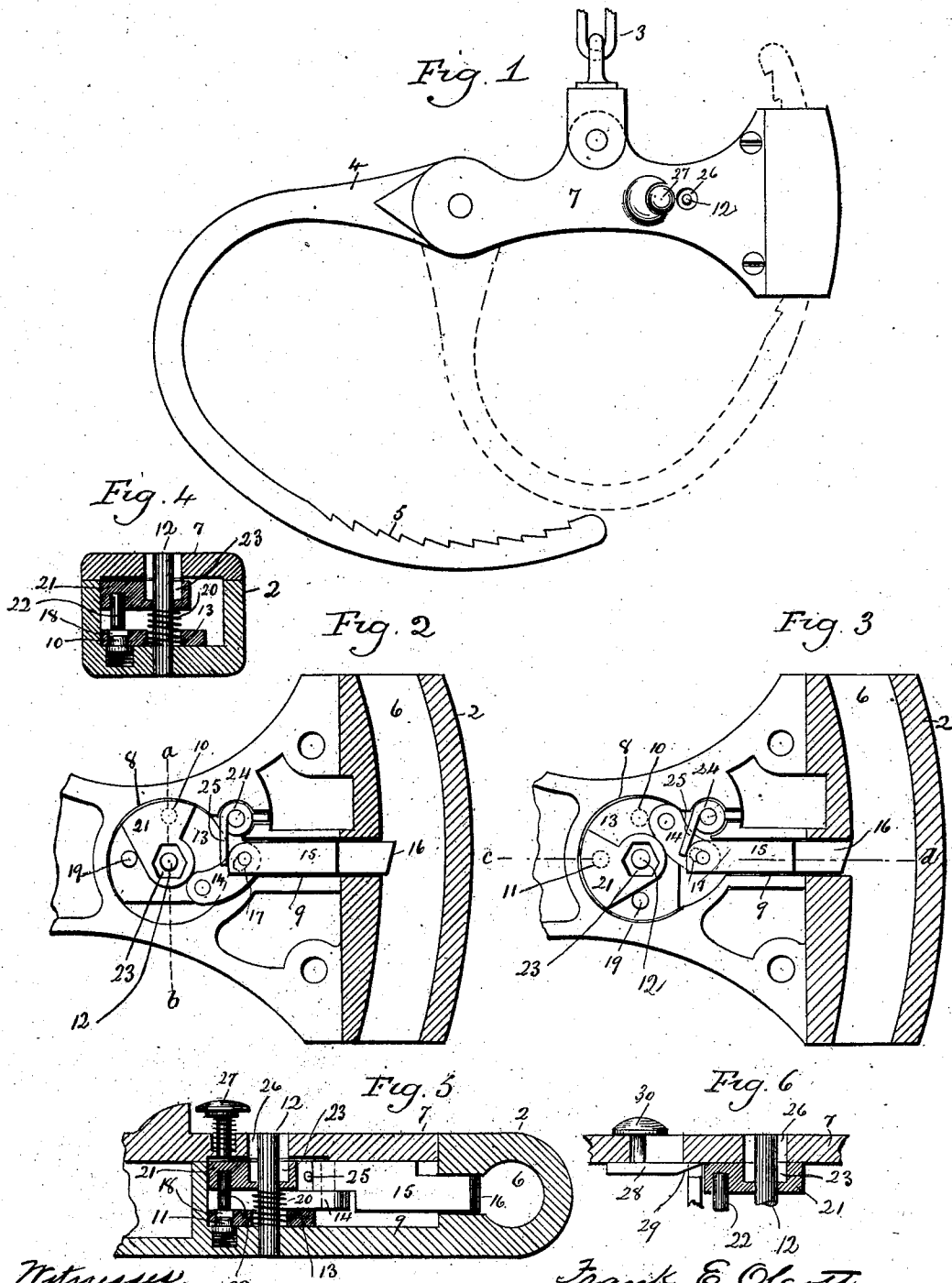


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PATENTED JULY 31, 1906.

F. E. OLCOTT.
HANDCUFF.

APPLICATION FILED SEPT. 27, 1905.



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UNITED STATES PATENT OFFICE.

FRANK E. OLCOTT, OF WATERBURY, CONNECTICUT.

HANDCUFF.

No. 827,385.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK E. OLCOTT, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Handcuffs; and I do hereby declare the following, when taken in connection with the accompanying drawings, and the numerals of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a plan view of a handcuff constructed in accordance with my invention; Fig. 2, a top or plan view of the outer end thereof with the cap removed and the outer end shown in sections, the parts being in locked positions; Fig. 3, a similar view with the parts in the unlocked positions; Fig. 4, a sectional view on the line *a b* of Fig. 2 with the cap in place; Fig. 5, a sectional view on line *c d* of Fig. 3 with the cap in place; Fig. 6, a broken sectional view showing the modified means for depressing the key-tumbler.

This invention relates to an improvement in handcuffs or shackles; and by the term "handcuffs" as hereinafter used I wish to be understood as including either devices adapted for use as handcuffs or made of sufficient size to be used as leg-irons, the object of the invention being to produce at a reduced cost for manufacture handcuffs constructed with particular reference to lightness, simplicity, fewness of parts, and security against being "picked" by the prisoner.

Handcuffs or shackles as usually employed are arranged in pairs; but for the purpose of illustration only one handcuff is shown. Each cuff consists of a body or case 2, to which a chain 3 is swiveled in the usual way, and to one end of the case an arm 4 is swiveled, the outer end of the arm being formed with locking-notches 5 and adapted to pass through an opening 6, formed for it in the case, the case being open at one side and closed by a cap 7 in substantially the usual manner. In the case near the locking end is a circular recess or chamber 8, and from this chamber a channel 9 extends into the opening 6. In the bottom of the chamber are two spring-studs 10 and 11, and in the center of the chamber is a post which will hereinafter be termed the "key-post" 12. Located within the chamber and of a diameter

free to rotate therein is a locking-disk 13, and connected with this disk by a link 14 is a locking-bolt 15, the bolt being arranged in the channel and having a nose 16 adapted to engage the notches 5 when the end of the arm passes through the opening 6, the end of the link 14, which is connected with the bolt 15, having a slot 17 to permit of more or less independent movement between the bolt and the link for the purpose as will hereinafter appear. In the disk 13 is a hole 18, which is adapted to receive either one of the spring-studs 10 or 11. Extending upward from the disk also is a stud 19. The central opening through the disk 13 for the clearance of the post 12 is larger than the diameter of the post, so as to provide space for a spring 20. Mounted upon the post above the disk 13 is a tumbler 21, this tumbler being provided in its under face with a short pin 22, adapted to be entered into the hole 18 in the disk. The hub of this tumbler is also formed with an angular recess 23 to receive a correspondingly-shaped key to rotate said tumbler.

Mounted in the case at one side of the chamber 8 is a spring 24, the upper arm 25 of which extends into the chamber and against the rear end of the bolt 15, so as to normally force that bolt forward. Mounted in the cap-plate 7, near the keyhole 26, is a spring push-button 27, which will bear upon the upper face of the tumbler and so that the tumbler may be depressed. In the locked position, as shown in Fig. 2 of the drawings, the hole 18 in the disk stands over the spring-pin 10, by which the disk is held against rotation, and in this position the bolt 15 is thrown forward, so as to stand in the opening 6 and engage with one of the notches 5 of the arm, and hence lock that end of the arm to the case. To open the handcuff, a key is inserted through the hole 26 and into the angular recess 23 in the tumbler and the tumbler forced downward thereby against the pressure of the spring 20 until the pin 22 in the under face of the tumbler depresses the spring-pin 10, so as to release the disk 13. If then the key be turned, the disk will be rotated by the engagement of the tumbler therewith either by the continued pressure, so as to hold the pin 22 in the hole 18, or by the engagement of the tumbler with the stud 19. When the disk is rotated to its unlocked position, the hole 18 will stand over the spring-pin 11, which is then forced upward into the hole 18 and so as to hold the disk in its unlocked po-

sition. This movement of the disk will have turned the link 14, so as to withdraw the nose of the bolt 16 out of the opening 6, leaving the arm free to be moved back and forth therein or entirely withdrawn therefrom. If now it be desired to lock the cuff without the use of the key, the spring-button 27 will be depressed, and this inward movement of the button forces the tumbler downward, so that the pin 22 carried thereby will depress the spring-stud 11, thus releasing the disk 13, at which time the spring 24 will act to force the bolt 15 forward, so that the nose 16 thereof is in position to engage with the notches 5 of the arm, but the bolt is free to move rearward. This permits the arm to be passed through the case to any desired extent, but locks it against withdrawal. When it is adjusted to the desired extent, in order to prevent it from being forced too tightly upon the person the tumbler is again turned by the key, so as to turn the disk 13 again into engagement with the spring-stud 10, in which position the bolt 15 is held against movement in either direction, and thereby securely locks the arm in the case—in other words, doubly locks it in a closed position. It will thus be seen that while the cuff cannot be unlocked without a key after being opened by the key the key may be removed, yet when placed upon a person can be immediately placed in condition for operation by a mere pressure upon the spring-button 27.

Instead of providing the spring-button 27 to be moved inward against the face of the tumbler a slide 28 may be arranged upon the inner face of the cap 7, as shown in Fig. 6, this slide having a beveled nose 29, adapted to enter between the top of the tumbler and the inner face of the cap, so as to force the tumbler downward when the slide is moved against it, the slide being connected with a thumb-piece 30 on the outside of the cap for operation in the same way as was the spring-button 27, except that it is moved longitudinally instead of being pressed inward.

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

1. The herein-described improvement in handcuffs comprising a case, an arm pivoted thereto and adapted to pass through an opening in said case, said case formed with a chamber having a spring-pin mounted therein, a channel extending from said chamber to the opening for the arm, a bolt located in said channel to engage said arm, a disk mounted in said chamber and connected with said bolt, said disk formed with a hole adapted to engage with said spring-pin, and a tumbler adapted to engage with said disk whereby the said disk may be rotated, substantially as described.

2. The herein-described improvement in handcuffs comprising a case, an arm pivoted

thereto and adapted to pass through an opening in said case, said case formed with a chamber having two spring-pins mounted therein, a channel extending from said chamber to the opening for the arm, a bolt located in said channel to engage said arm, a disk mounted in said chamber and connected with said bolt, said disk formed with a hole adapted to engage with either of said spring-pins, and a tumbler adapted to engage with said disk whereby the said disk may be rotated, said tumbler provided on its under face with a pin to engage with the hole in said disk and to force either of the spring-pins out of engagement therewith, substantially as described.

3. The herein-described improvement in handcuffs comprising a case, an arm pivoted thereto and adapted to pass through an opening in said case, said case formed with a chamber having two spring-pins mounted therein, a channel extending from said chamber to the opening for the arm, a bolt located in said channel to engage said arm, a disk mounted in said chamber and connected with said bolt, said disk formed with a hole adapted to engage with either of said spring-pins, a tumbler adapted to engage with said disk, said tumbler provided on its under face with a pin to engage with the hole in said disk, and to force either of the said spring-pins out of engagement therewith, and means mounted in the cap of the case for depressing said tumbler.

4. The herein-described improvement in handcuffs comprising a case, an arm pivoted thereto and adapted to pass through an opening in said case, said case formed with a chamber having two spring-pins mounted therein, a channel extending from said chamber to the opening for the arm, a bolt located in said channel to engage said arm, a disk mounted in said chamber and connected with said bolt, said disk formed with a hole adapted to engage with either of said spring-pins, a tumbler adapted to engage with said disk, said tumbler provided on its under face with a pin to engage with the hole in said disk and to force either of the spring-pins out of engagement therewith, a spring-pin arranged within a cap and adapted to be forced inward into engagement with said tumbler whereby the tumbler is depressed and the spring-pin forced out of engagement with said disk.

5. The herein-described improvement in handcuffs comprising a case and a cap, an arm pivoted to one end of said case, the other end adapted to pass through an opening formed for it at the opposite end of the case, said case formed with a chamber and a channel extending from said chamber to the opening for the arm, two spring-pins mounted in said chamber, a key-post in the center of said chamber, a disk located in said chamber and adapted to turn therein, said disk formed

with a hole adapted to be engaged by either
of said spring-pins, a bolt located in said
channel to engage said arm and connected to
said disk by a link, a spring upon said key-
5 post, a tumbler mounted upon said key-post
above said spring, a pin extending downward
from said tumbler and adapted to enter the
hole in the disk and bear upon either one of
the said spring-pins, said tumbler formed in
10 its upper face with an angular key-recess, a
spring tending to throw said bolt forward,

and a spring-pin mounted in the cap of the
case and adapted to bear upon the tumbler
when turned to its unlocked position, sub-
stantially as described.

In testimony whereof I have signed this
specification in the presence of two subscri-
ing witnesses.

FRANK E. OLCOTT.

Witnesses:

LEWIS S. REED,
ERVIS E. WRIGHT.