

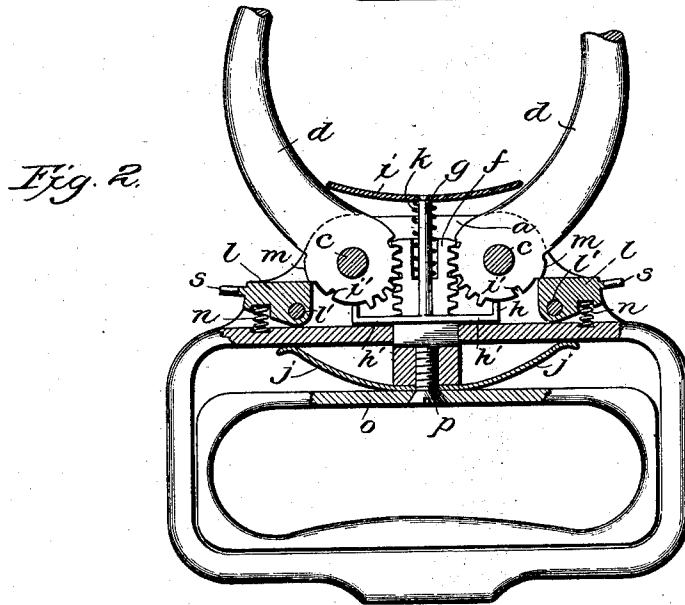
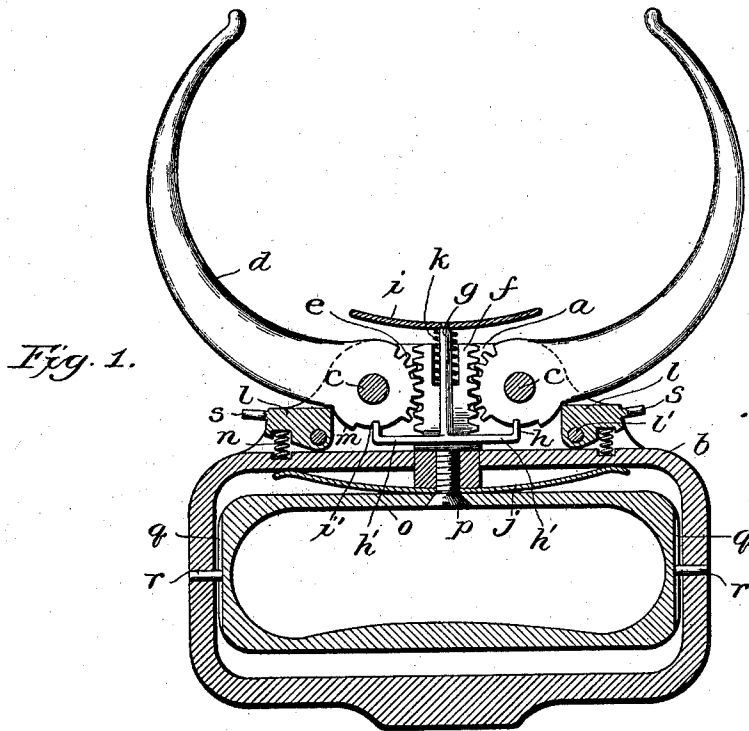
No. 691,941.

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**F. A. HEADSON.
HANDCUFF.**

(Application filed May 23, 1901.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

FRANK A. HEADSON, OF LAFAYETTE, INDIANA.

HANDCUFF.

SPECIFICATION forming part of Letters Patent No. 691,941, dated January 28, 1902.

Application filed May 23, 1901. Serial No. 61,546. (No model.)

To all whom it may concern:

Be it known that I, FRANK A. HEADSON, a citizen of the United States, residing at Lafayette, in the county of Tippecanoe and State of Indiana, have invented certain new and useful Improvements in Handcuffs, of which the following is a specification.

My invention relates to that class of handcuff which is used for grasping and holding the wrist of a prisoner to enable his captor to obtain a firm and practically irresistible hold upon his wrist, and relates particularly to that class of handcuff which is provided with means for automatically closing upon the wrist and means for automatically locking the parts in their closed position.

The principal object of my invention is to provide a light, economical, and efficient handcuff having relatively movable jaws provided with means for locking them in an open position subject to the action of trigger mechanism for releasing them and permitting them to close, means for automatically closing them when the trigger mechanism is released, and means for automatically locking them in their closed position.

A further object of my invention is to provide a handle in operative connection with the closing mechanism for operating it, if necessary, independently of the means for automatically closing the jaws and so arranged that an effort to escape from the jaws would tend when resisted to move the handle in the same direction in which it operates in closing the jaws; also, to provide trigger mechanism arranged in such a position as to be readily pressed against any object which may be between the jaws, so as to be released by such pressure and permit the jaws to automatically close upon such object.

The invention consists in the features, combination, and details of construction hereinafter described and claimed.

Figure 1 is a side view, partly in section, of a handcuff constructed in accordance with these improvements and showing the jaws in their open position; and Fig. 2, a similar view showing the jaws in their closed position, with a portion of the jaw removed.

In constructing a handcuff in accordance with my improvements I provide a frame portion *a*, having a handle *b*, which is preferably made in the form of a hollow oblong

square, as shown in the drawings, and provided with pivots *c*, on each of which is rotatably mounted a curved jaw *d*. The pivoted ends of the jaws are circular and provided with gear-teeth *e* upon their inner adjacent edges, forming pinions integral with the jaws. Between these pinions is arranged a tumbler portion *f*, provided with teeth on each side, making a double rack, the teeth of which mesh with the pinion-teeth on the jaws and form a rack-and-pinion connection between such rack portion and the jaws.

It is desirable that the jaws should close automatically and immediately upon being placed in position upon the wrist and also that they be immediately and automatically locked in their closed position. To accomplish these purposes I provide a trigger portion *g*, which is slidingly mounted in the rack portion and provided with two detents *h* upon the arms *h'*, which extend in opposite directions at right angles with the body portion of the trigger, making an inverted-T-shaped trigger. The opposite end of the trigger is provided with an outer face-plate, which also extends at right angles to the body portion of the trigger, forming a relatively broad surface against which the pressure may be expended to release the trigger and permit the jaws to close. A spring *j* is provided at the lower end of the rack portion and arranged to contact the handle *b*, so as to hold the racks and jaws under tension when the jaws are in their open position, as shown in Fig. 1.

To set and hold the jaws in their open position against the tension of the spring, the trigger is provided with a spiral spring *k*, which encircles it, and is compressed between the face-plate and rack portion, so as to hold them in constant tension, and each of the jaws is provided with a notch *z*, into which the respective trigger-detents are forced by the spiral spring when the jaws are open. It will be seen that when the trigger is thus held in the position shown in Fig. 1 the jaws cannot close until the trigger is pressed inwardly and the trigger-detents withdrawn from the notches in the jaws and that the movement of the trigger will immediately release the jaws and permit them to close. The jaws are thus held open against the tension of the spring *j*, which is in operative connection with such jaws through the medium of

the rack-and-pinion connection and in position to close the jaws upon their being released. In order to release the jaws and permit them to be automatically closed by the action of the spring *j* and rack-and-pinion mechanism, it is only necessary to press the face-plate *i* of the trigger against the wrist of the prisoner, causing the trigger-detents to release the jaws, whereupon they are swung to their closed position by the action of the spring.

To automatically lock the jaws in their closed position and immediately upon being closed, dogs *l* are mounted upon pivots *l'* adjacent to the jaws, so as to be in sliding contact therewith when the jaws are moving toward their closed position and in locked connection with lugs or shoulders *m* on the jaws when they are closed. The dogs thus lock the jaws in their closed position until released. To automatically press and hold the dogs in their locking position against the lugs, each dog is provided, preferably, with a helical spring *n*, having one end seated in a niche in the cuff-handle and the other in the dog near its free end. These springs are compressed to afford a constant tension sufficient to press the detents against the lugs, and thus lock the jaws.

In order to insure the closing of the jaws when desired upon the release of the trigger, the rack or tumbler portion is provided with a handle *o*, secured thereto by a screw *p*, which also serves to hold the spring *j* in position. This handle is also provided at each end with slots *q*, which are in sliding connection with lugs *r* on the cuff-handle, and is thereby held in position. It will thus be seen that when the trigger is pressed should the spring be out of order or for any reason refuse to act the closing of the jaws may be accomplished by hand-pressure upon the handle and that such pressure when continued will hold the jaws in their closed position independent of either the spring or locking-dogs.

It is very desirable that the jaws be readily adjustable to their open position preparatory to their being operated. In order to accomplish this, the dogs *l* are provided with projecting ends *s*, and, as will be seen by an inspection of the drawings, a downward pressure on such projecting ends simultaneously with an upward pressure upon the rack or tumbler handle will quickly set the jaws in their open position, subject to the action of the trigger.

I claim—

1. In a handcuff of the class described, the combination of two relatively movable jaws, a frame portion upon which the jaws are pivotally mounted, means for opening the jaws, means for locking them in their open position, means for automatically closing the jaws, and locking mechanism arranged in contact with the pivoted end of each jaw for locking it in its closed position, substantially as described.

2. In a handcuff of the class described, the combination of a pair of relatively movable jaws, a frame portion upon which the jaws are pivotally mounted, and gear-and-rack mechanism for operating the jaws, substantially as described.

3. In a handcuff of the class described, the combination of a pair of relatively movable jaws, a frame portion upon which the jaws are pivotally mounted, gear-and-rack mechanism for opening and closing the jaws, and means for automatically locking them in their closed position, substantially as described.

4. In a handcuff of the class described, the combination of a pair of relatively movable jaws, a frame portion upon which the jaws are pivotally mounted, means for opening the jaws, means for locking them in their open position, means for closing the jaws, and a dog for each jaw arranged in contact with the pivoted end thereof for automatically locking it in its closed position, substantially as described.

5. In a handcuff of the class described, the combination of a frame portion, a pair of jaws pivotally mounted on such frame portion and having pinion-teeth upon the ends thereof, a tumbler arranged between the toothed ends of the jaws provided with rack-teeth which mesh with the pinion-teeth upon the jaws, a trigger portion movably mounted in the tumbler for locking the jaws in their open position, spring mechanism for closing the jaws, and means for locking the jaws in their closed position, substantially as described.

6. In a handcuff of the class described, the combination with a frame and handle portion, a pair of movable jaws pivotally mounted thereon, trigger mechanism for holding the jaws in their open position, spring mechanism for automatically closing the jaws when released from the trigger, and locking mechanism arranged in contact with the pivoted ends of the jaws for automatically locking them in their closed position, substantially as described.

7. In a handcuff of the class described, the combination of a frame and handle portion, a pair of jaws pivotally mounted thereon and provided with gear-teeth upon their respective pivoted ends, a trigger for holding the jaws in their open position, a tumbler slidably mounted between and engaging the teeth on the pivotal jaws for operating the jaws, a handle secured to the tumbler and slidably mounted within the main handle, dogs for holding the jaws in their closed position and arranged to be operated to release such jaws, spring mechanism for holding the trigger in locking position, and spring mechanism for holding the tumbler under tension, substantially as described.

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Witnesses:

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