No. 636,439. Patented Nov. 7, 1899.

L. F. MALTBY.

POLICE NIPPERS.

(Application filed June 1, 1899.)

(No Model.)

Fig. 1.

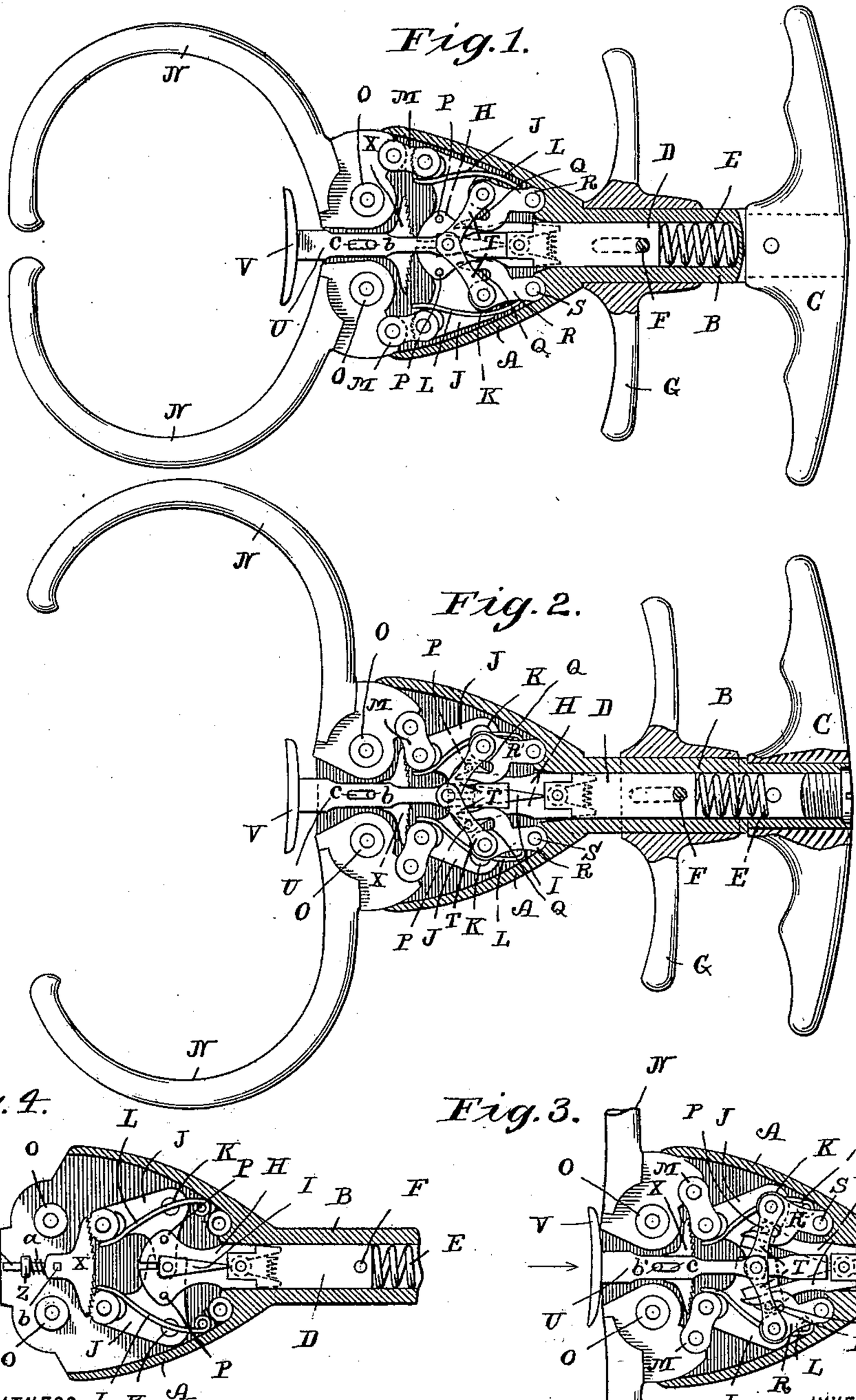

Fig. 2.

Fig. 4.

WITNESS L K

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Fig. 3.

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POLICE-NIPPERS.

SPECIFICATION forming part of Letters Patent No. 636,439, dated November 7, 1899.

Application filed June 1, 1899. Serial No. 718,946. (No model.)

To all whom it may concern:

Be it known that I, LOUIS F. MALTBY, a citizen of the United States, and a resident of Waterbury, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Police-Nippers, of which the following is a specification.

This invention relates to new and useful improvements in police-nippers, such as are used to grasp and lead prisoners from place to place or which may be used as a handcuff to chain one prisoner to another.

It is the object of my invention to generally improve the construction of devices of this kind, and particularly to provide a nippers which automatically adjusts and locks itself to various sizes of wrists, said jaws not requiring to entirely close in order to become locked, as is the case with all the nippers of this class upon the market.

With the above objects in view my invention resides and consists in the novel construction and combination of parts shown upon the accompanying drawings, forming a part of this specification, upon which similar characters of reference denote like or corresponding parts throughout the several figures, and of which—

Figure 1 is a central horizontal sectional plan view of my nippers, the same being in a closed position. Fig. 2 is a similar sectional plan view, the jaws, however, being in an open position. Fig. 3 is a similar sectional plan view with the jaws and handle broken away, the trip being pressed in to release the dogs and allow the jaws to close. Fig. 4 is a detail sectional view of the case with some of the mechanism removed, said view being intended to more clearly illustrate the dogs and their relation to the spring-actuated bell-crank levers.

Referring in detail to the characters of reference marked upon the drawings, A indicates the casing, B its barrel or stem, and C the handle thereon.

D represents the slide within the stem, and E a spring which acts upon the slide to thrust it forward. A pin F serves to connect the slide through slots of the stem with a movable handle G, which latter slides upon the stem and serves as a means whereby said slide is drawn backward against the resistance of the spring E, before mentioned. The forward end of this slide has pivoted to it a pair of spring-actuated dogs H, (see Fig. 4,) which, as shown, serve to engage an inclined lug I, which is pivoted to the interlocking end of one of the bell-crank levers J. These levers are pivoted to studs K, secured to the casing, and are normally thrown outward, as shown in Fig. 1, by means of the springs L. The link M connects these levers to a shoulder of the jaws N, which latter are fulcrumed on studs O, secured to the casing.

From the foregoing it will be noted that in the normal position, the jaws N are closed by reason of the action of the springs L and E and that said jaws are opened by reason of the handle G and its slide D being drawn back to the position shown in Fig. 2, after which in order to close said jaws the handle G must be released or the dogs H disengaged from the lug I, whereupon the springs L will throw the jaws closed.

Upon each of the dogs H is a pin P, which in practice is engaged by an inclined recess Q of the pivoted levers R, pivoted at S. Said levers are further provided with links T, connecting them with a central sliding trip U, which is normally extended by reason of the spring E and is provided with an engaging plate V.

Referring to Figs. 1, 2, and 3, it will be apparent that when the handle G is drawn back upon this stem it carries with it its central slide and dogs and swings the bell-crank levers upon their pivot in a manner to open the jaws N, which movement of the dogs brings their pins P back into the recess of the levers R, whereupon by an inward thrust against the plate V of the trip U the free ends of said levers R are forced outward, causing the dogs to be spread apart and re-releasing the inclined lug, as shown in Fig. 3, whereupon the bell-crank levers are free to assume their normal position and close the jaws. It will thus be apparent that by means of proper contact of a prisoner's wrist with the trip U the jaws of my instrument may be closed without releasing the handle

G, which feature makes it substantially automatic in its closing operation.

In addition to the above features of my invention I provide a lock which is intended to secure the jaws in position at any point of their closing operation. This is desirable, since it provides for the positive engagement with large wrists as well as small ones and will hold the prisoner should he be imperfectly grasped by reason of the jaws being prevented from expanding and will gradually close tightly upon him. This locking device consists in providing the forward ends of the bell-crank levers J with a serrated face, as shown in Fig. 4, and providing a serrated yoke X for engagement therewith. This yoke is provided with a stem Y, which is mounted in bearings Z and is provided with a small spring *a*, the tendency being to thrust the yoke forward into contact with the serrations of the bell-crank levers. A small pin *b* is secured to the yoke and engages an orifice *c* in the trip U. The adjustment of these parts is such that the spring-actuated trip holds the yoke out of the path of engagement with the bell-crank lever until said trip is forced completely inward, at which time the bell-crank levers are swung in the path thereof.

The free ends of the jaws of my instrument are substantially parallel when closed, and their extremities swing in over the line of their pivotal points O, which features release them when closed from any tendency to open should a lateral strain be exerted on the instrument. It will further be noted that owing to the special shape of the jaws they assume the same relative shaped opening when partially expanded as they do when closed, and consequently will accommodate large and small wrists in the same proportion. It will be obvious that this locking mechanism is only required for locking the jaws at an intermediate point, since the bell-crank levers and their link or toggle connection with said jaws are so arranged that said connections form a positive lock when the jaws are closed.

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

1. In a police-nippers of the class described, the combination with a pair of hinged jaws, of means for opening the same, a trip for closing said jaws and means for locking said jaws in an intermediate or partially-closed position.

2. In a police-nippers of the class described, the combination with a pair of hinged jaws, of mechanism for opening said jaws, means for releasing and closing the same, mechanism for locking said jaws at any intermediate position, and separate means for locking said jaws in a closed position.

3. The combination with a pair of spring-actuated hinged jaws, of a central slide and connections for opening said jaws, a trip adapted to disengage the connections between said slide and the jaws, whereby the latter may be closed by the action of the springs, means for engaging the connections of the jaws during their closing operation, whereby they are locked against an open movement, and mechanism for automatically locking said jaws in a closed position.

4. The combination with a pair of spring-actuated jaws, of bell-crank levers linked thereto, a central slide to engage said levers and retract the jaws, a trip to disconnect the slide and the levers, whereby the jaws are automatically closed.

5. The combination with a pair of hinged jaws, of spring-actuated bell-crank levers connected therewith, a spring-actuated slide bearing dogs to engage an intervening piece of said levers, a trip connected with said dogs whereby the latter are automatically expanded to release the levers, and a locking device controlled by the trip, for the purpose specified.

6. The combination with a pair of hinged jaws, spring-actuated bell-crank levers connected with said jaws and having interlocking arms, an inclined piece secured to one of said interlocking members, dogs to engage said piece, a spring-actuated slide to which the dogs are hinged and bearing a handle by means of which the slide and dogs are drawn backward to open the jaws, mechanism for automatically expanding the dogs to release the levers, and jaws, substantially as described.

7. In a nippers of the class described, the combination with a pair of hinged jaws, spring-actuated bell-crank levers connected thereto bearing serrations upon one arm, a serrated slide for engagement with the serrations of said arms, whereby the latter is retained against backward movement, a trip for operating said slide, and means for opening the jaws, substantially as described.

8. The combination of a pair of hinged jaws, of spring-actuated bell-crank levers, links connecting the same with said jaws, a slide for operating the levers to open the jaws, means whereby said jaws may be closed by a relaxing movement of the slide, substantially as described.

9. The combination with a pair of jaws, bell-crank levers, and links connected therewith in a manner to form a positive lock when the jaws are closed, means for opening and closing said jaws.

10. In a police-nippers of the class described the combination with a pair of hinged jaws, of bell-crank levers connected therewith and bearing interlocking members, an inclined lug secured to one of said members, a spring-actuated slide bearing dogs to ride up said incline and engage the shoulder of the lug whereby the latter, and its levers may be drawn back to expand the jaws with a retracted movement of the slide, a central trip

including levers for engagement with pins of the dogs, and links connecting said levers with a central trip-slide whereby the dogs are expanded by an inward thrust of the trip, as, and for the purpose described.

11. The combination with a pair of jaws, bell-crank levers and links connected therewith, means for locking said jaws in an intermediate or partially-closed position, links connected with said levers in a manner to form a positive lock when the jaws are closed, and means for opening and closing said jaws.

Signed at Waterbury, in the county of New Haven and State of Connecticut, this 28th day of May, 1899.

LOUIS F. MALTBY.

Witnesses:
J. W. PALMER,
H. C. EWING.