J. MALCOLM.

POLICE LEADER.

APPLICATION FILED JUNE 29, 1910.

980,651. Patented Jan. 3, 1911.

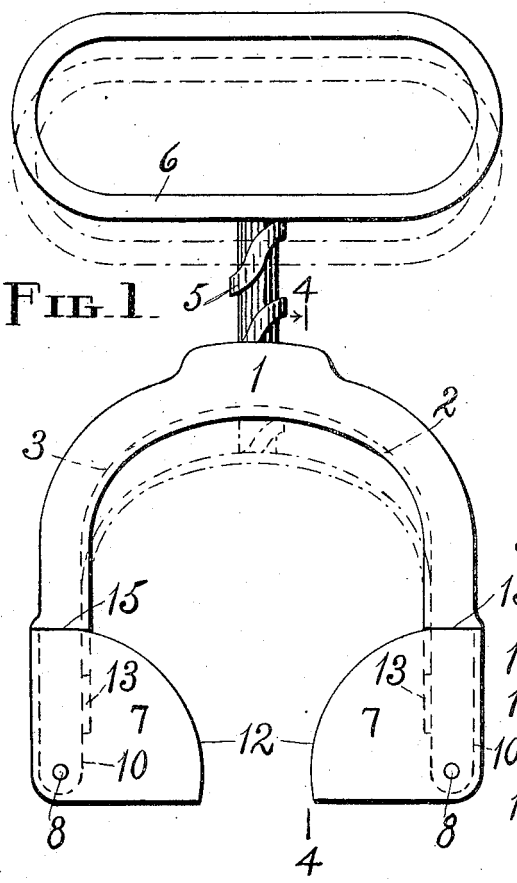

FIG. 1.

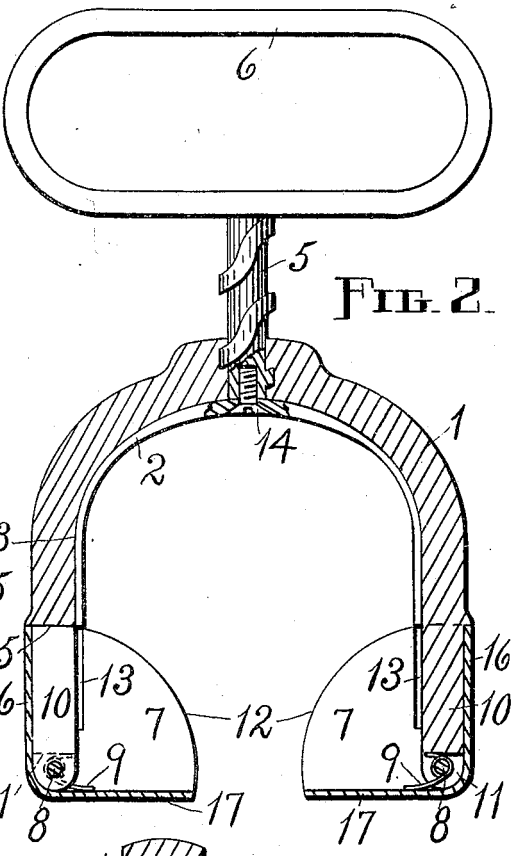

FIG. 2.

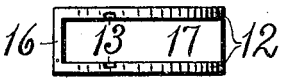

FIG. 3.

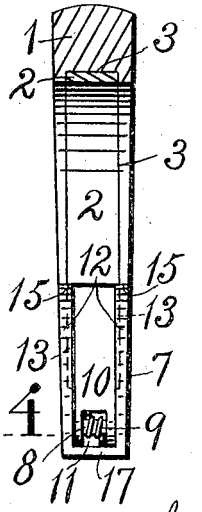

FIG. 4.

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POLICE-LEADER.

980,651. Specification of Letters Patent. Patented Jan. 3, 1911.

Application filed June 29, 1910. Serial No. 569,435.

To all whom it may concern:

Be it known that I, JAMES MALCOLM, a citizen of the United States of America, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented a new and useful Police-Leader, of which the following is a specification.

My invention relates to improvements in what are known as police nippers or leaders, and consists of a frame or yoke equipped with yielding jaws, a bow movable in said yoke and capable when actuated in one direction of locking said jaws and at the same time assisting in confining the wrist upon which the leader is placed and applying pressure to such wrist, all of certain peculiar construction as hereinafter set forth.

The object of my invention is to produce a strong, durable, simple, compact, safe and secure device of the class specified, which can be easily and quickly slipped on to a wrist of any size and becomes locked thereon by the mere act practically of applying, and with which a positive and powerful pressure can be conveniently brought to bear on the wrist that is already in the grasp of said device.

I attain this object by the means illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a leader which embodies my invention in a practical form, the advanced position of the bow being represented by dot-and-dash lines; Fig. 2, a vertical section through said leader, parts such as the handle, a portion of the screw, and the lower terminal of the left-hand branch of the yoke being in elevation; Fig. 3, a top plan of one (the left-hand) of the jaws, and, Fig. 4, a partial section and elevation taken on lines 4—4, looking in the direction of the arrow, in Fig. 1.

Similar figures refer to similar parts throughout the several views.

In general, the leader illustrated in the drawings comprises a frame or yoke 1, a bow 2 arranged on the inside of said yoke and movable in a groove 3 therein, a screw 5 attached at its inner end to said bow and provided with a handle 6 at its outer end, such screw being of the coarse or "quick" thread variety wherewith the maximum amount of longitudinal travel results from the minimum amount of rotation, and being tapped through the center of said yoke, and two jaws 7 each pivoted at 8 to the base of one of the branches of the yoke. In addition to these parts and members there is a spring 9 for each jaw 7. The lower terminal portions of the yoke 1, those portions which are indicated at 10, are made thinner than the portions above, thinner in fact than the width of the groove 3, and the flanges which form the sides of said groove end at the junctions of said portions 10 with the rest of said yoke. The inner faces of the aforesaid thinner portions 10 are either in the same vertical plane with or are offset outward from the inside walls of the vertical sections of the groove 3, so as not to obstruct the downward course of the bow 2 when advanced. Recesses 11 are cut in the terminals of the yoke 1, or, in other words, in the bottoms of the portions 10 of said yoke, such recesses being in line with each other or opening through the outer and inner faces of said portions as well as through the bottoms thereof.

Each jaw 7 consists of parallel side pieces having arcuate inner edges 12 and in the inner faces of which are two oppositely-disposed parallel slots 13, and end and bottom pieces joining such side pieces. Each spring 9 is wound around one of the pivots 8 and so arranged, with one end bearing against the top of the recess 11 through which such pivot extends and the other end bearing on the inside of the bottom piece of the associated jaw 7, that it acts on said jaw in a manner normally to hold the jaw with its end piece against the branch of the yoke, on the outside, to which said jaw is pivoted. When the two jaws are thus normally disposed they extend toward each other some little distance, a sufficient distance, in fact, to obstruct the entrance to the yoke 1 and prevent the passage between said jaws of an object as large as a wrist even of small size. The yoke portions 10 fit snugly between the side pieces of the jaws, and when the latter are normally disposed the slots 13, owing to their location, are directly in line with the ends of the vertical parts of the groove 3 above and form continuations of such groove in the side pieces of said jaws, so that the bow 2 can be thrust downward into such slots. Thus it is seen that the slots 13 not only open a way for the ends of the bow 2, but also afford means whereby the jaws 7 are locked by said bow in such a way that they cannot be turned on their pivots 8 to open them.

From the foregoing it is plainly to be seen that, when the jaws 7 are free, they can be thrust aside readily, by pressing them

against a person's wrist, to admit such wrist within the confines of the yoke 1, said jaws first swinging inwardly at their bases on the pivots 8, against the force of the springs 9, and then being returned to former position again by said springs. The wrist is now confined within the yoke 1 by the jaws 7, and cannot be withdrawn or released without rocking said jaws inwardly by pressure applied from the outside as before, the fingers usually being employed to open the jaws to effect the release of the wrist.

The screw 5 must be attached to the bow 2 in such a way that the former can rotate, and to this end a small screw 14 may be employed. The screw 14 is tapped into the base or inner end of the screw 5 and turns with said screw 5, but said screw 14 passes through the center of the bow 2, before entering the larger screw, and is loose in said bow so that it can turn freely therein.

In practice, the leader is grasped by the handle 6 and slipped on to the wrist, in the manner explained above, and immediately enough rotary motion is imparted to the screw 5, by the hand holding said handle, to advance the bow 2 in the groove 3 against said wrist, said screw being turned in the proper direction, of course, to actuate said bow into its advanced position. The jaws 7 are locked by the advanced bow, in the manner hereinbefore described, so that they cannot be opened either by accident or design while the twisting grasp on the handle 6 is maintained. The wrist is now securely held in the grip of the bow and the jaws, under a pressure that is varied by simply turning the screw 5 in or out, the former act increasing such pressure and the latter decreasing it. To release the wrist, simply turn out the screw 5 to retract the bow 2 or withdraw it from its close engagement with said wrist and from locking engagement with the jaws 7, and then force apart said jaws sufficiently to permit the leader to be separated from the wrist, the force being applied to the bases of the jaws in such a way as to swing their ends outwardly and their bases upwardly toward the inside faces of the thinner portions 10 of the yoke. As soon as the pressure is removed from the jaws their springs act to return them to normal position. When the jaws 7 are swung on their pivots 8 out of normal position, their arcuate edges 12 pass under shoulders 15 which project both sides over the portions 10 of the yoke and are formed by such portions or by reason of the fact that such portions are thinner than the parts above.

The end pieces and the bottom pieces or bases of the jaws 7, hereinbefore referred to, are indicated by the reference characters 16 and 17, respectively. It is the end pieces or ends 16 which contact with the yoke to limit the movement imparted to the jaws by the springs 9 and afford the strength necessary to successfully resist any force that may be exerted on said jaws to open them by pressure on their arcuate edges 12, and it is the bases 17 which receive the thrust of said springs.

Various changes in the shape, size, and arrangement of some or all of the parts of the leader as herein shown and described, may be made without departing from the nature of my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A leader comprising a yoke, a bow fitted to slide in such yoke, means to actuate said bow, and jaws pivotally attached to the ends of said yoke and arranged to obstruct normally the entrance thereto, said bow when actuated toward said jaws operating with the latter to confine the wrist.

2. A leader comprising a yoke, a bow fitted to slide in such yoke, means to actuate said bow, and jaws pivotally attached to the ends of said yoke and arranged to obstruct normally the entrance thereto, said jaws having bow-engaging means whereby the former when normally disposed are locked by said bow when advanced.

3. The combination, in a leader, with a yoke, and jaws pivotally attached to the ends of said yoke and arranged to obstruct normally the entrance thereto, of a bow fitted to slide in said yoke, a bow-actuating screw tapped through said yoke and loosely connected with said bow, and a handle on said screw, said jaw when actuated by said screw toward said jaws operating with the latter to confine the wrist.

4. The combination, in a leader, with a yoke, a bow fitted to slide in such yoke, and means to actuate said bow, of jaws pivotally attached to said yoke and adapted to swing in the entrance thereto, said bow when actuated toward said jaws operating with the latter to confine the wrist, and springs arranged to retain said jaws normally in their obstructing position in said entrance, such jaws having parts to engage the yoke and limit the movement imparted to them by said springs.

5. The combination, in a leader, with a yoke, a bow fitted to slide in such yoke, and means to actuate said bow, of slotted jaws pivotally attached to said yoke and adapted to swing in the entrance thereto, the slots in such jaws being in line with the ends of said bow, when said jaws are normally disposed, to receive such ends when the bow is advanced, whereby the jaws are then locked, and springs arranged to retain said jaws normally in their obstructing position in said entrance, the jaws having parts to engage the yoke and limit the movement imparted to them by said springs.

6. The combination, in a leader, of a yoke,

a bow fitted to slide in such yoke, a bow-actuating screw tapped through said yoke and loosely connected with said bow, a handle on said screw, slotted jaws pivotally attached to said yoke and adapted to swing in the entrance thereto, the slots in such jaws being in line with the ends of said bow, when said jaws are normally disposed, to receive such ends when the bow is advanced, whereby the jaws are then locked, and springs arranged to retain said jaws normally in their obstructing position in said entrance, the jaws having parts to engage the yoke and limit the movement imparted to them by said springs.

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Witnesses:
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