No. 647,545. Patented Apr. 17, 1900.

J. WALLA.

SNAP HOOK.

(Application filed May 26, 1899.)

(No Model.)

Fig. 1.

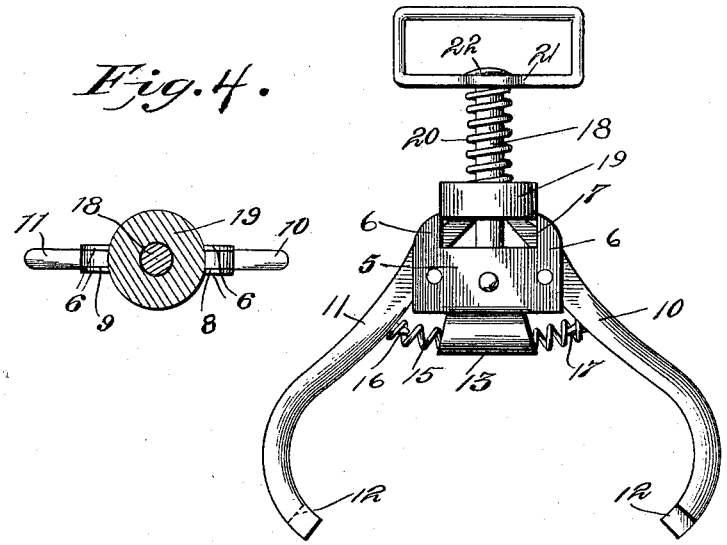


Fig. 4.

Fig. 2

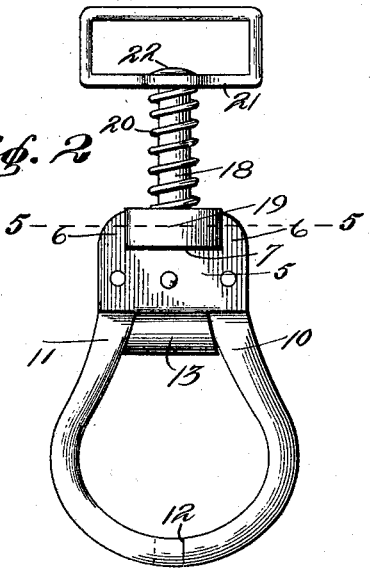
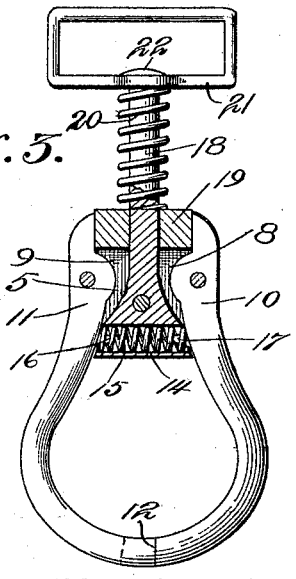


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN WALLA, OF WESTON, NEBRASKA.

SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 647,545, dated April 17, 1900.

Application filed May 26, 1899. Serial No. 718,382. (No model.)

To all whom it may concern:

Be it known that I, JOHN WALLA, a citizen of the United States, residing at Weston, in the county of Saunders and State of Nebraska, have invented a new and useful Snap-Hook, of which the following is a specification.

This invention relates to snap-hooks, and more particularly to that class adapted for employment upon harness; and it has for one object to provide a simple and efficient construction in which the engaging portions may be quickly operated for engagement and disengagement and in which when the engaging portions are in engagement they will lie positively in this position.

A further object of the invention is to provide means for quickly separating the engaging elements when the locking mechanism is released.

With these objects in view the invention consists of two engaging arms pivotally mounted in slots in a plate, beyond which plate said arms extend in one direction, the opposite ends being adapted to move with their inner faces into and out of alinement with the end boundary-walls of a recess in the upper edge of the plate. Secured in the plate and extending upwardly therefrom is a rod which carries a block adapted to be forced between the upper ends of the arms when the arms are lying with their lower ends in mutual engagement. A spring carried by the rod engages the block and tends to hold it in this position.

In the drawings forming a portion of the specification, and in which similar numerals of reference designate corresponding parts in the several views, Figure 1 is a front elevation of the hook with its arms distended. Fig. 2 is a front elevation with the arms in mutual engagement. Fig. 3 is a view similar to Fig. 2, showing the plate and a portion of the stem or rod in section. Fig. 4 is a section on line 5 5 of Fig. 2.

Referring now to the drawings, 5 represents a plate which is preferably formed integral and at the lower end of which projects a lug 13, substantially cylindrical in cross-section and having a cylindrical transverse recess 14, said lug being of lesser width than the remaining portions of the plate 5 and having its sides tapered or converging upwardly.

In the upper edge of the plate 5 is formed a recess 7, bounded by parallel end walls, resulting in the formation of mutually-parallel ears at opposite ends of the recess. Vertical slots 8 and 9 are formed in the side edges of the plate 5 and extend from the outer edges of the lug 13 upwardly and through the ears 6 and open into the recess 7.

Arms 10 and 11 are pivotally mounted in the slots 8 and 9 of the plate 5 and which arms have their lower ends diverging for a portion of their length and then bent inwardly into mutual alinement and engagement, these lower engaging extremities being halved, as shown at 12, to prevent lateral displacement of one with respect to the other when in an engaging position.

The upper ends of the arms 10 and 11 are extended beyond their pivotal connections with the plate 5, the shape of said arms being such that when the arms are in mutual engagement the inner faces of the upper ends thereof will lie flush with the adjacent end walls of the recess 7, the outer faces of the upper ends of the arm lying flush with the outer edges of the adjacent ears 6.

In order to hold the arms 10 and 11 normally separated, a helical spring 15 is disposed in the recess 14, the ends of which spring are adapted to project therefrom and inclose lugs 16 and 17 upon the adjacent portions of the inner faces of the arms. When the arms are brought into mutual engagement, the spring 15 is compressed within the recess 14, and when the arms are released said spring throws them outwardly, causing their upper ends to project into the recess 7 in the top of the plate 5.

In order to hold the arms 10 and 11 with their lower ends in mutual engagement against the tendency of the spring 15, a rod 18 is inserted between the sides of the plate 5 and is secured by means of a pin, as shown, said rod extending upwardly and centrally of the recess 7 and having mounted thereon a circular block 19, which is adapted to enter the recess 7 when the upper ends of the arms are moved therefrom and to simultaneously engage the end walls of the recess 7 and the inner faces of the upper ends of the arms 10 and 11, the faces of the recess and the arm at each side of the block being adapted to lie

in a position to conform to the curvature of the block. Thus it will be seen that the face of the block at each side will project slightly beyond the end walls of the recess 7, and thus will lateral displacement of the block with respect to the plate 5 be prevented.

In order to throw the block 19 into the above-named position when the arms 10 and 11 have their lower ends in mutual engagement, a helical spring 20 is mounted upon the rod 18 and bears at one end upon the block and at the other end upon a strap-receiving loop 21, provided with a perforation through which the rod is passed and within the inclosure of which is headed, as shown at 22, to prevent withdrawal therefrom. Thus it will be seen that normally the spring 15 will throw the lower ends of the arms 10 and 11 outwardly and the upper ends thereof to project into the recess 7, at which time the block 19 will be yieldably held upon the outer faces of the upper ends of the arms under the influence of the spring 10, thus to hold, in connection with the spring 15, the arms in the position shown in Fig. 1. Also it will be seen that if the lower ends of the arms be moved inwardly as soon as they are in mutual engagement the spring 20 will act to move the block into the recess 7 and between the upper ends of the arms and will hold it in this position, thus preventing separation of the engaging ends of the arms. Furthermore, it will be noted that the block 19 projects beyond the opposite faces of the plate 5, and thus affords means for grasping it to move it against the action of the spring 20.

It will be readily understood that any form of strap-attaching means may be employed other than that shown and that in the manufacture of the device the specific construction and arrangement described may be varied and that any of a variety of materials may be employed in the formation of the different parts.

Having thus described the invention, what is claimed is—

1. A snap-hook comprising a plate having a recess therein, arms pivotally mounted in said plate, said arms extending above their pivots and adapted to enter said recess, a rod carried by the plate, a block in slidable engagement with the rod, and adapted to enter said recess and engage the arms when the latter are moved from the recess, and a spring carried by the rod and adapted to seat the block in the recess.

2. A snap-hook comprising a plate having a recess therein, arms pivoted in said plate and adapted for mutual engagement and disengagement, said arms extending beyond their pivotal connection and adapted to lie with their extended portions in said recess when they are disengaged and to lie in the rear of the walls of the recess when they are engaged, a rod carried by the plate, and a block slidably mounted upon the rod and adapted to enter the recess and engage the walls of the latter and the adjacent faces of the arms.

3. A snap-hook comprising a plate having a recess therein, arms pivotally mounted in said plate and extending beyond their points of pivotal engagement and adapted to lie at times in said recess, when the arms are disengaged, said arms being adapted for engagement and disengagement, an extension of the plate having a recess therein, a helical spring disposed in said recess and having its ends seated upon lugs carried by the arms, said spring tending to hold the adjacent portions of the arms separated, a rod carried by said plate and lying in the recess thereof, a circular block slidably mounted upon said rod and adapted to enter the recess of the plate and engage the adjacent faces of the recess and the arms, a spring carried by said rod and tending to hold the block in the recess, and a strap-receiving loop carried by the rod.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN WALLA.

Witnesses:
H. F. BLUNK,
J. J. POSPISIL.