

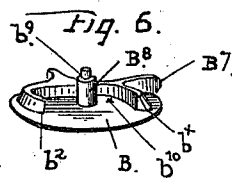
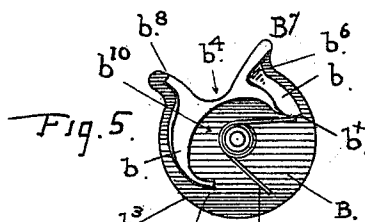
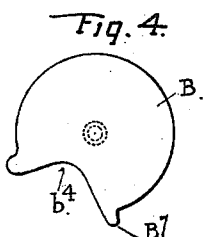
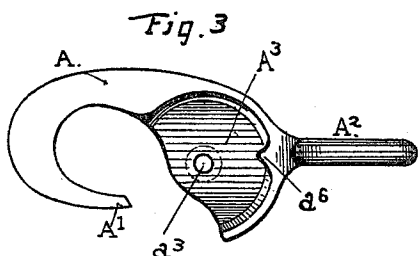
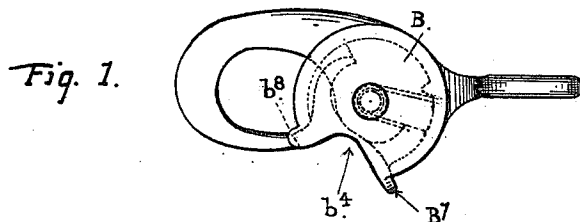
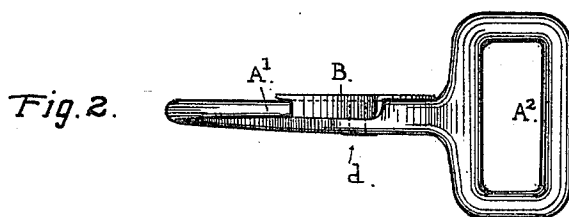
No. 617,081.

Patented Jan. 3, 1899.

C. A. CONGER.
SNAP HOOK.

(Application filed Aug. 6, 1897.)

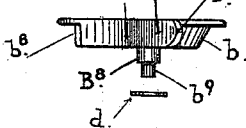
(No Model.)



Witness:

A. Regner...
E. Salomon.

Fig. 7



Inventor:

Charles A. Conger

By Smith & Osborn
his Atty.

UNITED STATES PATENT OFFICE.

CHARLES A. CONGER, OF OAKLAND, CALIFORNIA.

SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 617,081, dated January 3, 1899.

Application filed August 6, 1897. Serial No. 647,368. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. CONGER, a citizen of the United States, residing in the city of Oakland, county of Alameda, and State of California, have invented certain new and useful Improvements in Snap-Hooks, of which the following is a specification.

This invention has for its object the production of a safety snap-hook having several points and features of advantage in its construction and operation over snap-hooks of the same kind or description heretofore made, and especially with regard to the qualities of strength and durability, certainty of action, and its cheapness of manufacture.

To such end and object my invention consists in certain novel parts and combination of parts producing an improved snap-hook for harness, for hitching-straps and halters, and for many other useful purposes, all as fully set forth in the following description, in which reference is had to the accompanying drawings.

Figure 1 of the drawings is a plan or top view of a snap-hook embodying my said improvements. Fig. 2 is a side view. Fig. 3 is a plan of the body of the hook with the rotary keeper or latch-piece removed. Fig. 4 is a top view of the keeper or latch-piece. Fig. 5 is a view of the reverse side of Fig. 4. Fig. 6 is a perspective view of the latch-piece. Fig. 7 is a side view of the same piece.

A indicates the body or shank of the hook, A' the beak of the hook, and A² a loop or eye on one end for securing the hook to the end of a strap.

B is a rotary keeper or latch-piece under the beak, and C is a spring between the shank and the latch-piece for holding the latter in position against the point of the hook to close the opening.

The latch-piece B is a circular plate working on a pivot C and let into a circular seat or recess A³ in the body of the hook. On one face is formed a relatively deep flange b, set just within the edge of the plate, so as to produce a thin overhanging rim b³, that laps over and lies closely against the body of the hook around the recess A³. In one side of this piece B is also formed a curved recess b⁴,

having a wide face b⁵, that corresponds in width with the thickness of the flange b, and at each end of this recess the material is extended beyond the circular edge of the piece of the full width of the face, so as to produce at one end of the recess a stop or shoulder b⁶ and a thumb-piece B⁷ and at the opposite end the stop b⁸. The pivot B³, on which the piece B is set to rotate, is fixed in or formed integrally with the plate or body of the piece, and a shoulder or portion b⁹ of reduced diameter is formed on the end to receive a head or washer. The piece is secured in position by inserting the end of the post B⁸ through a hole a³ in the bottom of the recess and then fixing the washer d on the projecting end of the post by upsetting the end. The back of the shank is countersunk around the hole a³ to let in the washer flush with the surface. This forms a strong and inexpensive way of securing the latch-piece in place without weakening it, and at the same time it provides a strong and durable pivot for the latch-piece to work on.

The flange b should have a close working fit in the recess in the body of the hook, and it is better to give the outer face of the flange a slight bevel and give the sides of the recess a corresponding bevel. A shoulder a⁶ in the recess at the back or side that is farthest away from the beak of the hook forms a stop for one end of the coil-spring C, while the flange b is recessed, as seen at b¹⁰, to let in the spring, which is formed with an eye or center coil and two straight arms. When the spring is set in place, the eye is placed over the post B³ and the end of one arm bears against the stop a⁶ and the other arm, resting against the part b¹⁰, exerts a constant pressure that holds the stop b⁸ up to the beak and closes the opening of the hook. In that position the opposite stop formed by the back of the thumb-piece rests against the shoulder at the end of the recess, thereby producing a solid bearing that holds the latch-piece and prevents it from springing laterally from beneath the end of the beak under any pulling force or strain that the ring or loop caught in the hook can bring upon the latch-piece.

The recess B is of proper depth to take in

a ring or loop of the greatest size or thickness with which the snap-hook is designed to be used. In this recess the ring is laid preparatory to rotating the latch-piece both in the operation of engaging the ring with and disengaging it from the hook. In the normal position of this keeper its recess is turned to the outside and lies beyond the point of the hook, while the solid portion of the rim rests against the point and closes the opening. In the operation of inserting the ring to engage it with the hook the ring is simply laid in the recess, and by a slight pull of the ring the latch-piece is turned on its pivot, throwing the recess under and past the point of the hook. In the construction of this latch-piece it will be noticed that the projecting rim is cut away flush with the flange *b* for that portion of the circumference which lies across the opening between the body of the hook and the end of the beak and that a portion of the rim left at the side comes in contact with the beak or laps over the tip of the beak when the opening is closed. The object of this construction is in the one case to furnish a broad surface for the ring to bear against when confined in the hook and in the other to prevent the latch-piece from being sprung laterally away from the beak.

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

1. A snap-hook comprising a shank or body having an inwardly-bent beak turned to one side and in the same plane with the body, a circular recess in one face of the body and a loop on the end opposite to the beak; and a rotary keeper or latch-piece pivotally mounted in said recess in position to engage the beak of the hook and close the opening between that part and the body of the hook, said latch-piece having a deep flange on one face fitted to seat and turn in the recess in the body, a rim extending beyond said flange circumferentially, a segmental cut-away portion or recess extending from the rim toward the center of the latch-piece, having a stop or shoulder at one end to engage the beak of the hook, and a stop at the opposite end to engage the body of the hook when the latch-piece is closed; and a spring in the latch-piece

adapted to hold the said piece in engagement with the beak, as described.

2. The combination with the hook body or shank, having a downwardly-bent beak, an opening thereunder through the side of the body and a circular recess in one face situated below said opening; of the latch-piece pivotally mounted in said recess having a rotative movement therein and composed of a disk with a segmental recess in one side of the center extending from the circumference toward the center, a deep flange on the bottom face fitted to turn in the recess of the hook-body and following the contour of the disk at and on the sides of the segmental recess, a flat rim on the top face projecting beyond the flange excepting at the said recess, and the stops or shoulders on the circumference, one of which is adapted to engage the point of the beak, and the other a stop on the shank of the hook; and the coil-spring situated within the flanged bottom of the latch-piece and adapted to hold the said piece in position to close the hook, as hereinbefore described.

3. The combination, with a snap-hook having a circular recess in the shank or body beneath the beak of the hook, and a central hole in the bottom of said recess; of the circular latch-piece pivotally mounted to rotate in the said recess and having a deep flange on the bottom face fitted to turn in the recess of the shank or body, a projecting top rim extending over the shank around the margin of the recess, a post in the center of the latch-piece integral therewith adapted to fit and turn in the aperture in the center of the recess and having a head on the outer end to confine the same in place while allowing the said post to turn therein, the stop or shoulder on the circumference adapted to engage and cover the point of the hook; a stop to engage a shoulder on the shank, and the segmental recess in the edge between the said stops, as described, for operation as set forth.

In testimony that I claim the foregoing I have hereunto set my hand.

CHARLES A. CONGER.

Witnesses:

BEN F. WOOLNER,
J. C. MACDOUGALL.