No. 615,345. Patented Dec. 6, 1898.

E. A. CUMMINGS.

SNAP HOOK.

(Application filed Nov. 18, 1897.)

(No Model.)

Fig - 1 -

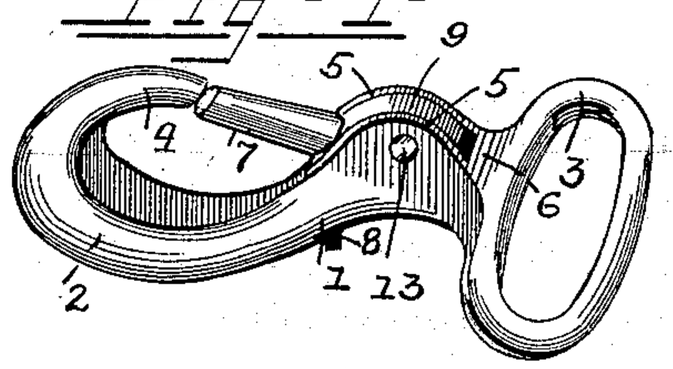


Fig - 2 -

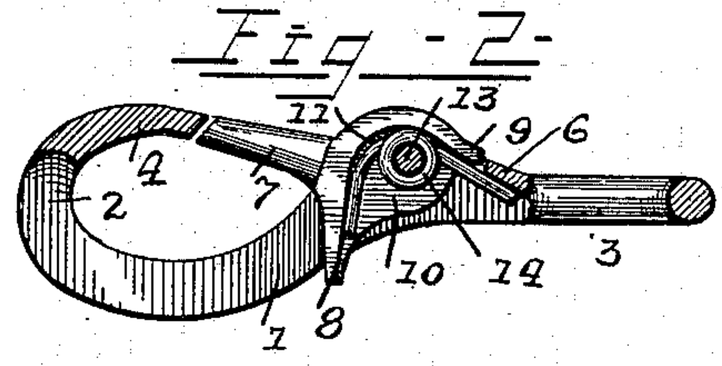


Fig - 3 -

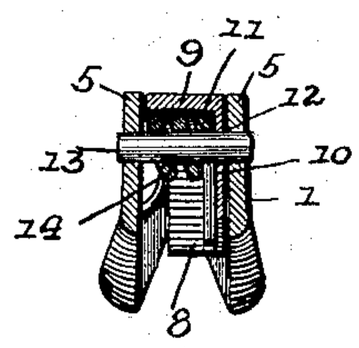


Fig - 4 -

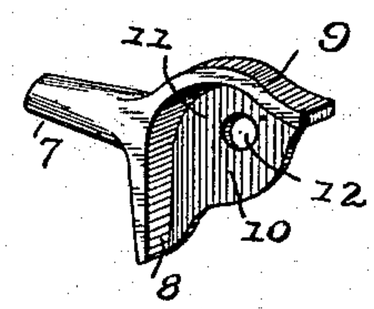
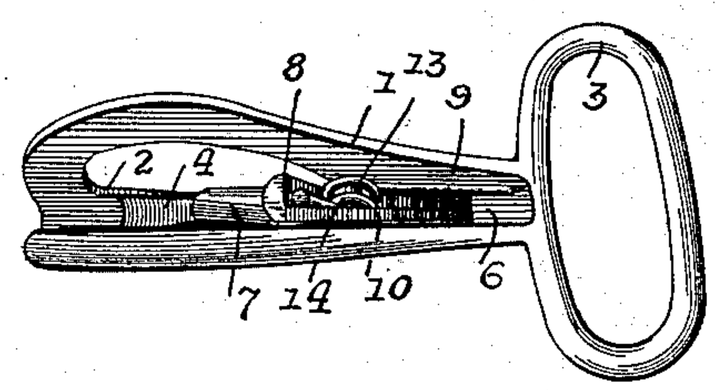


Fig - 5 -



Witnesses
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UNITED STATES PATENT OFFICE.

EVERETT A. CUMMINGS, OF BELGRADE MILLS, MAINE.

SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 615,345, dated December 6, 1898.

Application filed November 18, 1897. Serial No. 659,011. (No model.)

To all whom it may concern:

Be it known that I, EVERETT A. CUMMINGS, a citizen of the United States, residing at Belgrade Mills, in the county of Kennebec and State of Maine, have invented a new and useful Snap-Hook, of which the following is a specification.

My invention relates to improvements in snap-hooks for use on harness; and it is designed more particularly as an improvement in hooks of that class wherein the tongue is pivoted in the body and normally held in a closed position by the employment of a spring.

The object that I have in view is to improve the construction of hooks of this class in a manner to have the pivot of the tongue lie above the body of the hook, so that the pivot is overhung instead of occupying an underhung relation to the tongue and hook. The advantage due to this arrangement of the parts is that a horse cannot manipulate the hook in a manner to free the ring or loop from the snap-hook.

A further object of the invention is to so construct the tongue as to provide a housing for the spring in which the parts occupy such relation that they can be readily cleaned of any dust, dirt, and snow which accumulates in the hook and tongue.

A further object of the invention is to provide an improved form of tongue in which the movement of the tongue under the impelling force of the spring is positively arrested independently of the contact of the free end of the tongue with the beak or hook, and which tongue also furnishes a means for its convenient operation by hand.

To the attainment of these ends my invention consists in the novel construction and arrangement of parts, which will be hereinafter fully described and claimed.

To enable others to understand my invention, I have illustrated the same in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a perspective view of a snap-hook constructed in accordance with my invention. Fig. 2 is a vertical longitudinal sectional view thereof. Fig. 3 is a vertical transverse sectional view. Fig. 4 is a detail perspective view of the tongue detached from the body of the hook. Fig. 5 is an inverted perspective view of the body and hook.

Like numerals of reference denote corresponding parts in all the figures of the drawings.

1 designates the body, which is formed with the hook 2 and with the loop 3 in a single piece of metal, preferably of cast metal. In its general contour the hook resembles those now in common use; but the body is constructed in a manner to receive the tongue for the purpose of having the tongue-pivot substantially on the plane or line of the free extremity of the hook.

In the construction of my improved device the body and hook are practically split or divided from the loop 3 to a point near the extremity of the hook; but the extremity of the hook is made solid at 4 to give the necessary strength thereto. The body 1 is furthermore provided with parallel ears or lugs 5 5, which are disposed on opposite sides of the cavity or opening which divides the body and the hook, and these ears or lugs 5 rise from the upper face of the body, so as to present well-defined protuberances which terminate on a line substantially parallel to the extremity 4 of the hook 1. The loop 3 is joined with the body 1, and said loop presents a solid shoulder or abutment 6 between the lugs 5 5 to form a seat for a stop-lug on the tongue, as will be presently described.

The tongue 7 is cast in a single piece in the novel form shown by Fig. 4 of the drawings. This tongue is provided at one end with an approximately U-shaped fork consisting of the dependent arm 8 and the stop-arm 9 and closed at one side by the plate or web 10. The stop-arm 9 curves upward and rearward from the tongue 7, while the dependent arm 8 extends downwardly at substantially right angles to the tongue. The web or plate 10 is arranged on one side of the arms 8 9, and it is joined therewith and with the tongue in a manner to form a recess or cavity 11 in the tongue. This recess or cavity is closed on one side by the plate or web. Its top side is bounded by the curved stop-arm 9 and its front side is closed by the tongue and the pendent operating-arm 8; but one side and the rear of this recess is open to enable

the spring to be housed therein for ready and convenient access to said spring. The stop-arm 9 of the tongue projects beyond the rear edge of the web or plate, so as to form the lug to contact with the seat formed by the shoulder 6, and in the plate is an eccentric opening 12 for the passage of the rivet which forms the pivot on which the tongue is mounted loosely. The cast tongue, constructed as described, is fitted in the cavity of the body so as to lie snugly between the parallel ears or lugs 5, and said tongue has its curved stop-arm 9 arranged to be flush with the curved edges of the ears 5, thus presenting a neat appearance and preventing any protruding edges on which the straps may catch. The operating-arm 8 projects downwardly, so as to have its lower extremity protrude slightly below the body for the fingers to engage therewith in the operation of depressing the tongue away from the free extremity 4 of the hook.

13 designates the rivet or pin, which passes through the ears 5 of the body, the plate or web of the tongue, and the coil of the spring 14, the ends of said rivet or pin being headed flush with the exposed side faces of the ears 5. The spring 14 is thus housed within the cavity of the tongue and one arm of the spring bears against the shoulder or ledge presented by the rear side of the operating-arm 8, while the other arm of the spring bears against the shoulder or abutment 6 between the body and the solid front side of the loop 3. The tension of the spring forces the tongue normally into contact with the solid extremity of the hook, thus closing the throat or opening between the hook and body, and in this adjustment of the tongue the protruding rear end or lug of the stop-arm 8 bears upon the abutment or seat 6 to arrest the movement of the tongue under the pressure of the spring independently of the engagement between the tongue and the hook.

In my improved device the body and the tongue are constructed to provide for the elevation of the pivot 13 above the body and to thus support the tongue in a manner to prevent the ring or loop from being pulled out of the hook by any effort of the animal to free the ring from the hook. The body, hook, and tongue are all open on the lower side of the hook for free access to the tongue and the spring to enable accumulations of dirt and snow to be easily and readily removed, thus keeping the parts in condition for the easy operation of the tongue.

My improved device is exceedingly simple in construction, durable and reliable in service, and cheap of manufacture.

What I claim is—

A snap-hook consisting of a body having a longitudinally-bifurcated hook member, a pair of pivot-ears in rear of the hook member, and a shoulder at the rear of the space between said ears, a tongue 7 formed at one end with an approximately U-shaped fork registering between the pivot-ears and provided with a web closing one side thereof, said fork essentially consisting of a curving flange having a pendent operating-arm 8 projected, and exposed to the fingers, through the bifurcation of the body, and a curved stop-arm member 9 conforming to the curvature of the pivot-ears and having its terminal projected beyond the web-plate to engage said shoulder of the body, a pivot-pin passing through the web-plate and pivot-ears, and a spring coiled on the pivot-pin and housed within the casing formed by the fork of the tongue, substantially as set forth.

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

EVERETT A. CUMMINGS.

Witnesses:

E. W. TOWLE,

F. A. SCRIBNER.