(No Model.)

R. J. REED & S. O. CAROTHERS.

SNAP HOOK.

No. 513,652. Patented Jan. 30, 1894.

Fig. 1.

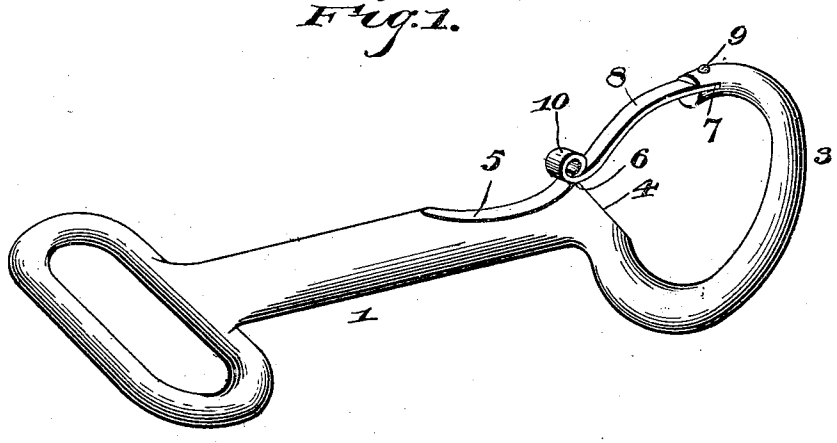
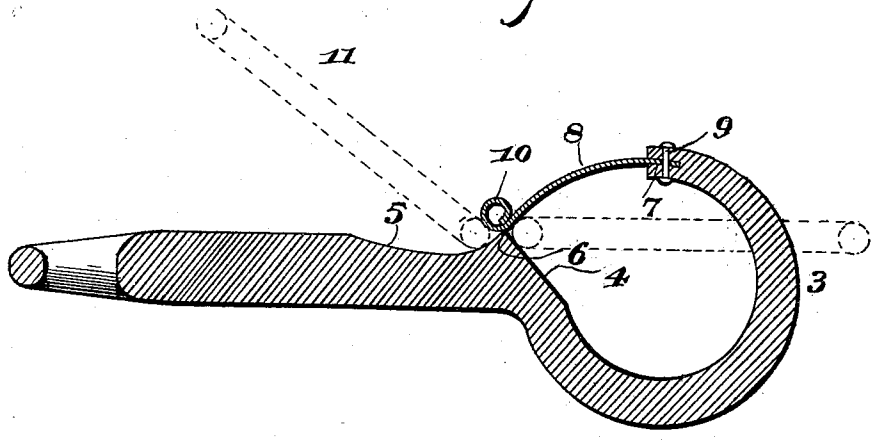


Fig. 2.



Witnesses
B. S. Ober
W. S. Duvall

Inventors
Robert J. Reed,
Samuel O. Carothers
By their Attorneys,
C. A. Snow & Co.

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ROBERT J. REED AND SAMUEL OTT. CAROTHERS, OF WHEELING, WEST VIRGINIA.

SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 513,652, dated January 30, 1894.

Application filed September 12, 1893. Serial No. 485,322. (No model.)

To all whom it may concern:

Be it known that we, ROBERT J. REED and SAMUEL OTT. CAROTHERS, citizens of the United States, residing at Wheeling, in the county of Ohio and State of West Virginia, have invented a new and useful Snap-Hook, of which the following is a specification.

Our invention relates to improvements in snap-hooks; the objects in view being to produce a snap-hook that is strong, durable, and safe; that may be cheaply manufactured and sold; and which by its peculiar formation may be readily applied to or disconnected from a ring, and the said operations being carried on with a single movement of one hand of the operator.

With these and other objects in view the invention consists in certain features of construction hereinafter specified and particularly pointed out in the claim.

Referring to the drawings:—Figure 1 is a perspective view of a snap-hook embodying our invention. Fig. 2 is a vertical longitudinal sectional view thereof.

Like numerals of reference indicate like parts in both the figures of the drawings.

In the practice of our invention we construct a shank 1, providing the same at one end with an elongated transverse eye 2. The opposite end of the shank merges into a curved hook 3 which is gradually reduced and flattened toward its extremity. At the point where the shank merges into the hook an abrupt bend is made, and upon the inner convexed side of said bend we cut away the metal forming an inclined guide surface 4. This guide surface extends at its outer end to a point about transversely opposite the bend and merges into a shallow curved guiding recess 5, the said guiding recess 5 and surface 4 meeting at the aforesaid point, namely, transversely opposite the bend between the hook and the shank and forming a point 6. In the present instance the extremity of the hook 3 is kerfed, as indicated at 7, and let into the kerf is the outer end of a flat but curved spring-tongue 8. Through the walls of this kerf and the aforesaid spring-tongue a rivet 9 is passed. The spring-tongue is designed to cover the entrance to the hook, and being curved extends to the point 6 where it contacts with the body of the hook and beyond which it is abruptly curled upon itself to form a rounded eye 10. It will be seen that the tongue itself coacts with the inclined guide-surface 4, while the curled eye at the outside of the hook coacts with the guide recess 5.

As shown by dotted lines in Fig. 2, wherein we have illustrated a ring 11 with which the hook is about to engage, it will be seen that the hook may be brought to position by one hand of the operator, the guide recess 5 serving to guide the hook downward against the edge of the ring until the said ring is caught between the inner end of the guide recess and the said eye 10. It now remains simply to draw upon the hook, when, as will be obvious, the ring striking the eye at a point slightly beyond an imaginary transversely disposed diametrical line will cause said eye to elevate away from the contact point 6 of the hook-body and thus facilitate the entrance of the ring to the hook. In the disengaging or separating operation, it is simply necessary to elevate the hook or push the same away from the ring, the ring being guided by the convexed inclined guide surface 4 or the tongue itself toward the contact point 6, and inasmuch as this inclined guide surface and the tongue converge toward a given point a continued movement of the hook will effect the desired disengagement.

Thus it will be seen that we have provided a very simple form of hook, one which may be readily and cheaply manufactured and sold, and operated or manipulated with the greatest facility and dispatch.

It will be observed that the guide-recess 5 is gradual in its curvature toward its outer end, but as it approaches the eye 10 it becomes abrupt, so that the ring presses against the eye in very nearly the direction assumed by the before mentioned imaginary diametrically transverse line, and as the result the spring is more readily elevated. This enables a strong spring to be employed, and one with which accidental disengagement is avoided, and yet lessens the force necessary to effect an engagement.

Having described our invention, what we claim is—

The herein-described improved snap-hook,

the same consisting of a shank terminating at one end in a hook said shank being provided at the inner side of its point of juncture with the hook with an inclined guide surface 4 and at the opposite side with the guide recess 5 meeting the inclined surface 4 to form a contact point adjacent to which the said recess is more abruptly curved than at any other point, and the spring-tongue 8 secured to the end of the hook and inwardly curved to the said point of contact and beyond which it is curved upon itself to form an eye, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

ROBERT J. REED.
SAMUEL OTT. CAROTHERS.

Witnesses:
A. B. BUTLER,
W. B. TURNER.