

F. SHERKEL, JR.
 SNAP HOOK.
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952,367.

Patented Mar. 15, 1910.

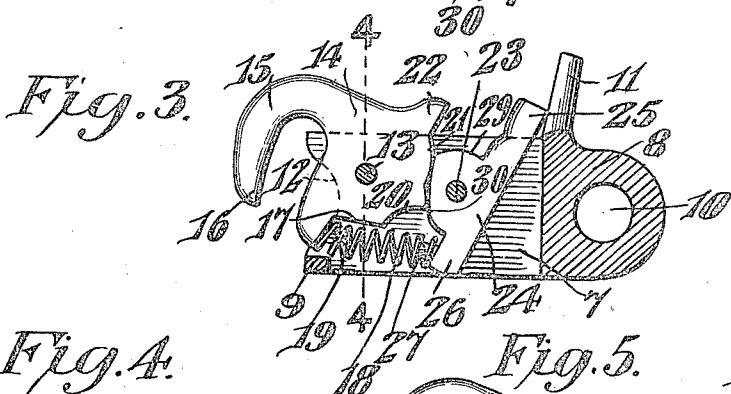
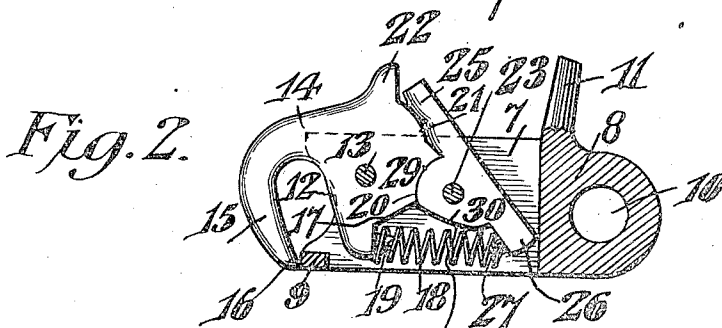
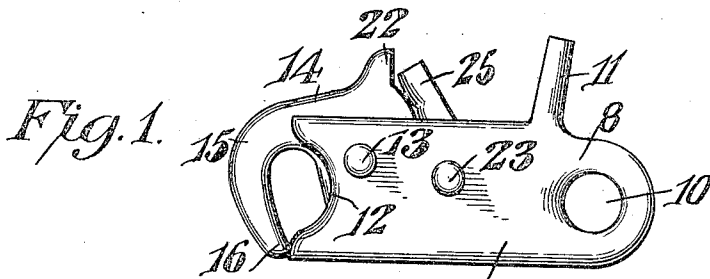


Fig. 4.

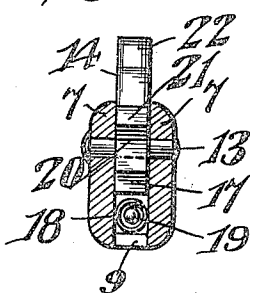


Fig. 5.

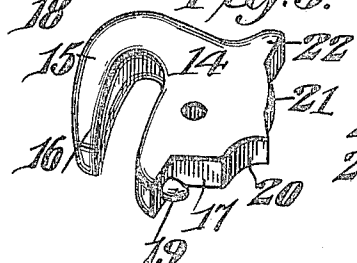
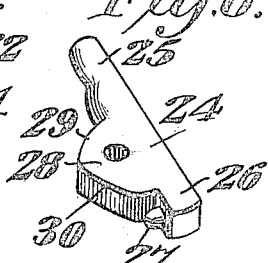


Fig. 6.



Witnesses
Jas E. McArthur
George T. Lab.

Frank Sherkel, Jr. Inventor
 By *E. J. Sayers* Attorney

UNITED STATES PATENT OFFICE.

FRANK SHERKEL, JR., OF HOBOKEN, NEW JERSEY.

SNAP-HOOK.

952,367.

Specification of Letters Patent. Patented Mar. 15, 1910.

Application filed June 8, 1909. Serial No. 500,845.

To all whom it may concern:

Be it known that I, FRANK SHERKEL, JR., citizen of the United States, residing at Hoboken, in the county of Hudson and State of New Jersey, have invented a new and useful Snap-Hook, of which the following is a specification.

This invention relates to snap hooks, and is an improvement on the construction shown and described in Letters Patent No. 804,175, granted to me Nov. 7, 1905.

The principal object of the invention is to provide a novel device of the character described, having an efficient means which will lock the hook in a closed position, and assist in opening and will hold the same in its opened position.

A further object of the invention is to provide a device of the class described, which is simple in construction, easy of operation, and cheap to manufacture.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing, Figure 1 is a side elevation of the device. Fig. 2 is a longitudinal sectional view of the same, and showing the hook in a locked position. Fig. 3 is a similar view, but showing the hook held in an opened position. Fig. 4 is a vertical transverse sectional view of the device, taken on the line 4—4 of Fig. 3, and showing the hook in elevation. Fig. 5 is a perspective view of the hook, and Fig. 6 is a perspective view of the locking-dog.

Like reference numerals designate corresponding parts in all the figures of the drawing.

The invention comprises a body consisting of spaced longitudinally disposed side members 7—7, which are integrally connected at one end 8, and at the other end by a transverse connecting-bar 9 which is arranged at the lower corner of the body. The body extends beyond the connection 8 to form an eye 10, which may be of any desired shape. An upstanding and slightly rearwardly inclined finger-piece 11 is also arranged to ex-

tend from the connecting portion 8. The opposite ends of the members 7—7 are respectively provided with curved cut-out portions 12 to form an article-receiving seat.

Arranged between the members 7—7, and pivoted by any suitable bearing 13 near the corner opposite the upstanding finger-piece 11, and above the transverse bar 9, is a retaining hook 14, the main portion or body of which extends longitudinally between the members 7—7, and is provided with an offset and downwardly extending bill 15. The bill is arranged to extend beyond the end of the said members, and has an end which preferably engages with the outer side of the transverse bar 9 of the body. The lower portion of the body of the hook 14 is cut-out as shown at 17, to provide a space and a shoulder for a spiral spring 18, which is retained by means of a stud 19 that projects from the shoulder into the cut-out portion 17. The body is further provided with a concaved edge 20 which connects the cut-out portion 17 with the inner edge of the hook. This edge is preferably curved outwardly at its center, and extends upwardly beyond the hook 14 to form a thumb-piece 22. Also arranged between the longitudinally disposed members 7—7, and pivoted thereto between the hook 14 and the connection 8 by any suitable bearing 23, is a locking-dog 24. The dog is pivoted near its center, and comprises an upward projection 25, and a lower projection 26. The former extends beyond the members 7—7 of the body, and constitutes a finger-piece, and the latter is provided with a stud 27 adapted to receive the other end of the spiral spring 18. The dog is furthermore provided with an enlarged central hub portion 28 which is adapted to engage the hook 14. This portion is provided with a convexed edge 29 which is of the same size and shape as the concaved edge 20 of the hook. A downwardly inclined and slightly curved edge 30 connects the convexed edge 29 with the lower projection 24.

As clearly shown in Fig. 2 of the drawing, the locking-dog 24 is retained in engagement with the hook 14 by means of the spiral spring 18. In order to unlock the hook, the finger-piece 25 of the dog is pulled toward the finger-piece 11 of the body. This action causes the convexed edge 29 of the dog to move out from the concaved edge 20 of the hook, and at the same time, compress

the spiral spring 18. Immediately after the two edges have become entirely disengaged, the spiral spring 18 will cause the hook to be raised and the inner edge 21 thereof will be thrown into engagement with the inclined edge 30 of the locking-dog. The spring, thus being relieved, will tend to hold the hook in its open position, as illustrated in Fig. 3 of the drawing.

When the hook is in the above described position, and it is desired to attach the hook to an article, the said article is, of course, first positioned within the bill 15 of the hook. Pressure applied to the article, will force the same against the body of the hook. This movement will cause the corner, which connects the concaved edge 20 and the edge 21 of the body, to frictionally move along the inclined edge 30 of the locking-dog, this movement simultaneously compressing the spring 18. Immediately after the said corner of the hook reaches the convexed edge 29 of the locking-dog, the spring will be relieved, its action will throw the convexed edge 29 into engagement with the concaved edge 20 of the hook, and thereby securely lock the hook in its closed position. It will therefore be readily apparent, that the spring, together with the locking-dog, assists in opening the hook, in holding the hook in its opened position, and also, when the hook is being closed, the spring assists in forcing the said dog into its proper position for locking the hook.

What I claim is:—

1. A device of the class described comprising a body, a hook movably mounted in the body, a locking-dog movably mounted in the body and engaging the hook, and a spring engaging both the hook and the dog for actuating the said parts upon movement of either part.

2. A device of the class described comprising a body, a hook pivoted to the body, a dog pivoted to the body and adapted to lock the hook in a closed position, and a means engaging both the hook and the dog and separate from both for positively opening the hook upon the movement of the said dog.

3. A device of the class described comprising a body, a hook pivoted to the body, a dog pivoted to the body and engaging the hook, and a means engaging both the hook and the dog, said means being adapted to actuate the dog to engage the hook and hold the same in an open position or lock the hook in a closed position.

4. A device of the class described comprising a body having spaced longitudinally disposed side members, a hook arranged between and pivoted to the members, a dog arranged between and pivoted to the members and engaging the hook, the hook and the dog having coacting edges and a spring inter-

posed between and engaging both the hook and the dog for actuating the said hook and the said dog, the coacting edges of the dog and hook being shaped so as to lock the hook by the position of the dog in either the open or closed positions of the former.

5. A device of the class described comprising a body having spaced longitudinally disposed members connected at one end by a transverse bar and cut-out to form an article-receiving seat, a hook arranged between and pivoted to the members above the transverse bar, said hook being provided with an off-set bill adapted to engage the transverse bar to close the article-receiving seat, a dog arranged between and pivoted to the members and engaging the hook, and a coiled spring engaging and actuating both the hook and the dog, said dog being adapted in one position to lock the hook in its closed position and in another position to hold the hook in an open position.

6. A device of the class described comprising a body having spaced longitudinally disposed members, a hook arranged between and pivoted to the members, said hook comprising a body portion having a bill, a dog arranged between and pivoted to the members and engaging the hook, the dog and the hook having coacting edges, the said edges being constructed so as to lock the hook in either its open or closed positions, said dog comprising an upper projection constituting a finger-piece, and a coiled spring arranged between the hook and the dog and having its ends respectively engaging each so as to actuate the hook and the dog in unison upon movement of either part.

7. A device of the class described comprising a body having spaced longitudinally disposed members, a hook arranged between and pivoted to the members, said hook comprising a body portion having a bill, and a concaved portion at its inner edge, a dog arranged between and pivoted to the members and engaging the hook, said dog comprising an upper projection constituting a finger-piece, a lower projection, and an enlarged central portion connecting the upper projection with the lower projection and adapted to engage the hook, said central portion comprising a convexed upper edge which is adapted to be seated in one position of the dog in the concaved portion of the hook, and a coiled spring arranged between the hook and the dog and having its ends respectively engaging the hook and the lower projection of the dog, said spring being adapted upon closing the hook to actuate the dog so that the convexed edge of the dog will engage in the concaved edge of the hook and thereby lock the said hook in its closed position.

8. A device of the class described com-

prising a body having spaced longitudinally disposed members, a hook arranged between and pivoted to the members, said hook comprising a body portion having an off-set and downwardly extending bill, a stud extending from the hook body, and a concaved portion, a dog arranged between and pivoted to the members and engaging the hook, said dog comprising an upper projection constituting a finger-piece, a lower projection having a stud secured thereon, and an enlarged central portion connecting the upper projection with the lower projection and adapted to engage the hook, said central portion comprising a convexed upper edge which is adapted to be seated in one position of the dog in the concaved portion of the hook, and a coiled spring arranged between the hook and the dog and having its ends respectively engaging the studs of each, said spring being adapted upon movement of the dog to actuate the hook and open the same, the movement causing the convexed edge of the dog to become disengaged from the concaved edge of the hook.

9. A device of the class described comprising a body having spaced longitudinally disposed members solidly connected at one end, and at the other end by a transverse bar, said members having an eye integral with and extending from the solid end, a finger-piece extending from the same end and above the members, the ends of the members above the transverse bar being cut-out to form an article-receiving seat, a hook arranged between and pivoted to the members above the transverse bar, said hook compris-

ing a body portion having an off-set and downwardly extending bill, said bill being adapted to engage the transverse bar to close the article-receiving seat, said hook having a cut-out portion formed in the lower portion of the hook body, a stud extending from the hook body and into the said cut-out portion, a curved inner edge, a concaved edge connecting the cut-out portion with the said curved inner edge, and a finger-piece extending from the hook body above the members, a dog arranged between and pivoted to the members and engaging the hook body, said dog comprising an upper projection constituting a finger-piece, a lower projection having a stud secured thereon, an enlarged central portion connecting the upper projection with the lower projection and adapted to engage the hook body, said central portion having a convexed upper edge which is adapted to be seated, in one position of the dog, in the concaved edge of the hook body, a downwardly inclined edge connecting the said convexed edge with the lower projection, and a coiled spring arranged between the hook body and the dog and having its ends respectively engaging the studs of each, said spring being adapted to actuate the hook and the dog.

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

FRANK SHERKEL, JR.

Witnesses:

JOHN KANE,
CHARLES MCGILLYCUDDY.