Sept. 11, 1928. 1,684,322

M. ITJEN

SNAP HOOK

Filed April 11, 1928

Fig. 1.

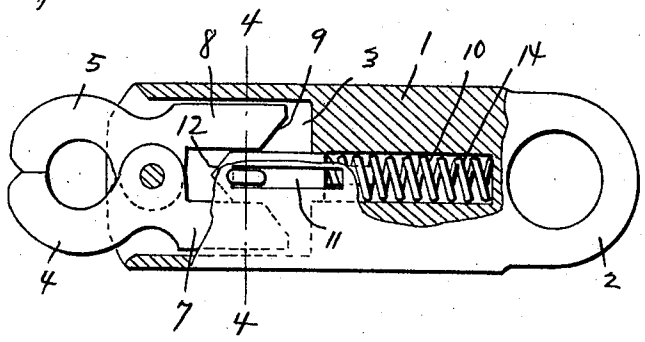



Fig. 2.

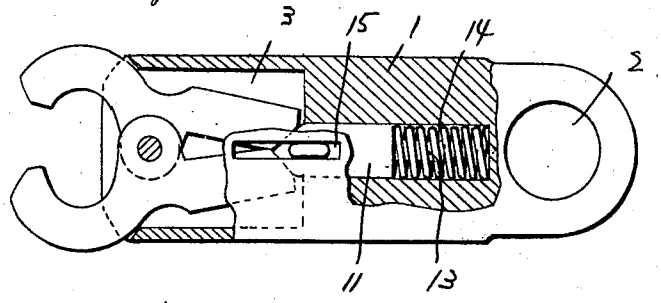



Fig. 3.

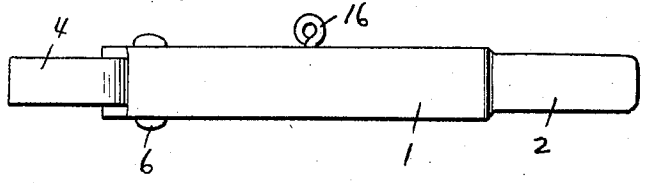
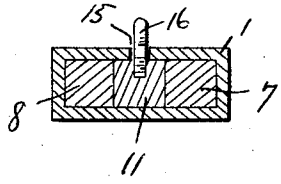



Fig. 4.




*Inventor*

Martin Itjen

By Clarence O'Brien

*Attorney*

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# UNITED STATES PATENT OFFICE.

MARTIN ITJEN, OF SKAGWAY, TERRITORY OF ALASKA.

## SNAP HOOK.

Application filed April 11, 1928. Serial No. 269,160.

The present invention relates to improvements in fastening devices and has reference more particularly to a snap hook that is of such construction as to relieve any strain being placed upon the spring-pressed plunger of the snap hook.

A salient object of the present invention resides in the provision of a snap hook that can be readily and easily opened to facilitate the attachment or disengagement of the snap hook from any suitable member, a spring pressed plunger being provided for normally holding the complementary jaw members of the snap hook in a closed position.

A still further object is to provide a snap hook of the above mentioned character which is simple in construction, inexpensive, strong and durable and further well adapted to the purposes for which it is designed.

Other objects and advantages will become apparent during the course of the following description.

In the accompanying drawing, forming a part of this specification, and in which like numerals indicate like parts throughout the same:

Figure 1 is a view partly in elevation and partly in section of a snap hook embodying my invention showing the position of the coacting jaws when the spring pressed plunger is in its normally projected position,

Figure 2 is a similar view showing the jaws in an open position and the spring pressed plunger retracted,

Figure 3 is a side elevation of the snap hook, and

Figure 4 is a transverse section taken approximately on the line 4—4 of Figure 1.

In the drawing wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 1 designates a solid rectangular shaped body portion that is formed at one end with an enlarged eye 2 for attachment of the snap hook to a chain or the like.

The opposite end of the body portion is formed with an enlarged socket 3 that extends inwardly from the forward end of the body to the intermediate portion thereof and pivotally supported in the forward portion of the socket 3 are the inner ends of a pair of coacting curved jaws designated by the numerals 4 and 5 respectively, a pivotal connection being illustrated at 6. These jaws are curved in opposite directions and project beyond the forward end of the solid body portion 1 for engagement with a link of a chain or the like.

A rearwardly extending leg 7 is formed on the inner end portion of the jaw 4 for disposition within the rear portion of the socket 3, a similar leg 8 being formed on the inner end portion of the complementary jaw 5 and these leg members 7 and 8 are spaced with respect to each other when the complementary jaw members 4 and 5 are in a closed position. The inner ends of these leg members are beveled as shown at 9 for a purpose to be presently described.

The rear portion of the body 1 is formed with a centrally located cavity 10 that communicates at its forward end with the rear end of the socket 3 and arranged within the forward end portion of this cavity is a plunger 11, the forward end thereof being beveled on opposite sides to form a head 12 that cooperates with the beveled inner ends 9 of the spaced legs 7 and 8 in a manner to be also later described in detail.

A pin 13 projects from the rear end of the plunger 11 and a normally expanded coil spring 14 is arranged within the cavity 10, the rear end of the spring engaging with the innermost end of the cavity while the forward end of the spring encircles the pin 14 and engages with the rear end of the plunger 11. This spring normally urges the plunger 11 into the socket 3 so that the pointed head 12 will be disposed between the leg members 7 and 8 whereby to maintain the complementary jaws 4 and 5 in a closed position.

A slot 15 is formed in one side of the body 1 for communication with the socket 3 and extending through this slot is the screw eye 16 that is threaded into the slidable plunger 11 and the eye portion of this member projects beyond the outer face of the body 1 whereby to form a handle or knob to actuate the plunger.

If desired, a pin or wire may be passed through the eye to form a better handle or to operate the same from a remote point.

Normally the parts are arranged as shown in Figure 1 and the jaws are held in a closed position so that the link not shown that is held between the jaws cannot be disengaged therefrom. By sliding the plunger 11 rearwardly in the cavity 10, the pointed head 12 will be moved out of engagement from between the legs 7 and 8 and when the parts are arranged as shown in Figure 2, the jaws 4 and 5 may be swung on their pivotal con-

nection 6 to an open position whereby to remove or insert the link of a chain.

By releasing the actuating member 16, the spring 14 which has been placed under tension by a rearward sliding movement of the plunger 11 will exert an outward pressure on the plunger to move the same forwardly in the socket member 3 so that the pointed head 12 will ride along the beveled inner ends 9 of the leg members and will again be disposed between the inner opposed sides of the leg members as shown in Figure 1 to maintain the complementary jaws in a locked position.

It will thus be seen from the foregoing description, that I have provided a snap hook which is very simple in its construction and operation and which will furthermore at all times be positive and efficient in carrying out the purposes for which it is designed.

Furthermore the simplicity of my device renders the snap hook strong and durable and very inexpensive in its manufacture.

While I have shown the preferred embodiment of my invention, it is to be understood that various changes in the size, shape and arrangement of parts may be resorted to, without departing from the spirit of the invention and the scope of the appended claim.

What I claim is:—

In a snap hook, a solid body formed at its rear end with an attaching eye, the forward end of the body being formed with a rearwardly extending socket that terminates at the intermediate portion of the body, a pair of complementary jaw members pivotally secured at their inner ends in the outer end portion of the socket, said jaws projecting beyond the forward end of the body, an inwardly extending leg formed on the inner end of each jaw, the inner end of each leg being bevelled, a plunger slidable in the rear portion of the socket, the solid body being provided with a longitudinally extending cavity in the rear portion thereof which communicates with the rear end of the socket, said plunger being also slidable in the cavity, the forward edge of the plunger being bevelled to cooperate with the bevelled inner ends of the legs, a reduced pin formed on the rear end of the plunger and disposed within said cavity, expansible coil spring arranged within the cavity, the rear end of said spring engaging the rear end of the cavity, the forward end of said spring encircling the reduced pins and engaging the rear end of the plunger for normally urging the same forwardly into the socket for disposition between the legs to maintain the jaws in a closed position, said body being formed with a slot in one side for communication with the cavity and the socket, and a handle forming member carried by the sliding plunger and projecting through said slot to facilitate the manual rearward movement of the plunger in said cavity and out of engagement from between said legs whereby the jaws are disposed in such a position as to be capable of separation.

In testimony whereof I affix my signature.

MARTIN ITJEN.