No. 622,201. Patented Apr. 4, 1899.

J. D. BRASSINGTON.

SNAP CATCH FOR HARNESS.

(Application filed May 13, 1897.)

(No Model.)

FIG. 2.

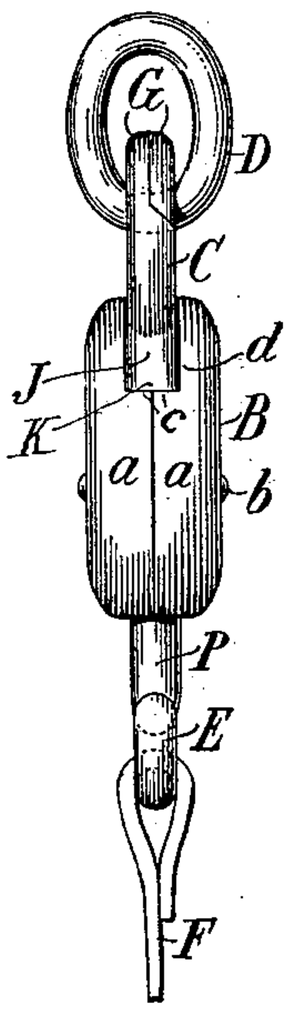


FIG. 1.

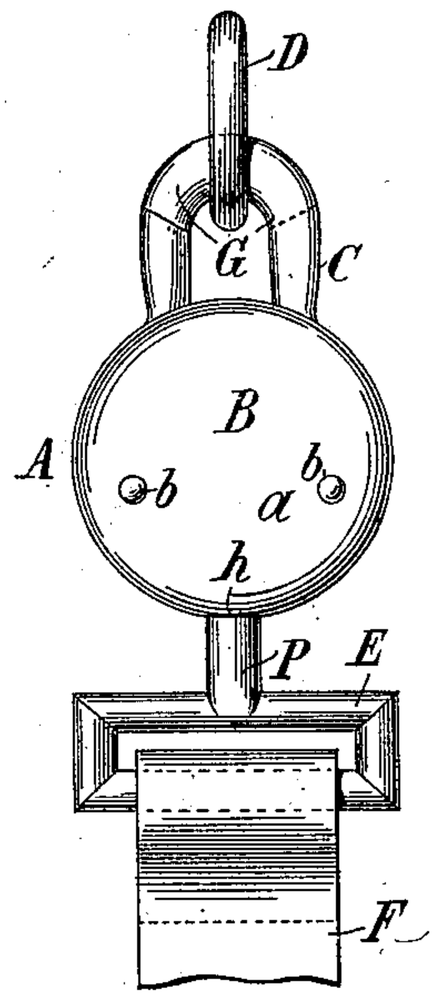


FIG. 3.

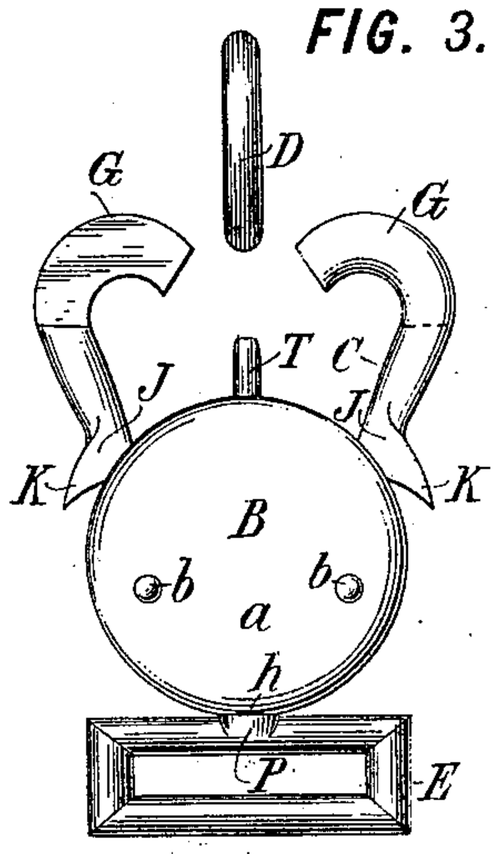


FIG. 5.

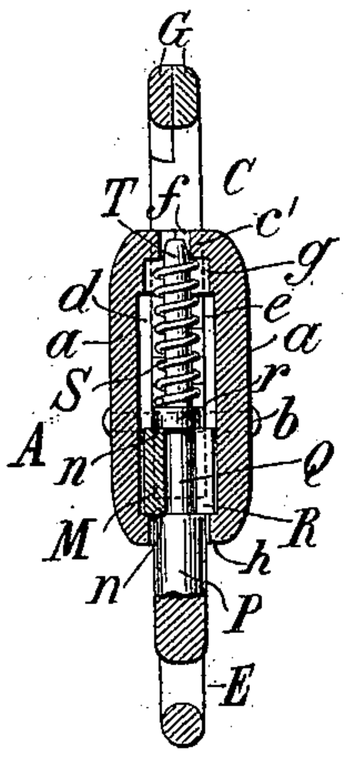


FIG. 4.

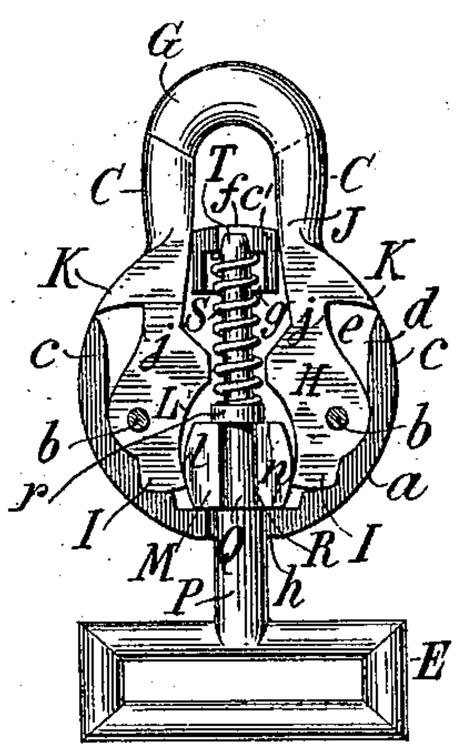


FIG. 6.

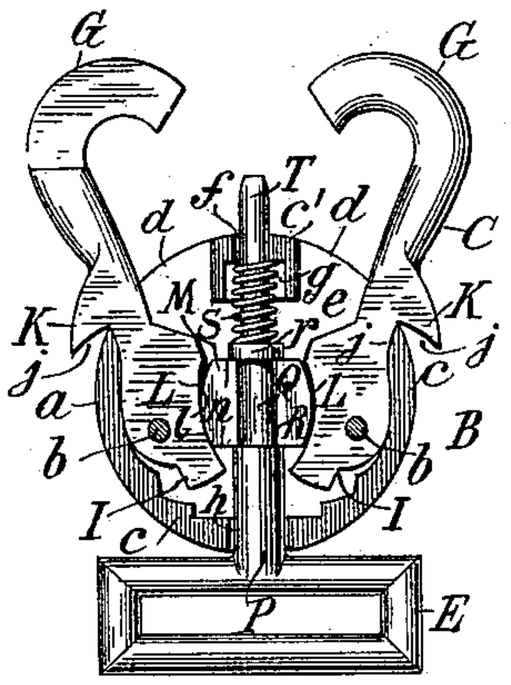


FIG. 8.

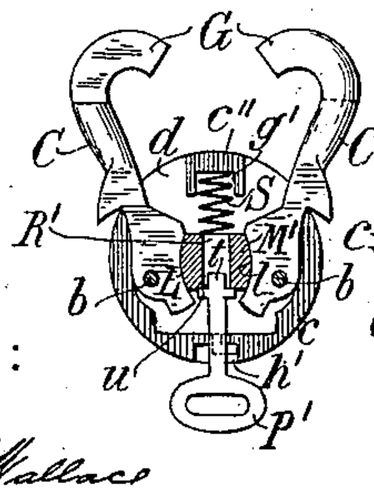
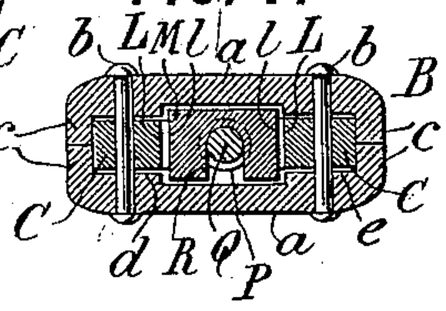


FIG. 7.



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SNAP-CATCH FOR HARNESS.

SPECIFICATION forming part of Letters Patent No. 622,201, dated April 4, 1899.

Application filed May 13, 1897. Serial No. 636,272. (No model.)

To all whom it may concern:

Be it known that I, JOHN DEGROAT BRASSINGTON, a citizen of the United States, residing in New York, (Port Richmond,) Richmond county, New York, have invented certain new and useful Improvements in Snap-Catches for Harness, of which the following is a specification.

This invention relates to snap-catches and the like and aims to provide certain improvements in such devices especially applicable to swivel-catches.

Heretofore swivel snap-catches have generally comprised a hook to which was swiveled a loop, a spring-actuated bolt controlling entrance to the hook. The handle for the bolt has projected and been liable to engagements with the part to which the loop has been attached, involving danger of accidental drawing of the bolt through the fact that its releasing movement has been in the direction of the strain on the loop.

My invention provides an improved catch which can be easily opened to engage with a link, which will secure the latter against accidental escape, which requires for opening a pressure opposite in direction to that of the usual strain on the catch, and which can be used for catching or fastening parts of harness or other articles together.

In its preferred form as a swivel snap-catch my invention consists of a hollow body or shell carrying two hooked jaws, a spring snapping these jaws together, an operating-block controlling the jaws, and a swiveled loop or eyepiece connected to the block for actuating it. The spring and loop act on the jaws through the block, the tension of the spring being in a direction of the strain on the catch, so that it normally holds the catch closed, while the closed position for the block is that in which it is held by the loop when the latter is under strain, so that the strains of use resist opening of the catch. The loop is movable axially toward and from the body to move the block and open and close the jaws, and inward movement against the tension of the spring and in opposition to the normal tension on the catch being requisite for opening the jaws.

In the accompanying drawings, which show the preferred form of my invention, Figure 1 is a plan view of my improved swiveled snap-catch. Fig. 2 is an edge view thereof. Fig. 3 is a plan view showing the catch open. Fig. 4 is a longitudinal section on the line of the jaws, showing the catch closed. Fig. 5 is a longitudinal section taken at right angles. Fig. 6 is a similar view to Fig. 4, showing the jaws open. Fig. 7 is a cross-section through the fulcrums of the jaws; and Fig. 8 is a view similar to Fig. 6, showing a key-operated catch or lock embodying my improvements.

Referring to the drawings, let A indicate the snap-catch; B, the body thereof; C, the jaws thereof; D, a link or other article engaged by the jaws; E, the swivel loop-piece, and F a strap or other article connected thereto.

The body B preferably consists of two light cast-metal halves *a a*, which are united by two studs or pins *b* or in any suitable manner and have projecting flanges *c* engaging at their side edges. Within these flanges each shell has a recess *d*, having a flat bearing-face *e*, which recess opens out through the flange at each side of the center of the body. Between the recesses the halves *a* have a socket *f* at top extending inwardly to a larger socket *g*, communicating with the recess *d*. At bottom each half has a semicircular socket *h*, extending from the recess *d* through the wall. The sockets *f*, *g*, and *h* are in axial alinement.

Two jaws C are used, both preferably being movable and having reduced overlapping hooked portions G at their outer extremites, from which they extend inwardly, having flat inner ends H, fitting within the respective openings of the recesses *d* and fulcrumed therein in any suitable manner, as by means of the rivet pins or studs *b*, so that the jaws can swing toward and from each other to close and open the catch. In the closed position the inner ends of the jaws bear with their tails high against the flanges *c* and with their faces J against the projections *c'*, in which the socket *f* is formed. In this position each jaw has an outward projection or wing K, which is flush with the outer edge of the shells and closes the entrance to the corresponding recess, but which when the jaw swings to the open position moves out to the flange *c*, to permit which each jaw is constructed with a

notch *j* in its outer face. On their adjacent edges the jaws have bearing faces or provisions L, extending longitudinally of the jaws from one side to the other side of the pins *b*.

To operate the jaws, I prefer to provide a block M, which fits in the recess *d* between the faces L and acts as a wedge or cam against these faces to throw the jaws from one to another position and to hold them in any position. This block is preferably a flat piece of metal fitting the flat walls *e* of the recess, having convex bearing-faces *l* on its side edges reciprocal to the faces L of the jaws and having square top and bottom bearings *n*, by which it can be moved. When the block is moved outwardly, its outer end *n* bears against the flanges *c* and separates the adjacent ends of the jaws, forcing their hooked ends together and holding them in this position. As the block is moved inwardly it engages the portions *h* of the jaws, separating them and holding them in the open position.

I prefer to operate the jaws through the medium of the block by the looped piece E, which is preferably swiveled to the block by having its shank P reduced at Q and fitted into a notch R in the block, so that the shank and loop are swiveled to the block and held thereby to the body, but can be moved in and out to operate the block and open or close the jaws. Any suitable connection between the block and shank may be employed. I prefer to employ a spring S, tending to hold the jaws in the closed position, and to extend the end of the shank as a reduced portion T beyond its shoulder *r*, which portion passes through the spring and into the socket *f*, by which it is guided at its end and which it closes. The spring S fits at its end in the socket *g* and reacts against the flange *c'* and the shoulder *r* of the shank, tending to move the block and loop outwardly and to close the jaws. The shank is guided by the sockets *f* and *h* at its opposite ends. The end T of the shank projects beyond the shell into the space between the hooks when the latter are open and may be used to expel an object from between the hooks, or if an object is being engaged it may be pressed against this end to start the closing of the hooks.

In operation the shell will be grasped by the thumb and fingers and the loop forced by the hand toward the shell to open the hooks, the other hand being free to guide the object D between the hooks. Then by releasing the loop the spring will snap the block outward and close the hooks, or by pulling on the body against the loop the block will be drawn outward in the body to close the hooks. The block in all its positions will firmly hold the hooks in their corresponding positions. There will be no room for accidental unhooking. The interior of the catch will normally be closed against ingress of dirt and the parts will be protected from injury. To release the catch, the body and loop must both be engaged and brought together. Any tension on the catch must be overcome before it can be released.

It will be seen that my invention provides an improved catch which is convenient of operation and free from danger of accidental release, and it will be understood that the invention is not limited to the particular details of construction and arrangement nor to the particular character of catch set forth as embodying the preferred form of the invention, but that it can be employed in whole or in part according to such modification or for such uses as circumstances or the judgment of those skilled in the art may dictate without departing from the spirit of the invention.

My improvements are applicable to similar devices, such as padlocks, as illustrated in Fig. 8, wherein the block M′ is separably engaged by the member P′, which latter in this case is a key, the wards *u* of which, after having been passed through the socket *h'* of the shell, bear against the end of the block, so that by pressing in on the key the block can be raised against the spring S to open the jaws C. The end *t* of the key fits and turns in an aperture R′ in the block. The socket *g'* for the spring is here formed in a solid lug *c''* on the shell. The spring throws the block to the closed position and holds it there when the key is released or removed, thus preventing opening of the jaws.

What I claim is—

1. In snap-catches and the like, a body B having recess *d*, in combination with two hooks C having separated tails fulcrumed to said body within said recess, and having overlapping ends beyond the body, a shank P swiveled to said body and movable axially therein, and a block M connected to said shank within said body between and engaging said tails for opening and closing the jaws as said shank is moved inwardly and outwardly of said body.

2. In snap-catches and the like, a body B, in combination with jaws C having tails pivoted therein, shank E, between said tails, spring S, and block M, within said body and between and engaging said tails, said block movable past the pivotal axes of said jaws for opening and closing them, and moved in one direction by said shank and in the other direction by said spring.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN DEGROAT BRASSINGTON.

Witnesses:
FRED WHITE,
THOMAS F. WALLACE.