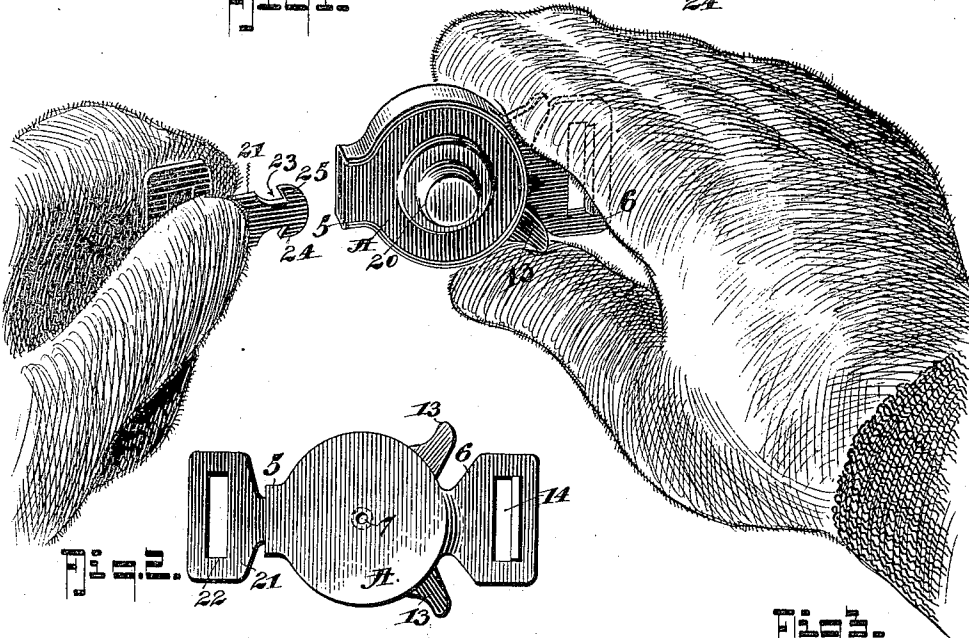
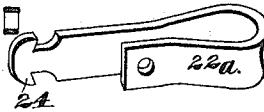


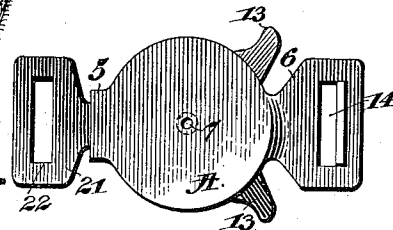
SNAP.

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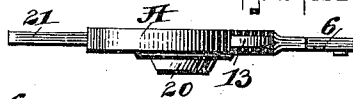
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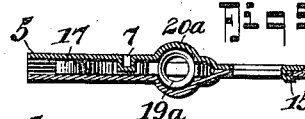
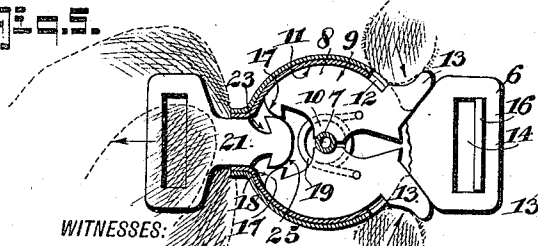
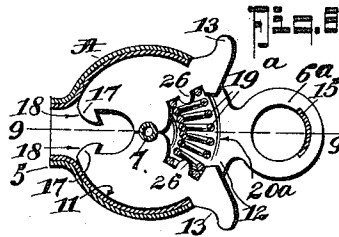
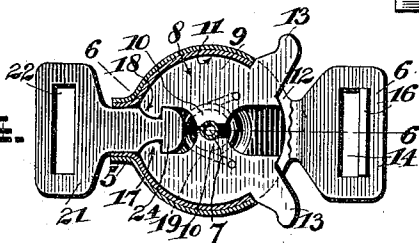
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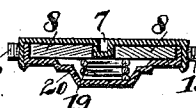
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UNITED STATES PATENT OFFICE.

BERT BENSON WOOD, OF MADISON, WISCONSIN.

SNAP.

1,209,369.

Specification of Letters Patent.

Patented Dec. 19, 1916.

Application filed January 31, 1916. Serial No. 75,353.

To all whom it may concern:

Be it known that I, BERT BENSON WOOD, a citizen of the United States, and a resident of Madison, in the county of Dane and State of Wisconsin, have invented certain new and useful Improvements in Snaps, of which the following is a specification.

One of the principal objects of my invention is to provide an improved snap which will be capable of efficient and enduring service under all conditions, and which will be exceedingly safe and strong, although light of weight and simple in construction.

Another object of the invention resides in the provision of an improved snap in which the latches with which the removable segment or member interlocks, are reinforced against undue strain or disruption by the walls of the casing against which the latches bear.

Still another object of the invention is to provide a snap which will safely retain the separable member or segment in place, and which will not become unlocked by accidentally rubbing over or striking obstructions.

A still further object of the invention is to provide an improved snap of the class described which will be of extremely attractive appearance.

With these and other objects in view which will become apparent as the description proceeds, the invention resides in the construction, combination, and arrangement of parts hereinafter more fully described and claimed, and illustrated in the accompanying drawing in which like characters of reference indicate like parts throughout the several figures, of which—

Figure 1 represents a view in perspective of my improved snap, showing the same at a time when the segment is being removed from engagement with the latches. Fig. 2 represents a plan view of the device looking at the same from one face thereof. Fig. 3 represents an edge view of the snap. Fig. 4 represents a view with one of the sides of the snap removed to show the interior construction thereof. Fig. 5 represents a similar view, disclosing the method of detachment of the removable segment or member. Fig. 6 represents a view in section taken on the plane indicated by the broken line 6—6 of Fig. 4. Fig. 7 represents a view in section taken on the plane indicated by the line 7—7 of Fig. 6. Fig. 8 represents a view of

a modified form of the snap, with one of the faces removed to show the interior construction thereof. Fig. 9 represents a view in section taken on the plane indicated by the line 9—9 of Fig. 8. Fig. 10 represents a view in perspective of a modified form of removable segment.

In carrying out my invention, I provide a casing indicated at A, which casing is circular in formation and is composed of a pair of plates having inwardly extending marginal flanges which fit one within the other as clearly indicated in the drawing. At one point in the casing a mouth 5 is formed, and at a diametrically opposed point is formed a plate 6 composed of extensions of the plates which form the sides of the casing. The said casing may be formed of any suitable and desirable metal, the plates which compose the casing being cast or stamped therefrom. One of the plates which form the body of the casing, is provided with an in-stamped central portion 7 which forms a pivot upon which the latches 8 rock. These latches are similar in formation and, as indicated clearly in Figs. 4, 5, and 6, each consists of a body portion 9 having an in-standing foot 10 provided with a notch or recess fitting against the pivot 7. The outer edge of the body is curved as at 11 to snugly fit and slide against the curved wall of the casing. Through a slot 12 provided at the rear portion of the casing side wall near the plates 6, projects a lever arm 13. The outer ends of the arms 13 stand out beyond the walls of the casing to be in convenient position to be engaged for operation by the fingers of a person manipulating the device.

In constructing the casing, it is to be noted that the plate 6 is provided with an elongated opening 14, and that one of the plates which compose the casing has a flange portion 15 extending through the opening provided in the other plate and crimped about the opposite plate as at 16. The flanged edge or rim of the outer case is also crimped slightly over the back circled edge of the inner case, thereby fastening the two halves of the casing together.

At the forward ends of latches 8 adjacent the mouth 5, are formed the inwardly extending hooks or shoulders 17. These hooks have outer convex edges 18. In one modification of the device, namely, that shown in Figs. 4 and 5, the latches are con-

trolled by a coil spring 19 whose tendency is to maintain the hooks or shoulders 17 in proximity to each other. This coil spring is arranged centrally within the casing and lies within a recess formed by an outwardly stamped central portion 20 of the opposite plate than that from which the pivot 7 is stamped. The ends of spring 19 engage each in an opening or recess provided in the body portion of one of the latches 8, as clearly shown.

The removable segment or member is indicated at 21, and while being in the form of an eye 22 at its outer end, has the inner end of its shank oppositely recessed or notched as at 23, to provide prongs or shoulders 24 for coaction with the hooks 17. This member 20 may be passed inwardly through the mouth 5 of the casing, and when its convex inner edge 25 engages against the convex edges of hooks 17, the latter will be spread until the shoulders 24 pass beyond the hooks, at which time through the action of the spring 19 the hooks will snap back into position within the recesses 23 and will engage the shoulder 24 for preventing withdrawal of the removal segment. This member 20 is preferably stamped from metal the thickness of which is equal to the distance between the inner faces of the plate which form the casing. In disengaging the segment or removable member from the hooks 17, as indicated in Figs. 1 and 5, both of the arms or levers 13 must be pressed toward each other, so that both of the hooks 17 will be removed from engagement with the shoulders 24. The segment may then be withdrawn from the casing.

If only one of the levers 13 is depressed the removable member will not be released, the tendency being really to increase the grip of the opposite latch from the one depressed, upon the segment, for the reason that increased tension will be put upon the spring 19. The snap I provide is thus an extremely safe one, the danger of its being accidentally released by contact with obstructions, being reduced to a minimum.

In the modified form shown in Figs. 8 and 9 a spiral spring 19^a is substituted for the coil spring 19, and is arranged within an arcuate recess formed by arcuate indentations 20^a provided in the walls of the casing. The spring at its ends bears against the latches 8 near the bases of the arms or levers 13, being anchored on lugs 26 formed on the latches. The spring, similarly to spring 19, tends to maintain the hooks 17 in juxtaposition. In the form shown in Figs. 8 and 9, the plate 6^a, corresponding with the plate 6, is circular in formation rather than rectangular.

It is to be noted that any strain or pull imparted upon the removable segment 21

when the latter is engaged by the latches, is transmitted through the body portion of the latches so as to be distributed against the walls of the casing, against which said latches bear. In this manner, the strain is not localized at the shoulders 17, and hence an exceedingly strong device is attained without sacrificing the advantages of lightness of weight and simplicity of construction.

One of the advantages of the device is the fact that it may be readily operated in the dark, and in all conditions of weather, and may be readily handled by a man wearing gloves or mittens, without undue exertion.

The device is simple and attractive in design, and may be readily and conveniently operated.

Although I have described the preferred embodiment of my invention, I may desire to make such changes in the construction, combination, and arrangement of parts thereof, as do not depart from the spirit of the invention, and the scope of the appended claims.

A modified form of removable segment is indicated in Fig. 10, wherein the eye portion 22 is displaced by a curved or hooked portion 22^a. The modified form is provided with the prongs or shoulders 24 already described.

I claim:—

1. The herein described snap including a casing consisting of a pair of circular plates having marginal flanges engaging one within the other, the flange of one plate being crimped over the opposite plate, said casing being provided at one point in its periphery with a mouth and at a diametrically opposed point with a plate consisting of extensions of the plates forming the casing laid face to face, said extensions being provided with an opening therethrough, one of the extensions having a flanged portion crimped upon the opposite extension, a plurality of spring controlled latches arranged within the casing and having arms extending outwardly through slots provided in the walls of the casing, and a removable member adapted to be engaged with the latches through the opening provided at the mouth of the casing.

2. A snap comprising a circular casing having a mouth portion provided at one point in its periphery and having a single centrally arranged pivot, a pair of latches arranged in opposed relation within the casing and having feet portions slidably engaging the pivot, said latches having their body portions provided with curved outer edges slidably engaging the peripheral wall of the casing, said latches being further provided at one end with arms extending out through slots provided in the peripheral wall of the

casing, and at their opposite ends with opposed hooks arranged adjacent the mouth portion of the casing, spring means engaging the latches for normally forcing the hook portions toward each other, and a detachable member having opposed shoulders movable through the mouth portion into locking engagement with said hooks.

3. The herein described snap including a circular casing having a mouth portion provided at one point in its peripheral wall, said casing being provided centrally with a pivot, a pair of opposed latches arranged within the casing and having feet portions engaging the pivot for centering the latches thereon, said latches being provided with outstanding arms extending through slots provided in the peripheral wall of the casing whereby the latches may be manipulated by hand, hooks provided on the latches and being arranged adjacent the mouth portion of the casing on opposite sides thereof, said latches adjacent the hooks having sliding contact with the peripheral walls of said casing for relieving strain upon the hook portions, spring means engaging the latches for normally maintaining the hook portions in alinement with the mouth of the casing, said casing being stamped to provide a recess for receiving the spring means, and a detachable member having a shank provided with notches for receiving the hook portions when the shank is inserted within the mouth of the casing.

4. The herein described snap including a casing having a pair of opposed latches arranged therein for oscillation about a common pivot, said latches being provided with opposed hooks and being further provided with means whereby the latches may be manually operated, a detachable member movable into the casing and provided with means adapted to be interengaged by the hook portions of the latches, a spiral spring interposed between the latches within the casing bearing directly at its ends against said latches and having its axis arranged concentric with the pivot, said spring normally tending to move the hook portions toward each other and being adapted when one only of the latches is moved to detach its hook from the detachable member, to exert a tension upon the opposite latch for increasing its grip upon the detachable member, and arcuately arranged indentations concentric with the pivot formed in the opposing walls of the casing and within which the said spring rests, for retaining and guiding the spring.

5. The herein described snap including a casing having a pair of latches arranged therein for oscillation about a common pivot, a compressed spiral spring interposed between the latches arranged with its axis concentric with the pivot, and opposed

arcuate indentations formed in the walls of the casing concentric with the pivot and into which the spring projects whereby the spring will be properly positioned and guided.

6. A snap including a casing having a circular inner wall and having a single centrally arranged pivot, a pair of latches oppositely arranged within the casing and having oppositely extending feet slidably bearing against the pivot for centering the latches thereon, the latches having curved edges opposite their feet portions slidably engaging the inner wall of the casing, arms carried by the latches and extending through slots provided in the wall of the casing, engaging elements carried by the latches arranged adjacent the mouth portion of the casing, means for normally retaining the engaging elements in juxtaposed position relatively to each other, and a detachable member movable into the mouth portion for engagement with the engaging elements of the latches.

7. A snap including a casing having a circular inner wall and having a centrally arranged pivot, opposed latches slidably centered upon the pivot and having curved edges slidably bearing against the inner wall of the casing, said latches further having engaging means, and a removable element having means adapted to interengage with the engaging means of the latches.

8. The herein described snap including opposed pivoted latches having opposed hooked portions, a detachable member having means engageable with the hooked portions for connecting said detachable member with the latches, means whereby the latches may be simultaneously moved for releasing the detachable member, means for normally retaining the latches in position for engaging the detachable member, and a casing within which the latches are arranged and against the marginal walls of which said latches bear whereby the strain upon the latches will be relieved.

9. The herein described snap including a casing having a mouth portion, oppositely disposed latches arranged therein having hooked portions arranged on opposite sides of the mouth portion, a detachable member movable into the mouth portion to be engaged by the hooked portion of the latches, said latches adjacent the hooked portions having a sliding engagement with the marginal walls of the casing for relieving strain upon the hooked portions.

10. The herein described snap including a circular casing having a pair of opposed spring controlled latches arranged for reciprocation therein and bearing against the marginal walls of the casing, said casing being provided with a mouth portion, said latches having engaging portions arranged

adjacent the mouth portion in position to be engaged by an element entering the mouth portion, and a removable member having a shank provided with opposed shoulders adapted to be engaged with the latches when moved into the mouth of the casing, and means whereby the latches may be simultaneously operated for disengaging the removable member.

10 11. A snap including a casing having circular walls, and latches pivotally arranged in the casing and having curved walls whereby to relieve the latches of strain bearing against the circular walls, and an element

adapted to be engaged by said latches, the strain exerted upon the latches by the element being transmitted to the walls of the casing for partly relieving the latches of stress.

12. A snap including a casing having a circular inner wall and oppositely arranged movable latches contained in the casing and engageable by a detachable member, said latches slidably bearing directly against the circular wall of the casing for transmitting the stress thereto.

BERT BENSON WOOD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."