Sept. 29, 1959 D. I. REITER 2,905,991

FASTENER

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Fig. 1.

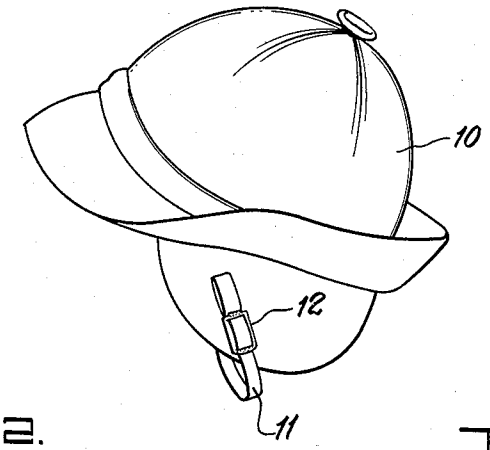


Fig. 2.

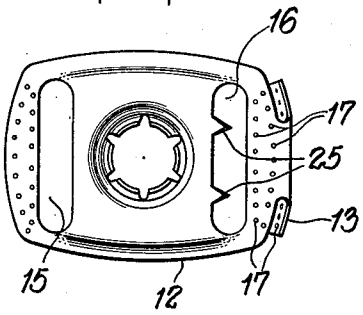
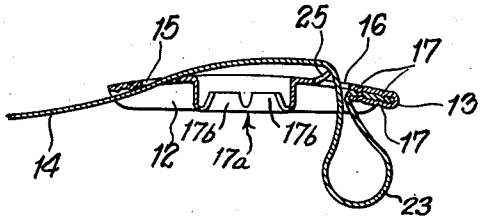


Fig. 3.



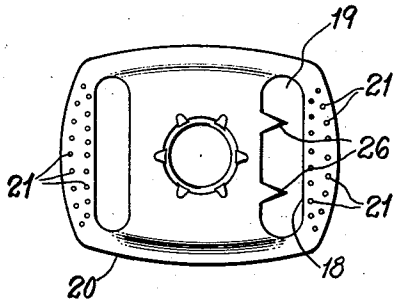


Fig. 4.

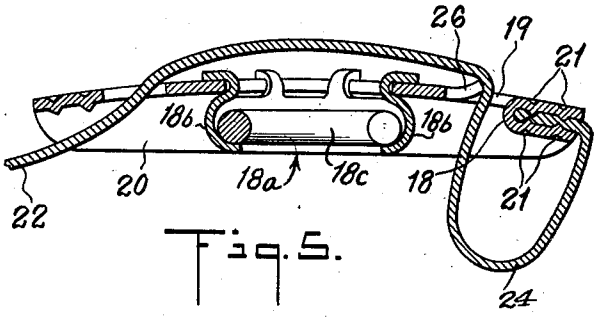


Fig. 5.

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FASTENER

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4 Claims. (Cl. 24—77)

This invention relates to adjustable buckle snap fasteners and particularly to those of the type which have slots to receive a belt, strap, ribbon or the like. Such an adjustable buckle snap fastener is most frequently used in conjunction with a chin strap on a hat, helmet or suspenders or clothing. It is desirable to provide for the length of the strap to be adjustable to accommodate the difference in size of the head, neck and body measurements of various wearers.

It has been the practice in the past to secure one end of the belt, ribbon, strap or the like to a portion of the garment by means of riveting, stitching or other similar means, and to insert the other end of the strap into slots provided on the removable snap fastener, and by securing the said strap at its desired length to the fastener by means of teeth or other similar means provided therefor on the adjustable buckle snap fastener. The balance of the length of the strap would hang free from the fastener. It is also sometimes desirable to fasten both ends of the strap to adjustable buckle snap fasteners in which case both ends of the strap would hang free from the removable fasteners.

The adjustable buckle snap fasteners have snap fastener sockets which are stud receiving openings usually located centrally in the snap fasteners. These are adapted to cooperate, as is well known, with studs which are sewn or fastened to the hat or garment. The belt, ribbon, strap or the like, is attached to the snap fastener. The snap fastener is in turn snapped onto the stud which is attached to the garment. The snap fastener socket in the snap fastener may be of one or more kinds well known in the trade, as will be described hereinbelow. When the snap fastener socket of the snap fastener is pressed onto the stud, the fastener will fasten itself to the stud. It may be easily removed by a pulling pressure to pull it away from the stud. The snap fastener is therefore a removable fastener.

My present invention concerns itself with the problem of securing the free end of the belt, ribbon, strap or the like, so that it will be permanently attached to the snap fastener to prevent loss of the same if it should slide off the strap inadvertently.

I have already obtained the following numbered United States patents for slotted fasteners and improvements therefor: 1,734,048; 1,828,256; 1,849,807; 1,857,973; 1,859,271; 1,889,322; 1,947,424; 1,989,379; 2,177,119; 2,219,938 and 2,268,224. In all of the mentioned patents the fastener could slide off the free end of the strap and easily become lost. In my many years of experience in this art, I found that women would continually write in to the companies with which I was associated for fasteners to replace those lost in the cleaners, or in the washing machine, or by their children while playing. There always was a definite need for a fastener which could not be lost by slipping off the free end of the strap.

My invention is the first new development to definitely solve this problem and it is the first new development in this type of fastener after many years.

It is, therefore, an object of my invention to provide an adjustable buckle snap fastener to be used with a belt, strap or ribbon or the like, in which there is provision to permanently clamp the fastener to a portion of the belt, strap or ribbon and other provision to permit it to be fastened at any point which may be desired along the length of the belt, strap or ribbon for purpose of size adjustment.

It is a further object of my invention to provide such a fastener in which the belt, strap or ribbon may be looped and serve as a hanger to hang up the hat or other garment on which it is used.

Other objects and advantages of my invention will appear in the specification hereinbelow.

I attain these objects by the new device which is illustrated in the accompanying drawings in which Figure 1 is a perspective view of a child's hat showing one of my fasteners in position;

Figure 2 is a top plan view of a form of fastener incorporating my invention;

Figure 3 is a cross-section of the fastener shown in Figure 2 provided with a belt, ribbon or strap;

Figure 4 is a top plan view of another type of fastener incorporating another form of my invention; and

Figure 5 is an enlarged cross-section of the form of fastener shown in Figure 4 with a belt, strap or ribbon inserted therein.

I have chosen these two forms of fasteners by way of illustration. My invention may be used in conjunction with any type of fastener generally illustrated in my above-mentioned patents as well as any other type of fastener which employs the use of a belt, strap, ribbon or the like.

A hat or cap **10** is provided with a chin strap **11** at one end of which I have placed my adjustable buckle snap fastener **12**. The hat may be made of any material suitable therefor. The chin strap **11** may also be made of any material suitable for such purpose such as belting, ribbon, leather or any other type of material which may be used for a chin strap **11**.

The chin strap **11** is designated as such because I am demonstrating the use of my invention in this application in conjunction with a child's cap **10**. It may also be used in many other applications for other types of garments and for luggage and other articles of manufacture. I make no claim in this application for any particular article on which my fastener may be used. Whatever is shown other than the fastener is shown by way of illustration and I do not desire to be limited thereby.

In the form of my invention embodied in the fastener **12**, as shown in Figs. 2 and 3 of the drawings, I have provided a clamp **13**. A chin strap **14** is threaded through the slots **15** and **16** and then the free end of the strap **14** is brought into the clamp **13** and permanently fastened therein by closing the clamp **13** on the material. I have provided dots **17** which protrude from the inner surface of the clamp **13** in order to make provision to hold the strap **14** more securely.

The method of manufacture of the fastener is old in the art and is fully described in my previously mentioned patents. Briefly, a relatively thin strip or ribbon of steel, brass, aluminum or other metal is punched out in the form of the fastener. The slots **15** and **16** and the form for the clamp **13** are either punched or pierced from the metal. The clamp **13** is then partially bent into position leaving enough room for the insertion of the strap **14**. The dots **17** are punched into the metal and, if desired, they may be pierced through to provide a jagged inner surface for the clamp **13**. A snap fastener socket comprising a stud receiving opening **17*a*** and a series of fingers **17*b***, adapted to snap around a stud, is also provided in the snap fastener **12**. Although the stud

is not shown in the drawings, it is well known in the art and would ordinarily be attached to the cap **10** at a central point underneath the snap fastener **12** as shown in Fig. 1 of the drawings.

In the other form of my invention, shown in Figures 4 and 5, I provide a clamp **18** which is made out of the metal which is sheared out of the slot **19** of the fastener **20**. It will be noted that here again I have provided for dots **21** by means of which the strap **22** may be more securely engaged in the clamp **18**.

In this form there is a saving in metal because the clamp **18** is made out of the metal sheared out of the slot **19** which would ordinarily be thrown away as scrap and there is no need for an extra portion of metal to be put on or provided for as in the clamp **13** in the fastener **12**.

It will also be noted that the fastener **12** is provided with teeth **25** on which the strap **14** may be temporarily impaled and fastened at any desired point along its length. It is by this means that the length of the strap **14** may be adjusted. I have also provided teeth **26** in the form of fastener **20** to accomplish the same purpose. In shearing the clamp **18** out of the slot **19** in the fastener **20**, it is obvious that the counterpart of the teeth **26** will remain as notches in the end of the clamp **18**. These notches will also serve to grasp the material of the strap **22** more firmly in place. In the second form of the invention shown in Figures 4 and 5, the snap fastener socket comprises a stud receiving opening **18***a*, a ring holding part **18***b*, and a yieldable wire ring **18***c*. This form of snap fastener socket will engage a stud in a manner well known to the art and will be readily removable when sufficient pressure to remove it is applied.

In either form of my invention, the fastener **12** or the fastener **20** cannot slide beyond the end of either the strap **14** or **22**, respectively, as the case may be. It cannot be lost. It will also be noted that loops **23** and **24** are formed at or near the end of the straps **14** and **22**, respectively. These loops **23**, **24** may serve as hangers to hang up the garment and are an added convenience.

In the foregoing specification I have described two preferred forms of my invention and have illustrated the preferred forms on two types of fasteners. I desire to make it clear that in this application I claim the principle of securely fastening a belt, strap or ribbon to an adjustable buckle snap fastener so that there will be no free end from which the fastener buckle may slide off. I do not claim a fastener as such without a clamp inasmuch as the essence of my invention lies in the clamp and it may be used in conjunction with any type of fastener. For example, the clamp may be made by bending metal down from the sides of the snap buckle fastener rather than from the ends as shown. In this manner a portion of metal may be bent down from each side of the snap fastener and brought together toward the middle and then be bent inwardly to hold the strap against the fastener.

Thus, instead of the clamp being formed in one piece out of the end of the fastener, it may be formed as two or more portions coming down from the side.

There may also be other ways of forming a clamp within the scope of the claims hereinbelow and I desire to be protected for all forms coming within the scope of the claims hereinbelow.

Wherefore, I claim:

1. The combination with a strap, having one end attached to an article, of a slide fastener having a plate portion, a snap fastener socket centrally located in the said plate portion, slots in the plate portion adjacent to said snap fastener socket adapted to receive said strap in slideable engagement, teeth formed in at least one of said slots to temporarily engage the said strap, and a clamp at an end of the said plate portion comprising jaws at least one of which has an inner side identical with the bottom of the said plate portion and at least one other jaw which is connected to and has an inner side facing the first mentioned jaw and is integral with the said first mentioned jaw at the connection, said clamp being adapted to receive and to retain the other end of the said strap between the said jaws.

2. The device as defined in claim 1, in which the inner portions of the clamp have raised dots to contact the end of the said strap.

3. The combination with a strap, having one end attached to an article, of a slide fastener having a plate portion, a snap fastener socket centrally located in the said plate portion, slots in the plate portion adjacent to said snap fastener socket adapted to receive said strap in slideable engagement, teeth formed in at least one of said slots to temporarily engage the said strap, and a clamp near an end of the said plate portion to receive the other end of said strap, said clamp comprising jaws at least one of which has an inner side identical with the bottom of the said plate portion and at least one other jaw which is connected to and has an inner side facing the first mentioned jaw and is integral with the first said mentioned jaw along at least a portion of that part of the said plate portion which forms an edge of one of the said slots.

4. The device as defined in claim 3 in which the inner sides of the jaws of the clamp have raised dots to contact the end of the said strap.

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