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2,970,359

LOCKING MEANS FOR PLASTIC STRAP

Original Filed Jan. 6, 1955

Fig. 1.

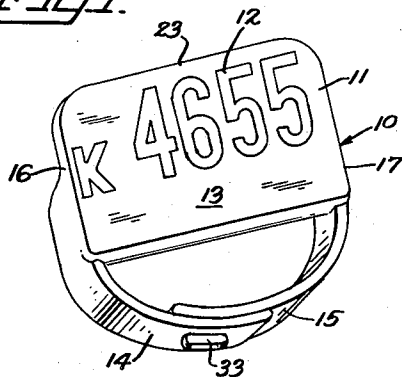


Fig. 2.

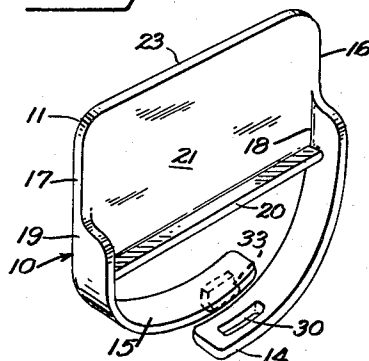


Fig. 3.

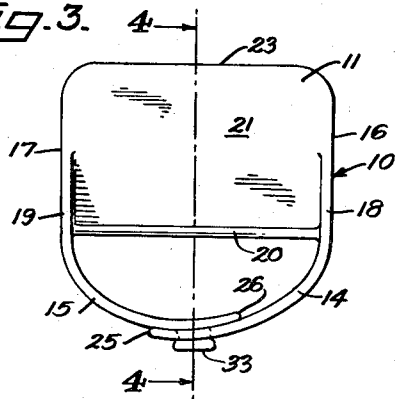


Fig. 4.

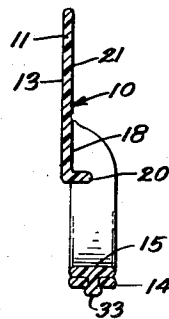


Fig. 5.

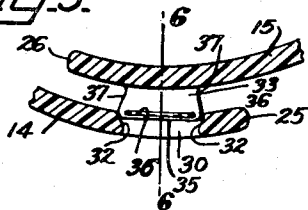


Fig. 6.

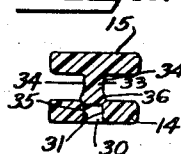


Fig. 9.

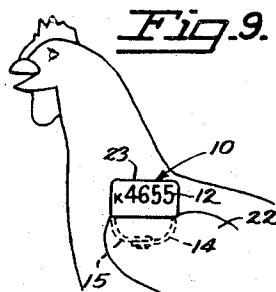


Fig. 7.

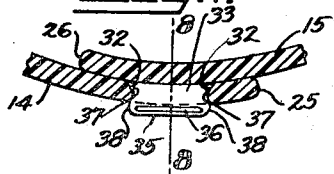
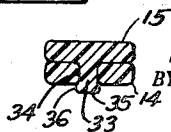


Fig. 8.



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LOCKING MEANS FOR PLASTIC STRAP

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Continuation of application Ser. No. 480,233, Jan. 6, 1955. This application Sept. 19, 1956, Ser. No. 610,762

1 Claim. (Cl. 24—213)

This invention relates to an improved clasp structure for a marker for fowls, other animals, and the like, which can form part of a completely unitary one-piece, all-plastic marker. This application is a continuation of my co-pending application, Serial No. 480,233, filed January 6, 1955, now Patent No. 2,794,277, which discloses and claims the one-piece, all-plastic marker.

The broad problem of marking fowls has been solved in recent years by my recent introduction of a badge adapted to be positioned on or around the fowl's wing. In my Patent No. 2,594,623 the wing badge comprised a hollow plastic housing, on the rear side of which a special type of metal pin was affixed. This particular badge was adapted to be secured through an incision in the fowl's wing. A subsequent improvement was presented in my Patent 2,654,169 where a broad aluminum band replaced the narrow pin, thereby spreading the area of contact and preventing damage to the fowl's wing. In my Patent 2,637,922 the aluminum strip was arranged perpendicularly to the badge, and with this structure it became practical for the first time to pass the strip around the wing instead of through an incision. An improved clasp for this badge was described in my Patent 2,675,594. These badges have been widely used throughout the world and have worked a revolution in the art of marking fowls.

However, there remained certain problems which heretofore seemed to be incapable of solution, but which the present invention has solved. In the first place, the metal band necessarily had sharp edges that tended to chafe the fowl's wing. In the second place, since the aluminum band and plastic badge were two separate pieces, they had to be assembled together, and this assembly added to the cost of the marker. In the third place, the staples that held the badge together sometimes came loose, and the badge would then fall apart.

In the fourth place, the devices of my aforementioned patents could be properly attached only with the aid of long-nose or electrical pliers or other instruments. The very fact that the tools had to be picked up and set down reduced the speed with which the markers could be applied to the fowls, but heretofore tools were always necessary if the badge was to be locked tight so that it would not fall off at some subsequent time. In trapezoidal it is essential that none of the badges fall off, because then the identity of the fowl is lost, and a year or more of data may become useless. When tools were not used or were not used correctly, the badges sometimes were worked loose by the chicken and dropped off.

In the fifth place, when the aluminum band of the prior wing badges was properly clamped in position, it could not be removed from the fowl except by severing the band or by breaking the clasp or by severing the fowl's wing. Therefore, the badges could almost never be re-used.

In the sixth place, the numbers appearing on the face badges were sometimes obscured by the feathers of the fowl, so that they could not be read except by picking up the bird and pushing the obscuring feathers out of the way.

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All these and other problems have been solved by the novel one-piece plastic badge of the present invention, in which the entire badge, including the strap and clasp, is molded at one time. The overlapping and oppositely biased and equipped plastic strap end portions provide a novel type of clasp which cannot accidentally be pulled loose or shaken apart by a bird or animal, but which a man can quickly clasp or unclasp. These and other structural features described herein, enable the invention to accomplish its objects of preventing badges from becoming lost off the fowl's wing, increasing the readability of the numbers on the badge, reducing the tendency of the badge to injure the fowl, reduce production expenses, and provide an unbreakable and re-usable badge. It is also useful with other animals, such as cows, where it can be secured by perforations in the cow's ear.

Other objects and advantages of the invention will appear in the following description of a preferred form of the invention presented in accordance with 35 U.S.C. 112.

In the drawings:

Fig. 1 is a view in perspective of a badge embodying the principles of the present invention looking at the front of the badge. In this view the clasp is shown in its fastened position.

Fig. 2 is a view in perspective of the badge looking from the rear and with the clasp unfastened.

Fig. 3 is a view in rear elevation of the badge with the clasp fastened.

Fig. 4 is a view taken in section along the line 4—4 of Fig. 3.

Fig. 5 is an enlarged fragmentary view in rear elevation showing the clasp in its unfastened position.

Fig. 6 is a view in section taken along the line 6—6 in Fig. 5.

Fig. 7 is a view similar to Fig. 5 with the clasp shown in its closed position.

Fig. 8 is a view in section taken along the line 8—8 in Fig. 7.

Fig. 9 is a view in elevation showing the appearance of the badge on the wing of a chicken.

A badge 10 with which the clasp of this invention can be used is shown in the drawings. This badge 10, disclosed and claimed in my co-pending application Serial Number 480,233, filed January 6, 1955, comprises a unitary integral member molded from plastic in a single operation. A permanently colored, extremely durable plastic is used, preferably a very high grade of tough cellulose acetate butyrate, sold under the trademark Tenite by Tennessee-Eastman Co. Its flat body portion 11 bears identifying insignia or indicia 12 on its front surface 13, and its broad strap portions 14 and 15 are integral with the body 11. The straps 14, 15 extend rearwardly from the lower half of the side edges 16 and 17 of the body 11, lying generally perpendicular to the body 11 at the points of juncture. Relatively extensive areas 18, 19 of contact with the body 11 strengthen this connection, and an additional reinforcement is provided by a ledge 20 that extends out perpendicularly to the rear face 21 of the body 11, along the bottom edge thereof and joins and is integral with the straps 14, 15 at each end. This ledge 20 also performs the important function of helping to maintain the badge 10 in an erect position on the fowl's wing 22 (see Fig. 9), so that the badge 10 does not fall forward or back into a position where it becomes difficult to read.

The indicia 12 comprise numbers, letters, or other symbols applied by permanent ink to the front surface 13 of the badge body 11. These indicia are located well toward the upper edge 23 of the body 11 and extend mainly above the center line of the body 11 so that the entire indicia lies in the upper two-thirds of the body 11. The lower third is blank. This solved the problem caused

where the badge became partially covered by feathers, because now feathers cannot obscure the indicia 12 because of their location.

The strap end portions 14 and 15 are flexible and somewhat elastic, so that they tend to resume the overlapped frictionally opposed curved shape in which they are molded, even after they have been bent in or out. The plastic is so strong that there is no danger of breakage from this bending or from use after the badge has been installed. The tendency to resume shape actually aids in keeping the interengaging strap end portions 14, 15 at all times properly interlocked around the chicken's wing and in the proper relation to the body 11 of the badge 10.

The present invention is directed to a self-locking releasable clasp by which such a strap as the strap 14, 15 is locked together. The clasp is located near the two ends 25, 26 of the strap portions 14 and 15. One strap portion 14 is provided with a generally rectangular opening 30, whose lengthwise sides 31 are preferably vertical (see Figs. 6 and 8) and whose end sides 32 preferably slope inwardly from the top to the bottom (see Figs. 5 and 7). A locking tab or stud 33 on the other clasp portion 15 is inserted into the rectangular opening 30. The stud 33 is generally rectangular in shape with its lengthwise walls 34 vertical except near the outer extremity 35 where a generally rectangular rib 36 is provided to aid in the locking. The side ends 37 of the stud 33 are flared outwardly and are widest at 38 near the outer extremity 35. When the stud 33 is inserted, the rib 36 and wide portion 38 snap out past the opening 30 and its end 37 projects out as shown in Figs. 7 and 8, so that the rectangular ribs 36 and flared ends 38 lie beyond the opening 30. The stud end 37 may be made slightly oversize with respect to the opening 30, since the elasticity of the material will enable it to be forced through and snapped into closed position.

Once the clasp 30, 33 is closed, the badge 10 will not come apart. The entire installation is done by hand, without any tools. The badge can be taken off by inserting a finger nail between the strap portions 14, 15 near their ends and then prying the stud 33 out of the opening 30, while keeping them substantially in-line, so that the strap portions 14, 15 are parallel adjacent the clasp 30, 33.

These visible wing badges 10 can be put on as fast or faster than any leg band and will not loosen and fall off from the fowl or damage the wing 22 when properly applied. Careful tests have shown that they can be successfully used on all breeds of chickens and on either wing. They can be used without difficulty on a wing that once carried a wing band that had been put on when the bird was a chick. Generally, the badges 10 are applied after the pullets approach physical maturity, at from four to six months, although they can be used at a somewhat younger age if necessary. Since my new, improved badge goes around the wing, rather than through the web, no incision is necessary. The badge is simply snapped on, and no tools are required.

Most poultrymen, particularly those who are right handed, will find the left wing 22 the handiest location for trapnesting purposes. The badge 10 is applied so that the

number 12 can be read when the bird is in a standing position. However, the badges can be successfully used on the right wing with good legibility.

In holding the bird during installation, the left wing 22 is preferably turned upside down so that the tap 33 is visible when it is snapped into position. One person can apply the badges 10 easily by holding the bird's feet under his arm pit, leaving his hands free for the actual application. Somewhat faster time can be made if one person holds the bird and another puts on the badges. The bird can be rested on the knee or on a table, with the person holding the bird extending the wing in an upside down position. No feathers need be plucked.

While use on a chicken has been described, the identical badge, preferably with the numbers upside down as compared with the drawing, can be suspended from a cow's ear, or used with other animals.

To those skilled in the art to which this invention relates, many changes in construction and widely differing embodiments and applications of the invention will suggest themselves without departing from the spirit and scope of the invention. The disclosures and the description herein are purely illustrative and are not intended to be in any sense limiting.

I claim:

In a pair of overlapping strap end portions of a unitary plastic wing marker or badge for chickens or the like, said strap ends being curved and biased toward each other and having thereon and therebetween interengaging fastening means; the improvement in which one of said strap end portions is provided with a longitudinally disposed rectangular aperture and a substantially correspondingly shaped and sized stud projecting laterally from the other of said end portions for insertion in said aperture, said stud having a body of substantially uniform thickness outwardly from its connection with its strap end portion and terminating in a laterally offset and enlarged free end with respect to the size and shape of said aperture, the thickness of said body being substantially the same as the width of the aperture and the longitudinal dimensions thereof increasing outwardly from its connection with its strap end portion to a length substantially greater than the length of said aperture, whereby said stud carried strap end portion may be readily snapped into tightly engaged and fastened position with said apertured end portion and thus retained against accidental separation in use by their oppositely biased connection with their unitary marker or badge.

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