

STRUCTURE OF BELT BUCKLE

The present invention relates to belt buckles and more specifically to a belt buckle for fastening together the ends of a belt having no through holes.

5 Various belt buckles have been disclosed, and have appeared on the market. These belt buckles commonly use a stud to insert in a series of equidistant holes in the belt. But holes in the belt often impair the esthetic sense, and the hole will deform and even break after use. Further, 10 these belts can not be adjusted freely to meet the needs of different people. U.S. Patent No. 4,669,155 to Keu-Jen Chen discloses a belt buckle, which eliminates the aforesaid drawbacks, comprised of a buckle body, a belt catch holder, a belt catch, a fastening plate, a spring plate and a serrate 15 plate. The belt catch is fitted in a recess on the belt catch holder and joined together with the belt catch holder and the buckle body by means of knuckles and pin in such way that the belt catch can swing to catch or release the belt. The fastening plate is fitted in an open space on the catch

holder and joined together with the holder by means of
knuckles and pin in such way that it can fasten the belt end
firmly. The spring plate has its upturned part engaging one
of the ratchet corners on the belt catch so that the other
ratchet corner can move retractably. The serrate plate is
mounted on the reverse of the belt and mating with the belt
catch in fastening the belt adjutably. This structure of
belt buckle is rather complicated, and expensive to
manufacture. The spring plate must be properly adjusted
when a belt of different thickness is used. As the spring
plate is exposed to the outside, it may be damaged easily.

The present invention has been accomplished under
the aforesaid circumstances. The present invention is to
provide an structure of belt buckle which eliminates the
drawbacks of the aforesaid prior art belt buckles. The
The present invention uses a spring to give a spring force to
an arched swinging belt catch causing the tooth on one end of
the arched swinging belt catch to engage a serrate plate on
the belt as the opposite end of the arched swinging belt
catch is stopped at a horizontal projection on a catch holder

within a recess thereof.

An embodiment of the present invention will now be described by way of example with reference to the accompanying drawings in which:

Fig. 1 is an exploded view of a belt buckle constructed according to the present invention;

Fig. 2 illustrates the application of the belt buckle of this invention (I); and

Fig. 3 illustrates the application of the belt buckle of this invention (II).

Referring to the various drawings attached herewith a detailed description of the structural features of "STRUCTURE OF BELT BUCKLE" of the present invention is as follows:

Referring to Figs. 1, 2, and 3, a belt buckle as constructed in accordance with the present invention is generally comprised of a buckle body 1, a catch holder 2 hinged to the buckle body 1 by a pivot pin 21 to hold a belt 3 by an arched belt catch 6, and a toothed fastening plate 4

hinged to the catch holder 2 to fasten the belt 3.

5 The catch holder 2 has a recess 20, through which the pivot pin 21 passes to hold the arched belt catch 6 in such way that the belt catch can swing to catch or release the belt 3. The arched belt catch 6 has one end terminated to a tooth 60 releasably engaging a serrate plate 30 on the belt 3, and an opposite end terminated to a stop wall 61. The tooth 60 projects in one direction for smooth insertion of the belt 3 through the gap between the buckle body 1 and the catch holder 2 (see Fig. 2). There is a horizontal projection 202 spaced above the bottom 201 of the recess 20 to stop the stop wall 61 of the arched belt catch 6 within the recess 20. A spring 7 is fastened inside the recess 20 and retained between the bottom 201 of the recess 20 and a blind hole 62 on the arched belt catch 6. The spring 7 gives a pressure to the belt catch 6 causing the tooth 60 of the belt catch 6 to engage the serrate plate 30 of the belt 3, and to stop the belt 3 from a backward movement. To release, the tooth 60 of the arched belt catch 6 is disengaged from the serrate plate 30 of the belt 3 by

10

15

20

-5-

swingingly pushing the belt catch holder 2 off the buckle body 1, as shown in Fig. 3.

Claims:

5 1. A belt buckle comprising a buckle body, a catch holder hinged to said buckle body by a first pivot pin to hold one end of a belt by an arched belt catch, a toothed fastening plate hinged to said catch holder by a second pivot pin to fasten the other end of the belt, wherein said arched belt catch is swingingly mounted on said first pivot pin and received in a recess on said catch holder and supported on a spring, having one end terminated to a stop wall stopped by a horizontal projection on said catch holder within said recess and an opposite end terminated to a tooth releasably engaging a serrate plate on the belt, said spring having one end connected to a bottom wall on said recess and an opposite end fastened in a hole on said arched belt catch to push said arched belt catch outwards causing the tooth of said arched belt catch to engage said serrate plate.

10

15

2. A structure of belt buckle as hereinbefore described with reference to and as illustrated in Figures 1, 2 and 3 of the accompanying drawings.