Nov. 12, 1963 N. HIGUCHI 3,110,071

BELT BUCKLE

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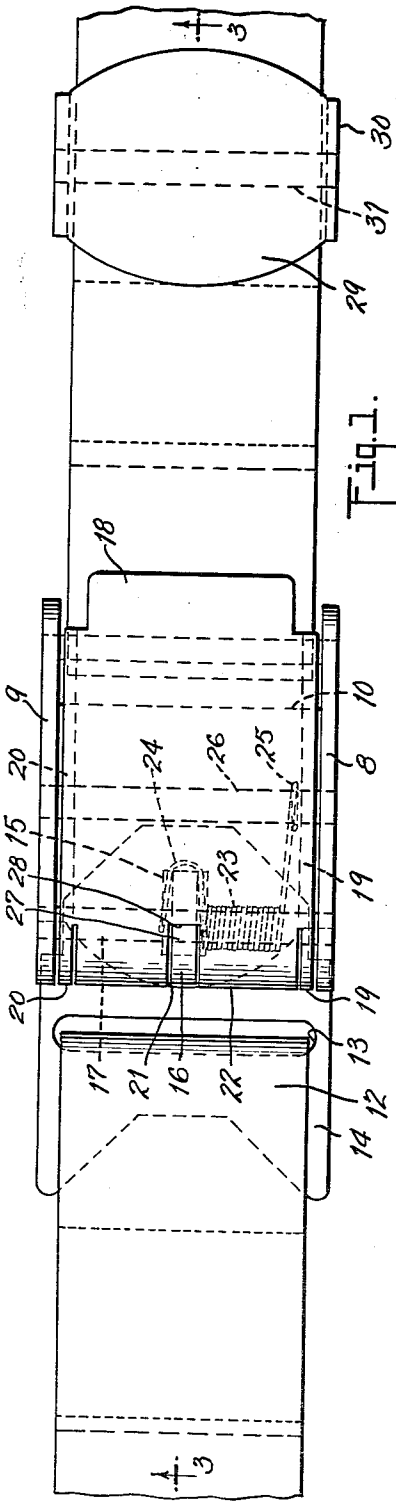


Fig. 1.

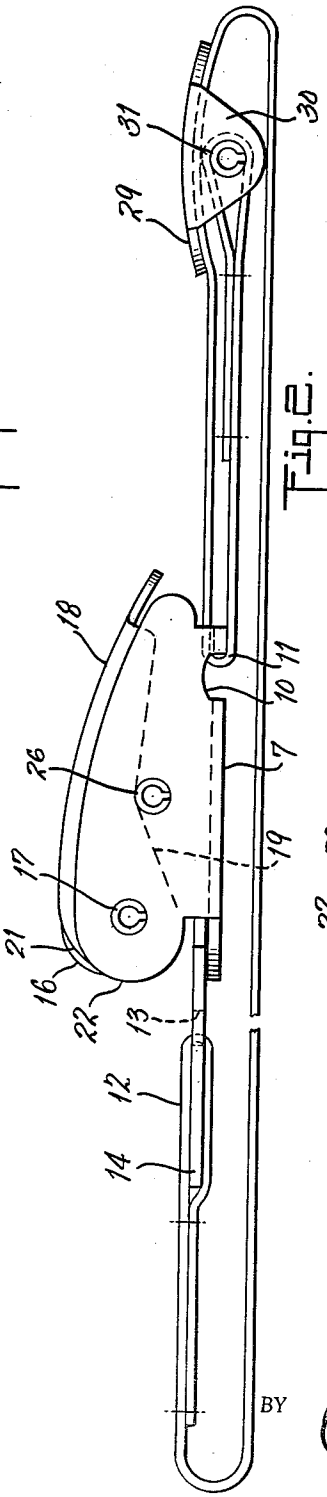


Fig. 2.

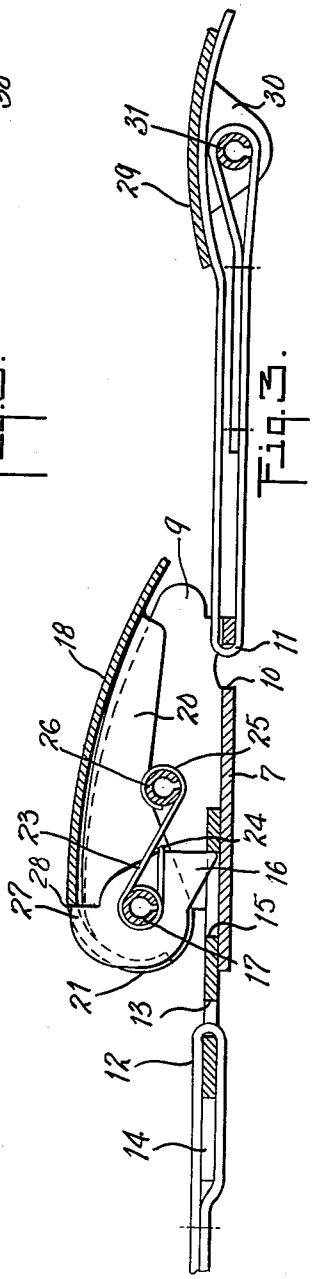


Fig. 3.

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BELT BUCKLE

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The invention herein disclosed relates to devices in the nature of belt buckles.

Objects of the invention are to provide a buckle of light weight, simple, inexpensive construction and consisting of few parts which may be made up of light sheet metal.

Other special objects of the invention are to provide a buckle of firmly connected but readily separable and attachable parts and which with all mechanical advantages will be ornamental and attractive in appearance, rendering it especially desirable as a belt buckle.

Further special objects of the invention are to provide a construction in which the parts of the buckle will be automatically connected by the simple act of engaging them but which cannot be separated without purposeful action of the user.

A further object of the invention is to provide simple, effective and readily adjusted means for varing the length of the belt with which the buckle may be used.

Other desirable objects attained by the invention and the novel features of construction, combination and relation of parts through which such objects are accomplished are set forth and will appear in the course of the following specification.

The drawing accompanying and forming part of the specification illustrates a present commercial embodiment of the invention. Structure however may be modified and changed as regards the immediate disclosure, all within the true intent and scope of the invention as hereinafter defined and claimed.

FIG. 1 is a top plan view of a belt buckle embodying the invention, showing the belt or webbing broken away.

FIG. 2 is a side elevation of the same.

FIG. 3 is a broken longitudinal sectional view as on the plane of line 3—3 of FIG. 1.

The body or frame of the buckle is of channel formation embodying a base 7 and upstanding side walls or flanges 8 and 9.

This base has means for attachment of one end of the belt or webbing, shown as a transverse slot 10 through which a loop 11 of the webbing is passed.

The other end of the belt or web material is shown formed in a loop 12 extended through a cross slot 13 in an end plate 14 which is entered over the base plate between the flanges at the opposite end of the frame.

The end fitting 14 is shown as having a locking opening 15 in the inserted portion of the same engageable by a holding dog or latch member mounted in the frame.

In the illustration this locking member is in the form of a dog 16 pivotally supported on a hinge pin 17 and having an extended lower end portion engageable in the locking opening in the end plate.

The hinge pin 17 is supported in the upstanding side walls 8, 9 of the base plate and this pin provides hinging support for a cover forming hand lever 18 having side flanges 19, 20, pivotally engaged on the pin at the inner sides of the base flanges 8 and 9.

The locking dog is positioned on the hinge pin by its engagement in a correspondingly sized notch or slot 21 in the downwardly and forwardly extended front portion 22 of the cover 18.

This downwardly extended guard portion 22 is shown provided as an extension of the top of the cover, curved downwardly between the side flanges 19, 20 of the cover

shaped in conformity with the rounded front ends of the side flanges of the base and cover.

Similarly the upper forward portion of the locking dog is shown as rounded in conformity with the curvature of these mentioned parts so as to present a substantially continuous rounded end surface of the buckle.

The locking dog is yieldingly pressed toward the end plate 14 by a spring 23 coiled about the hinge pin at one side of the dog and having one end 24 pressing on the dog and the opposite end 25 caught on a pin 26 in the adjoining side wall of the base.

This spring tension on the locking dog is utilized to yieldingly hold the cover in the lower closed position.

For this purpose the dog is shown as having an upward projection 27 at the top, positioned to engage the shoulder 28 at the inner or upper end of the slot in the cover.

To release the locking dog it is only necessary to lift the free end of the cover, thus to cause shoulder 28 to engage the releasing shoulder 27 on the dog. As soon as lifting pressure is released the spring will return the locking dog to its holding position and lower the cover to the closed position.

To afford easy adjustment of the effective length of the belt, the end of the belt, which is looped through the slot in the base, is shown as equipped with a slide made up of an arched piece 29 overlying the outer run of this belt loop and having end flanges 30 carrying a cross pin 31 to which the end of the belt is fastened. This cross pin is offset out of line with the downwardly arched edges of the top plate, which edges operate as clamp bars, depressing the belt about the intermediate bar, thus to frictionally grip and hold the webbing in the normal position of use but permitting the web, when slackened to slip under the slide into desired adjusted relation.

The buckle consists of few parts which can be inexpensively produced in sheet metal. The parts are held together in proper relation by the act of assembly.

There is only one spring to operate both locking dog and release handle and there is only a single fastening for all the parts, the hinge pin, which only needs to be inserted and headed over at one end.

The releasing lever, shaped as a cover, conceals and protects the operating parts and gives the buckle a smooth finished appearance with no projecting parts to catch on clothing or the like.

This cover forming handle may carry initials or be ornamented in various ways.

The front portion of the cover curved downwardly about the hinge pin and spring on the hinge pin serves both as a guard for these parts and as a guide for the locking dog.

Further, this guard portion curved downwardly toward the base plate serves as a guide to direct the entering edge portion of the end plate 14 into proper position over the base of the frame.

The portion of the end plate 14 left protruding from the frame serves as a convenient grip for handling the belt end in inserting it in and removing it from the end of the frame.

What is claimed is:

A belt buckle comprising

a base plate having upstanding side flanges and provided with means enabling attachment of one end of the belt thereto,

a cover forming hand lever having dependent side flanges engaged between said upstanding flanges of the base plate,

a hinge pin extending through said side flanges of the base plate and cover and pivotally supporting said cover on the base,

said cover having a guard portion extending about said

hinge pin with a slot therein transverse to the hinge pin and terminating in an abutment shoulder at the inner end of the slot,

a locking dog pivotally engaged on said hinge pin, said dog being disposed within said slot and thereby guided and held in definitely located position on the hinge pin,

an end plate having means for attachment of the opposite end of the belt thereto, said plate being insertable between said side flanges of the base and having a locking shoulder engageable by said locking dog, and

a spring holding said dog in engagement with said end plate,

said locking dog having an upwardly projecting shoulder in engagement with said abutment shoulder at the inner end of said slot and holding said cover forming lever in lowered position and whereby said lever may be raised to lift said locking dog from holding engagement with said end plate, a cross pin

extending between said side flanges of the base and underlying the side flanges of the cover, limiting lowering movement of the cover on the base, and

said spring being coiled about said hinge pin and connected with the dog at one end and the opposite end of said spring being engaged about said cross pin.

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