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(54) **PRESS STRUCTURE OF BELT BUCKLE**

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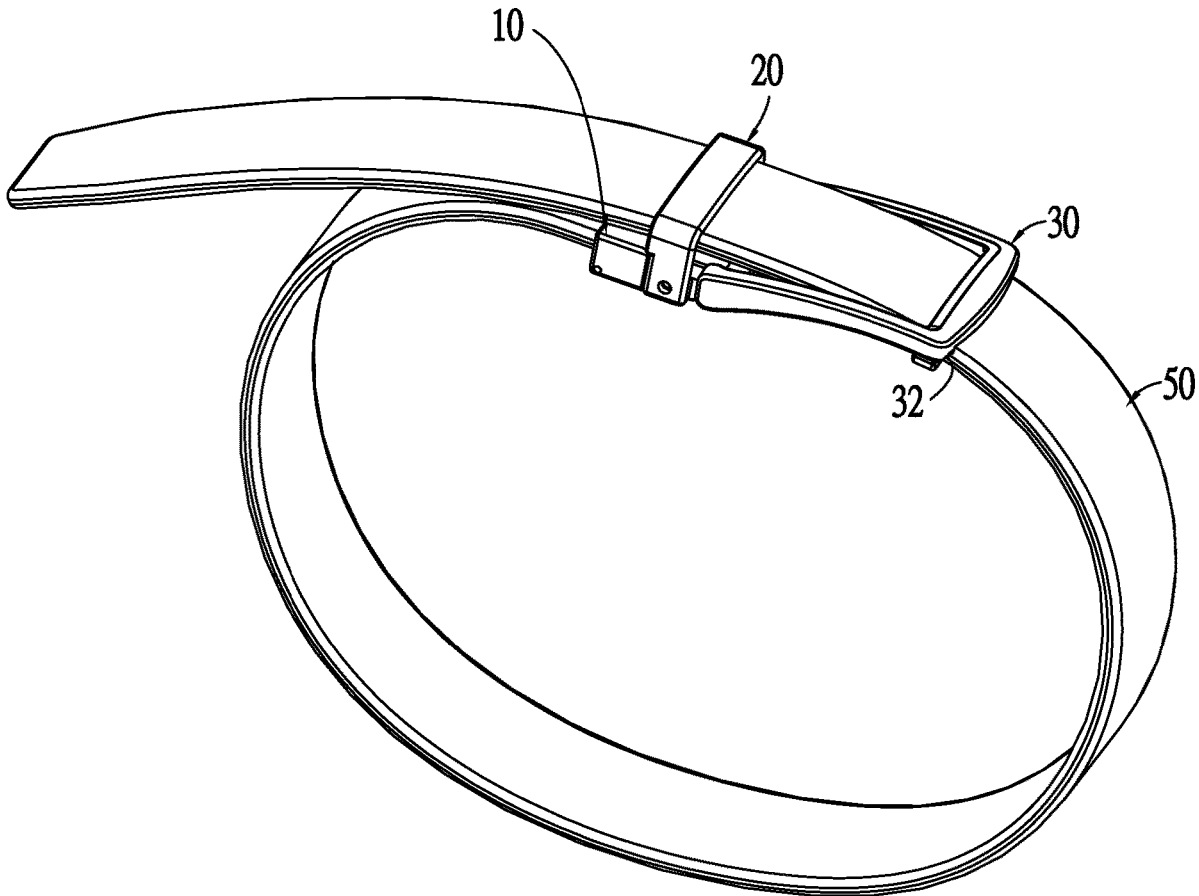
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(57) **ABSTRACT**

A press structure of a belt buckle includes a main body with a upper recess and main limit frame with a lower recess; the upper recess and lower recess are connected together to allow a plate control body with a pivoting shaft to be placed therebetween; the pivoting shaft is extended with a connecting part cooperating with a connecting shaft to connect a clamping element with the connecting part to form an adjustment area; and the clamping element is used to cooperate with an elastic element to clamp inside a groove of the main body, allowing the clamping element to have proper elastic force to press against the belt toward the inner side of the main limit frame to form a fixed state, so as to make the adjustment area pressable.



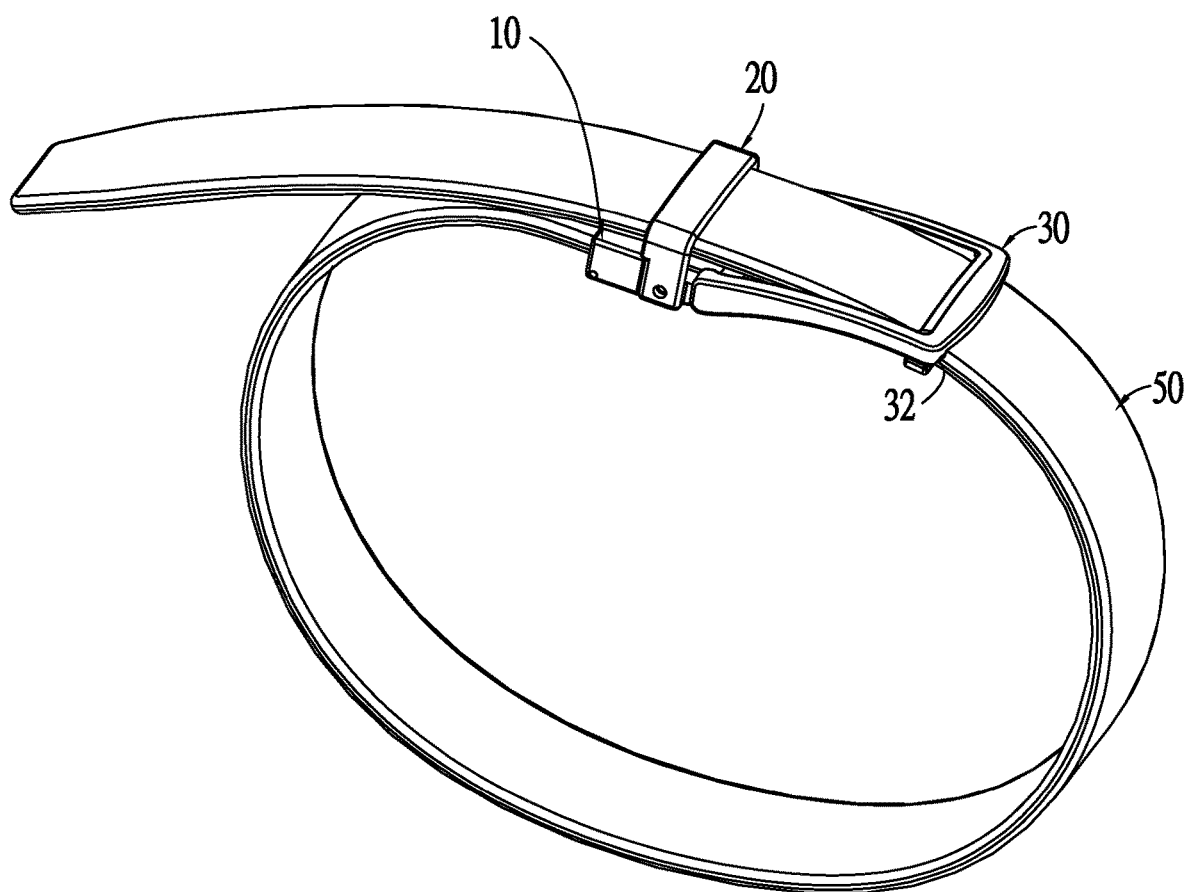


FIG. 1

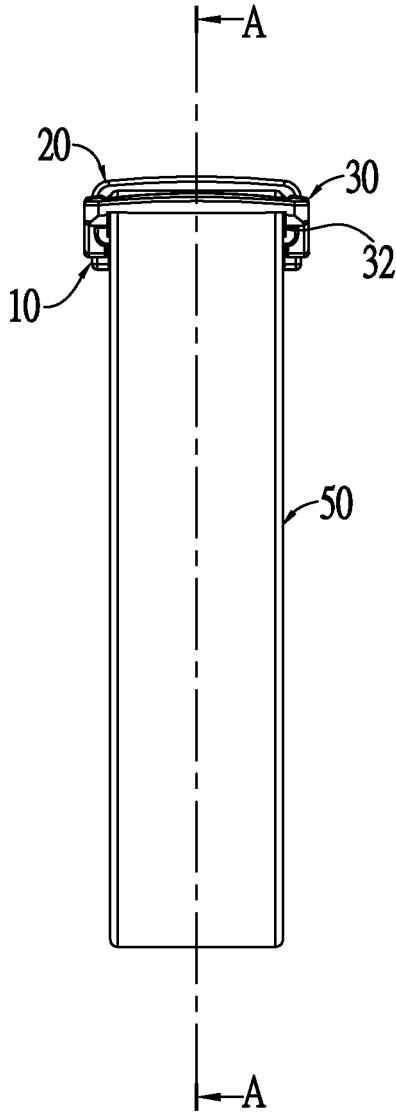


FIG. 3

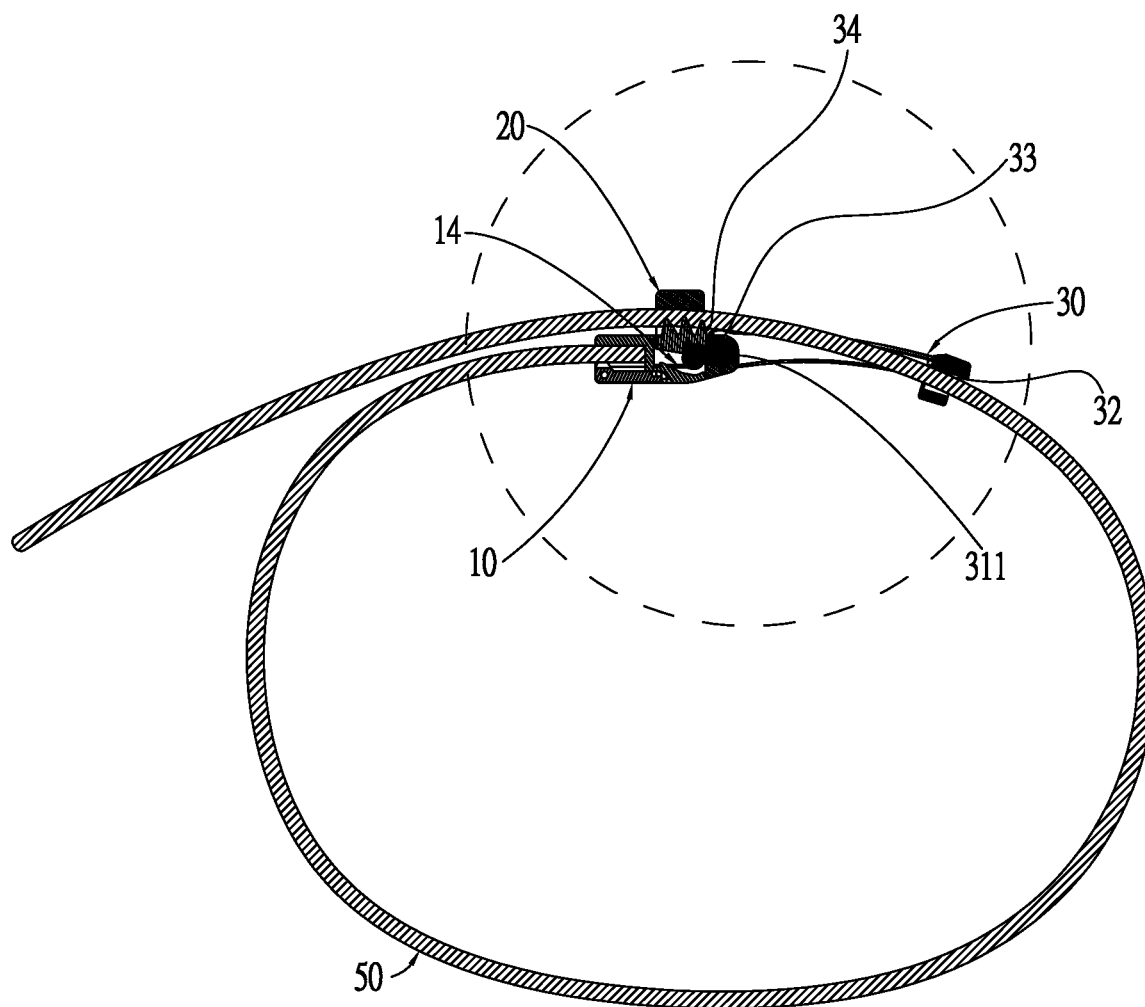


FIG. 4

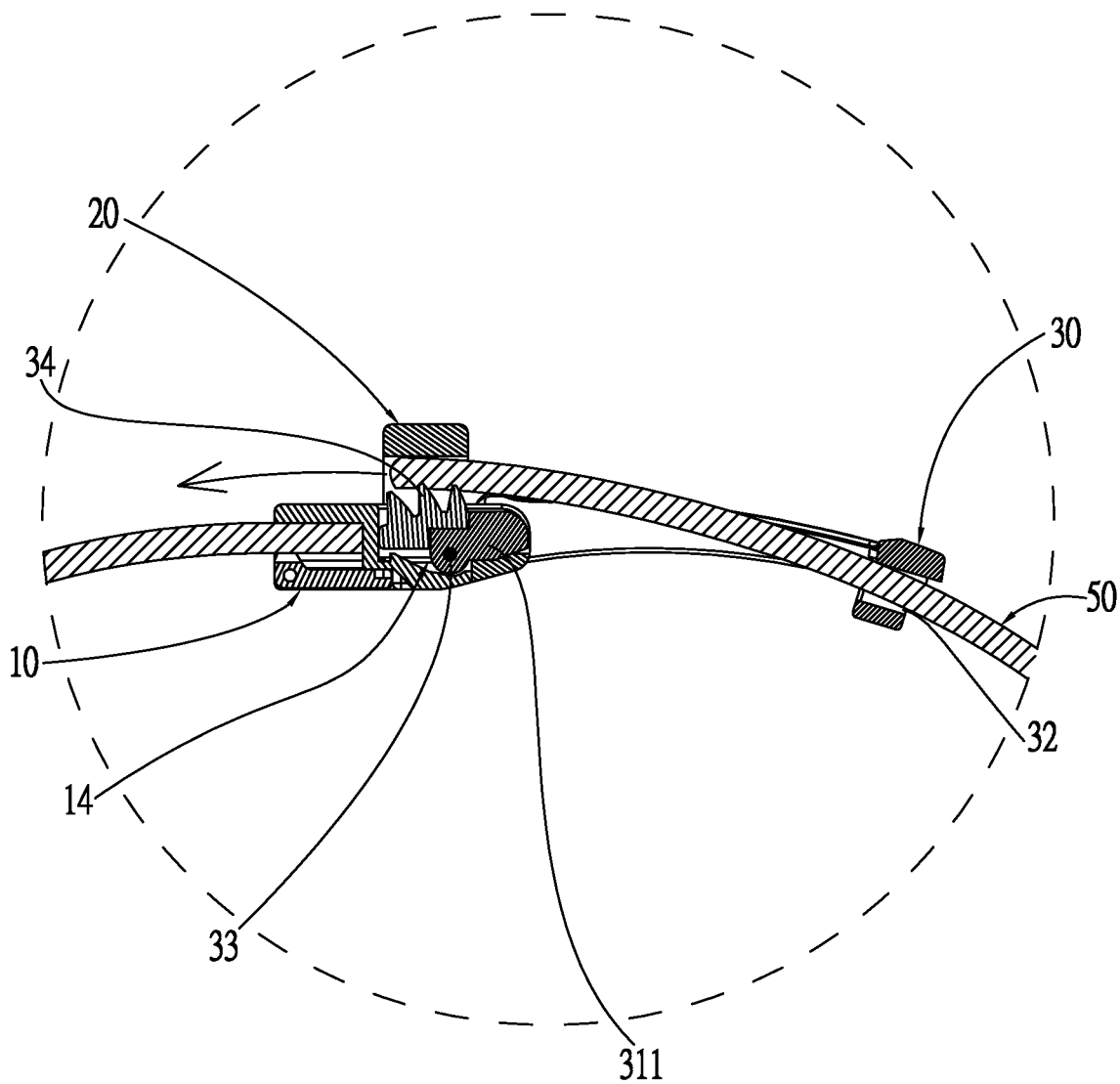


FIG. 5

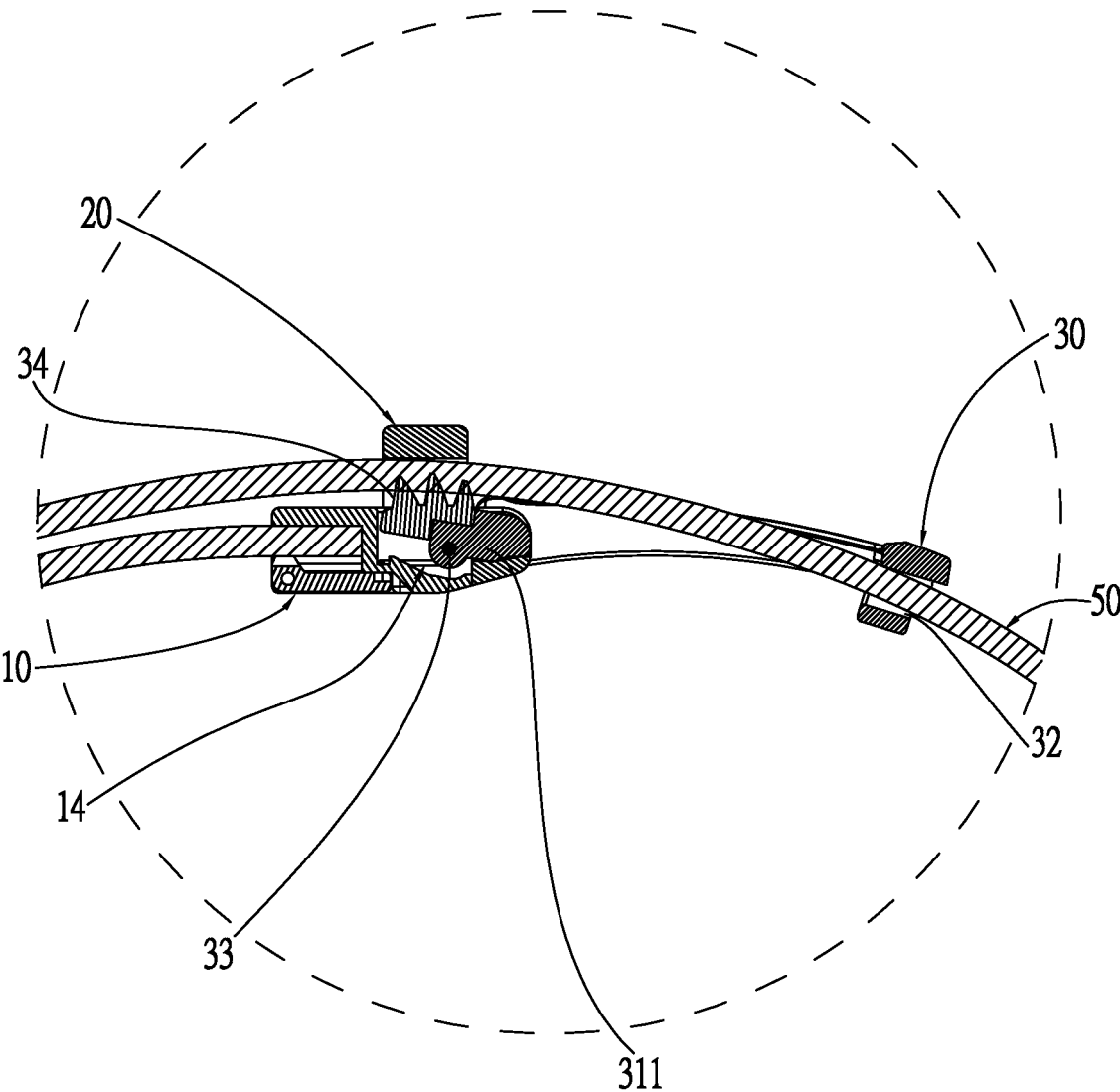


FIG. 6

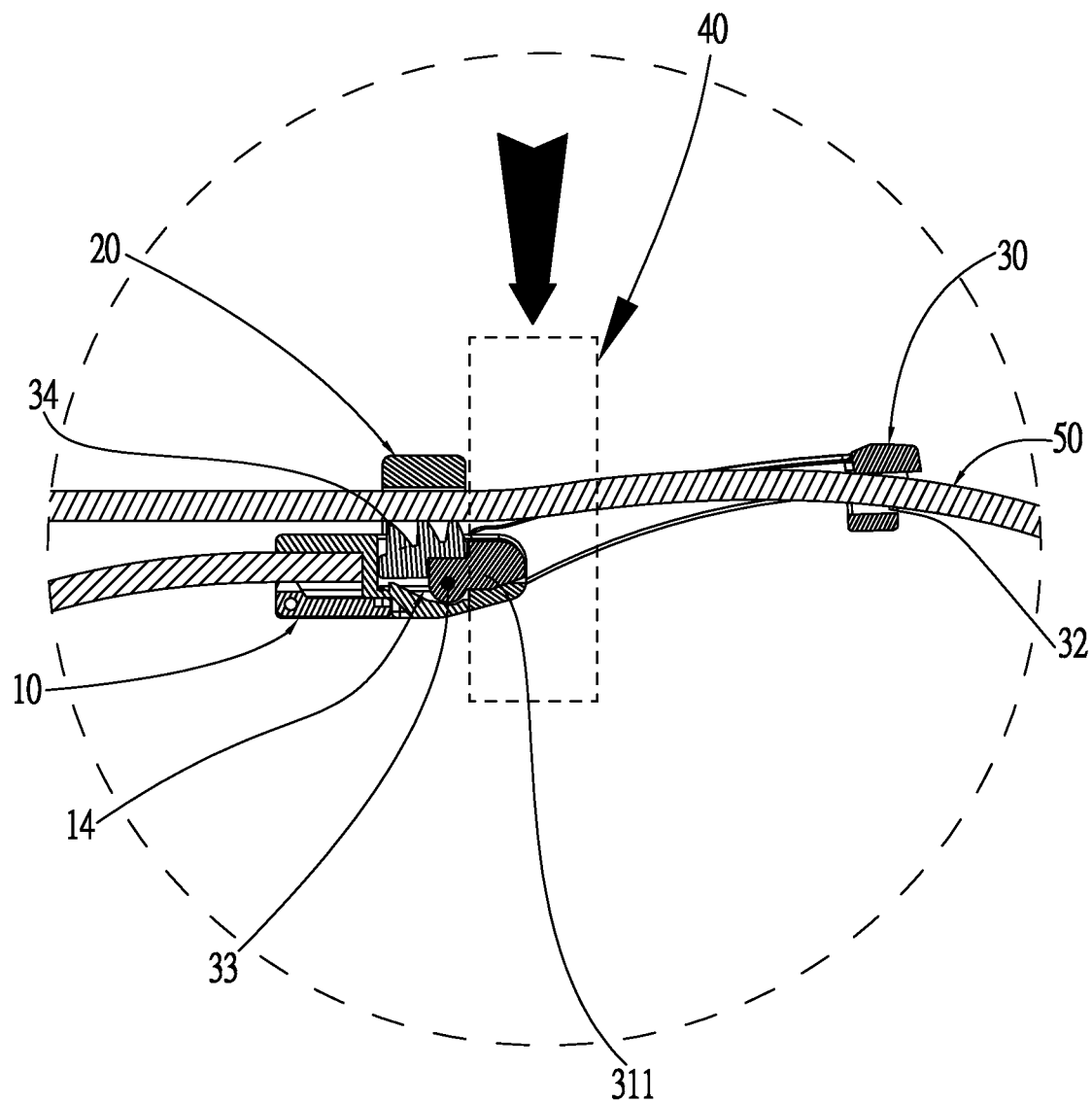


FIG. 7

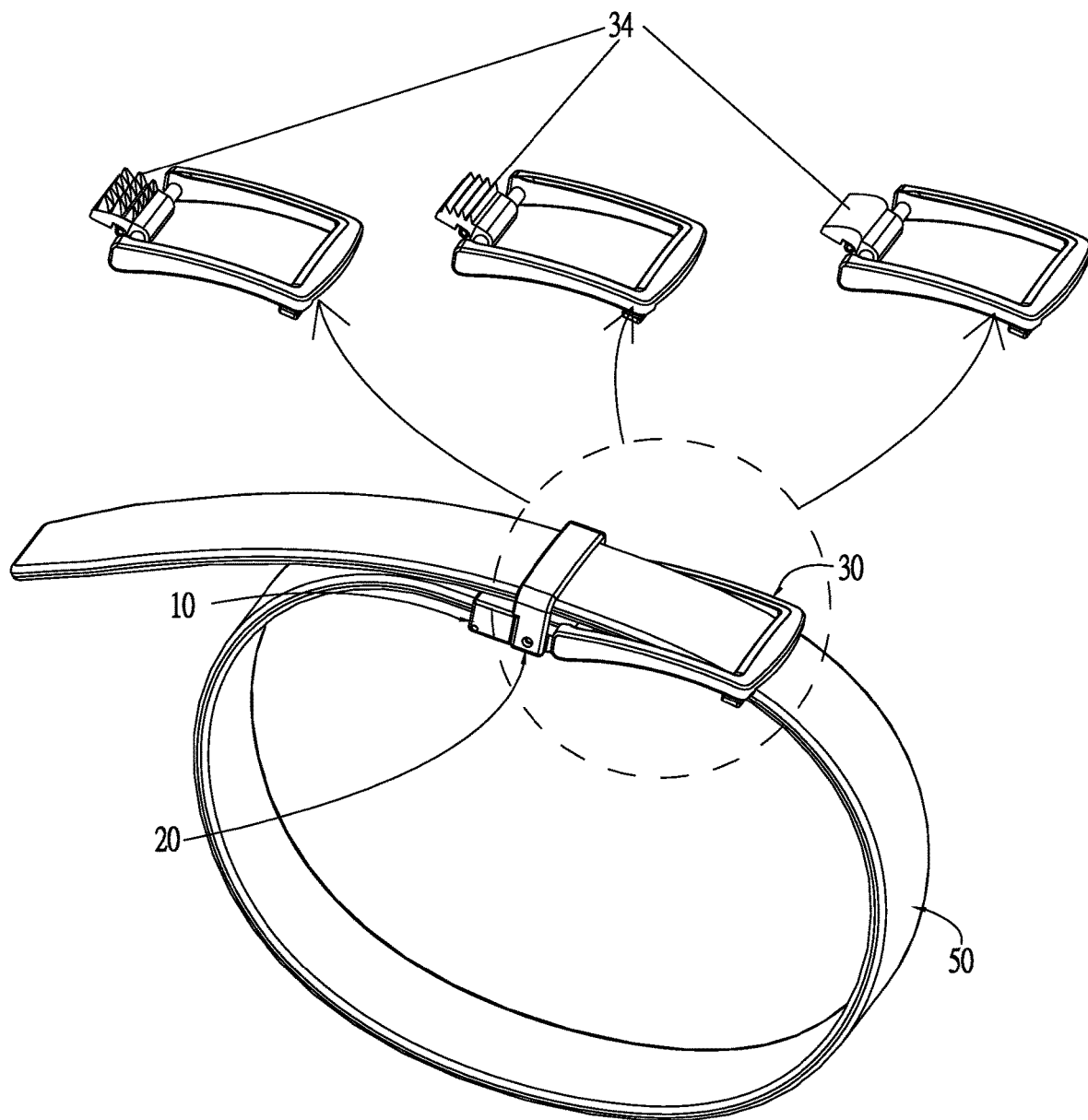


FIG. 8

PRESS STRUCTURE OF BELT BUCKLE

BACKGROUND OF THE INVENTION

(a) Technical Field of the Invention

[0001] The present invention relates to a press structure of a belt buckle, a main body of which cooperates with a main limit frame to connect a plate control body, where the plate control body is provided with a connecting part to connect a clamping element pressed against by an elastic element provided in a groove provided on the main body, allowing a belt to be automatically fixed in the main limit frame with the elastic pressing of the clamping element, and the elastic force of the clamping element can be reduced through a press adjustment area, convenient for quick and smooth adjustment of the fixed position of the belt.

(b) Description of the Prior Art

[0002] In the content of the improved belt buckle seat disclosed in Chinese Invention Publication No. “CN111280624A”, titled “belt buckle seat structure”, the back of the belt used needs to add ratchets to achieve the purpose of quickly adjusting and adapting the distance. Others such as: the belt, the belt buckle and the belt body corresponding to the belt buckle of Chinese Invention Publication No. “CN106963048A”, the belt buckle of Spanish Utility Patent No. “ES1185289U” and the belt buckle system with set screw system of US Invention Patent No. “U.S. Ser. No. 10/681,963B1”, each patent is additionally equipped with buttons or handles in the structure, so as to release the seizing piece to adjust the tightness of the belt, and also increase the number of related components, which relatively increases the complexity and failure rate to a certain extent. In addition, such button or handle mechanisms, in actual operation, are not easy to operate due to the tiny parts, and are easy to be over-tightened, which makes the belt inconveniently untied and difficultly adjusted.

[0003] To overcome the above defects, some improvements are processed, but the focuses of the designs thereof are on adjustment speed and ease of use. Although there are many products with special adjustment structures that perfectly improve the aforementioned defects, most of the adjustment structures are usually fixed. If a user wants to adjust the tightness of the belt they wear after a meal, it will pop open to the maximum looseness as soon as the belt is loosened, and the user needs to adjust the belt to an appropriate tightness again.

SUMMARY OF THE INVENTION

[0004] The present invention proposes a press structure of a belt buckle, and the main object thereof is to utilize an adjustment area formed by multi-structure connection to allow users to press the adjustment area with a finger to quickly adjust the tightness of a belt when the belt is tightened.

[0005] To achieve the above object, a press structure of a belt buckle proposed by the present invention includes: a main body, one end thereof adapted to be in connection with a head end of a belt, another end thereof provided with an upper recess, a center of the main body having a groove, outer side walls thereof provided with a first connecting part; a main limit frame, one end thereof provided with a second connecting part, another end thereof a lower recess, where

the second connecting part and the first connecting part of the main body are pivotally coupled to each other, characterized in that the press structure further includes: a plate control body, one end thereof provided with a pivoting shaft, and another end thereof a secondary limit frame, wherein the plate control body is formed with an adjustment area by providing the pivoting shaft between the upper recess and lower recess, a center of the pivoting shaft extended with a connecting part pivotally coupled to a clamping element by cooperation with a connecting shaft, a bottom of the clamping element clamped with an elastic element inside the groove, allowing the clamping element to have a proper elastic force to press the belt against the belt toward an inner side of the main limit frame to form a fixed state, allowing the elastic force of the clamping element to be reduced when a force is pressed on the adjustment area again, allowing the belt to be unfixed to form an adjustable state, and allowing the fixed state of the belt to be restored after cancelling pressing the adjustment area.

[0006] With the above press structure of a belt buckle of the present invention, the tightness of the clamping element pressing against the belt can be effectively controlled by pressing the adjustment area, allowing the belt to be conveniently adjusted to the most comfortable position in a labor-saving way according to requirement.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] The accompanying drawings, which are incorporated in and constitute a part of this specification, illustrate the embodiments of the invention and together with the description serve to explain the principles of the invention.

[0008] FIG. 1 is a perspective view of a preferred embodiment of the present invention;

[0009] FIG. 2 is an exploded view of the embodiment of the present invention;

[0010] FIG. 3 is a side view of the embodiment of the present invention;

[0011] FIG. 4 is a cross-sectional view taken along line A-A of FIG. 3;

[0012] FIG. 5 is a schematically enlarged view of the local action of a belt being passed through a main limit frame to cooperate with a clamping element according to the present invention;

[0013] FIG. 6 is a schematically enlarged view of the belt being completely passed through based on FIG. 5 according to the present invention;

[0014] FIG. 7 is a schematic view of the action of pressing an adjustment area upon belt adjustment based on FIG. 6 according to the present invention; and

[0015] FIG. 8 is a schematic view of the implementation of a clamping element and connection part being integrated into one body according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0016] Referring to FIGS. 1 to 8, a press structure of a belt buckle mainly includes a main body 10, main limit frame 20, plate control body 30, and adjustment area 40.

[0017] One end of the main body 10 is adapted to clamp the head end of a belt 50 to be in connection with it, and another end of the main body 10 is provided with an upper recess 11. Furthermore, the center of the main body 10

further has a groove 12, the two outer side walls of which are provided with a connecting part 13.

[0018] One end of the main limit frame 20 is provided with a second connecting part 22, and another end of it a lower recess 21, where the second connecting part 22 and the first connecting part 13 of the main body 10 are coupled pivotally to each other.

[0019] Furthermore, one end of the plate control body 30 is provided with a pivoting shaft 31, and another end thereof a secondary limit frame 32, where the plate control body 30 is formed with the adjustment area 40 by providing the pivoting shaft 31 between the upper recess 11 and lower recess 21, where the adjustment area 40 can be referred to as shown in FIG. 7.

[0020] Furthermore, the center of the pivoting shaft 31 is extended with a connecting part 311, which cooperates with a connecting shaft 33 to pivotally couple to a clamping element 34, the bottom of which an elastic element 14 is clamped inside the groove 12, allowing the clamping element 34 to have a proper elastic force to press against the belt 50 toward the inner side of the main limit frame 20 to form a fixed state.

[0021] However, when the adjustment area 40 is pressed again, the plate control body 30 is slightly lifted up after the elastic force can be weakened, thereby adjusting the position of the belt 50, and the fixed state of the belt 50 is restored after the pressing of the adjustment area 40 is canceled; as shown in FIG. 7, it can be easily adjusted by pressing the arrow position with force.

[0022] The clamping element 34 further includes a positioning rib 341, which may be made of silicone, rubber, nylon or metal; it is not limited, no matter what material it is made of, it can effectively press against the belt 50 made of various materials, so as to stabilize the position adjustment.

[0023] The positioning rib 341 is designed with an inclined angle, capable of effectively increasing the contact area of the clamping element 34 and belt 50, thereby increasing stability; generally, the upper surface of silicone or rubber is designed with an inclined angle, capable of increasing friction to prevent loosening.

[0024] The connecting part 311 and clamping element 34 may also be integrated into one body, and the upper and lower sides of the secondary limit frame 32 of the plate control body 30 are parallel to each other, allowing the displacement of the belt 50 to be smoother by contacting the planes on both sides of the secondary limit frame 32 when loosening or tightening the belt 50.

[0025] To sum up, the press structure of a belt buckle disclosed in the present invention utilizes the upper recess 11 of the main body 10 and the lower recess 21 of the main limit frame 20 to cooperate with the plate control body 30 having the pivoting shaft 31 for connection. The connecting part 311 provided on the pivoting shaft 31 can be used for

matching the clamping element 34 of different materials, and the groove 12 provided on the center of the main body 10 cooperates with the clamping element 34 to clamp the elastic element 14 therein, allowing the belt 50 to pass through the vicinity of the main limit frame 20 to form an adjustment area 40. The elastic clamping element 34 cooperates with the main limit frame 20 to effectively hold the belt 50 in a fixed state, and then lightly press the adjustment area 40 to release the belt 50 from the fixed state to adjust the degree of tightness, which can effectively reduce the cumbersome steps for users to press under the existing structure.

I claim:

1. A press structure of a belt buckle, comprising: a main body, one end thereof adapted to be in connection with a head end of a belt, another end thereof provided with an upper recess, a center of said main body having a groove, outer side walls thereof provided with a first connecting part; a main limit frame, one end thereof provided with a second connecting part, another end thereof a lower recess, where said second connecting part and said first connecting part of said main body are pivotally coupled to each other, characterized in that said press structure further comprises: a plate control body, one end thereof provided with a pivoting shaft, and another end thereof a secondary limit frame, wherein said plate control body is formed with an adjustment area by providing said pivoting shaft between said upper recess and lower recess, a center of said pivoting shaft extended with a connecting part pivotally coupled to a clamping element by cooperation with a connecting shaft, a bottom of said clamping element clamped with an elastic element inside said groove, allowing said clamping element to have a proper elastic force to press said belt against said belt toward an inner side of said main limit frame to form a fixed state, allowing said elastic force of said clamping element to be reduced when a force is pressed on said adjustment area again, allowing said belt to be unfixed to form an adjustable state, and allowing said fixed state of said belt to be restored after cancelling pressing said adjustment area.

2. The structure according to claim 1, wherein said clamping element is made of silicone, rubber, nylon or metal.

3. The structure according to claim 2, wherein said clamping element further comprises a positioning rib, and said positioning rib is made of silicone, rubber, nylon or metal.

4. The structure according to claim 3, wherein said positioning rib is designed with an inclined angle.

5. The structure according to claim 1, wherein said connecting part and clamping element are integrated into one body.

6. The structure according to claim 1, wherein upper and lower inner sides of said secondary limit frame are parallel to each other.

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