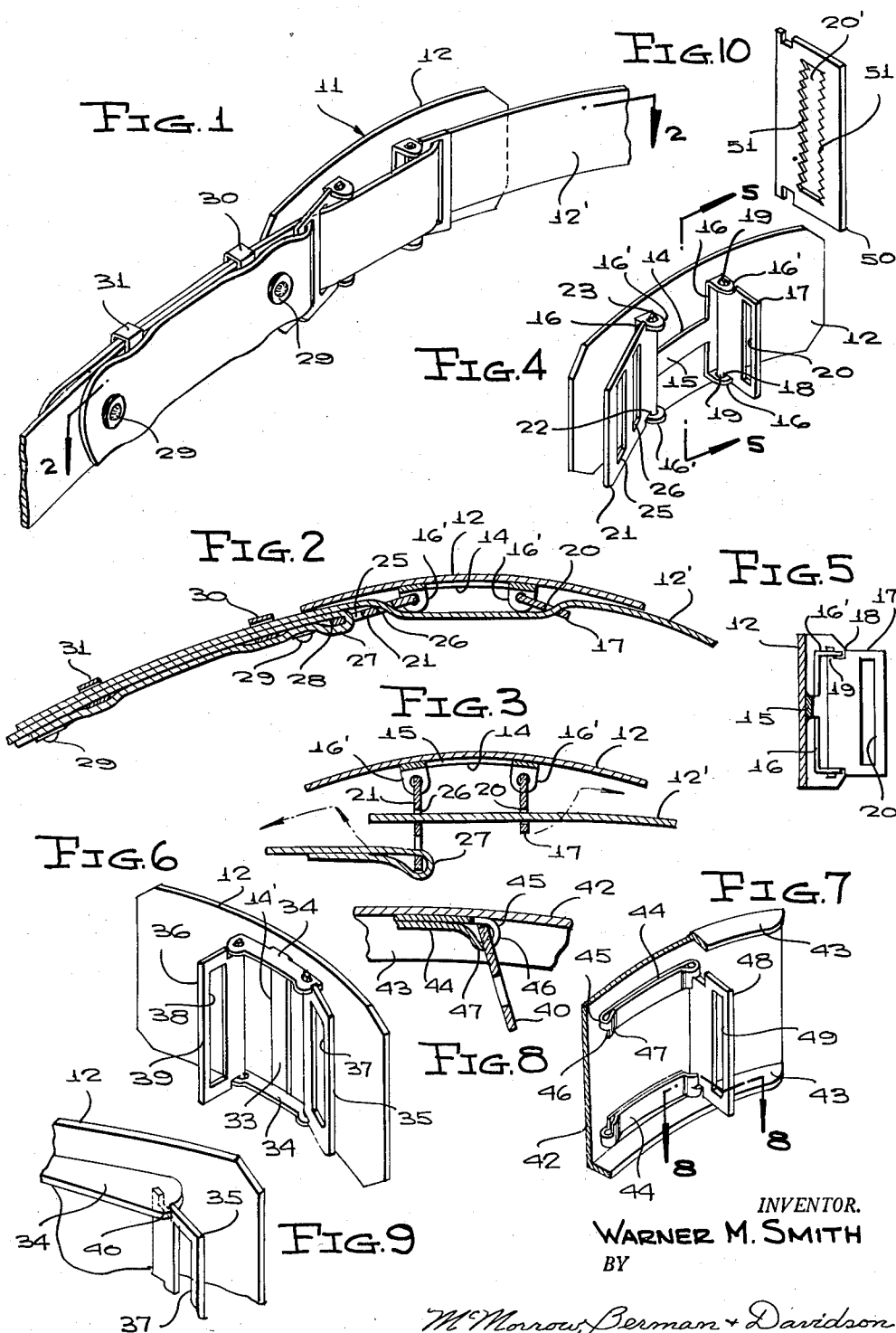


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CLAMPING BELT BUCKLE
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CLAMPING BELT BUCKLE

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1 Claim. (Cl. 24—191)

This invention relates to belts, and more particularly to an improved belt buckle of the clamping type.

The main object of the invention is to provide a novel and improved clamping belt buckle which is simple in construction, which is easy to attach to a belt and which provides a dependable clamping action on the belt without in any way marring or damaging the surface of the belt engaged thereby.

A further object of the invention is to provide an improved clamping belt buckle which is inexpensive to manufacture, which is durable in construction, which is neat in appearance, and which provides a secure and reliable grip on a belt with which it is employed.

Further objects and advantages of the invention will become apparent from the following description and claim, and from the accompanying drawings, wherein:

Figure 1 is a perspective view from the rear of an improved clamping belt buckle according to the present invention, shown attached to a belt and clampingly engaging the belt to fasten same.

Figure 2 is a horizontal cross sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a horizontal cross sectional view, similar to Figure 2, but showing the buckle in releasing position whereby the end of the belt may be drawn through the buckle prior to being clamped thereto.

Figure 4 is a perspective view of the clamping buckle employed in Figures 1 to 3 shown disengaged from the belt.

Figure 5 is a vertical cross sectional view taken on the line 5—5 of Figure 4.

Figure 6 is a perspective view of a modified form of clamping belt buckle constructed in accordance with the present invention.

Figure 7 is a fragmentary perspective view, partly in cross section, of a further modified form of clamping belt buckle according to the present invention.

Figure 8 is an enlarged horizontal cross sectional view taken on the line 8—8 of Figure 7.

Figure 9 is an enlarged fragmentary perspective view of an upper corner portion of the belt buckle illustrated in Figure 6, showing the stop means limiting the inward rotation of the clamping flap plate of the buckle.

Figure 10 is a perspective view of a further modified form of clamping flap plate which may be employed with a belt buckle of the present invention.

Referring to the drawings, and more particularly to Figures 1 to 5, 11 designates a belt buckle for use with a flexible belt 12'. The buckle 11 comprises a rigid, arcuately curved main plate-like body member 12, said body member having rigidly secured to the central portion of its inside concave surface a bracket member 14 comprising a longitudinally extending, relatively narrow intermediate stem portion and a pair of transverse wing portions 16, said wing portions being formed at their ends with the lug elements 16' extending substantially perpendicularly to the wing members 16.

Designated at 17 is a first rigid flat leaf member which is generally rectangular in shape, as shown in Figure 4, and which is formed with notches 18 at its top and bottom edges adjacent the rear edge of the rectangular leaf member, defining a pair of pivot lugs, 19, 19 which are rotatably received in apertures formed in the top and bottom lugs 16', 16', whereby the leaf member 17 is pivotally connected to the main body 12 on a transverse axis parallel to the main body. The rectangular leaf member 17 is formed adjacent its outer edge with a slot 20 extending parallel to said outer edge, and extending parallel to the pivotal axis defined by the lugs 19, 19.

Designated at 21 is a second generally rectangular rigid flat leaf member which is formed adjacent its inner edge with notches 22 defining pivot lugs 23, said pivot lugs being rotatably received in apertures formed in top and bottom lugs 16', 16' formed on the ends of the wing member 16 at the left end of the bracket member 14, as is clearly shown in Figure 4.

The rectangular flat leaf member 21 is formed with a pair of parallel slots 25 and 26, the slot 26 being located between the slot 25 and the pivot lugs 23, and the slot 25 being located at the outer marginal portion of the leaf member 21 and being parallel to the outer edge thereof.

As is clearly shown in Figures 1 and 2, the respective leaf members 17 and 21 are substantially shorter than the distances from their pivotal axes to the respective side edges of the main body 12, whereby the side marginal portions of said main body completely cover the leaf members when the leaf members are adjacent the rear surface of the main body. Thus, the leaf members are completely hidden and only the arcuately curved main body 12 is seen from the front of the buckle assembly. The clamped portions of the belt are likewise hidden and only the unclamped portions of the belt are exposed.

As shown in Figure 2, the loop portion 27 of the belt 12' is engaged around the bar 28 defined between the slot 25 and the outer edge of the rectangular flat leaf member 21 and is secured in a conventional manner, as by snap fasteners 29. In applying the belt, the leaf members 17 and 21 are rotated to positions extending substantially perpendicular to the main body 12, as shown in Figure 3, and the free end of the belt 12' is engaged through the slots 20 and 26, being then drawn to desired tightness, after which the leaf members 17 and 21 are rotated outwardly toward the outer portions of the main body 12, in the manner illustrated in Figure 2, whereby to clamp the portion of the belt 12' engaged through the slots 20 and 26. As will be readily apparent, tension exerted on the belt will cause the rigid flat leaf members 17 and 21 to clamp the belt 12' more tightly, it being understood that the portion of the belt between the slots 26 and 20 is engaged against the wearer's body. Thus, the buckle will securely hold the belt 12' in an adjusted position, particularly where the free end of the belt is engaged through the conventional sleeve-like loop members 30, 31, provided on the loop portion 27 and spaced therealong, as shown in Figure 2.

Referring now to the form of the invention shown in Figures 6 and 9, the main body of the buckle, shown at 12, has centrally secured to its inside concave surface a bracket member 14' comprising a transversely extending main bar portion 33 and the top and bottom flanges 34, 34 which are located perpendicular to the main bar portion 33 and which extend inwardly from the main body 12. Pivoted between the end portions of the flanges 34, 34 are the respective flat rectangular leaf members 35 and 36, said leaf members being formed with re-

spective slots 37 and 38 extending parallel to the pivotal axes of the leaf members. Thus, the slot 38 defines a bar portion 39 to which the loop 27 of the belt is secured, sufficient clearance being provided so that the free end portion of the belt may be engaged through the slot 38 after being passed through the slot 37 of the flat rectangular leaf member 35.

As shown in Figure 9, inward rotation of the leaf members 35 and 39 may be limited by providing stop lugs 40 on the ends of the flanges 34, 34, said lugs defining stop shoulders engageable by the top and bottom portions of the rectangular flat leaf members to limit inward rotation of said leaf members towards each other and to prevent such rotation beyond positions wherein the leaf members are at substantial angles to the main body 12.

In the form of the invention illustrated in Figures 7 and 8, the main body of the buckle is designated at 42 and comprises an arcuately curved, plate-like member formed at its top and bottom edges with the inwardly extending opposing flanges 43, 43. Secured to the central portion of the inside surface of the body 42, parallel to the flanges 43, 43, are the respective flattened loops 44, 44. The flattened loops 44, 44 are formed at their ends with the vertical hinge sleeve elements 45, said sleeve elements being notched away at 46 to define stop shoulders 47. Generally rectangular flat leaf members 48 are formed at their top and bottom inner corners with hinge lugs engaging in the hinged sleeve element 45 at the notches 46, whereby the flat leaf members 48 are rotatable relative to the main body 42 but are limited in their rotation towards each other to positions wherein the leaf members are at substantial angles to the main body 42. The leaf members 48 are formed with slots 49 adjacent to and extending parallel to their outer edges, said slots 49 being adapted to receive the belt portions therethrough. For example, one of the leaf members 48 may have the loop portion 27 of a belt fastened to the bar defined between the slot 49 and the outer edge thereof, the free portion of the belt passing through the remainder of the slot and through the slot 49 of the opposite leaf member in the same manner as in the case of the form of the invention illustrated in Figure 6. In either case, the leaf members may be first arranged in positions projecting inwardly from the concave surface of the main buckle body, whereby the free portion of the belt may be threaded through the flattened leaf members, after which the leaf members may be rotated away from each other towards the inside surface of the associated main plate-like body of the buckle, whereby to clampingly secure the free portion of the belt in a manner generally similar to that illustrated in Figure 2.

In the form of the invention illustrated in Figures 7 and 8, the lug elements 47 prevent rotation of the leaf members 48 toward each other beyond positions such as that illustrated in Figure 8, namely, beyond positions wherein the leaf members are at substantial angles to the main body 42.

Figure 10 illustrates a modified form of rectangular flat leaf member, designated at 50, which may be em-

ployed in place of the slotted leaf members 35, 36 of Figure 6 or the slotted leaf members 48 of Figures 7 and 8, as well as in place of the slotted leaf member 17 of Figures 1 to 5. In the embodiment of Figure 10, the slot, shown at 20' is formed with the opposing serrated edges 51, 51, defining gripping teeth adapted to grippingly engage the opposite surfaces of the belt portion passing therethrough when the leaf member is rotated towards its clamping position, whereby to more firmly secure the portion of the belt engaged thereby against slipping.

While certain specific embodiments of an improved clamping belt buckle for a belt have been disclosed in the foregoing description, it will be understood that various modifications within the spirit of the invention may occur to those skilled in the art. Therefore, it is intended that no limitations be placed on the invention except as defined by the scope of the appended claim.

What is claimed is:

A clamping buckle for a belt comprising a rigid arcuately curved, imperforate main plate-like body of substantial length having a convex front surface and a concave rear surface, a first rigid flat leaf member having an inner edge located adjacent and parallel to the concave rear surface of said main body, means pivotally connecting said inner edge to the concave rear surface of said main body, said leaf member being formed with a slot parallel to said main body, a second rigid flat leaf member having an inner edge located adjacent and parallel to the concave rear surface of said main body, means pivotally connecting said last-named edge to the concave rear surface of said main body on an axis parallel to and spaced from the pivotal axis of the first-named flat leaf member, said second flat leaf member being formed with a slot parallel to said main body, said belt being secured at one end to said first leaf member and having its free end threaded under the plate-like body through the slot in the second leaf member and then through the slot in the first leaf member between the plate-like body and said one end of the belt whereby to clamp the belt when the leaf members are rotated away from each other and towards said main body, the respective leaf members being substantially shorter than the distances from their pivotal axes to the respective side edges of the plate-like main body, whereby the side marginal portions of the main body completely cover the leaf members when said leaf members are rotated to positions adjacent said main body, and stop means limiting rotation of said flat leaf members towards each other and preventing such rotation beyond positions wherein the leaf members are at substantial angles to said main body.

References Cited in the file of this patent

UNITED STATES PATENTS

519,545	McClure	May 8, 1894
520,373	McClure	May 22, 1894
1,363,731	Hayden	Dec. 28, 1920
2,227,768	Stark	Jan. 7, 1941