

Jan. 8, 1946.

A. J. GORE

2,392,659

BUCKLE OR COUPLER

Filed June 14, 1944

Fig. 1.

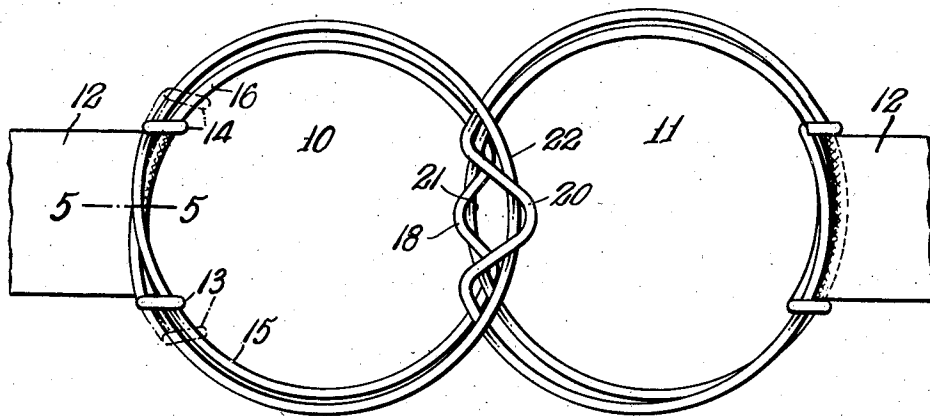


Fig. 2.

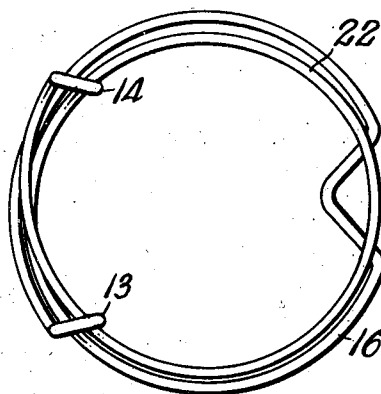


Fig. 3.

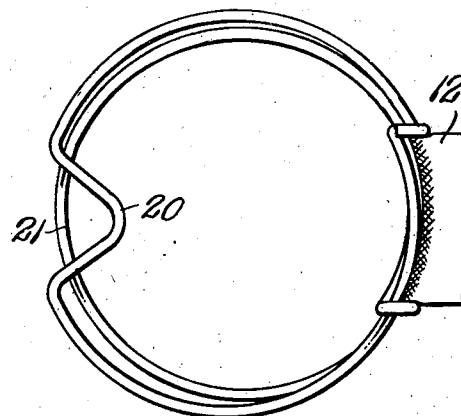


Fig. 4.

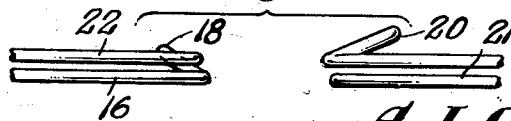
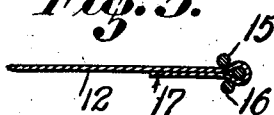


Fig. 5.



Inventor

A. J. Gore

By *Emory Alexander Stair*
Attorneys

UNITED STATES PATENT OFFICE

2,392,659

BUCKLE OR COUPLER

Albert J. Gore, Washington, D. C.

Application June 14, 1944, Serial No. 540,333

5 Claims. (Cl. 24-201)

This invention relates to buckles and the like, and although it is, of course, applicable to many uses where two members are adapted to be connected, it will be described in connection with belt buckles.

One of the objects of the present invention is to provide a simple and practical device of the above general character which may be inexpensively manufactured and assembled.

A further object is to provide a buckle or connector of the above general character which may be easily manufactured by automatic machinery.

A further object is to provide an improved buckle made of two complementary parts of substantially the same general construction and to which the ends of a belt member may be respectively connected in desired adjusted position.

A further object is to provide a buckle of the above general character in which when the belt ends are attached they will be more firmly gripped as the buckle parts are placed under tension.

Other objects will be in part obvious from the annexed drawing and in part hereinafter pointed out in connection with the following analysis of this invention.

This invention accordingly consists in the features of construction, combination of parts, and in the unique relation of the various members and in the relative proportioning and disposition thereof, all as more completely outlined herein.

To enable others skilled in the art fully to comprehend the underlying features of this invention and the numerous modifications in structure and relation contemplated thereby, a drawing depicting one of various possible modifications of the invention has been annexed as part of this disclosure, and in such drawing like characters of reference denote corresponding parts throughout all of the views, in which—

Fig. 1 is an enlarged front elevational view of the complementary members of a buckle with the belt ends shown in dotted lines; the coils being slightly distorted to be more easily followed;

Fig. 2 is an elevational view of one member; while

Fig. 3 is a similar view of the complementary members;

Fig. 4 shows the two parts separated and about to be joined;

Fig. 5 is a sectional view taken substantially along the line 5—5 of Fig. 1.

Referring now to the drawing in detail, the buckle or connector as shown in Fig. 1 comprises two substantially similar or complementary mem-

bers broadly designated as 10 and 11 respectively. Each of these members is provided with means whereby belt ends 12 may be attached as shown in Fig. 5. Each of these members or parts 10 and 11 is made preferably from a continuous piece of resilient wire bent in coils to provide a coil of slightly more than two full turns. The coils may be round, elliptical or square, and instead of wire a resilient plastic would serve with only slight modification in shape. Each of the extreme ends 13 and 14 of the wire are respectively wrapped around the complete turn; in other words, the ends 13 and 14 embrace both coils adjacent thereto. Thus, as the coil is made larger in diameter these ends 13 and 14 move away from each other as shown by the dotted line position, Fig. 1, and obviously when tension is placed upon the opposite side of the coil or member 10, as for example, by means the coacting pull of the other or opposite member 11, then these two members 13 and 14 are drawn towards each other along the coils and tend to grip the belt end 12 therebetween, and thereby more firmly hold the belt end against slippage.

As shown in Fig. 5 the belt end 12 may pass between two of the loops or coils near their respective ends, that is, the terminals 13 and 14, and around an intermediate loop, and by spreading the members 13 and 14 apart then the extreme end 17 of the belt end 12 may be pulled up or released, as desired.

At the opposite side of each of the complementary members as shown in this modification there is an upwardly extended portion or hook as illustrated more clearly in Fig. 4, these hook portions being designated by the numerals 18 and 20, Fig. 1, and in assembling these parts the member at the right of Fig. 4 is placed between the superimposed loops of the part at the left side whereby each of the hooks 18 and 20 coacts respectively with the coils 21 and 22 shown in Fig. 4. Thus, the bent-up hooks on both complementary members coact with the flat coils of the other, and to separate these rings it is only necessary to give the complementary members a relative lateral movement with respect to the plane of these two members, as shown in Fig. 1. Such movement causes the respectively engaged rings or coils to ride up on the cams or inclined part of the hooks 18 and 20 and cause a complete separation of the two members. If desired, the two hooks may be on the same part and the coacting member being plain coils. The main idea is two rings and two hooks coacting therewith in the manner described

whereby relative lateral movement towards each other causes interlocking of the parts.

The construction and operation are clear from the above and further explanation is unnecessary. The entire mechanism may be inexpensively manufactured by simple automatic machinery and the belt ends may be attached at the same time or later; in other words, the belt buckle may be sold by itself or with the belt. The buckle provides for ready and quick adjustment of the size or diameter of the belt and the assurance that after the parts are assembled the belt ends are held in secure position of adjustment and unlikely to slip for the greater the strain exerted upon the two hooks then more tightly are the belt ends gripped laterally as well between the looped ends. The belt buckle is of simple and practical construction and is well adapted to accomplish, among others, all of the objects and advantages herein set forth.

While I have illustrated and described this invention in one of its various possible forms; as being particularly applicable, the belt buckle obviously may be applied to other uses where the ends of any two members, for example, are adapted to be corrected.

Without further analysis the foregoing will so fully reveal the gist of this invention that others can, by applying current knowledge, readily adapt it for various applications without omitting certain features that, from the standpoint of the prior art, fairly constitute essential characteristics of the generic or specific aspects of the invention, and therefore such adaptations should and are intended to be comprehended within the meaning and range of equivalency of the following claims.

I claim:

1. A buckle device of the character described comprising two separately coacting parts each made from a single piece of resilient material forming slightly more than two complete substantially concentric coils, the ends of the material being spaced apart and surrounding the coils to coact with the coils in defining a space to receive, grip and retain a belt end, one of said coils having fastening means thereon for engagement with coacting means on the other end of a belt formed by the other part.

2. A belt buckle of the character described comprising two complementary parts each made from a single piece of resilient wire forming slightly more than two complete substantially concentric coils, the overlapping ends of the wire being spaced apart and surrounding the coils to move therealong in either direction thereby to coact with the coils in defining a space to receive a

belt end and to grip said belt end therebetween, one of said coils having at least one hook portion diametrically opposite the zone of said overlapping ends to engage with the other part to couple the two parts together.

3. A belt buckle of the character described comprising two complementary parts one of which is made from a single piece of resilient wire forming slightly more than two substantially concentric complete coils, the overlapping ends of the wire being spaced apart and surrounding the coils and free to move relative thereto in either direction, one of said coils having a hook portion diametrically opposite the zone of said overlapping ends projecting out of the plane of the coil to coact with the other part when moved into operative engagement therewith, and a belt end coacting with said one part and gripped between the said ends and held in non-slipping relation therewith by the tension exerted on said one part by the other part of the buckle coupled between the coils.

4. A belt buckle of the character described comprising two complementary parts each made from a single piece of resilient wire bent to form slightly more than two complete substantially concentric coils, the overlapping ends of the wire being wrapped around coils and free to move therealong, one of said coils on each part having a V-shaped hook portion diametrically opposite said overlapping ends and projecting upwardly out of the plane of the coil to coact with a coil of the other part when moved into operative engagement therewith, and a belt, the ends of which coact with said parts respectively and are gripped between the wrapped around ends of said wire and held in non-slipping relation therewith by the tension exerted on said parts by the pull of the other part of the buckle when coupled therewith.

5. A belt buckle of the character described comprising two parts each made from a single piece of resilient wire forming slightly more than two complete substantially concentric coils with overlapping ends said ends being wrapped around the adjacent coils but free to move relatively therealong, one of said coils of each part having a V-shaped integrally formed hook portion opposite said overlapping ends, said hook projecting out of the plane of the coil from which it is formed to coact with the flat coil of the other complementary part when the parts are in operative engagement, and a belt end coacting with each one of said parts and gripped between the wrapped around ends of said wire and held in non-slipping relation therewith by the tension exerted on said part by the other part of the buckle when in coupled operative tensioned position.

ALBERT J. GORE.