

May 14, 1946.

P. F. D'ALEO

2,400,291

SWIVEL

Filed Dec. 15, 1944

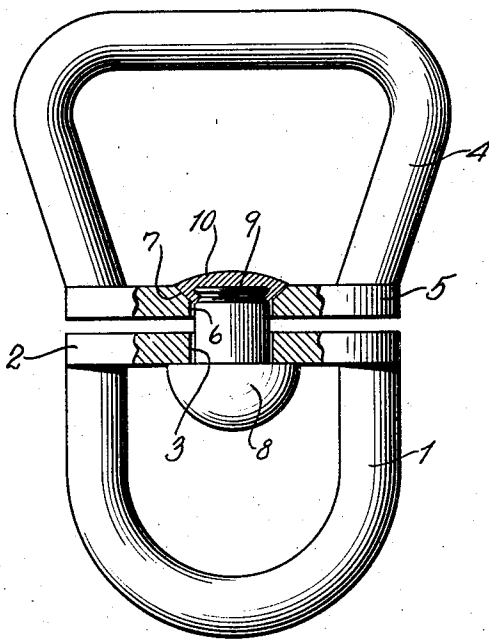
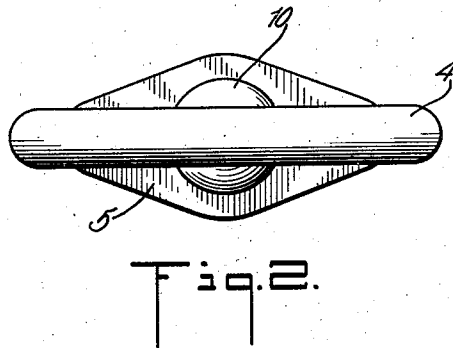
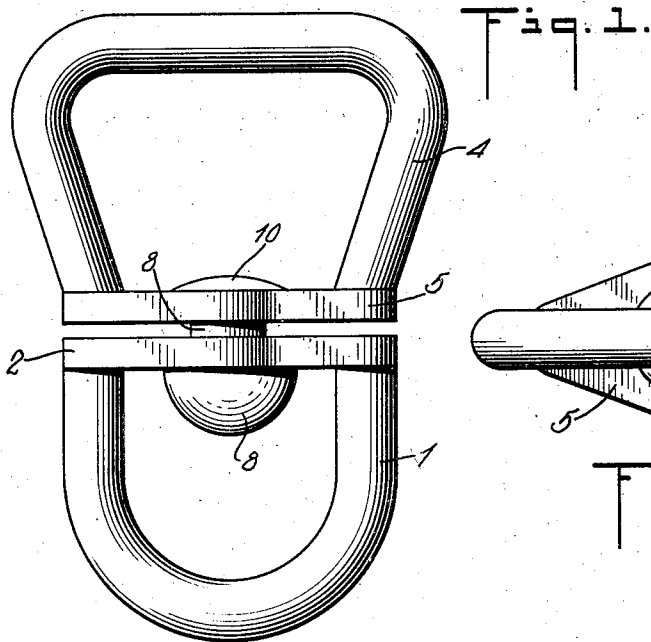
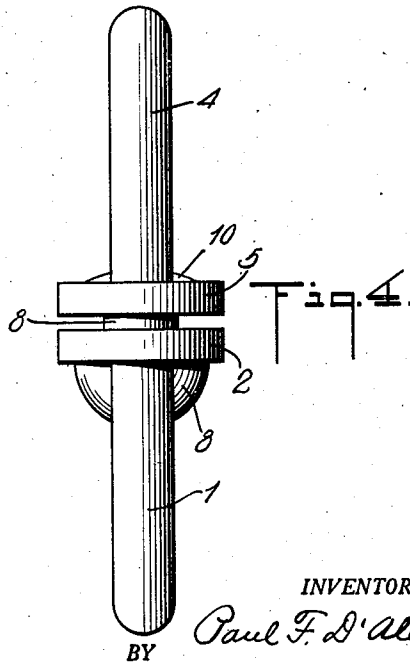


Fig. 3.



BY

INVENTOR.
Paul F. D'Aleo
Henry & Henry
ATTORNEYS

UNITED STATES PATENT OFFICE

2,400,291

SWIVEL

Paul F. D'Aleo, Brooklyn, N. Y.

Application December 15, 1944, Serial No. 568,295

7 Claims. (Cl. 59—95)

This invention relates to improved swivels such as are used to attach sea anchors to life rafts and lifeboats.

Heretofore, the members of such swivels have been manufactured from welded parts. Because the members so made are not of sufficient strength and because of greater economy in manufacture, it has been proposed to make such members from castings. However, in the latter case, it has been found that ordinary welding at the connection between members cannot be made strong enough to stand up under the heavy strains put upon it.

Accordingly, it is an object of this invention to provide a new and particularly advantageous construction in swivels wherein there is attained at the point of connection a union of much greater strength and durability than has been hitherto possible.

Another object of the invention is to provide a construction wherein the members may each be cast rather than formed from several parts welded at various points, thus effecting great economy in cost and labor of manufacture.

Other objects of the invention will appear from the following description of a preferred form of the improved swivel construction, reference being had to the accompanying drawing, in which

Figure 1 is a front elevation of the swivel;

Fig. 2 is a top plan view of the swivel;

Fig. 3 is a view similar to that of Fig. 1 but partly in section; and

Fig. 4 is an end elevation of the swivel.

The swivel as shown in Figs. 1 to 4 inclusive consists of three members cast from some such suitable material as manganese bronze or other metal of equal strength. The ringlike member 1 is integrally formed as shown with the ring portion terminating in base 2 which has a bore 3 in the center.

The ringlike member 4 is integrally formed as indicated with the ring portion terminating in a base 5 of the same size and shape as base 2. Base 5 has a bore 6 which corresponds in positioning and diameter to bore 3. But, unlike bore 3 which has an equal diameter throughout, bore 6 is cast with a chamfer 7 of preferably 45° at its inner end.

The two ringlike members 1 and 4 are held together by rivet 8 which passes through bores 3 and 6. Rivet 8 is furnished with a circumferential groove 9, preferably 45° and one-eighth of an inch in width, which is so positioned on the stem of the rivet 8 that, when the top of rivet 8 is substantially flush with the upper face of base

5, the lower edge of groove 9 is substantially in line with the lower edge of chamfer 7.

In assembling the members of the swivel, rivet 8 is passed through bores 3 and 6 in bases 2 and 5, respectively, with the head of rivet 8 against the lower face of base 2, and the lower edge of groove 9 in the position indicated, that is, in line with the lower edge of chamfer 7 or just slightly below it. A result of this positioning of members 1 and 4 and rivet 8 is that base 5 is separated from base 2 by a space of some such width as, for example, one-eighth of an inch as shown.

With the several members in the indicated position, rivet 8 is rigidly and permanently united to base 5 of member 4 by a suitable means therefor known to the art as, preferably, by a rod of brazing material. Because of the special construction of rivet 8 and base 5, when these two members are brazed, the molten brazing material is caused to flow into the chamfered recess 7 in base 5, and then into the groove 9 in bolt 8, forming a strong and secure shelf-lock within the braze 10.

Because of the space between base 5 and base 2, and since member 1 is not rigidly fixed, said member 1 is free to rotate or swivel around the stem of rivet 8.

In use, as for connecting sea anchors to rafts or lifeboats, the ring portion of member 1 is attached to the sea anchor as by means of webbing, while the ring portion of member 4 is fastened to the raft or lifeboat.

While the invention has been disclosed herein for use with sea anchors, its use is not so limited. The swivel may be used, for instance, as a connection between the ends of ropes or cables, either of wire or other materials, and for other purposes.

Furthermore, while the invention has been disclosed herein in an embodiment at present preferred, for illustrative purposes, it is obvious that changes in construction, form and arrangement of parts may be made without departing from the scope of the invention. Therefore, I do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

I claim:

1. A swivel comprising two ringlike members, each having a bore in the base thereof, the bore of one of said members having a chamfer at its inner end, a grooved rivet passing through said bores, the groove of said rivet being opposite to said chamfer, said chamfered member being rigidly

idly united to said rivet by a metal alloy in said chamfer.

2. A swivel comprising two ringlike members, each having a bore in the base thereof, the bore of one of said members having a chamfer at its inner end, a grooved rivet passing through said bores, the groove of said rivet being opposite to said chamfer, said chamfered member being rigidly united to said rivet by brazing material in said chamfer.

3. A swivel comprising two ringlike members, each having a bore therein, the bore of one of said members having a chamfer at its inner end, a grooved rivet passing through said bores, the groove of said rivet being opposite to said chamfer and uniting material in said chamfer and around and in said groove.

4. A swivel comprising two ringlike members, each having a bore therein, the bore of one of said members having a chamfer at its inner end, a grooved rivet passing through said bores, the groove of said rivet being opposite to said chamfer and brazing material in said chamfer and around and in said groove.

5. A swivel comprising a first ringlike member connected to a second ringlike member by means of a grooved rivet positioned in bores in said members, the grooved end of said rivet lying within a chamfer in the inner end of the bore of said second ringlike member and a metal alloy filling said chamfer and said groove.

6. A swivel comprising a first ringlike member connected to a second ringlike member by means of a grooved rivet positioned in bores in said members, the grooved end of said rivet lying within a chamfer in the inner end of the bore of said second ringlike member and brazing material filling said chamfer and said groove.

7. A swivel comprising a first ringlike member connected to a second ringlike member by means of a grooved rivet positioned in bores in said members, the grooved end of said rivet lying within a chamfer in the inner end of the bore of said second ringlike member and brazing material filling said chamfer and said groove, said first ringlike member being free to rotate on said rivet.

PAUL F. D'ALEO.