July 6, 1965 K. L. APPERSON 3,192,723

DIVING WEIGHT

Filed Nov. 2, 1962

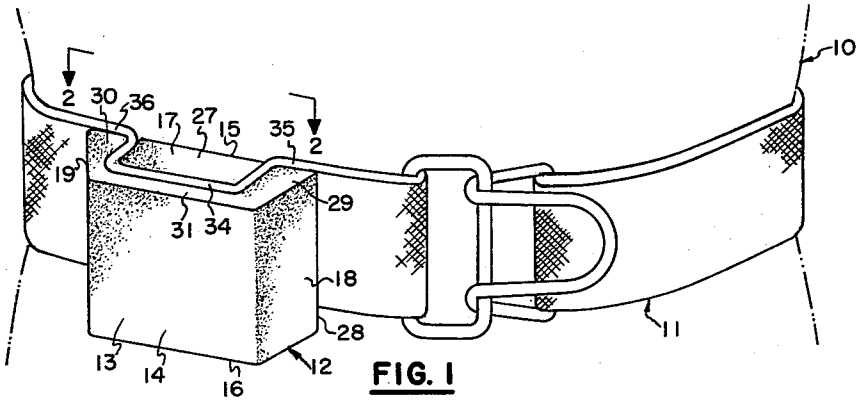


FIG. 1

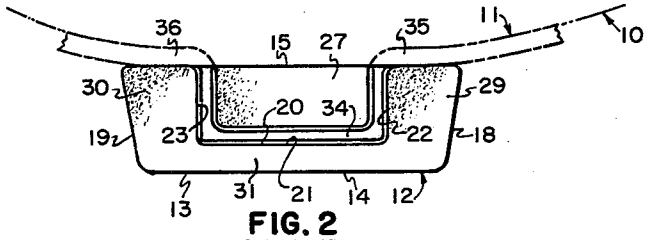


FIG. 2

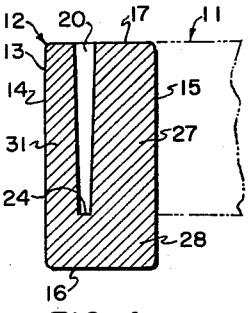


FIG. 4

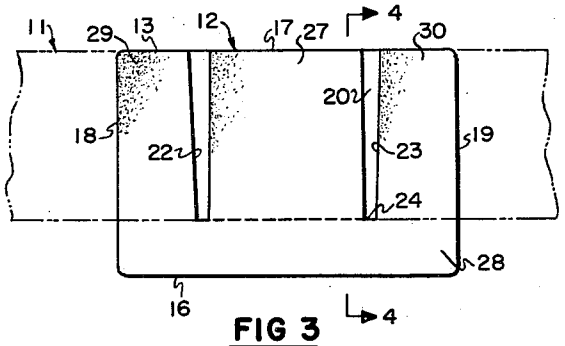


FIG 3

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DIVING WEIGHT

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This invention relates generally to accessories for diving, such as skin-diving and scuba diving.

As is well known, such diving requires that the diver carry weights in order that the desired depth be reached. Upon occasion, say in an emergency, it may be necessary for a diver to quickly discard one or more weights to facilitate upward movement. It is presently common practice to employ weights permanently affixed to the diver's belt; and, should the necessity arise for discarding weight the diver must discard the entire belt. In addition to the inconvenience and lack of control in discarding the belt with all the weights, it is quite expensive and prevents the carrying of knives and other equipment on the belt.

While there have been attempts to provide separate removable weights carried by a diver's belt, these devices have not found general acceptance for several reasons. For example, such devices have been relatively complex in construction, and therefore expensive and unreliable in operation.

Accordingly, it is an important object of the present invention to provide a diving weight of the type described which is extremely simple in construction, requiring no moving parts, so as to be durable and reliable throughout a long useful life.

It is another object of the present invention to provide a diving weight having the advantageous characteristics mentioned in the preceding paragraph, which is capable of quick and easy placement on and removal from a diver's belt, being effectively retained thereon throughout use and until it becomes necessary to discard the weight.

Still a further object of the present invention resides in the provision of a diving weight of the type described which is capable of economic manufacture for sale at a reasonable price, so as to be expendable, and which may optionally be permanently affixed to a diver's belt if such be the preference.

Other objects of the present invention will become apparent upon reading the following specification and referring to the accompanying drawings, which form a material part of this disclosure.

The invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts, which will be exemplified in the construction hereinafter described, and of which the scope will be indicated by the appended claims.

In the drawings:

FIGURE 1 is a front perspective view showing a diving weight of the present invention in operative association upon a belt worn by a diver;

FIGURE 2 is a plan view taken substantially along the line 2—2 of FIGURE 1, with the belt being shown in phantom;

FIGURE 3 is a rear elevational view of the diving weight of FIGURES 1 and 2, the belt being shown in phantom; and

FIGURE 4 is a sectional elevational view taken substantially along the line 4—4 of FIGURE 3.

Referring now more particularly to the drawings, and specifically to FIGURE 1 thereof, a diver is shown in dot-and-dash outline and generally designated 10. Girding the diver 10 is a belt generally designated 11, which

carries a diving weight 12 constructed in accordance with the teachings of the present invention.

The weight 12 is advantageously integrally fabricated as a single body 13. The body 13 may be formed of lead, or other suitable material, lead being preferred both for its density, ease of fabrication, and also its ductility for a purpose appearing presently.

The body 13 is generally hexahedral in configuration, having generally parallel front and rear surfaces 14 and 15, lower and upper surfaces 16 and 17 extending between the front and rear surfaces, and end surfaces 18 and 19 each extending between the respective end edges of front, rear, lower and upper surfaces.

In use, the rear or inner surface 15 is located proximate to the person of the user. Formed in the otherwise solid body 13 is a groove 20 extending downward or inward from the upper body surface 17 toward and terminating short of the lower body surface 16. The groove 20, as seen in the top view FIGURE 2 is of devious or non-straight configuration, and more specifically is of a generally U-shaped configuration having a medial or bight region 21 from the ends of which extend a pair of terminal or leg regions 22 and 23. That is, the leg or end portions 22 and 23 of groove 21 extend in substantial parallelism, transversely from or normal to the bight region 21 of the groove and open at their distal ends through the inner or rear surface 15 of the body 13.

Further, the groove 20 is advantageously configured to taper inwardly or downwardly, so that the groove side walls converge in the downward direction from the upper body surface 17 to the bottom wall 24 of the groove. This downwardly tapering groove configuration is best seen in FIGURES 3 and 4.

It will now be appreciated, that by the generally U-shaped configuration of the groove 20 having its opposite ends opening through the rear body surface 16, there is defined of the body a generally medial tongue region 27 projecting upward from the lower body region 28, while on opposite sides of the tongue 27 the body 13 is configured to define a pair of upstanding end or wing portions 29 and 30, interconnected by a forward wall 31. The wing portions 29 and 30, and the forward wall 31 all upstand from the lower body portion 28.

In use, the belt 11 is flexed to provide a generally U-shaped belt portion 34 which is moved edgewise relative to the body 13 conformably into the groove 20. By the devious configuration of the groove 20 and conforming reception therein of the belt portion 34, the belt is firmly frictionally retained in the groove when the belt is worn, unless the belt is deliberately loosened for withdrawal or discard of the weight. Further, additional firm securement of the weight 12 to the belt 34 is obtained by the wedging action of the received belt portion 34 in the downwardly tapering groove 20. Also, with the belt in its normal condition of use, the belt portions 35 and 36 adjacent to the belt portion 34 are sandwiched between the user and the body wing portions 29 and 30, respectively for additional securing effect.

The belt may, of course, accommodate a plurality of different weights, which may be of different sizes, as desired by the user. Further, one or more of the weights may be permanently secured to a belt if this is the user's preference. Such permanent securement may be simply effected by deformation of the tongue 27 forward to firmly clamp the received belt portion 34 between the body tongue and forward wall 31. Fabricating the body 13 of lead or other suitably ductile material facilitates this permanent securement and permits repeated removal and replacement of the weights with respect to the belt.

It will now be apparent that a diver may attach or remove weights from the belt while the belt is in position about the diver. Further, this may be accomplished with-

out loosening the belt or even touching the buckle of the belt.

Although it was heretofore necessary with conventional diving weights that the belt and weights be placed on the diver after all other equipment was in position, in order to permit quick removal of the belt together with the weights without entanglement, this is no longer necessary. That is, the belt may be placed on the diver in the order desired by the diver, as release of weights is accomplished quickly and easily without removal of the belt. The prior danger inherent in a diver forgetting to put a weighted belt on last is therefore obviated.

From the foregoing, it is seen that the present invention provides a diving weight which fully accomplishes its intended objects and is well adapted to meet practical conditions of manufacture and use.

Although the present invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it is understood that certain changes and modifications may be made within the spirit of the invention and scope of the appended claims.

What is claimed is:

1. A weight for attachment to a diver's belt, said weight comprising a horizontally elongate generally rectangular solid body having top and bottom surfaces and inner and

outer side surfaces, said body being formed with an upwardly opening groove of generally U-shaped configuration in plan and having a bight portion extending longitudinally of said body and a pair of leg portions extending in angulate relation from respective ends of said bight portion through the inner side surface of said body, said bight and leg portions of said groove extending substantially straight downward from said top body surface and tapering in the direction away from said top body surface, whereby a diver's belt inserted edgewise in said groove is frictionally retained therein by the combined wedging action of the groove taper and binding action on the belt at the bends thereof.

2. A weight according to claim 1, said bight and leg portions being substantially straight to define sharp meeting angles for effective binding action on a received belt.

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