April 8, 1930. H. O. COSTELLO 1,753,310

EXERCISING BALL AND SUPPORT THEREFOR

Filed Jan. 3, 1929

Fig. 1.

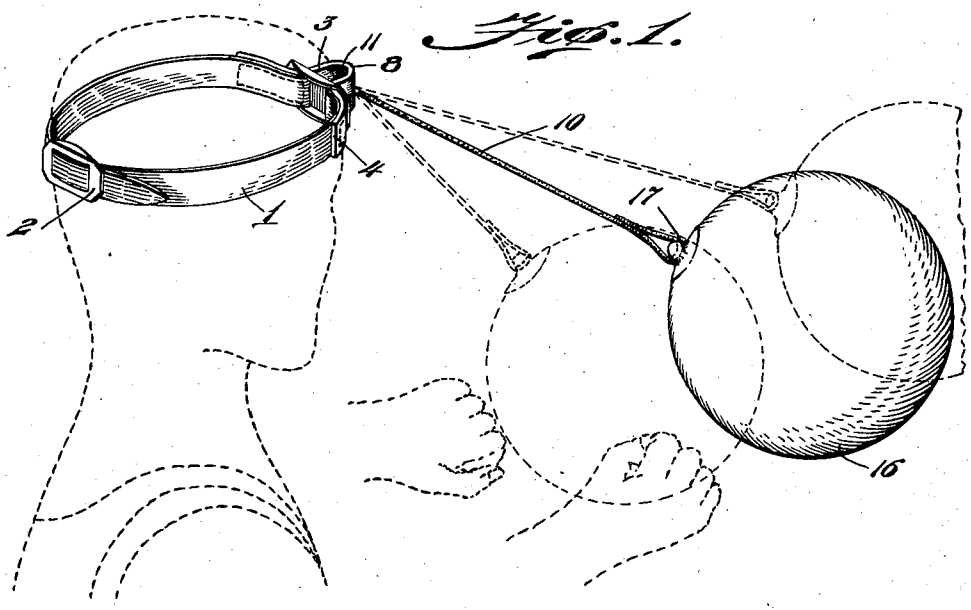


Fig. 2.

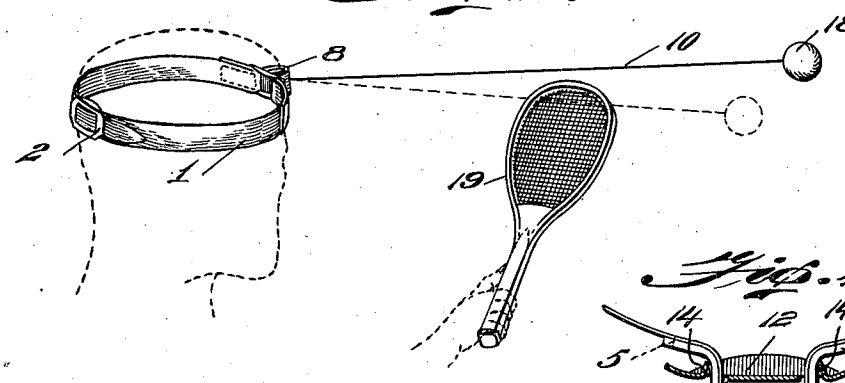


Fig. 3.

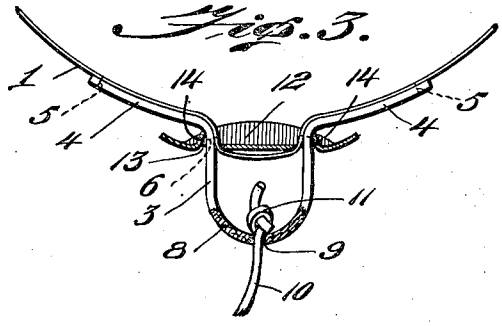
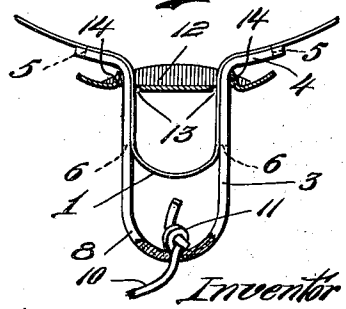


Fig. 4.



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UNITED STATES PATENT OFFICE

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EXERCISING BALL AND SUPPORT THEREFOR

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This invention relates to an improved exercising ball and support therefor adapted for use generally for exercising purposes as well as for training athletes in preparation for various sports such as boxing, foot-ball, tennis, base-ball, soccer and the like.

One object of the invention is to provide a novel device of this character which may be readily used either in a gymnasium or in the home and which does not require any expensive or cumbersome apparatus or accessories for its use.

Another object of the invention is the provision of an improved device of this character which is very compact and may be readily folded into a small package and carried in the pocket when not in use.

Another object of the invention is the provision of an improved means for supporting a ball from the head of the user in such a manner that it will be returned after being struck or thrown into position to enable the user to catch or again strike the ball and thus assist in training the eye to enable the user to more efficiently gauge the speed and direction of moving objects.

Other objects and advantages of the invention relate to various improved details of construction and novel methods of operation as will be more fully set forth in the detailed description to follow.

Referring to the drawings:—

Fig. 1 is a perspective view of the device illustrating the position of the parts when in operative position upon the head of the user, and showing the manner of operating the same as a punching bag,

Fig. 2 is a perspective view of another form of the device, illustrating the same as applied to the head of the user and employed as an exercising apparatus or training device for tennis players,

Fig. 3 is a detail sectional view taken through the forward portion of the head-band and ball supporting member, and showing the ball supporting member in its more retracted position relative to the head-band, and,

Fig. 4 is a detail perspective view, similar to Fig. 3, and showing the ball supporting member in a different adjusted position wherein the point of attachment of the elastic member to the ball supporting member is located at a greater distance from the head of the user.

In the embodiment of the invention illustrated herewith 1 designates generally a strap or head-band which is adjustably secured to the head of the user as by a buckle 2, whereby it may be adjusted in length to conform to and fit closely about the head of the user. The strap or head-band 1 is provided with a ball supporting member 3, which in the present instance is shown as a strip of fairly heavy leather or other similar material having its end portions 4 stitched or otherwise secured to the strap 1 as at 5 and 6, and provided with a central loop portion 8 which projects forwardly beyond the strap 1. The loop portion 8 of the ball supporting member is shown as provided with an opening 9 to receive an elastic cord or other resilient member 10 which may be knotted or otherwise secured thereto as at 11 to prevent separation of the end of the cord from the loop portion 8.

An adjusting member 12 of thin metal or other suitable material is provided with spaced openings 13 for receiving opposite ends of the strap 1, and portions of the adjusting member 12 adjacent to each opening 13, are bent inwardly towards the head of the user as at 14, to engage the outer surface of the end portions 4 of the ball supporting member whereby the loop portion 8 may be made of greater or less size as desired in order to space the point of support for the elastic cord 10 a greater or less distance from the head of the user as may be desired.

While I have shown the ball supporting member 3 as formed of leather or other suitable material shaped in the form of a relatively thin strap or plate and stitched or otherwise secured to the strap 1, it is to be understood that this ball supporting member may be given any other suitable or desired form and may be of rigid or semi-rigid construction, and may be formed of metal, wood, fibre, rubber or any other suitable and desired material, and may be secured or attached to the strap 1 in any suitable or desired man-

ner so as to permit of adjusting the point of support for the elastic cord relative to the head of the user, or the ball supporting member may be so formed as not to permit adjustment of the point of attachment of the elastic cord towards and from the head of the user in cases where this adjustment is deemed unnecessary.

A relatively large inflated ball 16 may be supported from the elastic cord 10, as shown in Fig. 1 of the drawings, when the device is to be used as a punching bag, the ball being provided with an attaching member 17 for readily securing it to the cord 10. As shown in Fig. 1 of the drawings, the ball 16 may be struck by the user to drive it forwardly to the limit of its movement as determined by the elastic cord 10, from which position it will be returned by the cord towards the face of the user and substantially along the line of vision of the user in position to be again struck by the user. By supporting the ball from a point in front of and slightly above the face of the user the ball is always returned towards the face of the user and in a position best adapted to train the eye of the user in striking the ball at the proper moment and to direct it upon the desired course of travel from the user.

In the use of the apparatus as an exercising or training means for tennis players or for throwing a ball and having the same return to the thrower, a smaller ball may be employed such as the ball indicated by the numeral 18 in Fig. 2 of the drawings. In this case as in the form shown in Fig. 1 of the drawings, the elastic or resilient cord 10 serves to return the ball directly towards the head of the user and into position to be caught or struck by the racquet 19 as may be desired in the use of the device.

It will be seen upon reference to Figs. 3 and 4 of the drawings that the loop portion 8 of the ball supporting member is capable of adjustment to increase or decrease the distance of the point of support of the cord 10 from the head of the user by positioning the adjusting member 12 at different points on the ball supporting member. In Fig. 3 of the drawings the adjusting member is placed close to the strap 1, whereby the loop portion 8 is made relatively small, while in Fig. 4 of the drawings, the adjusting member is so positioned as to considerably increase the size of the loop 8 and position the point of support for the cord 10 a considerably greater distance from the head of the user. The loop is retained in its position of adjustment by the inwardly bent portions 14 of the adjusting member engaging the outer surface of the end portions of the ball supporting member to prevent change in the size of the loop when the device is secured to the head of the user in adjusted position.

The cord 10 may, of course, be formed of any suitable or desired resilient material, such as a rubber strand, woven rubber cord or strip, a coiled spring, or other suitable material. By increasing or decreasing the length of the cord 10 the ball may be caused to return to the user with greater or less rapidity, as may be desired.

The form of device shown in Fig. 2 may be used as a training apparatus for base-ball players in order that they may acquire proficiency in throwing and catching the ball, and a similar form of the device, with a larger ball, if desired, may be used in training foot-ball or soccer players in throwing and receiving the ball.

It will be seen that the device shown and described provides a novel form of punching bag or exercising device, which is capable of use as a punching bag either in a gymnasium or in an ordinary room, and is adapted to combine shadow boxing with exercise and training in punching the bag since the user may move about at will while using the apparatus. The device is also excellently adapted for training the eye of the user in accurate hitting since the ball as carried by the user is capable of moving at other and different angles than the usual stationary punching bag and thus requires accurate hitting to keep the same in motion. The device is well adapted also for training foot-ball, basket-ball, soccer and hand-ball players for accuracy either in hitting or in catching the ball, since an elastic cord of any suitable or desired length may be used and the ball thrown as well as struck, if desired, the cord insuring the return of the ball to the user in each case.

What I claim is:—

1. A device of the character described comprising a strap to be secured to the head of the user and provided with a portion projecting outwardly from and in substantially the same horizontal plane with the remaining portion of said strap, and an inflated ball elastically supported from the forwardly projecting portion of said strap.

2. A device of the character described comprising a strap to be secured to the head of the user, a supporting strip overlying a portion of said strap and having parts thereof secured to said strap, a ball, and longitudinally extensible elastic means for supporting said ball from a portion of said supporting strip.

3. A device of the character described comprising a strap to be secured to the head of the user, a flexible supporting strip having a portion overlying a portion of said strap and secured thereto and a portion of said supporting strip overlying a portion of said strap but separable therefrom to permit access to that portion of the supporting strip next adjacent to the outer surface of the strap, a longitudinally extensible elastic member having one end thereof secured to that por-

tion of the supporting strip which is separable from a portion of said strap, and a ball secured to the opposite end of said longitudinally extensible elastic member and supported thereby.

4. In a device of the character described, a strap to be secured about the head of the user, said strap having a portion projecting outwardly therefrom, an adjusting member for retaining the outwardly projecting portion of said strap in any one of a plurality of adjusted positions relative to the head of the user, a ball, and elastic means for supporting said ball from the outwardly projecting portion of said strap.

5. An exercising apparatus comprising a flexible head-band, a supporting strip secured to that part of the head-band located above the eyes of the user and having a portion thereof located in proximity to a part of said head-band for supporting a ball, a longitudinally extensible member having one end secured to said ball supporting strip, and an inflated ball secured to the opposite end of said longitudinally extensible member and depending from said head-band whereby the ball upon being struck by the user will tend to move outwardly along a substantially straight path and will be returned directly towards the face of the user through longitudinal contraction of the longitudinally extensible member.

6. In an exercising device of the character described, a strap member adapted to be secured to the head of the user above the eyes of the user, a longitudinally extensible elastic member, means for connecting the strap member with one end of the longitudinally extensible elastic member in such a manner that one end of said longitudinally extensible elastic member will be located in close proximity to said strap member, and an inflated ball secured to the opposite end of said longitudinally extensible elastic member whereby when the inflated ball is struck by the user the force exerted thereon is expended substantially entirely in effecting longitudinal elongation of said elastic member and the contraction of said elastic member following such elongation tends to return the inflated ball substantially toward the face of the user and along the line of sight of the user.

7. In a device of the character described, a flexible head-band adapted to be secured to the head of the user, a longitudinally extensible elastic member, an inflated ball secured to one end of said longitudinally extensible elastic member, and means for securing the opposite end of said longitudinally extensible elastic member substantially directly to the said head-band at a point above and between the eyes of the user, whereby the ball upon being struck by the user will move outwardly from the face of the user and be returned directly towards the face of the user and substantially along the line of vision of the user through longitudinal elongation and contraction of said longitudinally extensible elastic member.

In testimony whereof I have affixed my signature.

HENRY O. COSTELLO.