Jan. 27, 1959 M. V. COOK 2,871,017

EXERCISER AND AMUSEMENT DEVICE

Filed June 21, 1955

Fig. 1

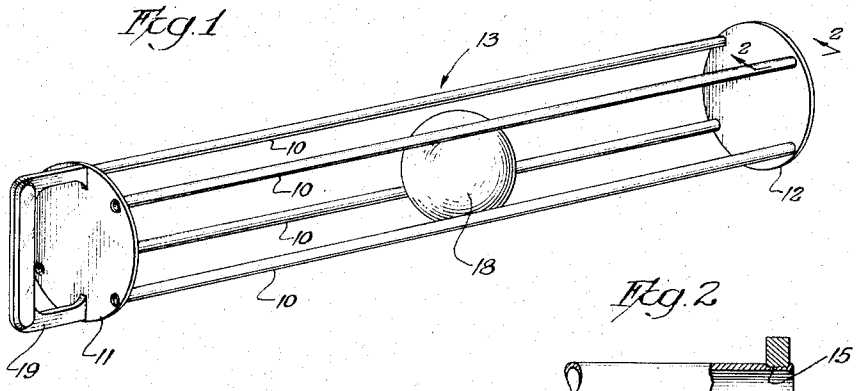


Fig. 2

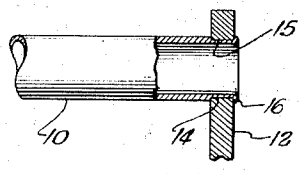


Fig. 3

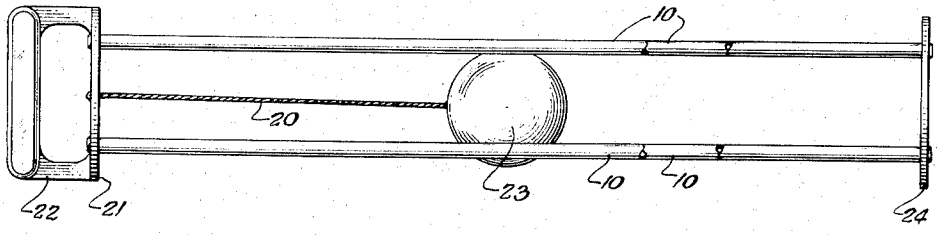


Fig. 4

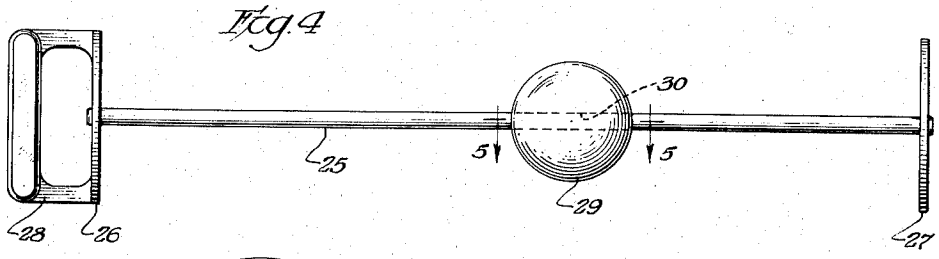
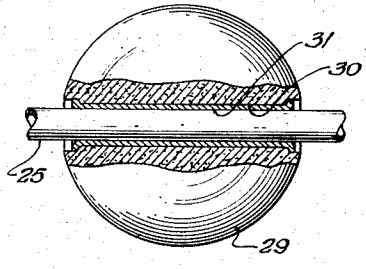


Fig. 5



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EXERCISER AND AMUSEMENT DEVICE

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1 Claim. (Cl. 272—79)

This invention relates to an exercising device and has as one of its objects the provision of an exerciser for strengthening the wrist, arm, shoulder, back, and abdominal muscles.

Another object of the invention is the provision of an exerciser which is adapted to be grasped and manipulated by either hand individually or by both hands simultaneously.

Still another object of the invention is the provision of an exerciser as in the foregoing which is especially suited to the training of prize fighters.

A further object of the invention is the provision of an exerciser which may also be used as an amusement device.

A still further object is the provision of a combined exerciser and amusement device which is simple in construction, and inexpensive to manufacture, as well as compact and light weight so that it may be readily transported from place to place.

The foregoing and other objects and advantages of the present exerciser will become readily apparent from the following detailed description thereof taken in conjunction with the annexed drawings wherein:

Fig. 1 is a perspective view of the exerciser and amusement device of this invention;

Fig. 2 is an enlarged section taken along line 2—2 of Fig. 1;

Fig. 3 is an elevation of a modified form of the present exerciser and amusement device;

Fig. 4 is an elevation of a further modified form of the present exerciser and amusement device; and

Fig. 5 is an enlarged section taken along line 5—5 of Fig. 4.

Referring first to Figs. 1 and 2 of the drawings, the preferred embodiment of the invention comprises four parallel, rods **10** joined at opposite ends to circular bumper plates **11** and **12** to form with said plates an elongated cage **13**. Rods **10** may be joined to plates **11** and **12** by providing reduced diameter end portions on the rods to form annular shoulders **14**, Fig. 2. These reduced end portions are inserted through holes **15** in the plates **11** and **12** and the outer ends of the rods are then flanged over the plates as indicated at **16**, so that the plates will be fixed on the rods between the shoulders **14** and flanges **16**.

Mounted in the cage **13** for movement between bumper plates **11** and **12** is a ball **18** of resilient material. The spacing between the rods **10** is made somewhat less than the diameter of ball **18** so that the latter will be precluded from passing between the rods. Bumper plate **11** has a handle **19** rigidly fixed to its outer surface.

According to one manner of using the present exerciser and amusement device, handle **19** is grasped in either hand with the cage **13** extending away from the user's body. The user then flexes his arm in a manner to reciprocate cage **13** in the direction of its length to cause the ball **18** to move into contact with first one of

the bumper plates **11** or **12** and then the other bumper plate. The resiliency of the ball **18** will cause the latter to bounce from one bumper plate toward the other so that by flexing the arm at the proper frequency ball **18** may be reciprocated back and forth in the cage **13**.

The device may be used with either hand individually and may be slowly raised and lowered as it is reciprocated so as to strengthen the various muscles of the wrist, arm, shoulder, back, and abdomen.

According to another manner of using the device, the cage **13** is positioned generally horizontally and crosswise of the user's body with one hand grasping handle **19** and the other hand grasping the bumper plate **12**. The device is then reciprocated in the direction of its length, to cause ball **18** to bounce back and forth between bumper plates **11** and **12**, as previously described. The device may also be slowly tilted about a horizontal axis during such reciprocation thereof.

This latter manner of using the device is intended primarily to exercise the muscles of the shoulder, back, and abdomen. The muscles of the legs will also be exercised, to some extent, during such use. It will be apparent that the present exerciser is ideally suited to the training of prize fighters since its use not only results in strengthening of those muscles of the body which are primarily used by one in that occupation but also facilitates the instilling of a sense of rhythm in the user which is of fundamental importance in the training of prize fighters.

In practice, cage **13** would be made in various weights and lengths to provide exercisers for use by persons of different weights and to provide exercisers having different, natural frequencies at which the device must be reciprocated to cause continued reciprocation of the ball in the cage.

It will also be apparent that the device may be made relatively small so that it may be used as a toy or amusement device by children.

A modified form of the present exerciser and amusement device is illustrated in Fig. 3 wherein an elastic cord **20**, or the like, is connected between a bumper plate **21**, mounting a handle **22**, and the ball **23**. The remainder of the device is identical in all respects to that of Fig. 1. The elastic cord **20** has a length equal approximately to one-half the length of the cage and serves merely to resiliently bias the ball toward the bumper plate **21**. The use of this latter exerciser is similar to that of the exerciser of Fig. 1 except that it is not necessary that the exerciser of Fig. 3 be reciprocated with sufficient force to engage the ball **23** with the distal bumper plate **24** since the resiliency of the cord **20** will return the ball toward bumper plate **21**.

Figs. 4 and 5 illustrate a still further modified form of the invention. In Figs. 4 and 5 a single rod **25** has a pair of bumper plates **26** and **27** rigidly fixed on its opposite ends. Bumper plate **26** has a handle **28** attached to its outer surface. A ball **29**, of resilient material, has a hole **30** extending centrally therethrough in which is fixed a bearing sleeve **31** for slidably receiving rod **25**. The ends of bearing sleeve **31** are spaced inwardly of the surface of the ball, as shown in Fig. 5, so as to provide for resilient impact of the ball with the bumper plates **26** and **27**. The latter form of the present exerciser is used in the same manner as the exerciser of Fig. 1.

Numerous other modifications in the design and arrangement of parts of the invention will occur to those skilled in the art. The invention is, therefore, not intended to be limited to the illustrative embodiments thereof but only by the spirit and scope of the following claim.

I claim:

An exercising and amusement device, comprising: a hollow elongate housing defining an internal, longitudinal guideway, said housing including rigid end walls closing opposite ends of said guideway, a single, relatively light weight rubber ball confined in the guideway for movement into impact with said end walls by reciprocation of said housing, said ball having a diameter approximating but slightly less than the cross-sectional dimensions of said guideway so as to be restrained against any appreciable lateral movement in the guideway and being completely detached from said housing so as to be free to roll in said guideway, said housing having at least one longitudinal opening through which movement of said ball in the guideway may be observed by a user of the device, and a handle secured to one end of said housing, said handle including a hand grip extending transverse to the length of the housing.

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