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Goodwin

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[54] **BOWLING GRIP EXERCISE DEVICE**

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[52] **U.S. Cl.** ..... **272/68,** 273/54 B

[51] **Int. Cl.** **A63b 21/30**

[58] **Field of Search** ..... 272/67, 68; 273/54 B; 73/379, 380, 381

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[57] **ABSTRACT**

A bowling exercise device comprising a relatively thin body or housing with a pair of indentations formed in the peripheral edge thereof and adapted to receive a user's second and third fingers, and an adjustable thumb assembly including a spring-biased member slidably received by the housing and oppositely disposed of the indentations and adapted to accommodate a user's thumb, whereby squeezing and gripping forces are exerted by the user which closely simulate the exercise of bowling. The thumb assembly is variably positioned away from the oppositely disposed indentations to accomodate for users with different size hands.

7 Claims, 6 Drawing Figures

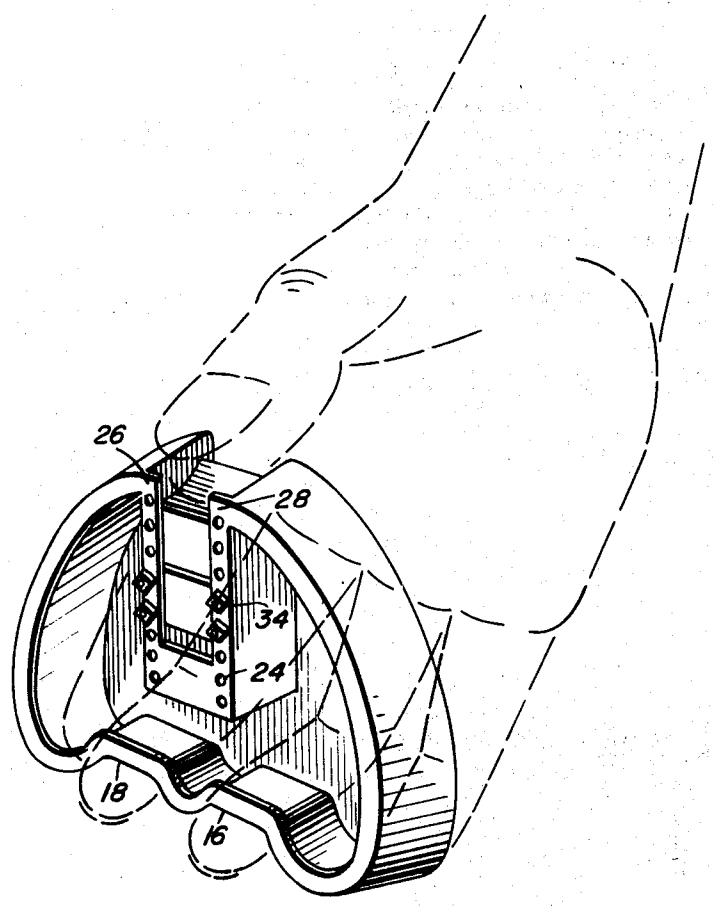


Fig. 1

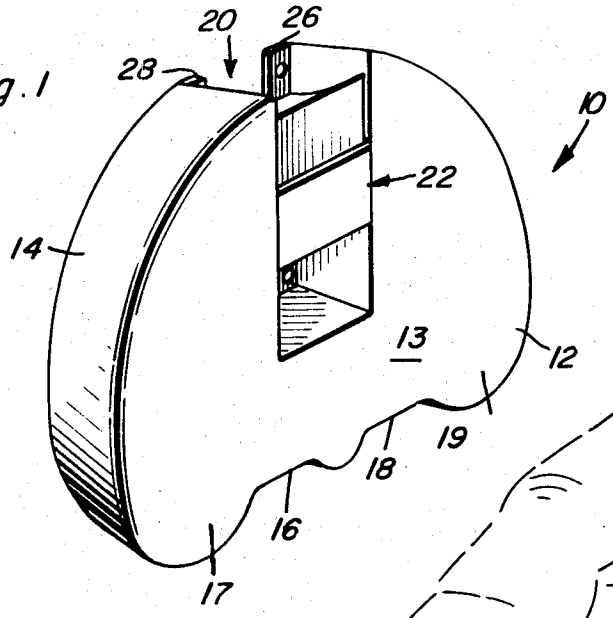


Fig. 2

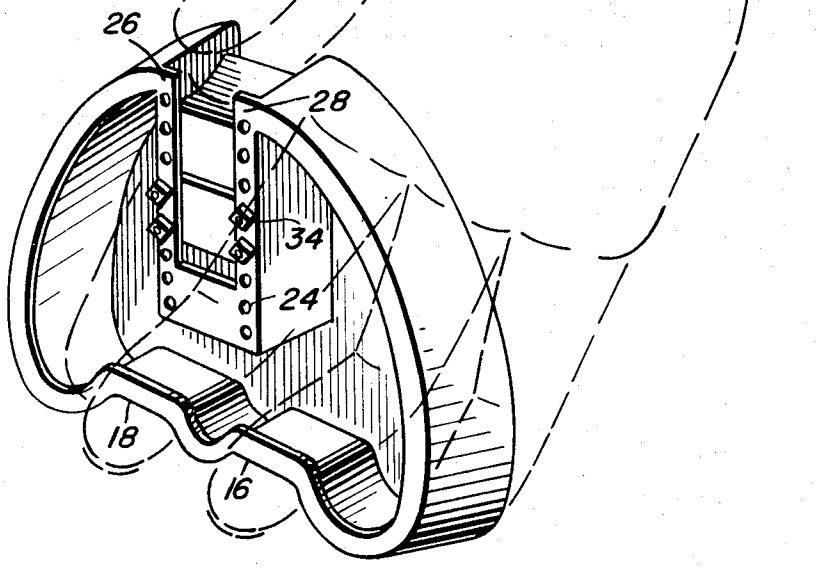


Fig. 3

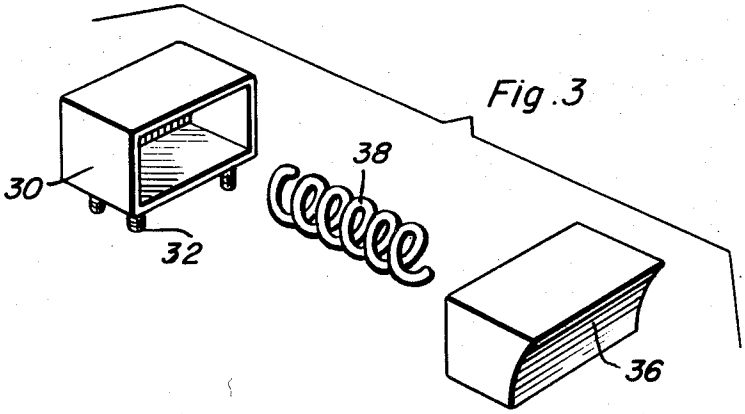


Fig. 4

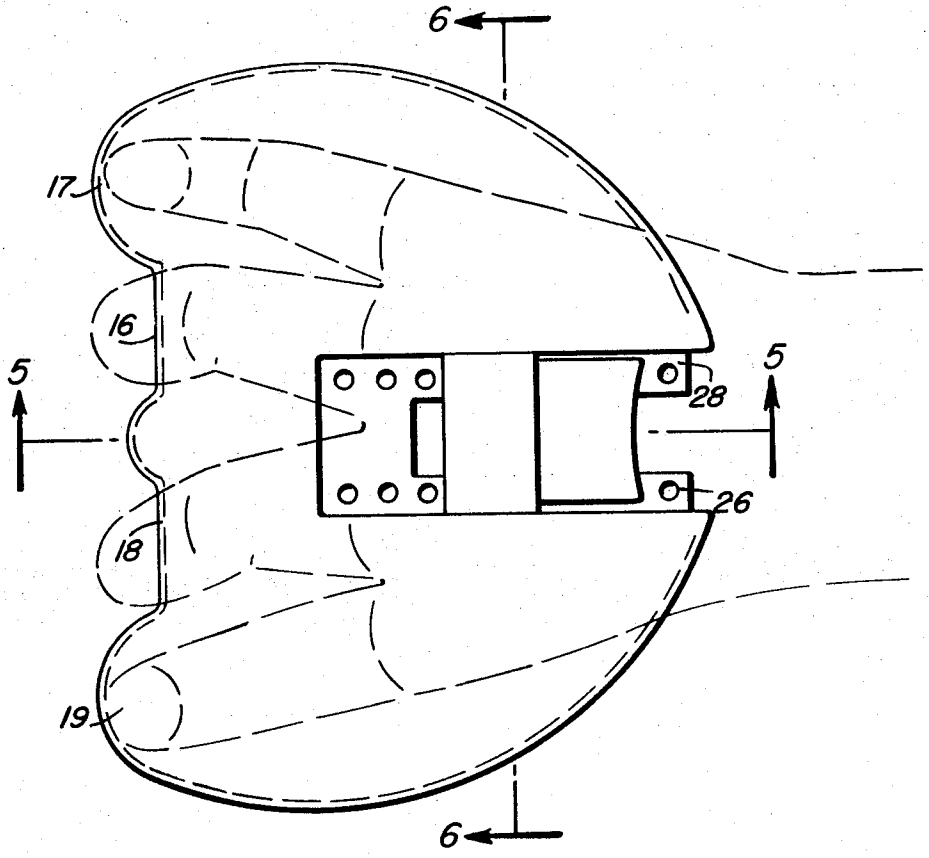


Fig. 5

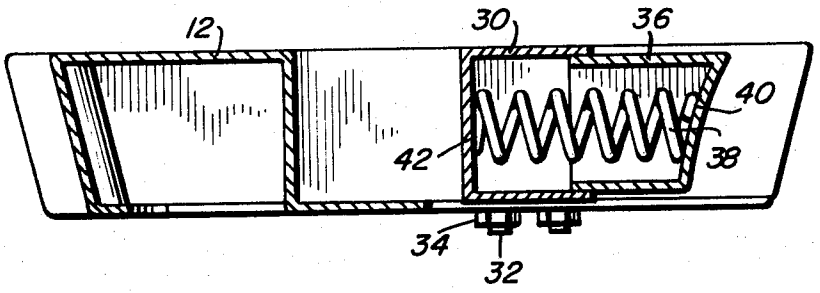
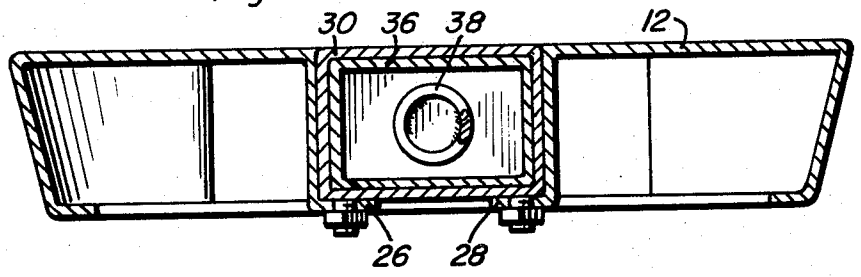


Fig. 6



BOWLING GRIP EXERCISE DEVICE

The present invention is generally related to exercising devices and, more particularly, to a device for exercising muscles in a manner which simulates, in part, the acts of bowling.

In the past, the proper development of bowling skills required a bowler to adhere to a regular training schedule including muct time spent each day at a bowling alley. Such a time consuming training schedule was impractical, if not impossible for the amateur or once-a-week bowler to adhere to on a regular basis. As a result, the once-a-week bowler seldom achieved his full potential. His finger, wrist, and arm muscles tended to relax between weekly bowling sessions, such that he could not maintain satisfactory ball control.

Therefore, it is an object of the present invention to provide a novel exercising device for bowlers which is effective in conditioning the thumb, finger, wrist and arm muscles with regular use for a relatively short period of time each day, whereby a bowler may improve or maintain his ball control skills.

It is another object of the present invention to provide a unique bowling exercise device which is adapted to accommodate the four fingers of a user in squeezing relationship with the thumb which is flexed against the forces of a compression spring or the like, whereby the acts of bowling ball grip and manipulation are simulated to improve or maintain one's ball control skills.

A further object of the present invention is to provide a versatile bowling exercise device including a spring mechanism or the like which may be selectively positioned in a main body or housing to accommodate different hand sizes for simulating the maniuplation of a ten-pin type bowling ball.

It is still another object of the present invention to provide a novel bowling exercise device which is comprised of a small number of moving parts, is rugged, durable, long lasting, and relatively inexpensive to manufacture.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout.

FIG. 1 is a perspective view of the bowling exercise device of the present invention.

FIG. 2 is a perspective view of the bowling exercise device of the present invention with a phantom view of a user's hand in operative engagement therewith.

FIG. 3 is an exploded perspective view of the spring mechanism associated with the present invention.

FIG. 4 is a front elevation of the bowling exercise device illustrated in FIG. 1, with a phantom view of a user's hand in operative engagement therewith.

FIG. 5 is a sectional view taken along section 5—5 of FIG. 4.

FIG. 6 is a sectional view taken along section 6—6 of FIG. 4.

Referring now, more particularly, to FIGS. 1 and 2 of the drawings, the bowling exercise device of the present invention is generally indicated by the numeral 10 and includes a relatively rigid body or housing 12 which is of thin, generally planar configuration and is of a size which may be easily held in one's hand. Preferably, the housing is formed from steel, plastic, or similar rigid materials and is provided with a generally planar wall

13 and a peripheral edge portion 14 defined by a relatively smooth surface extending around substantially the entire housing. The lower section of the peripheral edge portion is provided with a pair of finger-receiving indetations 16 and 18 which are adapted to receive a user's no. two and no. three fingers, respectively. In addition, a pair of oppositely disposed, generally planar extension areas 17 and 19 are integral with the housing and adapted to accommodate a user's first and fourth fingers, respectively, as illustrated in FIG. 4.

Preferably, the housing is opened on one side and is of relatively thin walled construction, thereby providing a generally hollow configuration, as best shown in FIG. 2. An upper section of the peripheral edge portion 14 is provided with a downwardly extending slot generally indicated by the numeral 20 oppositely disposed of the finger-receiving indetations 16 and 18. The slot is of generally elongated, rectangular configuration and is adapted to mount a spring mechanism 22 therein by way of mounting apertures 24. The mounting apertures are located in a pair of oppositely disposed, generally parallel flange portions 26 and 28 integral with the housing 12. The mounting apertures are arranged in two columns, with the apertures of each column being vertically spaced from each other for the purposes of adjustment, as hereinafter explained.

With reference to FIGS. 3–6 of the drawings, it will be observed that the spring mechanism 22 is comprised of a spring seat member or housing 30 of generally rectangular configuration and being provided with threaded stud members 32 extending outwardly from one side thereof. The spring seat member is mounted to main housing 12 in stationary relationship thereto by way of threaded nuts 34, with studs 32 extending through corresponding aligned mounting apertures 24. A movable thumb-receiving member 36 is reciprocally mounted in slot 20 and is connected to spring seat member 30 by way of a coil compression spring 38, or similar biasing means. The thumb-receiving member is of generally rectangular configuration and is of lesser dimension than the corresponding interior dimensions of the spring seat member, such that it may be slidably received in the spring seat member for reciprocation therewith. Preferably, the opposite end convolutions of the coil compression spring are welded, or otherwise fastened, to the spring seat member 30 and thumb-receiving member 36 as indicated at 40 and 42 in FIG. 5.

As mentioned above, the purpose of the bowling exercise device of the present invention is to exercise the thumb, fingers, wrist, and arm muscles in a manner which closely simulates the acts of bowling. The gripping and maneuvering of a 10-pin type of bowling ball is of prime importance to the success or failure of each bowl. When utilizing the device of the present invention, a user grips the housing in a manner illustrated in FIGS. 2 and 4, applying thumb pressure to the thumb-receiving member 36.

The user presses downardly with his thumb and exerts oppositely directed forces with his second and third fingers sufficiently to depress the thumb-receiving member against the forces of the coil compression spring. The thumb-receiving member should be fully depressed and held in that position for intervals of approximately 20 seconds. At the same time, the first and fourth fingers rest against and are generally parallel to extension areas 17 and 19, the second and third fingers

being bent slightly as if gripping a bowling ball. This exercise is repeated for about 10 minutes several times daily. This exercising strengthens and conditions the muscles which are utilized in gripping a ten-pin type bowling ball. As the thumb and fingers are being exercised in the above described manner, the user should move his wrist in various directions relative to his forearm. In addition, the user may find it advantageous to simulate the other motions of bowling, such as stride and delivery while gripping the exercising device. With daily use, most bowlers will maintain or improve their ball control skills, such that they may concentrate on their timing and execution of delivery.

Since the finger and thumb holes of the 10-pin type bowling balls are sized and positioned to fit the individual's strength and hand size, it is esential that the exercising device provide approximately the same spatial arrangement for the fingers and thumb during exercising. This is achieved by adjusting the position of the spring seat member relative to the finger-receiving indentations. The threaded nuts **34** may be easily removed and the stud members **32** fitted into the appropriate mounting apertures **24** to assure proper spacing between the thumb-receiving member **36** and finger-receiving indetations when the coil compression spring **38** is fully depressed. Thus, the bowling exercise device of the present invention accommodates various hand sizes and provides a finger-thumb spatial relationship approximating that of the user's 10-pin ball.

It will be appreciated that the exercising device of the present invention may be provided with fastening means other than the studs and nuts illustrated in the drawings. Furthermore, the use of resilient means other than the coil compression spring is deemed to fall within the scope of the present invention. Also, minor changes in the configuration of the main housing may be provided so long as the spatial relationship between the fingers and thumb-receiving areas of the device is maintained. Since the device includes a relatively small number of moving parts, each of simple construction, it is economical to manufacture, such taht it may be sold within the financial means of most bowling enthusiasts.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

What is claimed as new is as follows:

1. A bowling exercise device comprising a generally planar body of relatively rigid construction with a peripheral edge portion extending therearound, an indentation area in said planar body adapted to receive the second and third fingers of a user, a slot formed in said peripheral edge portion oppositely disposed of said indentation area and spaced therefrom, and a biasing mechanism mounted to said body in said slot, said biasing mechanism including a movable thumb-receiving member slidable relative to said body and biased in a direction away from said indentation area, said slot being of elongated configuration with a longitudinal axis passing through the central portion of said indentation area, said indentation area being defined by a pair of spaced indentations formed in said body each adapted to accommodate one of the user's fingers.

2. The structure set forth in claim **1** wherein said biasing mechanism includes a stationary spring seat member adjustable fastened to said body for adjustment along said longitudinal axis.

3. The structure set forth in claim **2** wherein said biasing mechanism includes a coil compression spring extending between said spring seat member and said thumb member.

4. An exercising device for simulating muscuar actions normally associated with bowling, said device comprising a relatively rigid body with a peripheral edge portion, an indentation area in said body and adapted to receive a user's second and third fingers, an elongated slot in said peripheral edge portion spaced from said indentation area, a stationary seat member mounted to said body in said slot, a movable member reciprocally mounted relative to said seat member and adapted to be moved by a user's thumb, and a biasing means mounted between said seat member and said movable member for influencing said movab le member away from said indentation area, said body including mounting means for selectively adjusting the spacing of said seat member from said indentation area.

5. The structure set forth in claim **4** wherein said biasing means includes a resilient compression spring.

6. The structure set forth in claim **5** wherein said body includes at least one elongated mounting flange adjacent to and generally parallel with said slot, and a plurality of longitudinally spaced mounting apertures in said flange for selectively securing said stationary seat member in a position representative of a user's hand size.

7. The structure set forth in claim **6** wherein said resilient compression spring includes a coil spring extending generally longitudinally in said slot between said stationary seat member and said movable member.

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