Nov. 23, 1965 S. D. STEINER 3,219,343

TAPERED BAR BELL WEIGHT

Filed Feb. 2, 1962

FIG. 1.

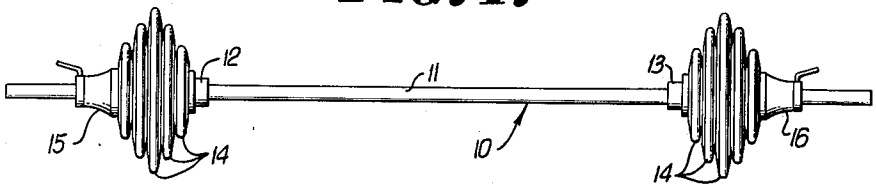


FIG. 2.

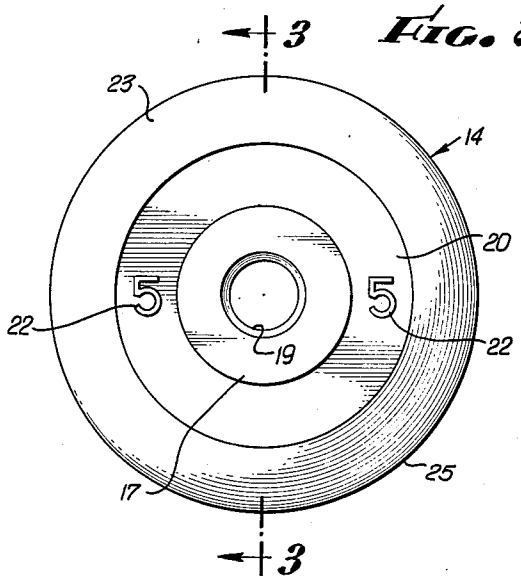


FIG. 3.

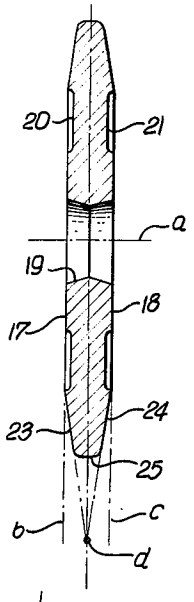
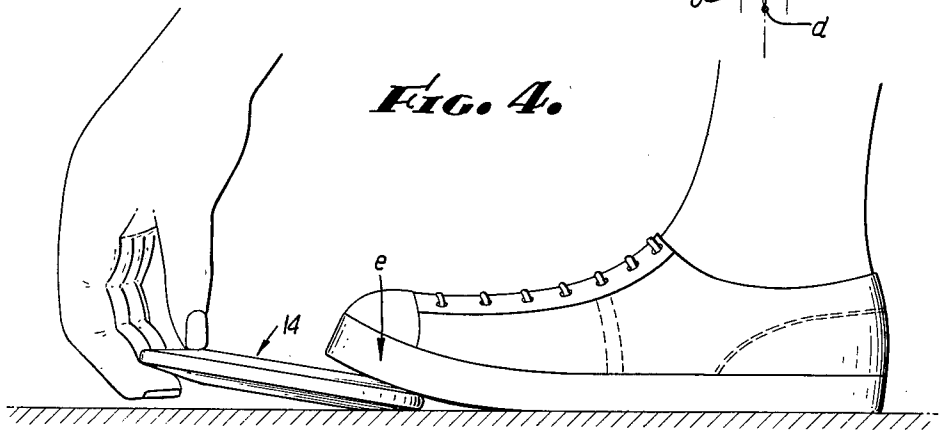


FIG. 4.



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TAPERED BAR BELL WEIGHT

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1 Claim. (Cl. 272—84)

This invention relates to exercising weights, and particularly to a detachable bar bell weight.

Weights for bar bells are commonly made of cast iron or like dense material shaped as a dish of substantially uniform thickness. The weight dishes are often added or removed in order to change the total weight of a bar bell. Typical prior weights resting upon the floor are not easily lifted, especially if of large size. Sometimes the weights can be lifted by one finger or two inserted at the central aperture of the weight. This may be a strain. It is more difficult to lift the weight by manipulations at the edge. Yet these inconveniences have been tolerated.

The primary object of this invention is to overcome the foregoing disadvantages, and provide a bar bell apparatus having a set of weights that can readily be lifted. For this purpose the peripheral portion of each weight has an outward taper whereby the weight can be tipped by pressing on one side, as with the foot. When so tipped, the weight can readily be gripped.

This invention possesses many other advantages, and has other objects which may be made more clearly apparent from a consideration of one embodiment of the invention. For this purpose, there is shown a form in the drawings accompanying and forming a part of the present specification, and which drawings are true scale. This form will now be described in detail, illustrating the general principles of the invention; but it is to be understood that this detailed description is not to be taken in a limiting sense, since the scope of this invention is best defined by the appended claim.

Referring to the drawings:

FIGURE 1 is an elevation of a bar bell apparatus embodying the present invention;

FIG. 2 is an elevation of one of the weights;

FIG. 3 is a sectional view taken along the plane corresponding to line 3—3 of FIG. 2; and

FIG. 4 is a view illustrating the function of the weight.

In FIG. 1 there is illustrated a bar bell structure **10** that includes a bar **11** having collars **12** and **13** spaced inwardly of opposite ends respectively and against which one or more weights **14** may be placed in a conventional manner. Detachable clamps **15** and **16** hold the weights against the collars **12** and **13**.

One of the weights **14** is shown in detail in FIGS. 2 and 3. The weight **14**, which may be made of cast iron or the like, is circular in peripheral contour. Its side surfaces **17** and **18** are parallel to each other and perpendicular to the axis *a* of the weight. The side surfaces are flat at the inner areas **17** and **18** respectively, and define opposite bounding planes *b* and *c* for the weight **14**. The center of the weight **14** has a through aperture **19** by the aid of which it is received on the bar **11**.

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Shallow circular grooves or depressions **20** and **21**, just beyond the flat arms **17** and **18** extend inwardly of the bounding planes *b* and *c*. The depressions **20** and **21** provide areas for display of raised, integrally formed numerals, as at **22**, that do not project beyond the bounding planes *b* and *c*. The numeral displayed in this instance denotes the value of the weight.

The side surfaces **23** and **24** beyond the grooves **20** and **21** are tapered. Thus, the peripheral area **23** extends inwardly of the corresponding bounding plane *b*, and the peripheral area **24** extends inwardly of its corresponding bounding plane *c*. The surfaces are generally frusto-conical. The edge **25** of the weight **14** is rounded or blunted, the points or circle of convergence *d* of the surfaces **23** and **24** being well beyond the peripheral boundary of the weight **14**.

The angularity of each of the surfaces **23** or **24** is of the order of 10°. Should the weight **14** rest upon the floor, as indicated in FIG. 4, a downward force exerted in the direction of the arrow *e* at one edge of the weight will cause the weight **14** to tilt, as indicated, so that the opposite edge is lifted for ready grasp.

Since both sides of the weight are tapered, tilting can be accomplished in the manner described whichever side surface **17** or **18** happens to engage the floor. In the present example, the force at *e* is indicated as being applied by the foot of the user.

The inventor claims:

In combination: a bar; a set of centrally apertured weights detachably mounted on the bar, each weight being generally of disk configuration and having side surfaces defining parallel bounding planes of the weight, each of the side surfaces having peripheral substantially frusto-conical portions sloping inwardly of their corresponding bounding planes, the said sloping portions having a projected circle of convergence located substantially beyond the peripheral edge of the weight, the taper of each of said surfaces relative to their corresponding bounding planes being of the order of ten degrees, the said frusto-conical portions occupying a peripheral band of substantial radial width in comparison with the radius of the disk itself whereby the weight when resting upon the floor contacts the floor only within a circle concentric with the disk and of substantially smaller radius than the disk.

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