S. JOHNSON.

ADJUSTABLE BAR BELL.

APPLICATION FILED JAN. 11, 1910.

983,372.

Patented Feb. 7, 1911.

2 SHEETS—SHEET 1.

FIG. 1.

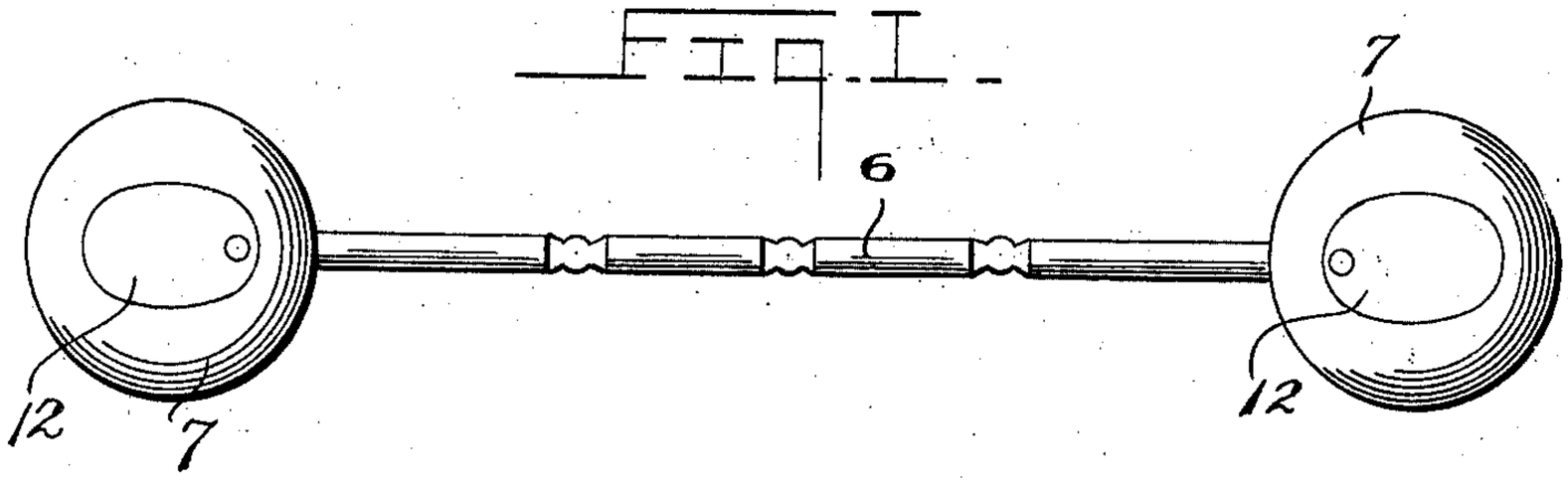


FIG. 2.

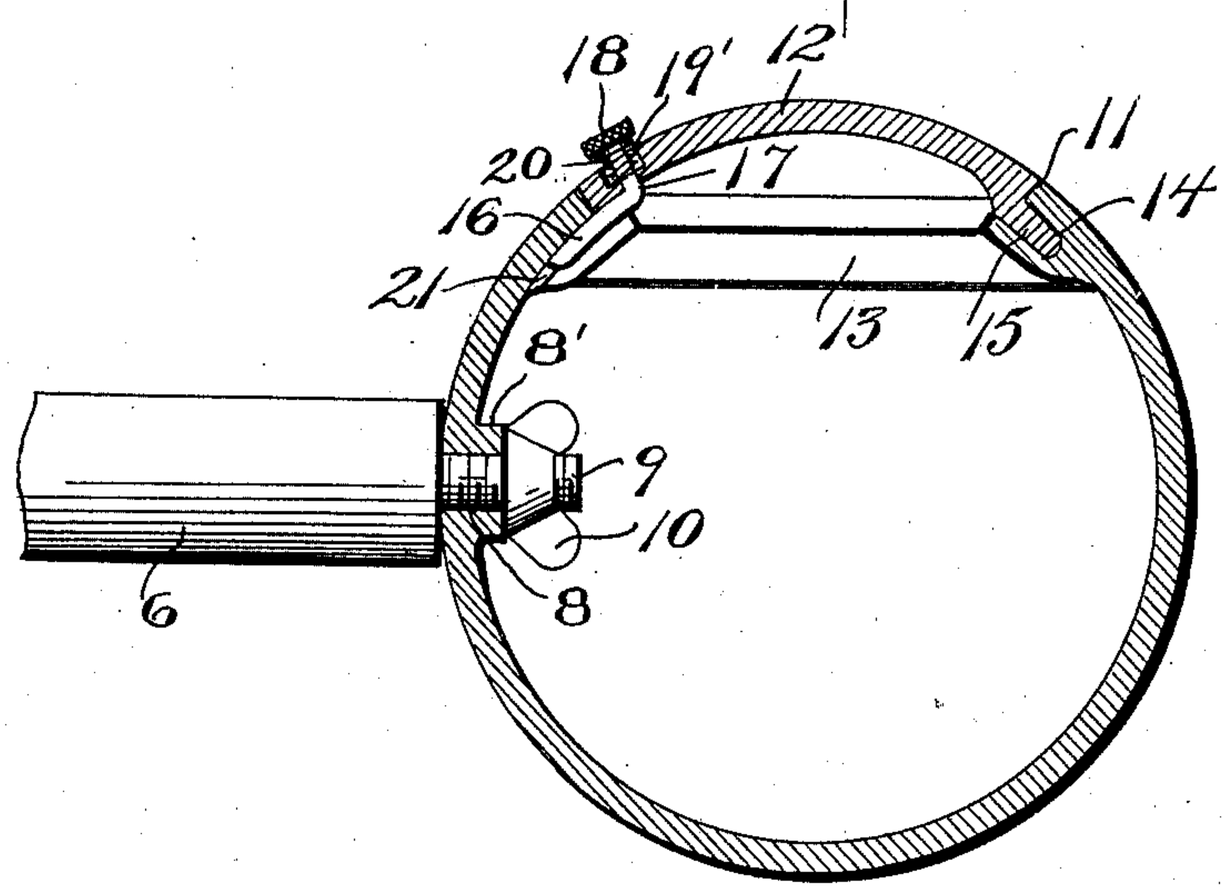
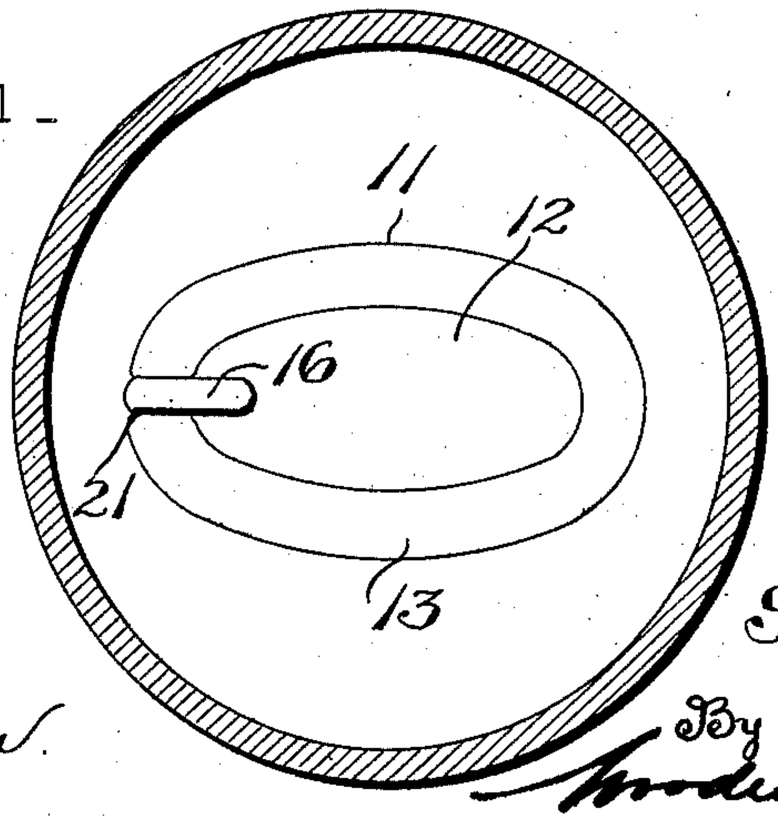


FIG. 3.



Witnesses

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2 SHEETS—SHEET 2.

FIG. 4.

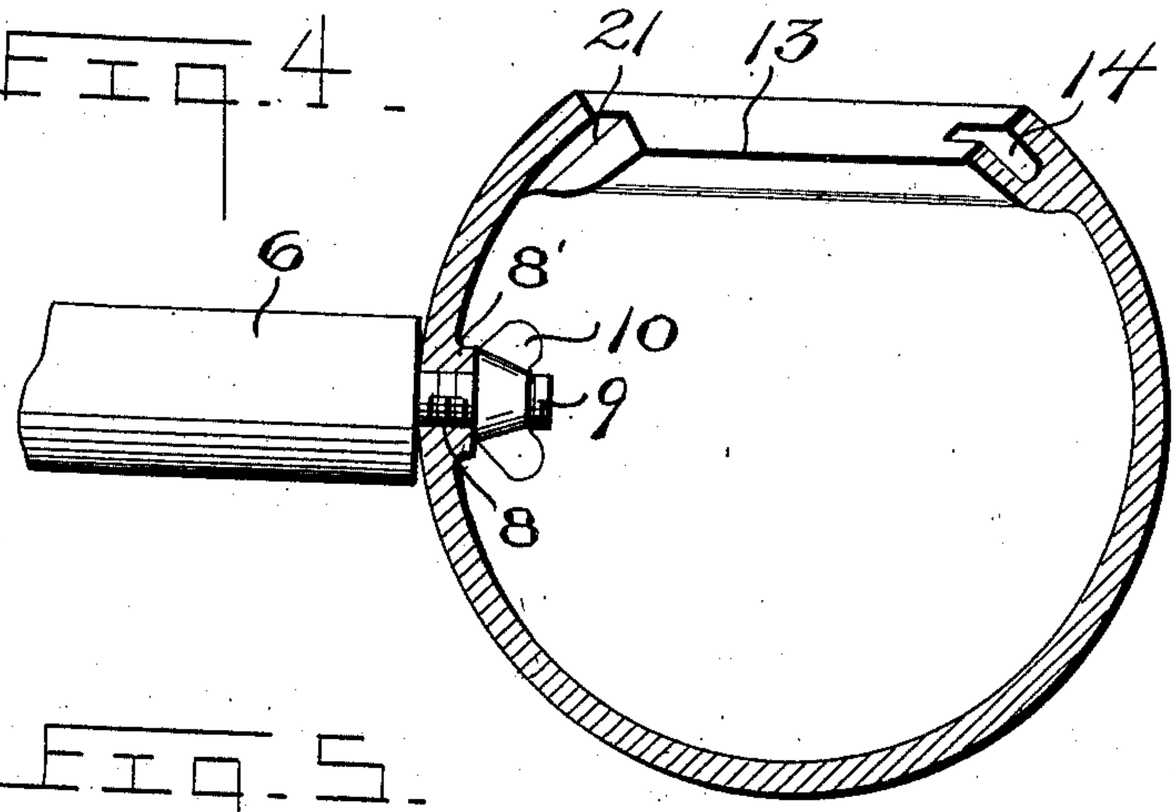


FIG. 5.

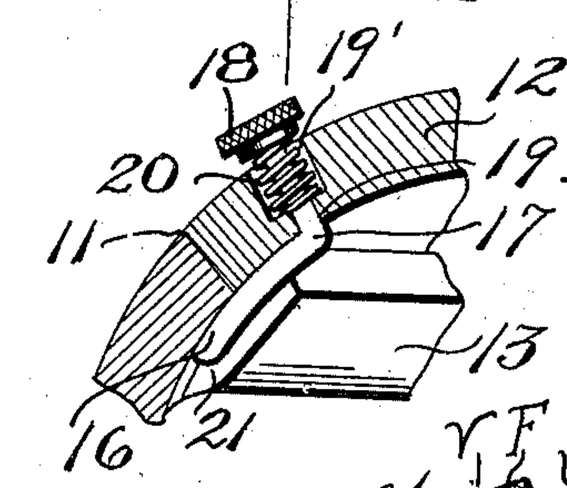


FIG. 6.

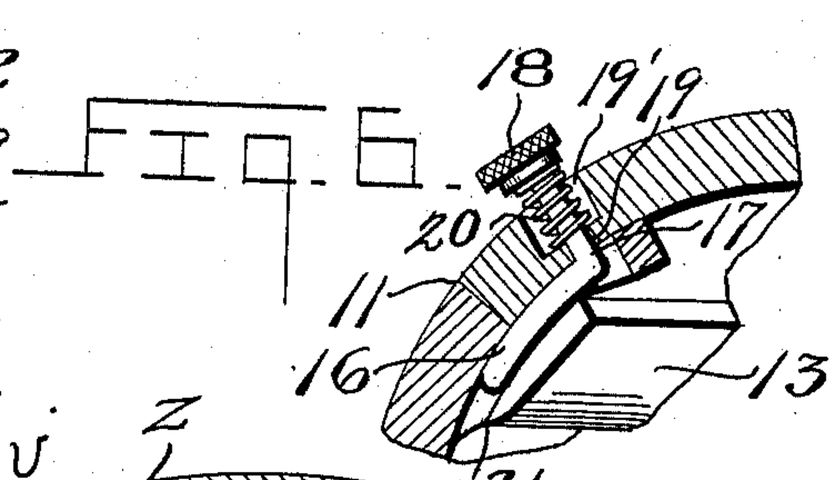


FIG. 7.

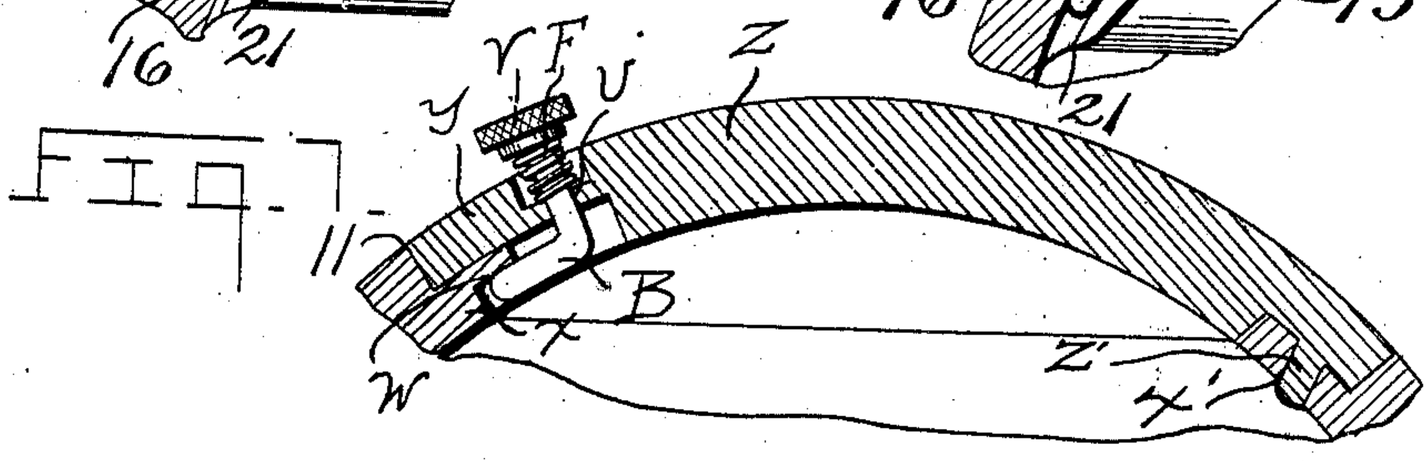
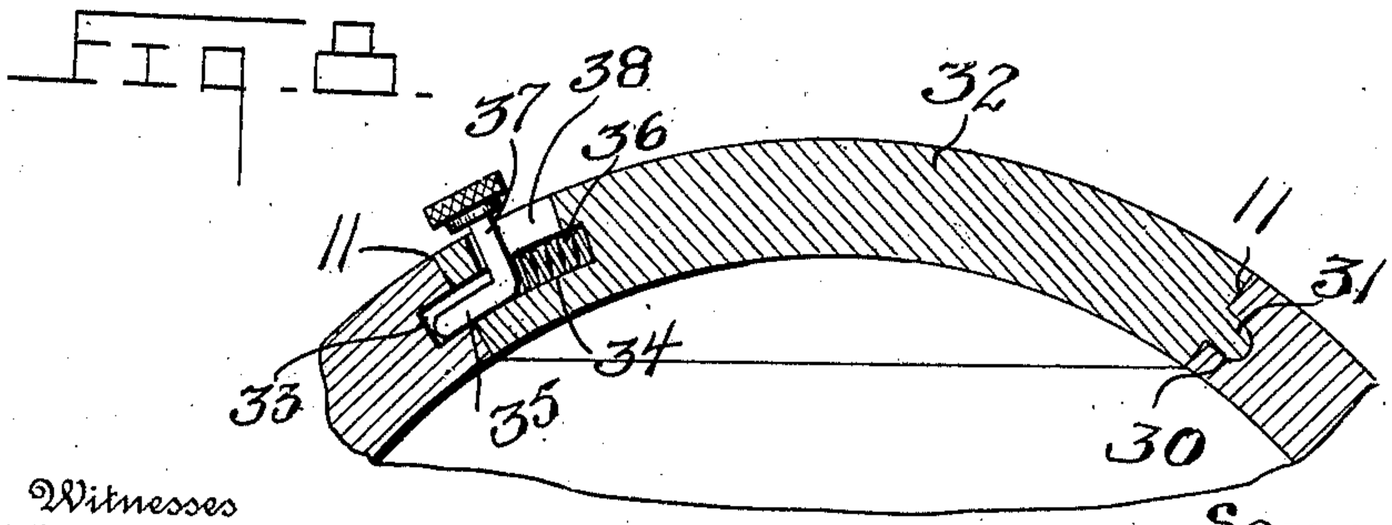


FIG. 8.



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UNITED STATES PATENT OFFICE.

SAMUEL JOHNSON, OF BATTLE CREEK, MICHIGAN.

ADJUSTABLE BAR-BELL.

983,372. Specification of Letters Patent. **Patented Feb. 7, 1911.**

Application filed January 11, 1910. Serial No. 537,407.

To all whom it may concern:

Be it known that I, SAMUEL JOHNSON, a citizen of the United States, residing at Battle Creek, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Adjustable Bar-Bells, of which the following is a specification.

This invention relates to gymnastic apparatus and more particularly to exercising bells, and has for its object to provide a bell of the bar-bell type constructed and arranged for variation of the weights of the bell head.

Another object is to provide a structure which will be such that the weight of the heads of the bell may be quickly changed, and which will also be such that the movement of the weighting bodies within the head cannot derange the fastenings of the closures for the head.

Other objects and advantages will be apparent from the following description, and it will be understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a view showing the bar-bell with the closures in place, Fig. 2 is an enlarged section of one of the heads of the bell taken longitudinally of the handle, Fig. 3 is a section at right angles to Fig. 2 showing the inner face of the closure, Fig. 4 is a sectional view of one of the heads similar to Fig. 2, showing the closure removed, Fig. 5 is a detail of the spring latch member. Fig. 6 is a detail view of a modified form of latch. Fig. 7 is a view of a second modification, Fig. 8 is a view of a third modification.

Referring now more particularly to the drawings, there is shown a bar-bell comprising the handle 6, having the usual terminal heads 7. In the present instance, however, the heads are hollow, as shown, and have threaded openings 8 therein, for the reception of the reduced threaded ends 9 of the bar 6.

The threaded ends 9 extend inwardly beyond a circular boss 8′ surrounding each of the openings 8, and engaged with these inwardly extending portions of the ends 9, there are wing nuts 10, which are screwed tightly upon the ends of the bar to hold the head against rotation and consequent loosening upon the bar.

Access to the wing nut 10 may be had through ovate apertures 11 formed longitudinally in the heads 7, and provided with arcuate closure plates 12. The apertures 11 are surrounded by inwardly extending beads 13, each of which is provided with a recess 14 opening through its upper edge. This recess extends downwardly and outwardly as shown and is arranged to receive a correspondingly formed tongue 15, which is carried by the closure plate 12 and lies snugly within the recess 14 when the closure plate is in position.

To hold the diametrically opposite points of the closure plate against movement, and thus fix the closure plate in position, a latch finger 16 is provided, which is carried by a stem 17 engaged revolubly in the closure plate 12 and extending outwardly beyond the outer face thereof, where it carries a knurled thumb nut 18.

The stem 17 extends through an aperture 19, which is enlarged at its outer end as shown at 19′ to receive a helical spring 20 engaged between the bottom of the enlarged portion of the aperture and the thumb nut 18. This spring normally holds the stem against inward movement, but permits of inward movement when the thumb nut is depressed.

At a point diametrically opposite to the recess 14, the rib 13 is entirely cut away, to produce a notch 21, and, as shown, the latch finger 16 is arranged to lie within this notch when the closure plate 12 is in operative position, being held by the sides of the notch from lateral movement out of holding position. When it is desired to move the closure plate, the thumb nut 18 is depressed, to bring the latch finger 16 out of the notch, and the nut is then rotated to shift the latch finger into position to extend over the plate 12 and inwardly of the edge of the plate, when the plate may be readily removed.

After removal of the plate, shot, sand, or other material may be introduced into the head to vary the weight thereof, and, as above stated, the hand may be inserted through the opening to manipulate the wing nut 10. By reason of the fact that the latch finger 16 lies in the notch 21, the movement of shot within the head when the bell is shifted,

cannot disengage the latch finger and permit the closure plate to become displaced.

In Fig. 6 there is shown a modified form of the invention in which a cam projection is formed upon the inner surface of the plate 12 rearwardly of the stem 17, so that when the stem is rotated to bring the latch finger 16 out of operative position, the finger will be depressed so that it will lie in position to pass over the rib 13 when the thumb nut is again rotated to bring the finger into engagement with the notch 21.

As will be observed, the arrangement of the closure plate 12 is such that, after the latch finger 16 has been moved out of operative position, the plate may be lifted by means of the thumb nut 18 to disengage the tongue from recess 14.

In Fig. 7, there is shown a form of the invention in which the opening 11 is provided with an inwardly extending flange X receiving a flange Y carried by the closure plate Z. The flange has an opening X′, which receives a tongue Z′ carried by the closure Z at one side, and diametrically opposite the flange X is cut away as shown at W to receive a pivotally movable finger B corresponding to the latch finger 16 of the first described form. The finger is carried by a revoluble stem U corresponding to the stem 17, and is equipped with the thumb nut V surrounded by the helical spring F as in the first described form. The operation of this form of the invention will be clearly understood.

In Fig. 8, the opening 11 is shown tapered inwardly and provided with a socket 30 at one side receiving a tongue 31 carried by the closure plate 32. At a diametrically opposite point, the wall of the opening is recessed as shown at 33, this recess being extended circumferentially of the opening, and registering with the similarly formed recess 34 formed in the edge of the closure plate 32. A laterally enlarged sliding bolt 35 is engaged in the recess 34 for movement to extend into the recess 33, in which position it is held normally by a helical spring 36 engaged between the bolt 35 and the inner end of the recess 34. A stem 37 projects outwardly through a slot 38 and by means of this stem the bolt may be slid into inoperative position.

What is claimed is:—

1. In a bar-bell the combination with a handle, of a hollow spherical head having a circular opening in one side thereof, a thickened annular portion surrounding said opening, said thickened portion having a recess formed therein at one side of said opening, said recess being arranged concentrically with said spherical head, said thickened portion having a latch receiving notch formed therein at a point diametrically opposite to said recess, a concavo-convex closure having a tongue on one edge thereof adapted to be seated in said recess, a latch finger on the diametrically opposite side of said closure for engagement in said notch, a stem on said latch finger projecting through said closure and a thumb nut on said stem disposed below the highest point of said spherical head, said closure being of such shape as to form the continuation of said spherical head, said tongue adapted when seated in said recess, to prevent the rotation of said closure.

2. In a bar-bell, the combination with a handle, of a hollow spherical head having a circular opening in one side thereof, the wall of said opening having a recess formed therein on one side of said opening, said recess being arranged concentrically with said spherical head, a concavo-convex closure having a tongue on one edge thereof adapted to be seated in said recess, a latch finger on the diametrically opposite side of said closure, and a stem on said latch finger projecting through said closure and having a thumb nut disposed in a plane below the highest point of said spherical head, said closure being of such shape as to form the continuation of said spherical head, said tongue adapted when seated in said recess to prevent the rotation of said closure.

3. In a bar-bell, the combination with a handle, of a hollow spherical head on either end of said handle and having a circular opening in one side thereof, the wall of said opening having a recess formed therein and at one side thereof, a concavo-convex closure having a tongue adjacent one edge thereof adapted to engage in said recess, said closure being of such shape as to form the continuation of said spherical head, and a latch on the diametrically opposite side of said closure, said latch having a latch finger adapted to engage in a notch formed in the wall of said opening at a point diametrically opposite to said recess, said tongue adapted, when seated in said recess to prevent the rotation of said closure.

In testimony whereof I affix my signature, in presence of two witnesses.

SAMUEL JOHNSON.

Witnesses:
M. E. Duckering,
M. G. Weybright.