

No. 789,538.

PATENTED MAY 9, 1905.

C. E. HAM.
DUMB BELL.

APPLICATION FILED NOV. 11, 1904.

Fig. 1.

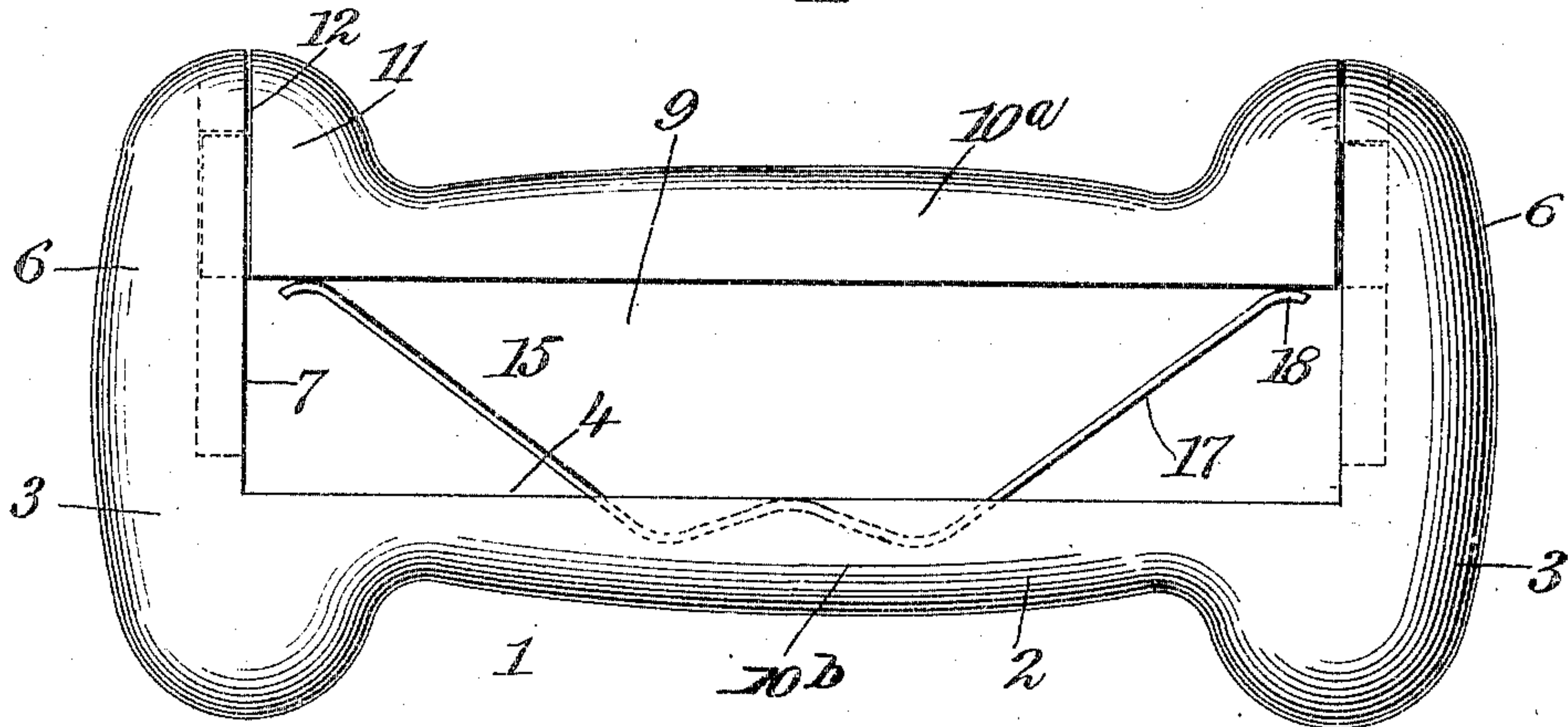


Fig. 2.

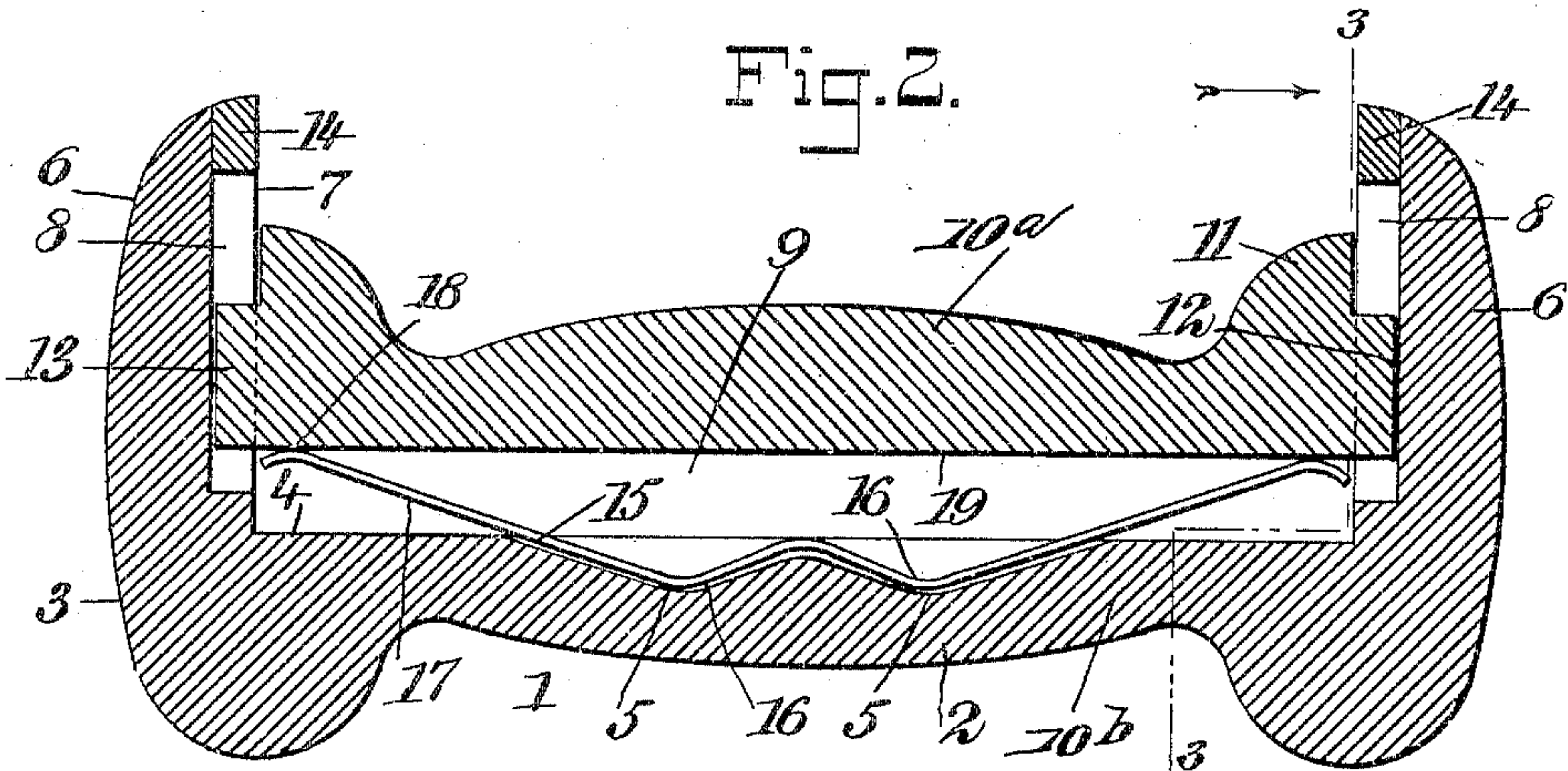


Fig. 3.

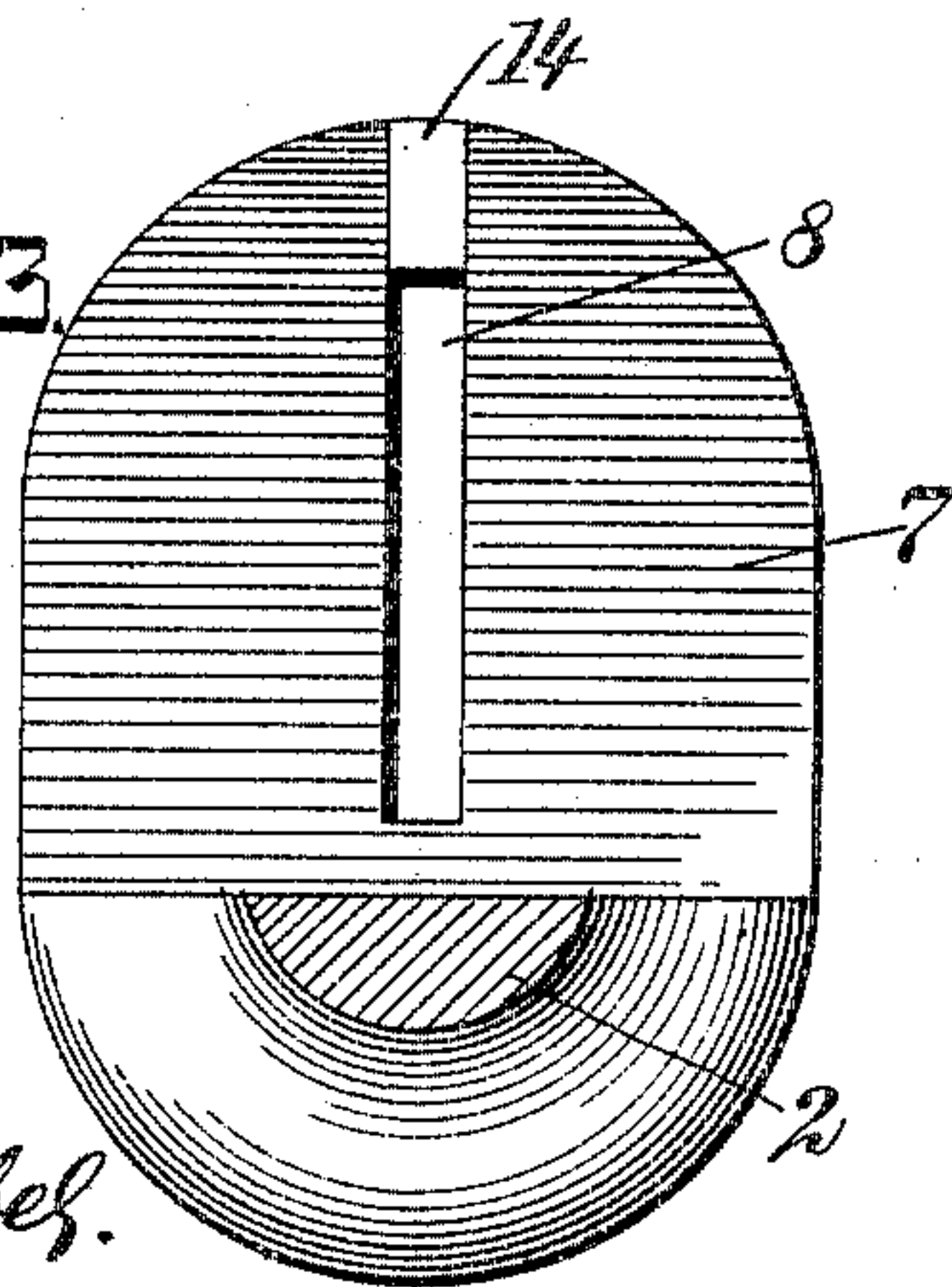
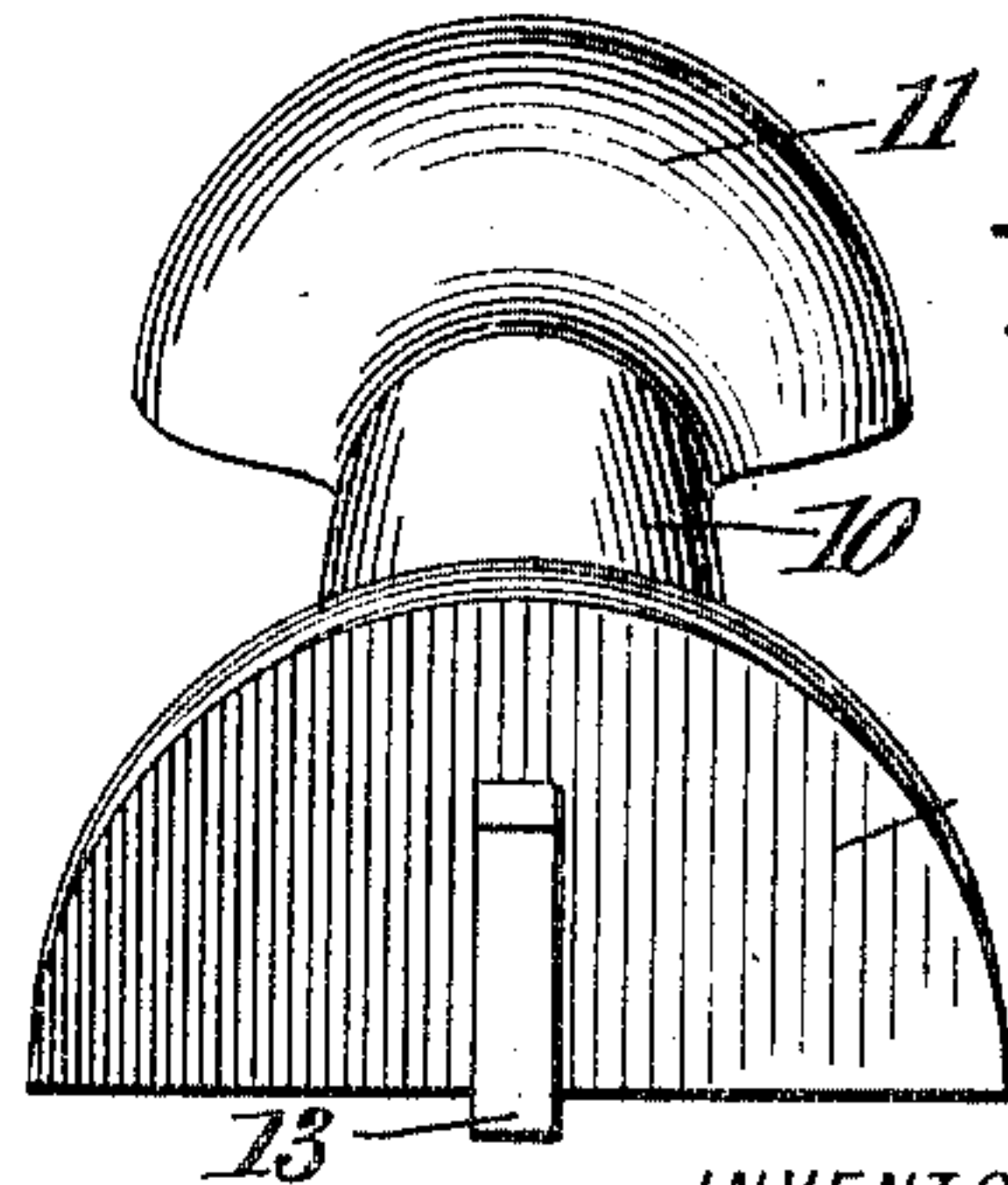


Fig. 4.



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DUMB-BELL.

SPECIFICATION forming part of Letters Patent No. 789,538, dated May 9, 1905.

Application filed November 11, 1904. Serial No. 232,285.

To all whom it may concern:

Be it known that I, COLIN E. HAM, a citizen of the United States, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Dumb-Bell, of which the following is a full, clear, and exact description.

This invention relates to dumb-bells, and especially to the class known as "spring" dumb-bells. Dumb-bells of this class usually comprise oppositely-disposed bars which are maintained apart by springs. As ordinarily constructed the heads of these dumb-bells present angular corners, which are a defective feature, for the reason that in exercising they offer opportunity for abrading one's skin if struck accidentally.

The object of this invention is to overcome the defects referred to above and to provide a dumb-bell of simple construction, the body of which will present a resilient resistance to compression.

To this end the invention consists in the construction and relation of the opposing parts of the dumb-bell, and concerns itself also with improvements relating to the means for guiding them upon each other and for mounting the spring to thrust them apart.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of a dumb-bell constructed according to my invention. Fig. 2 is a vertical central section. Fig. 3 is a cross-section taken substantially on the line 3-3 of Fig. 2, and Fig. 4 is a perspective view representing one of the parts of the dumb-bell as detached from the other and viewed from one end.

Referring more particularly to the parts, 1 represents the body of the dumb-bell, which comprises a reduced neck 2, connecting enlarged heads 3. These heads are preferably rounded on their outer faces, as shown, and each head presents the general outline of an oval, as illustrated in Fig. 1, the main axes of the oval being disposed substantially at right angles to the longitudinal axes of the

dumb-bell. The central portion of the neck 2 is removed, forming an opening 9 of substantially rectangular form, dividing the neck into opposite parallel bars 10. The end faces 7 of the opening 9 are preferably disposed on the central planes of the heads, and the said heads are each split or divided on the line 12 in such a manner as to extend the end faces to the outer surface of the heads at one side. From this arrangement the bar 10^a is cut off, so as to constitute a distinct and movable slide-bar terminating in enlarged ends or knobs 11, which complete the heads 3 of the dumb-bell, as will be readily understood. The outer faces 6 of the heads 3 are preferably of rounded form, as shown. The inner face 4 of the bar 10^b is preferably flat and is provided substantially centrally with a pair of oppositely-disposed recesses 5. The purpose of these recesses will appear more fully hereinafter. The faces 7 are provided, preferably centrally, with grooves or guide-ways 8, which are disposed longitudinally with the major axis of the heads, as indicated in Fig. 3. Upon the end faces 7 tongues 13 are provided, which are adapted to be received in the aforesaid grooves 8 in the manner shown in Figs. 1 and 2. When the slide-bar 10^a is in its normal position with respect to the body 1, the dumb-bell presents a symmetrical appearance, as indicated in Fig. 1, the outer faces of the knobs 11 constituting portions of the rounded outer surfaces of the heads 3. The bar is forced outwardly against stops 14 by means of a spring 15, mounted as shown most clearly in Fig. 2. Said stops 14 preferably consist of small blocks, which are tightly driven into the grooves 8, as best shown in Fig. 3. These stops of course abut against the ends of the tongues 13, so as to limit the outward movement of the slide-bar, and in order to enable the outer faces of the knobs 11 to complete nicely the rounded contour of the heads the upper portions of the tongues 13 are preferably depressed, as shown in Fig. 2, with respect to the outer faces of the heads. The spring 15 is a leaf-spring and is formed with a pair of oppositely-disposed rudimentary

bows 16, which occupy the recesses 5, as indicated in Fig. 2, the legs 17 of the spring being disposed in inclined positions and having upwardly-turned tips 18, which present convex faces adapted to slide upon the inner flat face 19 of the slide-bar 10^a.

In using the dumb-bell the bar 10^b will be held in the palm of the hand and the fingers closed upon the neck of the slide-bar 9. If muscular force is exerted in the fingers, the parts of the bell may be forced toward each other, so that they may occupy substantially the relation shown in Fig. 2, at which time the spring 15 will become more flattened, as will be readily understood. Evidently the form of the spring and the manner of mounting the same conduces toward flexibility, so that the spring can retain its resilient properties under substantially flat pressure. The form of the spring also enables the parts to come very closely together, which is an advantageous feature.

Attention is again called to the fact that in using the bell the bar 10^b is held against the palm, and the construction as shown is advantageous with respect to this manner of grasping the bell, for the reason that the spring-pressure will be concentrated at substantially the center of the palm, while the spring forces acting upon the slide-bar will be disposed close to the guiding-faces. This arrangement operates to prevent a tendency of the slide-bar to tilt out of its normal position. The construction of the bell also adapts it admirably for being formed of a steel shell, increasing the elasticity. In this way I aim to secure a maximum contraction of the muscles with a bell of small weight, reducing the nervous strain. Evidently the spring may be of any strength desired, while the bell itself may be of very light construction.

Attention is called to the fact that by the construction described the employment of screws for connecting the parts is unnecessary and no special means are required for guiding the springs.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. A dumb-bell presenting heads divided transversely with respect to the axis of said bell, and comprising a movable slide-bar carrying portions of said heads, in combination with means for constraining said slide-bar outwardly.

2. A dumb-bell having substantially parallel bars and enlarged heads connected thereby, said heads being divided in a transverse plane into movable sections, in combination with springs normally maintaining said bars apart.

3. A dumb-bell having oppositely-disposed bars and enlarged heads connected thereby, said heads being transversely divided, rendering said bars movable with respect to each other, the inner faces of one of said bars having a recess, and a leaf-spring having a bow received in said recess, the legs of said spring thrusting against the inner face of the opposite bar.

4. A dumb-bell comprising a body having an elongated neck and enlarged heads, said heads having laterally-projecting extensions presenting substantially flat guiding-faces disposed at right angles to the axis of said bell, a slide-bar having a reduced neck and enlarged heads disposed between said extensions, said heads having substantially flat faces abutting said first faces, tongue-and-groove connections at said faces, means for limiting the outward movement of said slide-bar with respect to said body, the inner face of said first neck having recesses, and a leaf-spring having bows received in said recesses, the extremities of said spring thrusting against said slide-bar near said faces.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

COLIN E. HAM.

Witnesses:

G. E. FRENCH,
I. F. BURNHAM.