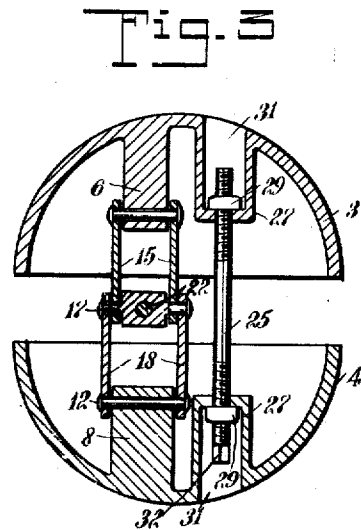
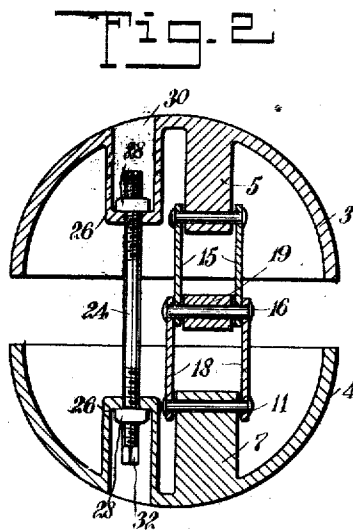
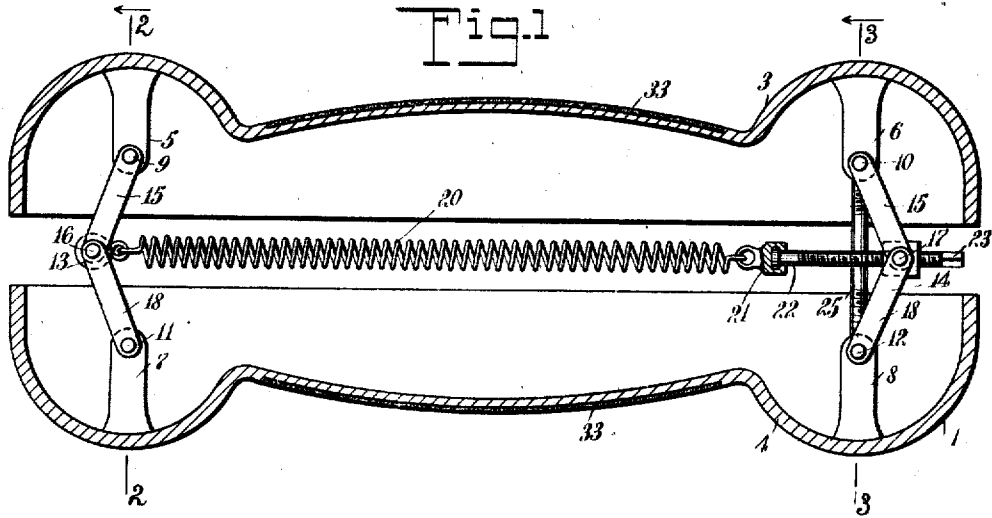


H. WHITING.
EXERCISING DEVICE.
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1,017,356.

Patented Feb. 13, 1912.



WITNESSES:
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HORATIO WHITING, OF NEW YORK, N. Y.

EXERCISING DEVICE.

1,017,356.

Specification of Letters Patent.

Patented Feb. 13, 1912.

Application filed December 20, 1909. Serial No. 534,147.

To all whom it may concern:

Be it known that F. HORATIO WHITING, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Exercising Devices, of which the following is a specification.

This invention relates to an improvement in exercising devices and particularly to that class of devices known as dumb-bells; and particularly relates to means for forming a resilient gripping dumb-bell which is adapted to improve the muscles of the forearm.

An object of this invention is to provide a device which will be simple in construction, inexpensive to manufacture, and readily adjusted.

A further object of this invention is to provide a dumb-bell divided into a plurality of sections adjustable relative to each other with spring means for normally urging said sections apart, and with means for adjusting the tension of said spring means.

A still further object of this invention is to provide a dumb-bell composed of relatively-adjustable sections with means for limiting the movement of said sections.

These and further objects, together with the construction and combination of parts, will be more fully described hereinafter and particularly set forth in the claims.

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, and in which—

Figure 1 is a vertical longitudinal section; Fig. 2 is a transverse vertical section on the line 2—2 of Fig. 1; and Fig. 3 is a transverse vertical section on the line 3—3 of Fig. 1.

Referring more particularly to the separate parts of the device, 1 indicates a dumb-bell divided into a plurality of sections or members, such as the two halves 3 and 4, which may be made of any suitable material, such as cast-iron, and may be formed in the usual shape. Secured to each of the sections 3 and 4, at each end thereof, there are provided lugs 5, 6, 7 and 8, which have openings therein to form bearings for suitable pins 9, 10, 11 and 12. Each pair of pins 9 and 11 and 10 and 12 are connected together by toggles 13 and 14, preferably consisting of links 15, pivotally connected to

the pins 9 and 10. The links 15 are pivoted at their opposite ends to pins 16 and 17, which also have pivotally connected thereto links 18, which in turn are pivoted to the pins 11 and 12. The pin 16 has pivotally connected thereto a hook 19, which forms a connection for a spring 20, which is preferably in the form of a coil spring, and is connected at its opposite end to a swivel 21. The swivel 21 is rotatably supported on a screw rod 22, which engages a screw-threaded opening in an enlargement on the pin 17. The screw rod 22 may be adjusted in any suitable manner, such as that shown, wherein there is provided at the outer end of the screw rod a squared portion 23, which is adapted to be engaged by a suitable key, so that the screw rod 22 may be rotated thereby. It will thus be seen, by grasping on the opposite sides of the members 3 and 4 and exerting a squeezing pressure, the sections 3 and 4 will be brought together against the tension of the spring 20. The tension of this spring, and therefore the strength required to stretch the spring, can be adjusted by rotating the screw-adjusting rod 22, and thereby stretching the spring 20 more or less.

In order to limit the outward movement of the sections 3 and 4, there may be provided any suitable form of tie or ties, such as rods 24 and 25, which are adapted to extend through openings in projections 26 and 27 on the sections 3 and 4. The rods 24 and 25 are screw-threaded at their opposite ends in opposite directions, and are adapted to engage nuts 28 and 29, which extend in angular openings 30 and 31 in the projections 26 and 27. The rods 24 and 25 may be provided with squared ends 32 or any other formations, which are adapted to be engaged by a key, whereby they may be rotated. It will thus be seen that by rotating the rods 24 and 25, the nuts 28 and 29 remaining stationary in the angular openings will screw in or out on the rods 24 and 25, thereby varying the distance between the sections 3 and 4.

In order that a comfortable grip may be provided on the dumb-bell, each half thereof is provided with a covering 33, which may be formed of any suitable material, such as cork, leather or the like, and which is secured to the sections 3 and 4 by any suitable means, such as an adhesive.

It is to be noted that the lugs 5 to 8 on the projections 26 and 27 are interchanged on opposite ends of the dumb-bell. This is

done for the purpose of forming a compact structure, and at the same time, equalizing the tension on the two sections. The lugs and projections could, however, be placed in substantial alinement centrally of the sections 3 and 4.

The operation of the device will be readily understood when taken in connection with the above description. The dumb-bell is seized in the hand and squeezed by flexing the fingers. This may be accompanied by other motions of the arms if desired. The gripping of the sections 3 and 4 of the dumb-bell causes the spring 20 to stretch, thereby resisting the gripping action. This will be found to readily increase the size and agility of the muscles of the forearm if used frequently.

The tension of the spring 20, and thereby the force necessary to squeeze the sections 3 and 4 together, can be regulated by rotating the adjusting rod 22. Further, the distance of the members 3 and 4 apart can be regulated for different sizes of hands by rotating the rods 24 and 25.

While I have shown and described one embodiment of my invention, I do not wish to be limited to the specific form or elements therein, but desire to be protected in various changes and modifications I may make within the scope of the appended claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. An exercising device, comprising a plurality of relatively-adjustable members, means for limiting the relative movement of said members, comprising nuts having angular connection with said members and screw-threaded rods adjustably connected to said nuts, toggles connecting said members, a spring connected at one end to one of said toggles, a swivel connected to the opposite end of said spring, a screw-threaded adjusting rod connected to said swivel and also connected to the other of said toggles, and a hand grip for said members.

2. The combination with a dumb-bell divided into a plurality of sections, of a single spring located within said dumb-bell and extending in substantially the same longitudinal direction as said dumb-bell, for holding the sections of said dumb-bell apart and adapted to yield under pressure on said sections to permit the approach of said sections toward each other, and means for varying the tension on said spring.

3. The combination with a dumb-bell divided into a plurality of sections, of a plurality of spaced toggles connected to said sections, and a spring connecting said tog-

gles together, normally tending to straighten said toggles, so as to force said sections apart, and adapted to yield under pressure on said sections to permit the approach of said sections toward each other.

4. The combination with a dumb-bell divided into a plurality of sections, of a plurality of spaced toggles connected to said sections, each of said toggles comprising a plurality of links pivotally connected together and pivotally connected to said sections, and a spring connecting the pivotal points of connection of said toggle-links yieldingly together in such a manner as to tend to straighten said toggles so as to force said sections apart, and adapted to yield under pressure on said sections to permit the approach of said sections toward each other.

5. The combination with a dumb-bell divided into a plurality of sections, of a plurality of spaced toggles connected to said sections, and a spring connecting said toggles together, normally tending to straighten said toggles, said spring being fixedly secured to one of said toggles and adjustably secured to the other of said toggles, whereby the tension on said spring may be varied.

6. The combination with a dumb-bell divided into a plurality of sections, of a plurality of spaced toggles connected to said sections, a spring connected to one of said toggles, and an adjusting rod connected to the other of said toggles and to said spring, whereby the tension on said spring may be varied, said spring tending normally to straighten said toggles so as to force said sections apart, and adapted to yield under pressure on said sections to permit the approach of said sections toward each other.

7. The combination with a dumb-bell divided into a plurality of sections, of a plurality of spaced toggles connected to said sections, a spring connecting said toggles together, normally tending to straighten said toggles, so as to force said sections apart, and adapted to yield under pressure on said sections to permit the approach of said sections toward each other, and a screw for adjustably connecting said spring with one of said toggles, having a swivel connection with said spring and an adjustable connection with said last-mentioned toggle.

Signed at New York city in the county of New York and State of New York this 18th day of December A. D. 1909.

HORATIO WHITING.

Witnesses:

GRISELL B. HENRY,
PHILIP D. ROLLHAUS.