No. 835,873. PATENTED NOV. 13, 1906.

J. E. THOMPSON.

HAND EXERCISING DEVICE.

APPLICATION FILED MAR. 17, 1906.

Fig. 1

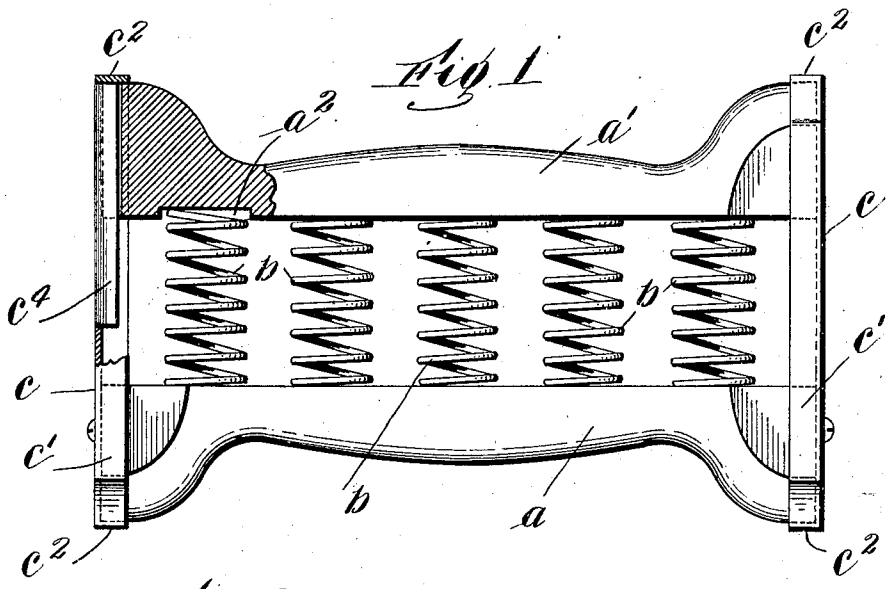


Fig. 2

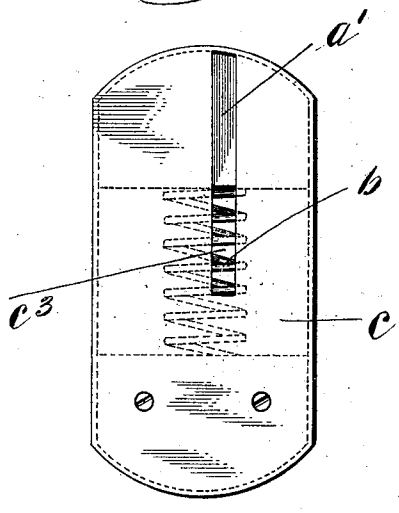


Fig. 3

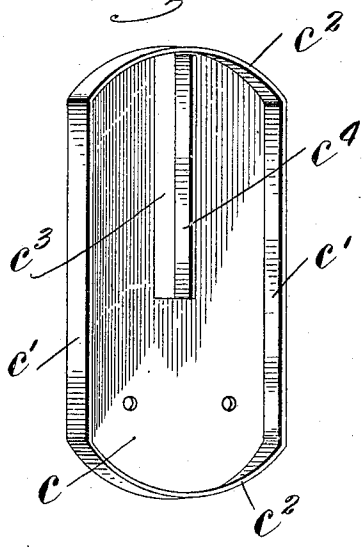
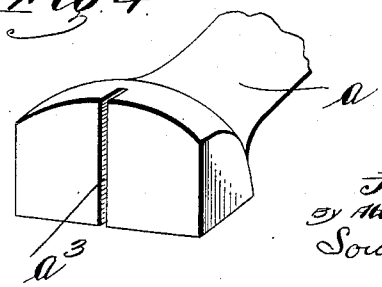


Fig. 4



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UNITED STATES PATENT OFFICE.

JOHN E. THOMPSON, OF WORCESTER, MASSACHUSETTS.

HAND-EXERCISING DEVICE.

No. 835,873. Specification of Letters Patent. Patented Nov. 13, 1906.

Application filed March 17, 1906. Serial No. 306,487.

To all whom it may concern:

Be it known that I, JOHN E. THOMPSON, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Hand-Exercising Device, of which the following is a specification.

My invention relates to improvements in that class of dumb-bells known as the "spring-grip" bells, which are provided with two handle-grips separated by springs and held together in some convenient manner. These bells are usually made of cast metal, and, in fact, owing to their peculiar design, they cannot conveniently be made of any other material. They are consequently quite heavy, and therefore fail to accomplish the desired results, for the reason that the contraction of the particular muscles involved in a certain physical-culture movement is not obtained, the weight of the bells serving to stimulate the excessive contraction of certain other muscles of the hand and arm. Moreover, on account of their design, they are made slender in certain places, and as some of them are provided with holes for the passage of bolts they are rendered fragile and are easily broken at these points. Also the sliding handle-grip easily binds with respect to the stationary one, and if the pressure is put on at one end the device fails to operate in the desired manner. The screw-bolts which are ordinarily used also work loose and allow the parts to become separated.

The particular objects of my invention are to so construct a hand-grip that it can conveniently be made of lighter materials and so that the objections above noted can be avoided.

Reference is to be had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation, partly broken away and in section, showing a hand-grip embodying the features of my invention. Fig. 2 is an end elevation of the same. Fig. 3 is an inside elevation showing one of the heads detached from the handle, and Fig. 4 is a fragmentary perspective view of the end of the sliding handle-grip.

As usual, the grip is provided with a divided handle consisting of two hand-grips a and a'. These grips are provided with sockets a^2, in which fit the ends of springs b for normally forcing the two grips apart. One of the grips, which I designate the "stationary" one, is provided with a pair of heads c, bolted or screwed to its opposite ends.

In order that the hand-grips may be made of wood, compressed pulp, or thin sheet metal, the head is made of a separate piece and affixed to the stationary grip, as mentioned above. This head is preferably made of sheet-steel or other metal and is provided with a flange c', which extends around the major portion of the head and projects inwardly. The portion c^2 of this flange which extends above the end of the movable grip serves as a stop therefor, and consequently permits the contraction of the device without the additional stops used on several of the forms of spring-grip dumb-bells which have heretofore been put upon the market, thus simplifying the construction.

The heads are preferably formed of such sheet material that they can be stamped out, which not only simplifies the construction, but results in saving in the expense of manufacture.

For the purpose of providing a guide for the movable grip the heads have longitudinal slots c^3, the material removed to form these slots being bent inwardly and constituting a guide c^4. This guide enters a slot a^3 in the end of the movable grip and may be double or of any desired construction. It is to be observed that these heads constitute means whereby the movable grip can be guided with respect to the stationary grip. They also afford a stop for the movable grip, the stop being of a simple character, the stop and guide also being of such nature that they can be stamped out of one peice of metal. On account of the shape of the heads they are somewhat resilient and permit a slight lateral and longitudinal motion of the grip. Moreover, on account of the peculiar nature of the internal-flange stop the movable grip may be made somewhat shorter than the other grip, and in addition to the resilience of the heads permits the tilting motion which the grip takes when one end only is pressed inwardly without resulting in any binding action of the heads. The longitudinal motion mentioned above can also be had, thus affording a certain variety in the use of the device, which is absolutely lacking in the dumb-bells of this character heretofore made.

As the principal object of spring-grip dumb-bells has been to provide a complete contraction of certain muscles without subjecting the deltoid muscles of the arm to severe

strain it will be seen that the lightness of my hand-grip is an advantage and enables the user to employ this instrument for the purpose for which it was intended without exercising other muscles, which can be more conveniently exercised, if desired, by other apparatus. Therefore the user, by virtue of the great resilient power which he can obtain and the extreme lightness of the bell, can contract at will any particular muscles, according to the peculiar physical-culture movement being executed without causing the muscles of the hand and arm to contract too much in order to overcome the nervous strain on the motor nerves of the deltoid. The peculiar sliding arrangement and guides permits a smooth even action and if the handle tilts out of normal position prevents binding, also permitting a slight lateral and even a longitudinal movement which rests the hand. The design of the device also admits of a strong construction with wood, compressed pulp, or thin sheet material grips, giving a minimum of weight with sufficient strength. No screw-bolts or stop-blocks are necessary to connect the parts; nor does the invention involve any peculiarity of construction that would weaken the bell in any particular point. All parts are of such a nature that while the construction is cheap, simple, and practical, yet it can not readily get out of order, and it is not easily broken or bent.

While I have illustrated and described a particular form in which my invention may be constructed, it is to be understood that many modifications can be made by any persons skilled in the art within the scope of my claims.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A hand-exercising device having a divided handle, and a head mounted on one part of the handle and having an inwardly-extending exterior flange for engaging another part of the handle.

2. A hand-exercising device having a divided handle, and a head mounted on one part of the handle and having an inwardly-extending exterior flange for engaging another part of the handle, said flange comprising a stop for a movable part of the handle, and resilient means for moving the movable part along said head.

3. A hand-exercising device comprising a pair of hand-grips, means for yieldingly forcing said hand-grips apart, and a resilient head mounted on each end of one of said grips and adapted to guide the other grip.

4. A hand-exercising device comprising a pair of hand-grips, means for forcing said hand-grips apart, a sheet-metal head mounted on each end of one grip, said heads having an inwardly-projecting flange extending along one side and an inwardly-projecting stop at one end, said heads also having a longitudinal slot, and a guide extending inwardly from said slot for one of said grips, said heads being formed of one integral piece of metal.

5. A hand-exercising device comprising a pair of hand-grips of small weight, means for forcing said hand-grips apart, a sheet-metal head mounted on each end of one grip, said heads each having an inwardly-projecting flange extending along one side, said heads also having longitudinal slots, and a guide extending inwardly from each slot for one of said grips, the grips being provided with end slots for receiving said guides.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN E. THOMPSON.

Witnesses:
ALBERT E. FAY,
LOUIS W. SOUTHGATE.