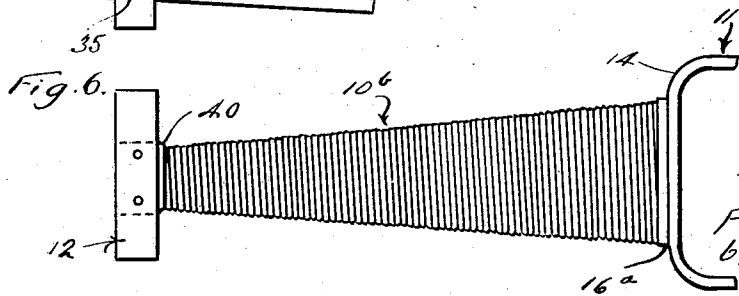
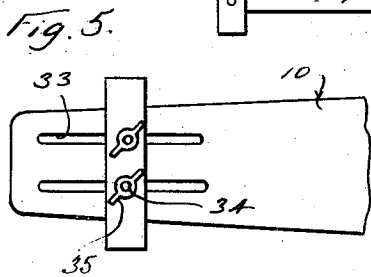
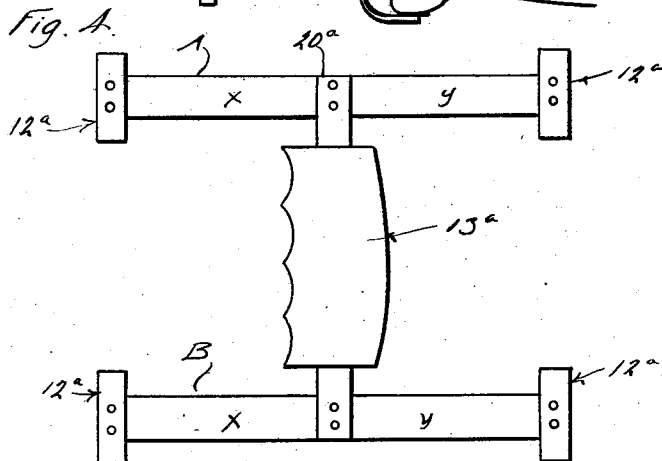
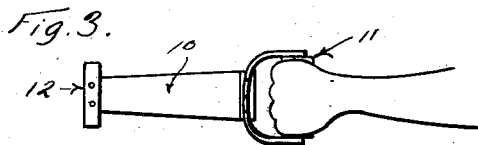
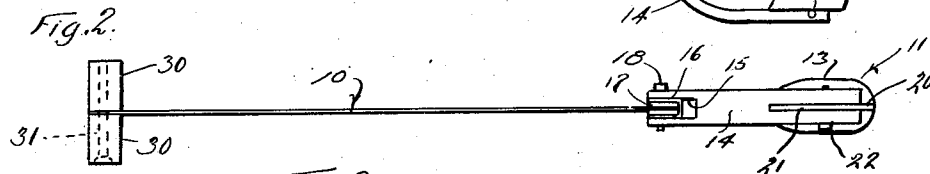
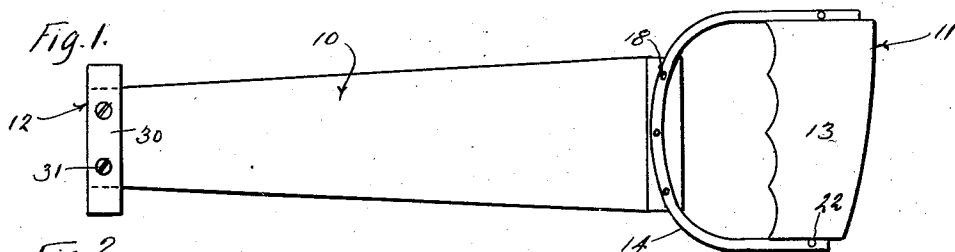


March 5, 1946.

P. S. KUSZNIR
EXERCISING DEVICE
Filed Jan. 29, 1944

2,396,106



Inventor
Phillip S. Kuznir
by *W. J. McFarland*
Attorney

UNITED STATES PATENT OFFICE

2,396,106

EXERCISING DEVICE

Phillip S. Kusznir, South Gate, Calif.

Application January 29, 1944, Serial No. 520,147

17 Claims. (Cl. 272-84)

This invention has to do with an exercising device and has particular reference to a device to be held in the hand of the operator and to be operated so that it exercises a substantial portion of the operator's body. It is a general object of the present invention to provide a device of the character mentioned which is extremely simple and inexpensive of manufacture, highly effective in operation or action, and exceedingly simple to manipulate.

There are many persons interested in exercising or working various parts of the body, some being concerned with limbering up muscles which have been or are about to be used, others being concerned with the development of firm body structure or with exercising particular parts of the body that may require exercise because of injury or to improve the appearance. Athletes such as boxers are interested in limbering up or exercising their muscles prior to boxing and various other athletes are likewise desirous of working their muscles gently and stimulating circulation without undue exertion. It is not infrequent that people suffer injuries which require manipulation or exercise of muscles or tissues and there are many people who exercise to beautify their bodies.

It has been a characteristic disadvantage of most physical exercise that it requires considerable exertion or consumes a substantial amount of energy and thus is tiring and, further, most ordinary exercise is not such as to effectively stimulate the body in the manner desired.

It is an object of my present invention to provide an exerciser which is effective to induce circulation and to limber up or work muscles in a large portion of the body, particularly in the region of the arms, shoulders, neck and chest. The device of the present invention is particularly effective in exercising and in stimulating the arms and the body parts just mentioned, but also results in working of practically the entire body in that it involves the taking and maintaining of a stance, and a general tensioning of the muscular system.

It is a general object of my present invention to provide an exercising device of the character mentioned which involves, primarily, a vibrating body in combination with weight means, so that as the device is operated it has a marked tendency to operate or vibrate the user. The user grasps the handle of the device and sets the vibrating body in motion and maintains the proper movement of the said member while the said member and the means which creates the

momentum react on the user to effectively vibrate a substantial portion of his body and cause him to exercise a large portion of his muscular system in order to maintain the device in operation.

Another object of my present invention is to provide an exercising device of the general character referred to which is extremely simple in construction and formation, making it inexpensive of manufacture and exceedingly simple to use.

The various objects and features of my invention will be fully understood from the following detailed description of typical preferred forms and applications of the invention, throughout which description reference is made to the accompanying drawing, in which:

Fig. 1 is a side elevation of one form of the present invention showing the general relationship of the several parts of the device. Fig. 2 is a plan view of the device being a plan view of the structure shown in Fig. 1. Fig. 3 is a view showing the manner in which the device is gripped in the course of operation. Fig. 4 is a view similar to Fig. 1 showing a modified form of construction. Fig. 5 is a view showing another modified form of construction which can be used in connection with the invention as shown in Fig. 1, or as it is shown in Fig. 4. Fig. 6 is a view similar to Fig. 1 showing another form of the invention.

Referring in particular to Figs. 1, 2 and 3 of the drawing, the device of the present invention includes, generally, a body 10, a handle 11 and weight means 12. It is a feature of the present invention that the several parts just named are rigidly joined so that the device is in the nature of a simple unit in which the handle is at the inner end of the body 10 while the means 12 is at the outer end portion of the body 10.

In accordance with the broader principles of my invention the body 10 is an elongate vibratory member, that is, an elongate part which is resilient and such that it can be readily operated to vibrate. As will appear from the description to follow, and as is apparent from the drawing, the body 10 may be formed in several different manners and yet have the general characteristics which are required.

In the form of the invention under consideration the body 10 is in the form of an elongate blade or leaf of spring metal, preferably spring steel. It will be apparent from Figs. 1, 2 and 3 of the drawing that the body 10 is a thin blade or leaf-like part proportioned so that its length is several times that of its height. It will be

understood, of course, that the exact proportioning of the body will, in practice, depend upon the thickness and resiliency of the material used in the formation of the body and that the particular proportioning of the body may be varied depending upon the character of action desired in the device. The general proportioning shown in Figs. 1 to 3, inclusive, is suitable for general use when the body is made of spring steel of the general character used in the manufacture of carpenters' saws and when the thickness of the body is about that employed in high grade carpenters' saws.

For most uses the body 10 is substantially uniform in character between its two ends. However, it may be varied as circumstances require. In Fig. 1, it will be noted that the body is shown tapered slightly from its inner end to its outer end, making its outer end portion somewhat more flexible than its inner end. Variation in action may, of course, be gained by varying the thickness of the body at different parts along its length or a similar action may be gained by perforating the body at suitable points.

The handle 11 is provided primarily as a part at the inner end of the body 10 to be conveniently gripped by the user so that the device can be firmly held in the hand. In the form of construction illustrated the handle 11 includes a grip 13 preferably proportioned and shaped to conveniently fit in the hand of the user and a yoke 14 which carries the grip 13 and is secured to the inner end portion of the body 10.

It will be apparent from Fig. 1 of the drawing how the two sides or arms of the yoke are proportioned to receive the grip 13 between them and how the yoke generally is proportioned to accommodate the user's hand. The yoke is preferably fixed to the inner end of the body 10 so that it is permanently joined therewith. In the case illustrated the yoke 14 is formed of a metal strap slotted at 15 to receive a clip 16 which is applied to the inner end of the body 10 through resilient washers 17. The washers may be of rubber, leather, or other material that has a suitable degree of resiliency so that there is a slight amount of give between the body 10 and the yoke 14. In the case illustrated screws 18 are provided for securing the yoke and the clip together. The screws are shown engaged through the slotted portion of the yoke and extend through the clip, washers and body so that the several parts are held tightly together.

It will be understood, of course, that the grip 13 may be formed in any desired manner and that it may be secured to the arms of the yoke through any suitable construction. In the case illustrated flanges 20 project from the ends of the grip 13 to fit slots 21 in the arms of the yoke and screws 22 are provided for clamping the arms of the yoke onto the flanges 20.

The means 12 provided in connection with the body is in the nature of a weight attached to the outer end portion of the body 10. In the form of the invention shown in Figs. 1 to 3, inclusive, the weight is applied to the extreme outer end of the body 10 and is in the form of two separate blocks 30 applied to opposite sides of the body 10 at its extreme outer end. Screws 31 are provided to extend through the blocks 30 applied to opposite sides of the body 10 at its extreme outer end. Screws 31 are provided to extend through the blocks and the end portion of the body 10 to hold the blocks firmly in the body. It will be apparent that the particular

location of the weights on the body will vary the action of the device and that the size of the weights will vary depending upon the density of the material used in their formation. In practice it is not necessary to make the weights exceedingly heavy since their location at the outer end of the body gives them a substantial mechanical advantage as the device is operated. For ordinary purposes bodies of ordinary plastic material, or the like, proportioned about as shown in Figs. 1 and 2, work satisfactorily on a body such as I have described.

It will be apparent that there may be cases where it is desired to vary the location of the means 12 on the body 10, thus calling for an adjustable mounting of the means 12 on the body. In Fig. 5 I have shown one manner in which such adjustability may be gained. In this case I have shown slots 33 formed longitudinally in the outer end portion of the body 10 and I have shown the weight blocks 30 held on the body by bolts 34 provided with two nuts 35, which bolts pass through the blocks and through the slots 33. With this construction it is possible to quickly vary the position of the blocks along the body and thus vary the action of the device so that it suits the individual user.

In the form of the invention shown in Fig. 4 the body of the device instead of being a single resilient blade or leaf, as hereinabove described, is divided into upper and lower sections A and B, respectively, located beyond the upper and lower ends of the grip 13a. Each section A and B is divided into two individual body parts X and Y which extend in opposite directions from the grip and each of the body parts X and Y is provided at its outer end with momentum establishing means 12^a.

In constructing the device shown in Fig. 4 the two body parts at each end of the grip may be formed of a single continuous leaf or blade which may be attached to the grip through flanges 20^a projecting from the ends of the grip. Each body part X and Y may be substantially the same in construction and principle of operation as the body 10 hereinabove described, and the means 12^a at the outer ends of the body parts may correspond to the weight means hereinabove described.

It will be noted that the form of the invention illustrated in Fig. 4 really embodies four resilient bodies or arms carried by or joined to a single hand grip, and that each individual arm is provided at its outer end with a weight. Where an individual device is thus equipped with a multiplicity of vibrating bodies or arms each individual body can be considerably lighter and weaker than where there is a single body, as shown in Fig. 1. Likewise, it will be apparent that the weights in connection with the several arms can be lighter than is required when there is but one body.

In the form of the invention shown in Fig. 6 the body 10, instead of being formed of a flat blade or leaf of spring steel, is formed of a coil of wire. In this form of the invention the body 10^b is a helical coil of wire, preferably wound tightly or so that the convolutions are tight one against the other and preferably wound so that the body tapers somewhat from its inner end to its outer end, giving it greater flexibility at its outer end. It will be noted from Fig. 6 of the drawing that the inner end of the body 10^b is considerably larger in diameter than the outer end. The yoke 14 of the handle is joined to the

body 10^b by a suitable plate 10^a and a head or coupler 40 is provided on the outer end of the body 10 to conveniently receive or accommodate the means 12.

In using the device shown in Figs. 1 to 3 of the drawings the user grasps the grip 13 in the manner shown in Fig. 3 so that the body 10 projects beyond the hand. By a slight simple manipulation of the hand or wrist the body 10 is set in motion or to vibrating so that the weight at the outer end thereof oscillates rapidly. The whipping action set up by reason of the resilience of the body 10 and the momentum of the means 12 causes a rapid, effective vibratory movement of a substantial portion of the user's body thus working and stimulating the body parts and causing the user to work the muscular system both in resisting the vibratory action and in keeping the device in proper operation. With very little practice the user is able to maintain the device almost in a constant state of vibratory action by exerting very little effort, and yet a large part of the user's body is exercised and stimulated. In practice the user may operate a device in each hand, thus greatly augmenting the action obtained.

In using the device shown in Fig. 4 the action is substantially the same and the results are likewise very similar to those obtained with the device shown in Fig. 1. It will be apparent, however, that because of the fact that there are several vibrating bodies each with a weight, the action is slightly different and the technique involved in operating it varies somewhat from that necessary with the device of Fig. 1. However, the general action is the same and the general results are likewise the same.

Having described only typical preferred forms and applications of my invention, I do not wish to be limited or restricted to the specific details herein set forth, but wish to reserve to myself any variations or modifications that may appear to those skilled in the art or fall within the scope of the following claims.

Having described my invention, I claim:

1. An exercising device of the character described including, an elongate resilient body, means at the outer end portion of the body to be oscillated by means of the body, and a handle at the inner end of the body, the handle including a yoke attached to the body and a hand grip carried by the yoke.

2. An exercising device of the character described including, an elongate flat resilient body, means at the outer end portion of the body to be oscillated by means of the body, and a handle at the inner end of the body with a grip transverse of the body and opposite the inner end of the body, the body varying in flexibility between its ends so it is more flexible at its outer end than at its inner end.

3. An exercising device of the character described including, an elongate resilient body, weight means at the outer end portion of the body to be oscillated by the body, and a handle at the inner end of the body, with a hand grip extending transversely of the body and spaced from the inner end of the body the body being in the form of a thin flat metal blade varying in width throughout its length and wider at its inner end than at its outer end.

4. An exercising device of the character described including a handle, a plurality of resilient elongate bodies having their inner ends attached to the handle, and weights on the outer end por-

tions of the bodies, the bodies being located at each end of the handle and extending at right angles therefrom.

5. An exercising device of the character described including a handle, a plurality of resilient elongate bodies having their inner ends attached to the handle, and weights on the outer end portions of the bodies, there being two oppositely disposed bodies at each end of the handle.

6. An exercising device of the character described including, an elongate resilient body, means at the outer end portion of the body to be oscillated by the body, and a handle at the inner end of the body, the handle including a yoke attached to the body and a hand grip carried by the yoke, the hand grip being disposed transversely of the body.

7. An exercising device of the character described including, an elongate resilient body, weight means at the outer end portion of the body to be oscillated by the body, and a handle at the inner end of the body, the body being in the form of a thin flat metal blade wider at its inner end than at its outer end, the handle being disposed at right angles to the body opposite its end.

8. An exercising device of the character described including, an elongate flat resilient body, a weight on the outer end of the body, and a handle at the inner end of the body disposed transversely of the body directly opposite the inner end of the body.

9. An exercising device of the character described including, an elongate flat resilient body, a weight on the outer end of the body, and a handle at the inner end of the body disposed transversely of the body in the plane of the body.

10. An exercising device of the character described including, an elongate flat resilient body, a weight on the outer end of the body, and a handle at the inner end of the body disposed transversely of the body in the plane of the body and directly opposite the inner end of the body.

11. An exercising device of the character described including, an elongate resilient body, means at the outer end portion of the body to be oscillated by the body, and a handle at the inner end of the body disposed at right angles to the body, the said means including a weight and means for fixing the weight to the body at various points along the body.

12. An exercising device of the character described including a handle, a plurality of flat resilient elongate bodies having their inner ends attached to the handle, and weights on the outer end portions of the bodies, the handle being disposed at right angles to the body.

13. An exercising device of the character described including a handle, a plurality of flat resilient elongate bodies arranged in a common plane and having their inner ends attached to the handle, and weights on the outer end portions of the bodies, the handle being disposed at right angles to the bodies in the plane of the bodies.

14. An exercising device of the character described including a handle, a plurality of flat resilient elongate bodies having their inner ends attached to the handle, and weights on the outer end portions of the bodies, the bodies being arranged to extend in opposite directions from the handle, the bodies being parallel to each other and the handle being at right angles to the bodies.

15. An exercising device of the character described including a handle, a plurality of resilient elongate bodies having their inner ends attached

to the handle, and weights on the outer end portions of the bodies, the bodies being located at each end of the handle and extending at right angles therefrom, there being two bodies extending from each end of the handle.

16. An exercising device of the character described including a handle, a plurality of resilient elongate bodies having their inner ends attached to the handle, and weights on the outer end portions of the bodies, the bodies being located at each end of the handle and extending at right

angles therefrom, there being two bodies extending from each end of the handle and in opposite directions to be in a common plane.

17. An exercising device of the character described including a handle, a plurality of flat resilient elongate bodies having their inner ends attached to the handle, and weights on the outer end portions of the bodies, there being two oppositely disposed bodies at each end of the handle, all of the bodies being in a common plane.

PHILLIP S. KUSZNIR.