

June 9, 1953

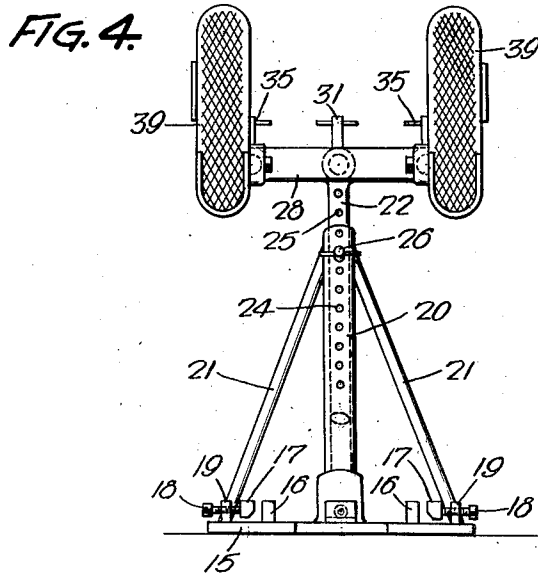
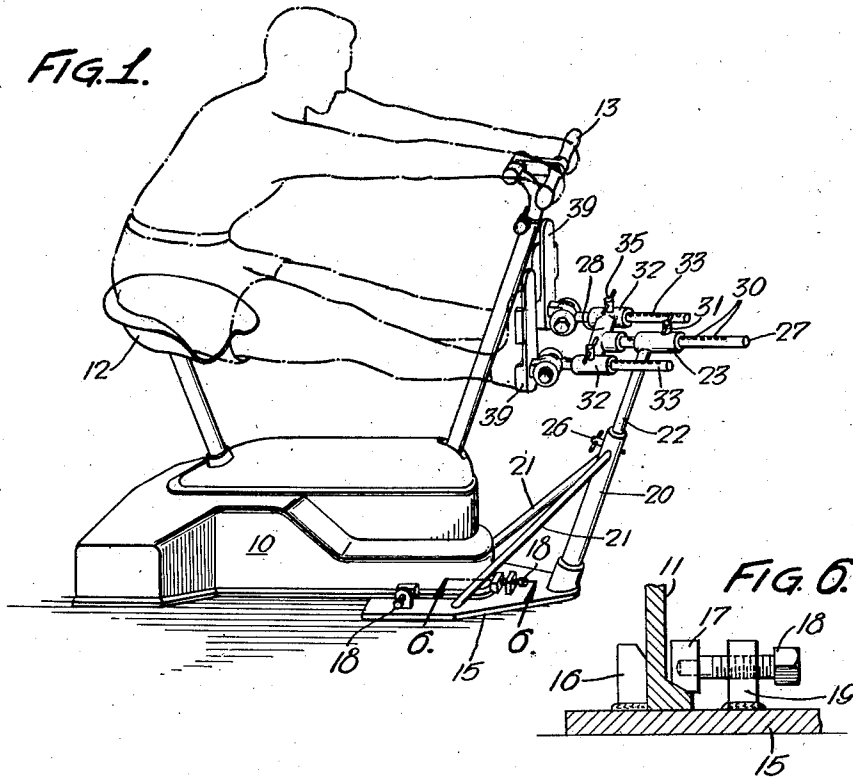
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2,641,250

ATTACHMENT FOR EXERCISING MACHINES

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2 Sheets-Sheet 1



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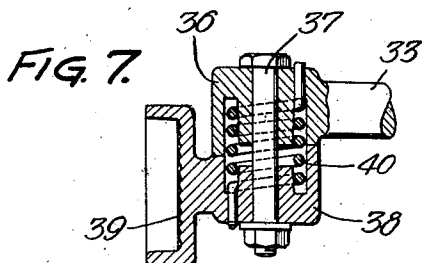
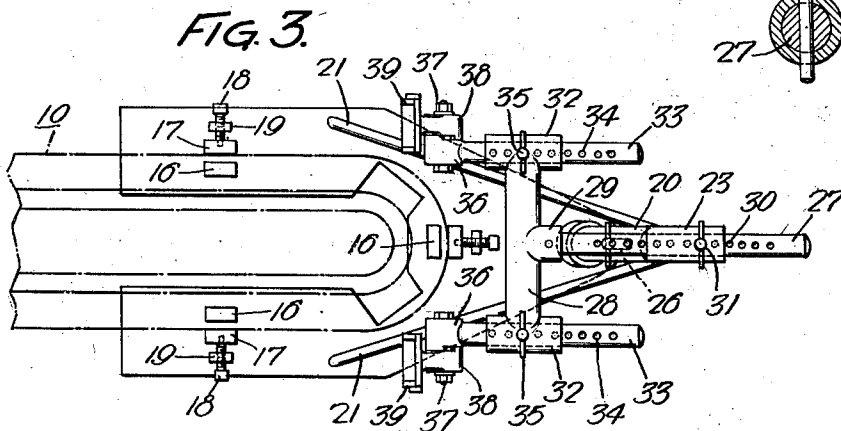
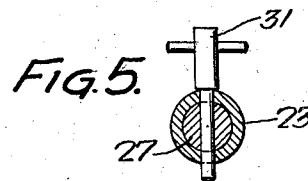
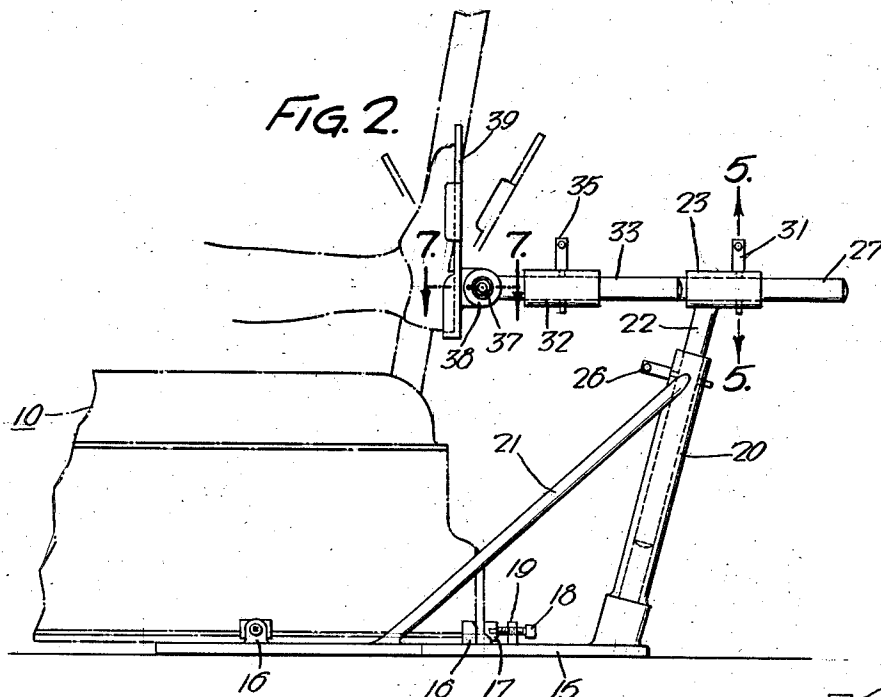
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ATTACHMENT FOR EXERCISING MACHINES

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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ATTACHMENT FOR EXERCISING MACHINES

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11 Claims. (Cl. 128—25)

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This invention relates to new and useful improvements in attachments for exercising machines, and more particularly to attachments for exercising machines of the type and construction disclosed in co-pending application for Exercising Machine, Serial No. 61,714, filed November 23, 1948, now Patent Number 2,565,348.

The principal object of the present invention is to provide an attachment for exercising machines of the type described which, when used in conjunction with such machine, effectively provides for the exercise and stretching of the ham-string muscle group which extends along the back of the legs of a person.

Another object of the invention is to provide an attachment as set forth which provides an adjustable range for flexion exercise for the lower portion of the back of a person.

Another object of the invention is to provide an attachment for exercising machines of the stated type which may be readily adjusted to meet different sizes of persons as well as the needs of individuals with functional limitations.

A further object of the invention is to provide an attachment having the foregoing features and characters which is of relatively simplified construction and highly efficient and effective in use.

These and other objects of the invention and the various features and details of the construction and use thereof are hereinafter fully set forth and described with reference to the accompanying drawings, in which:

Fig. 1 is a view in perspective showing an attachment made according to the present invention in cooperative association with an exercising machine of the aforesaid type and construction;

Fig. 2 is an enlarged side elevational view of the attachment;

Fig. 3 is a top plan view thereof;

Fig. 4 is an elevational view thereof;

Fig. 5 is an enlarged sectional view on line 5—5, Fig. 2;

Fig. 6 is an enlarged sectional view on line 6—6, Fig. 1; and

Fig. 7 is an enlarged sectional view on line 7—7, Fig. 2.

Referring now more particularly to the drawings, an attachment made in accordance with the present invention is shown in conjunction with an exercising machine of the construction described in application Serial No. 61,714, aforesaid. Such a machine embodies a hollow base structure 10 including a continuous enclosing

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side wall portion, a relatively fixed seat 12 and a handle structure 13 which is mounted for oscillatory movement toward and away from the seat 12.

An attachment made in accordance with the present invention comprises a base plate 15 which is adapted to rest upon the floor and underlie the forward end portion of the machine base 10, for example, in the relation shown in Fig. 1 of the drawings. Provided on the upper surface of the base plate 15 is a plurality of suitably arranged clamping devices each comprising a stationary jaw element 16 which is positioned on the base plate 15 so as to be disposed inwardly adjacent the base side wall portion 11, and a movable jaw element 17 which is mounted at the inner end of a screw member 18 for engagement against the base outer side wall 11 in the general relation shown, for example, in Fig. 6 of the drawings, the screws 18 being threaded in upstanding lugs 19 on the base plate 15 so that the movable jaw elements 17 may be placed in clamping engagement against the base side wall portion 11.

Secured upon the outer end of the base plate 15 and inclined outwardly with respect to the exercising machine is an upstanding tubular stanchion 20 which is braced by means of angularly extending elements 21, 21 which have their upper ends secured to the stanchion 20 and their lower ends secured to the base plate 15.

Adjustably received within the tubular stanchion 20 is a support or rod member 22 having at its upper end a horizontally disposed tubular or sleeve portion 23. The stanchion 20 and rod support 22 each is provided with an aligned series of uniformly spaced openings 24 and 25, respectively, therein and adjustable positioning of the rod support 22 telescopically with respect to the tubular stanchion 20 is effected by inserting a pin 26 through preselected openings 24 and 25 in these members.

Adjustably mounted within the tube or sleeve 23 at the upper end of the support rod 22 is the rod member 27 of a cross-head 28 to which the rod member 27 is fixedly secured in a central boss portion 29. Adjustment of the rod member 27 and the cross-head 28 horizontally with respect to the exercising machine within the sleeve 23 is accomplished by providing a series of openings 30 in the rod member 27 and providing a corresponding opening in said sleeve 23 for passage of a pin 31 through a selected opening 30 in the rod member 27.

Formed at the opposite outer ends of the cross-

head 28 are other tubular or sleeve portions 32, 32 which have their axes disposed parallel to each other and in a common horizontal plane. Adjustably mounted in each of the sleeve portions 32 is the shaft member 33 of a foot support device. Each of these shaft members 33 is provided with an aligned series of openings 34 therethrough and adjustment of the shaft members 33 longitudinally with respect to their supporting sleeves 32 is accomplished by providing an opening in each sleeve for the passage of a pin 35 through selected openings in the shaft member.

Formed at the forward end of each shaft 33 is a hub 36 and connected thereto by a stud 37 for rotation in a vertical plane is the hub portion 38 of a foot support 39. The hub portions 36 and 38 are provided with intercooperating flange portions of predetermined arcuate length constructed and arranged, for example, as shown in Fig. 3, to provide for limited rotational movement of the hub portions 38 and their foot supports 39 between the limit positions shown in broken lines in Fig. 2 of the drawings. Coil springs 40 are mounted within the hub portions 36 and 38 and have their opposite ends anchored respectively therein so that said springs act normally to urge the hub portions 38 and foot supports 39 in the counterclockwise direction with respect to Fig. 2 to the left hand limit position indicated in broken lines therein.

The attachment is used in the manner illustrated in Fig. 1 of the drawings with an exercising machine of the type previously referred to herein. By selective adjustment of the several rods and shafts 22, 27 and 33 with respect to their supporting sleeve portions, the foot supports 39 may be properly positioned both vertically and horizontally to receive the feet of the particular person using the machine. When the attachment has been properly positioned the person mounts the machine as shown in Fig. 1, placing his or her feet in the supports 39 and grasping the handle 13. The motor of the exercising machine may then be started and the resulting oscillatory movement of the handle 13 operates effectively to exercise and stretch the hamstring muscle groups in the person's legs and also provide for flexion exercise of the lower portion of the person's back.

While a particular embodiment of the invention has been illustrated and described herein it is not intended that the invention be limited to such disclosure and changes and modifications may be made within the scope of the following claims.

I claim:

1. An attachment for exercising machines comprising a supporting structure including selectively positionable vertically and horizontally adjustable elements, a pair of foot supports pivotally mounted on said supporting structure for rotation about a horizontal axis, means limiting rotation of said foot supports between fixed limit positions, and spring means normally biasing said foot supports to one of said limit positions.

2. An attachment for exercising machines comprising a vertically and horizontally adjustable cross-head, a pair of pivotal foot supports adjustably mounted in said cross-head for rotation about a horizontal axis, means limiting rotation of said foot supports between fixed limit positions, and spring means normally biasing said foot supports to one of said limit positions.

3. An attachment for exercising machines

comprising a horizontally and vertically adjustable cross-head member having horizontally disposed sleeves at the opposite ends thereof, shaft members adjustably mounted in said sleeves, and foot supports pivotally connected to said shaft members for rotation about a horizontal axis.

4. An attachment for exercising machines comprising a horizontally and vertically adjustable cross-head member having longitudinally disposed sleeves at the opposite ends thereof, shaft members adjustably mounted in said sleeves, foot supports pivotally connected to said shaft members for rotation about a horizontal axis, and means limiting rotation of said foot supports between fixed limit positions.

5. An attachment for exercising machines comprising a horizontally and vertically adjustable cross-head member having longitudinally disposed sleeves at the opposite ends thereof, shaft members adjustably mounted in said sleeves, foot supports pivotally connected to said shaft members for rotation about a horizontal axis, means limiting rotation of said foot supports between fixed limit positions, and spring means normally biasing said foot supports to one of said limit positions.

6. An attachment for exercising machines comprising a base, an upstanding support vertically adjustable with respect to said base, a cross-head member mounted on said support and horizontally adjustable with respect thereto, a pair of pivotal foot supports adjustably mounted in said cross-head, and spring means normally biasing said foot supports to one of said limit positions.

7. An attachment for exercising machines comprising a base, an upstanding tubular stanchion on said base inclined outwardly thereof, a support rod adjustably mounted in said stanchion, a horizontal sleeve at the upper end of the rod support, a crosshead member adjustably mounted in said sleeve, and a pair of pivotal foot supports adjustably mounted in said cross-head member for rotation about a horizontal axis.

8. An attachment for exercising machines comprising a base, an upstanding tubular stanchion on said base inclined outwardly thereof, a support rod adjustably mounted in said stanchion, a horizontal sleeve at the upper end of the rod support, a cross-head member adjustably mounted in said sleeve, other sleeves at the opposite ends of said cross-head, shaft members adjustably mounted in said other sleeves, and foot supports pivotally connected to said shaft members for rotation about a horizontal axis.

9. An attachment for exercising machines comprising a base, an upstanding tubular stanchion on said base inclined outwardly thereof, a support rod adjustably mounted in said stanchion, a horizontal sleeve at the upper end of the rod support, a cross-head member adjustably mounted in said sleeve, other sleeves at the opposite ends of said cross-head, shaft members adjustably mounted in said other sleeves, foot supports pivotally connected to said shaft members for rotation about a horizontal axis between fixed limit positions, and spring means normally biasing said foot supports to one of said limit positions.

10. An attachment for exercising machines comprising a base to overlie the machine having clamp means to secure the base thereto, a supporting structure on said base including selectively positionable vertically and horizontally adjustable elements, and a pair of foot supports pivotally mounted on said supporting structure for rotation about a horizontal axis.

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11. An attachment for exercising machines comprising a base to underlie the machine and having clamping means to secure the base thereto, an upstanding tubular stanchion on said base inclined outwardly thereof, a support rod adjustably mounted in said stanchion, means to secure the support rod in a preselected position relative to the stanchion, a horizontal sleeve at the upper end of the rod support, a cross-head member having a support rod adjustably mounted in said sleeve, means to secure the cross-head in a preselected position with respect to said sleeve, other sleeves at the opposite ends of said cross-head, shaft members adjustably mounted in said other sleeves, means to secure said shaft members in preselected position with respect to said other sleeves, foot supports pivotally con-

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nected to said shaft members for rotation about a horizontal axis with respect thereto between fixed limit positions, and spring means normally biasing said foot supports to one of said limit positions.

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