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J. PILATES
GYMNASTIC APPARATUS
Filed Aug. 24, 1925

Fig. 1.

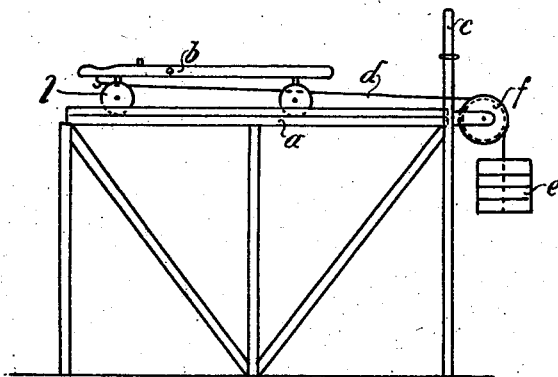


Fig. 2.

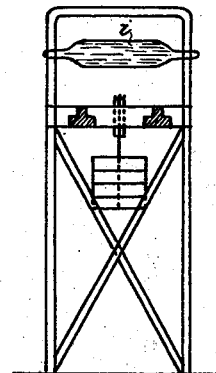
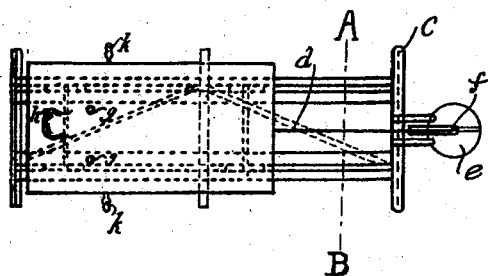


Fig. 3.



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GYMNASTIC APPARATUS.

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Gymnastic or remedial apparatus for ably provided with antifriction means of physical exercise are well known and in general use. Such apparatus is often designed to enable the user to develop particular muscles or remedy particular defects by simulating the effects obtained by partaking in various sports such as rowing, cycling and the like. Apparatus, of this character however, is generally open to the objection that it is not well adapted for use in restricted space such as living rooms, since a considerable amount of space has to be set apart for the use of such apparatus. A further objection to such apparatus is that it is not generally adapted for use by those suffering from particular ailments or disabilities which necessitate their maintaining a recumbent position or which result in an enfeeblement of the legs, as for instance weak foot arches or flat feet, or those having only one leg or only one capable of being normally used.

The present invention is particularly designed to be usable by such sufferers as well as those in vigorous health and for that purpose the machine comprises a supporting member or carriage adapted to receive the user in a recumbent position. The apparatus is also fitted with an abutment or pressure bar which may be employed by those suffering from weakened arches. The apparatus may also be used by those having one sound leg only.

In the accompanying drawings in which the invention is merely diagrammatically illustrated.

Figure 1 is a side elevation of one form of apparatus.

Fig. 2 is a cross section on the lines A—B of Fig. 3.

Fig. 3 is a plan view of the apparatus shown in Fig. 1. It is to be understood that the drawings are intended by way of example only and are not in any way intended to be a restrictive embodiment of the invention the scope of which is defined in the appended claims.

The apparatus of my invention comprises in its broadest aspect a movable supporting member or carriage *b* adapted to receive the user in a recumbent position and to be moved by him against the effort exercised by any suitable resistance members, shown in the drawings as comprising a weight *e* attached to the carriage *b* by the cord *d* and passing over a pulley *f*. The carriage *b* is prefer-

ably provided with antifriction means of any suitable character such as wheels running on tracks *a*, though, of course, the wheeled carriage could be employed without such tracks. I have found that a very convenient form of the apparatus is that illustrated in which *b* indicates a sliding carriage of a length adapted to receive the user in a recumbent position and provided with wheels *l* running on a track *a*, elevated at sufficient distance from the ground to allow for the vertical movements of the resistance weight *e*. An abutment member *i* is provided supported by the upright *c* and the traveling carriage is provided with shoulder pieces *g* and head rest *h*. The abutment member or thrust bar *i* is preferably adjustable on the upright *c* and of a width such that only the middle part of the foot bears thereagainst thus enabling sufferers from weakened arches to use the apparatus. It will of course be evident that the apparatus may be constructed in a variety of ways, for instance in general character of a couch, the sliding carriage running on the side members thereof and the necessary resistance being afforded by springs or other elastic members arranged between said carriage and the end of the frame.

It is believed that the method of employing the apparatus will be readily understood. The user takes up a recumbent position on the movable carriage *b* with his shoulders against the pieces *g*, after having previously adjusted the apparatus to his height, and the weight *e* to give the desired resistance; allowing his legs to flex, the carriage will be drawn by the weight to one extremity of the frame whereupon by straightening his legs the carriage will be forced toward the other end of the frame. These movements strongly exercise the muscles of the thighs, trunk, shoulders and neck without, however, imposing undue strain upon the back muscles or arches of the feet.

For, especially vigorous exercise it may be desirable to provide grips or holds *k* shown in Fig. 3, though for normal use the exercise afforded by my apparatus is of a particularly gentle though very beneficial character.

I claim:

1. Gymnastic apparatus comprising a substantially horizontal carriage mounted for movement in a linear direction and of a

length sufficient to afford support to the back and shoulders of the user when in recumbent position, said carriage being mounted for movement in a linear direction, an abutment positioned toward one end of the upper surface of the carriage and projecting therefrom sufficiently to engage against the shoulders of the user and resistance means arranged between said carriage and a fixed point and acting to oppose movement of said carriage.

2. Gymnastic apparatus comprising a substantially horizontal carriage of a length sufficient to afford support to the back and shoulders of the user when in recumbent position, said carriage being mounted for movement in a linear direction, anti-friction means arranged between said carriage and the surface on which said carriage rests, an abutment positioned toward one end of the upper surface of the carriage and projecting therefrom sufficiently to engage against the shoulders of the user and resistance means arranged between said carriage and a fixed point and acting to oppose movement of said carriage.

3. Gymnastic apparatus comprising a carriage or support of a length sufficient to afford support to the back and shoulders of the user when in recumbent position said carriage being mounted for movement in a linear direction, a track or runway acting to guide said carriage in its linear movement, an abutment positioned toward one end of the upper surface of the carriage and projecting therefrom sufficiently to engage against the shoulders of the user and resistance means arranged between said carriage and a fixed point and acting to oppose movement of said carriage.

4. Gymnastic apparatus comprising a carriage or support of a length sufficient to afford support to the back and shoulders of

the user when in recumbent position said carriage being mounted for movement in a linear direction, and resistance means arranged between said carriage and a fixed point and acting to oppose movement of said carriage, an abutment positioned toward one end of the upper surface of the carriage and projecting therefrom sufficiently to engage against the shoulders of the user, and a foot rest or abutment against which the user may exert pressure by straightening his legs from a bent position thereby moving said carriage away from said abutment.

5. Gymnastic apparatus as claimed in Claim 5, in which said abutment is of such a width that the user can bear against the abutment with the middle portion only of the foot, or of the toe or heel only.

6. Gymnastic apparatus comprising a carriage or support of a length sufficient to afford support to the back and shoulders of the user when in recumbent position said carriage being mounted for movement in a linear direction, and resistance means arranged between said carriage and a fixed point and acting to oppose movement of said carriage, an abutment positioned toward one end of the upper surface of the carriage and projecting therefrom sufficiently to engage against the shoulders of the user, anti-friction means arranged between said carriage and the surface on which said carriage rests, a track or runway acting to guide said carriage in its linear movement, and a foot rest or abutment against which the user may exert pressure by straightening his legs from a bent position thereby moving said carriage away from said abutment.

In testimony whereof I have signed my name to this specification.

JOE PILATES.