Aug. 27, 1963 J. CENCIG 3,101,944

EXERCISE APPARATUS

Filed March 2, 1961

Fig. 1.

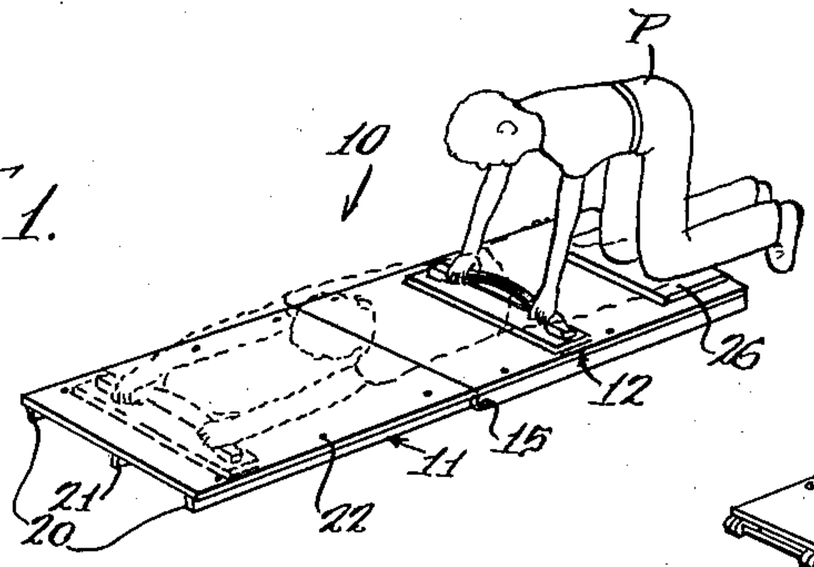


Fig. 2.

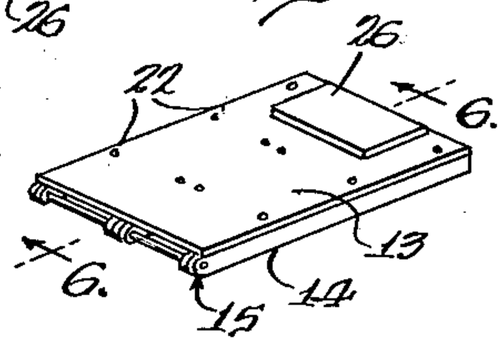


Fig. 3.

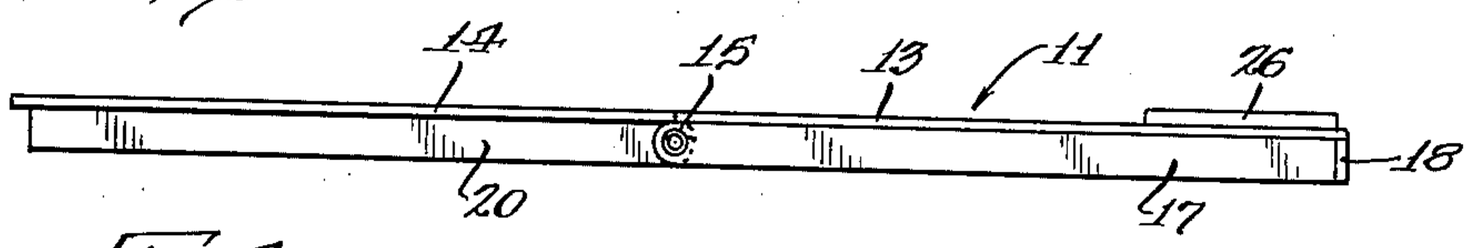


Fig. 4.

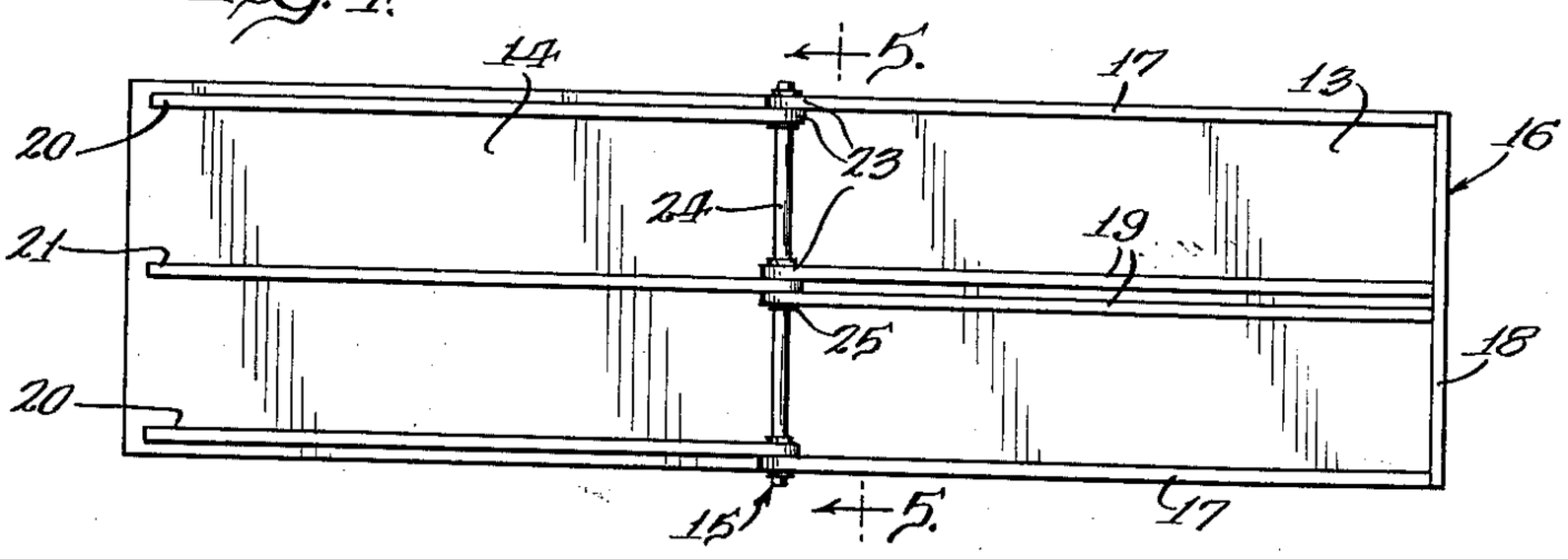


Fig. 5.

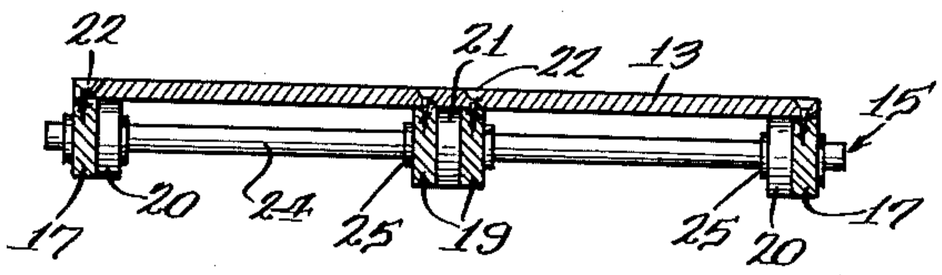


Fig. 6.

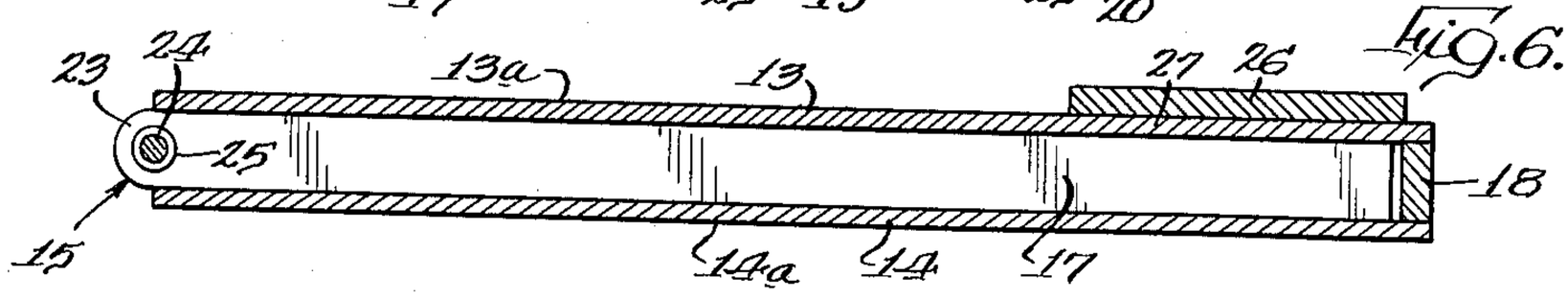
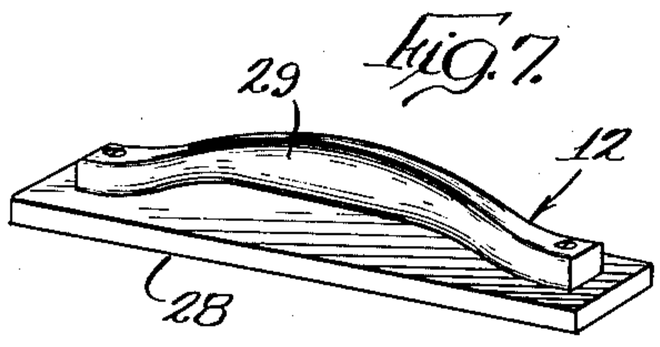


Fig. 7.



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EXERCISE APPARATUS

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This invention relates to athletic devices and in particular to an exercise apparatus.

One extremely efficacious arm strengthening exercise is the conventional "push-up" exercise wherein the person extends himself in a generally prone position and raises and lowers his torso relative to the floor by means of flexing his arms while pressing his hands against the floor. The present invention is concerned with a new and improved exercise apparatus in the use of which the user raises and lowers his torso, as in the "push-up" exercise, but requiring the use of a substantially increased number of body muscles providing an improved over-all exercise of the user's body.

Thus, a principal feature of the present invention is the provision of a new and improved exercise apparatus.

Another feature of the present invention is the provision of such an exercise apparatus including a reaction member having a generally flat surface portion, and a slide member having a generally flat slide surface portion and handle means for bimanual urging of the slide member on the reaction member with the surface portions in frictional facial engagement.

A further feature of the present invention is the provision of such an exercise apparatus wherein the reaction member is arranged for facilitated selective disposition in an extended exercising arrangement and in a folded storage arrangement.

Still another feature of the invention is the provision of such an exercise apparatus wherein the handle means is arranged for facilitated selective grasping with the hands spaced apart at a selected distance of a substantial range thereof.

Yet another feature of the invention is the provision of such an exercise apparatus which is extremely simple and economical of construction while providing long trouble-free life.

Other features and advantages of the invention will be apparent from the following description taken in connection with the accompanying drawing wherein:

FIG. 1 is a perspective view of an exercise apparatus embodying the invention, with a person utilizing the apparatus shown in full lines in a "start" position, and in dotted lines in an "extended" position;

FIG. 2 is a perspective view of the exercise apparatus in a folded arrangement;

FIG. 3 is a side elevation of the exercise apparatus;

FIG. 4 is a bottom plan view thereof;

FIG. 5 is a transverse section thereof taken substantially along the line **5—5** of FIG. 4;

FIG. 6 is a longitudinal section thereof taken substantially along the line **6—6** of FIG. 2; and

FIG. 7 is an enlarged perspective view of the slide member.

In the exemplary embodiment of the invention as disclosed in the drawing, an exercise apparatus generally designated **10** is shown to comprise a reaction member generally designated **11** and a slide member generally designated **12**. A person P utilizing the exercise apparatus **10** grasps the slide member while kneeling on one end of the reaction member and slowly slides the slide member over the reaction member to a fully extended position wherein his torso is juxtaposed to the reaction member, and then returns to the "start" position. In thus using the exercise apparatus **10**, the person P must exert a substantial effort in raising and lowering his torso and in overcoming the frictional resistance of the slide member

to movement on the reaction member. In performing this simple exercise, the person utilizes a substantial number of his body muscles including the back, chest, stomach, shoulder and arm muscles, improving the tone thereof and substantially strengthening the support of the internal organs.

In the illustrated embodiment, the reaction member **11** comprises an articulated bipartite member including a pair of flat panels **13** and **14** defining flat surface portions **13***a* and **14***a* and connected by a hinge structure **15** for selective disposition in an end-to-end extended relationship as shown in FIG. 1, and in a back-to-back folded relationship as shown in FIG. 2. In the extended arrangement, the exercise apparatus is suitable for use by substantially all persons including full-grown men, the respective panels **13** and **14** being illustratively 3 feet long by 20 inches wide. Alternatively, when the panels are arranged in the folded relationship of FIG. 2, the compact arrangement of the exercise apparatus permits facilitated storage as in a small closet space. Thus, the exercise apparatus is adapted for use by persons such as businessmen in their offices, as well as by persons at their homes or in athletic clubs.

The construction of exercise apparatus **10** is extremely simple. Referring now more specifically to FIGS. 3–6, panels **13** and **14** may be seen to comprise flat sheets of sturdy, wear-resistant material such as resin-impregnated plywood. Panel **13** is provided with a depending supporting framework generally designated **16** defined by a pair of side supports **17**, an end support **18**, and a pair of closely spaced middle supports **19**. Panel **14** is provided with a pair of side supports **20** and a middle support **21**, side supports **20** being arranged to be inwardly juxtaposed to side supports **17** of panel **13** and support **21** being arranged to fit between spaced middle supports **19** of panel **13** when the exercise apparatus is in the folded arrangement of FIGS. 2 and 6. The panels may be secured to the supports by any suitable means, such as screws **22** as shown in FIG. 5.

The juxtaposed ends **23** of the supports **17**, **19**, **20** and **21** overlap, as best seen in FIG. 4, and may be rounded as shown in FIG. 6. Hinge structure **13** comprises herein a metal rod **24** extending loosely through the end portions **23** and retained against longitudinal movement relative to the end portions by suitable means such as washers **25** spot-welded to the rod **24**.

A kneeling pad **26** may be secured to the panel **13** at the free end **27** thereof. Thus, the pad is located at the area of maximum support, i.e., the area supported by the pair of side supports **17**, the pair of middle supports **19**, and the end support **18**.

Referring now to FIG. 7, the slide member **12** herein comprises a generally flat slide surface portion **28**, and a handle portion **29** arranged for bimanual grasping by the person P for urging of the slide member on the reaction member with the confronting surfaces thereof in frictional facial engagement. Herein, the slide member **12** is formed of wood. As best seen in FIG. 7, the handle **29** is substantially elongated, permitting the user to grasp the same with the hands selectively spaced apart at any one of a substantial number of distances. Thus, the user may grasp the handle in a manner most comfortable to him, facilitating the use of the exercise apparatus.

Thus, exercise apparatus **10** comprises an extremely simple and economical apparatus providing an improved exercising of the user's body muscles. The apparatus may be constructed at relatively low cost while yet it provides muscular exercise substantially superior to the exercise obtained with conventional exercising devices which are substantially more costly and space consuming. Repetitive use of the apparatus beneficially conditions the user's body, providing improved physical fitness and increasing

the user's agility. As indicated briefly above, apparatus 10 is adapted for facilitated storage when not in use while yet it may be arranged for use in a matter of seconds.

While I have shown and described one embodiment of my invention, it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made without departing from the spirit and scope of the invention as defined in the appended claims.

I claim:

1. Exercise apparatus comprising: a portable reaction member having a generally flat surface portion; and a slide member having a generally flat slide surface portion and handle means for movement of said slide member against said reaction member by a bimanual urging of said slide member on said reaction member with said surface portions in frictional facial engagement, said surface portions being arranged to preclude substantial abrasion of either thereof as a result of such movement.

2. The exercise apparatus of claim 1 wherein each of said surface portions are ligneous.

3. The exercise apparatus of claim 1 wherein each of said surface portions are ligneous and at least one of said surface portions is resin-impregnated.

4. Exercise apparatus comprising: an articulated bipartite reaction member having contiguous, aligned generally flat slide surface portions; and a slide member having a generally flat slide surface portion and handle means for bimanual urging of said slide member on said reaction member with said slide surface portion of said slide member in frictional facial engagement selectively with said slide surface portions of the reaction member.

5. The exercise apparatus of claim 4 wherein said reaction member includes a pair of flat panels and hinge means connecting juxtaposed ends of said panels for selectively disposing said panels in an end-to-end extended relationship and in a back-to-back folded relationship.

6. The exercise device of claim 4 wherein said reaction member includes a pair of flat panels and hinge means connecting juxtaposed ends of said panels for selectively disposing said panels in an end-to-end extended relationship and in a back-to-back folded relationship, and support means fixedly secured to said panels for supporting said panels horizontally above a floor, said support means interfitting when said panels are in the folded relationship.

7. Exercise apparatus comprising: a portable reaction member having a generally flat surface portion; and a slide member having a generally flat slide surface portion and handle means for movement of said slide member against said reaction member by a bimanual urging of said slide member on said reaction member with said surface portions in frictional facial engagement, said surface portions being arranged to preclude substantial abrasion of either thereof as a result of such movement, said handle means being elongated for grasping with the hands selectively spaced apart at any one of a substantial number of distances.

8. Exercise apparatus comprising: means providing a substantially horizontal first slide surface; and a slide member having a second slide surface for frictional movable engagement with said first slide surface, said slide surfaces having preselected coefficients of friction permitting movement therebetween by a person grasping said member while kneeling on said first surface and moving said member selectively toward and away from himself, said movement requiring a substantial force whereby the person substantially exercises a large number of muscles including back, chest, stomach, shoulder and arm muscles.

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