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CORNER BANK FOR RACE COURSES

Filed May 15, 1963

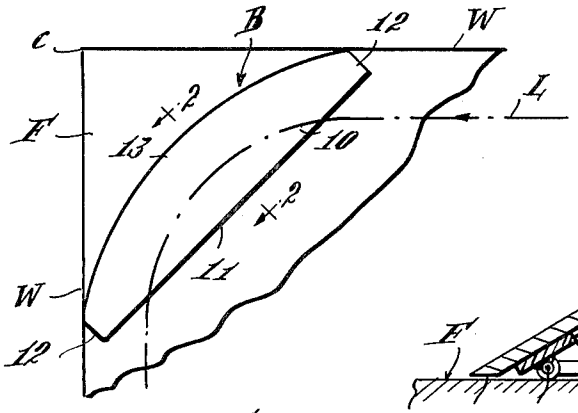


Fig. 1

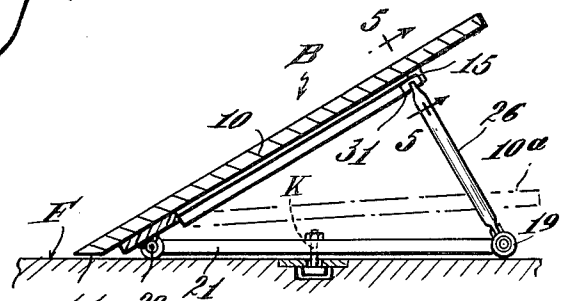


Fig. 2

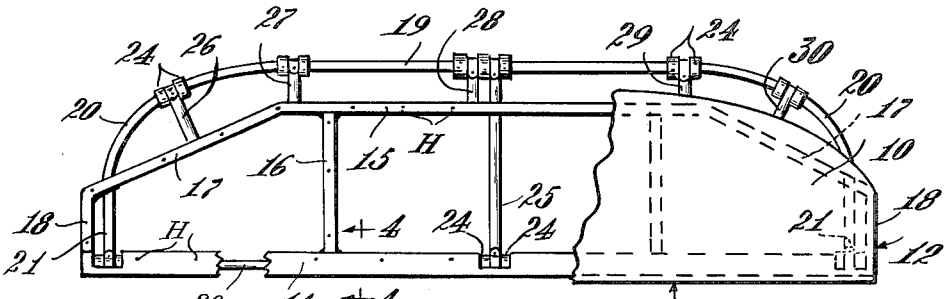


Fig. 3

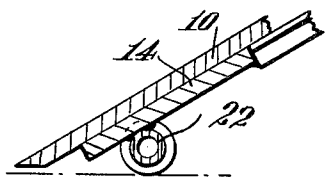


Fig. 4

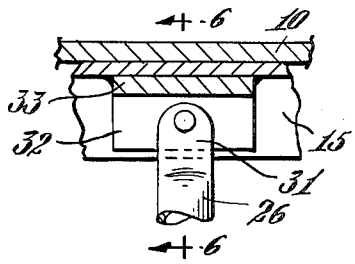


Fig. 5

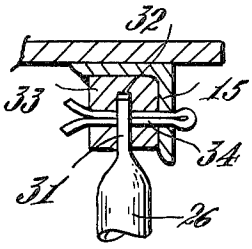


Fig. 6

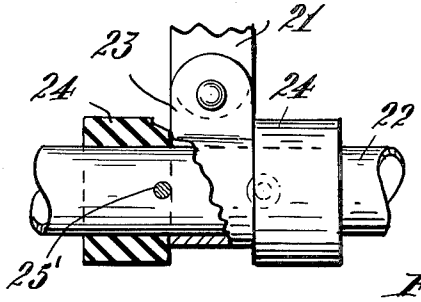


Fig. 7

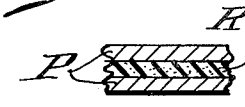


Fig. 8

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CORNER BANK FOR RACE COURSES

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This invention pertains to corner banks for race tracks, particularly indoor tracks, and more especially to a portable corner bank which may be set up upon any suitable surface, for example the floor of a conventional gymnasium thereby to make it possible to use such surface or floor as a foot race track.

Comparatively few schools are able financially to provide an indoor running track, although foot racing is recognized as a most enjoyable competitive sport and of great value as an exercise.

While many schools have gymnasiums, often of ample floor area for conventional use, they are not usually suitable for foot racing because they seldom, if ever, are large enough to provide a straight-away course, and without suitable banks at the turns or corners a closed course is impractical, since, without a bank, the runner must slacken his speed at each corner or sharp bend.

The present invention has for an object the provision of means whereby an ordinary gymnasium floor or other surface of substantial area may be temporarily modified to adapt it for foot racing. A further object is to provide a corner bank which may be arranged on an ordinary floor to define a turn in a race course laid out upon the floor, and with provision for temporarily anchoring it in the desired position of use. A further object is to provide a portable and preferably collapsible bank which, when set up, provides a strong and rigid race-course turn affording the desired banking slope, but which, when not in use, may be folded to facilitate storage and transportation.

Other and further objects and advantages of the invention will be pointed out in the following more detailed description and by reference to the accompanying drawings wherein:

FIG. 1 is a fragmentary diagrammatic plan view showing one corner of a room with the portable bank of the present invention set up in the corner in proper relation to a race course which follows the walls of the room;

FIG. 2 is a vertical section, to larger scale, in a plane which approximately bisects the corner of the room, shown in FIG. 1, and showing the bank as set up for use, and also indicating in broken lines its appearance when folded;

FIG. 3 is a plan view of the device, as it appears when folded, with the panel portion of the bank broken away to show the construction of the frame;

FIG. 4 is a fragmentary section substantially on the line 4—4 of FIG. 3;

FIG. 5 is a fragmentary vertical section, to larger scale, on the line 5—5 of FIG. 2;

FIG. 6 is a fragmentary section on the line 6—6 of FIG. 5;

FIG. 7 is a fragmentary elevation, to larger scale, party in section, showing a hinge connection between parts of the base of the supporting frame, and also cushioning members which rest upon the floor; and

FIG. 8 is a fragmentary section illustrating one desirable construction of tread panel.

Referring to the drawings and, in particular, to FIG. 1, the character B indicates a corner bank embodying the present invention, and which is shown as resting upon the floor F at the corner of a room having the walls W intersecting at the corner C, and wherein the broken line L designates the general direction of travel of a runner using the race course. The bank B is shown as comprising the tread panel **10** which is of rigid material and whose exposed surface is of a character suitable to form the banking portion of the race course. For example, this panel **10** may be of wood, for instance plywood, or it may be of metal, in particular metal coated with a material, for example a textile fabric, a plastic, sheet rubber, or the like, to make it non-slippery, or it may, for example, as illustrated in FIG. 8, comprise two plies P of wood with an interposed ply R of foamed plastic or rubber.

As shown in FIG. 1, this panel **10** has a substantially rectilinear lower edge **11** which, as illustrated in FIG. 2, is desirably beveled so that the exposed tread surface will reach down substantially to the floor F on which the bank is supported. As shown, the panel also comprises an upper edge **13** which may, for example, be arcuate, as shown, with the opposite ends of the arc intersecting substantially straight parallel end edges **12**. While this particular shape is not essential, it is desirable since it reduces weight as compared with a panel of uniform height from end-to-end.

The bank also comprises a panel-supporting frame (FIG. 3), desirably made from lengths of steel of such thickness or shape as to afford the requisite rigidity. The front member **14** is a rectilinear plate of a length such as to extend substantially from one end to the other of the lower part of the panel **10**. The frame also comprises the upper or rear member **15**, the downwardly divergent end members **17** and the parallel terminal members **18**, all of the said members desirably being of angle section and rigidly united by welding or the like, while the front and rear members **14** and **15** are united at intervals by the rigid angle-bars **16**. The several parts of this frame are provided at desired intervals with holes H (FIG. 3) for the reception of fastener elements such as wood screws whereby the panel **10** is rigidly and permanently secured to the frame.

The bank also comprises a base member desirably made of metal tubing thereby to reduce weight while providing the desired rigidity. As shown in FIG. 3, this base comprises the rear member **19** whose central portion is substantially parallel to the front member **14** of the panel-supporting frame but which is bent to arcuate curvature at opposite ends, as shown at **20**, the curved portions merging with parallel terminal members **21**, the rear member thus being of shallow U-shape. The base also comprises a substantially rectilinear front member **22** of a length approximating that of the front member **14** of the panel-carrying frame. The parts **21** of the rear member of the base are permanently hinged to the tubular front member **22** by straps **23** (FIG. 7) which embrace the member **22** and are fixed to the member **21**. The strap **23** is interposed between two resilient rings **24**, for example of rubber or the like, which are secured to the

tubular member **22** by pins **25**. These resilient rings **24** not only serve to prevent the strap **23** from moving longitudinally of the member **22** but also constitute cushioning means to reduce the transmission of vibrations from the tread panel to the floor on which the device rests. The rear member **19** of the base is also connected to the member **22** by at least one rigid bar **25'** whose opposite ends are hinged to the members **19** and **22** respectively, by straps **23** such as above described. Referring to FIG. 4, it may be noted that the lower end of the connecting bar **16** is welded to the upper edge of the plate **14** and that the plate **14**, in turn, is welded directly to the front member **22** of the base. However, since the member **22** is connected to the rear member **19** of the base by the hinge straps **23**, it is possible for the frame, comprising the parts **14** and **15**, to be rocked up and down about the axis of the front member of the base while the front member **22** of the base rocks with the frame. Thus the frame, with the attached panel **10**, may be swung upwardly from a folded, inoperative position, as shown in FIG. 2, to a position in which the exposed surface of the panel **10** makes a substantial angle with the horizontal, for example, as here shown, an angle of the order of 30°, although the device may be designed to provide a different angle in accordance with the amount of banking effect desired.

For holding the frame with its attached panel at the desired angle of inclination, one or more braces are provided, for example, as shown at **26**, **27**, **28**, **29** and **30**. Each of these rigid struts or braces is hinged to the base member **19** at its rear or lower end by connecting it to the member **19** by a hinge strap, such as the strap **23** above described, interposed between two resilient rings **24**. These rings, distributed about the periphery of the base, provide a good cushioning effect, as above described, to reduce the transmission of vibrations from the tread member to the floor while, at the same time, acting to locate the several brace members at the desired position along the base member **19**. Each of these brace members, for example the brace member **26** (FIGS. 5 and 6), and which may be of tubular metal, is flattened at its upper or free end, as shown at **31** (FIGS. 5 and 6) and, when in operative position, this flat end is disposed in a slot **32** in a block **33** welded to the member **15**. The flattened part **31** of the brace member, the member **15**, and the block **33** are provided with corresponding holes and, when the device is in use, a suitable fastener, here shown, by way of example, as a cotter pin **34** (FIG. 6) is passed through the holes thus releasably connecting the frame member **15** to the strut. It will be understood that each of the several struts or braces is thus releasably connected to the frame member **15**. When the several brace members are in operative position, as illustrated in FIG. 2, they collectively provide ample support for the panel **10** to withstand the shocks of use, but, by disconnecting the free ends of the brace member **26** from the angle member **15**, the braces may be folded down and the panel dropped to inoperative position as shown in broken lines at **10***a* in FIG. 2. Thus, the device may be folded for convenience in storage or transportation but may readily be erected to place the tread panel in position for use. Obviously, braces of different lengths may be provided, whereby the angle of slope of the tread panel may be varied at will, or alternatively, braces of adjustable length may be provided.

The base members **19** and **22** may be provided with suitable means whereby the base member may be rigidly secured to the floor, for example they may be provided with openings for the reception of T-bolts K (as indicated in broken lines in FIG. 2) whose heads are designed to fit within T-plates countersunk into the floor.

It is further contemplated that the panel **10**, with its supporting frame, might be arranged in an opening in the floor so that, when not in use, the upper surface of the panel **10** would be flush with the floor but, when in use, would be raised so as to dispose the surface of the panel at the desired inclined position. Under such circumstances, the base portion of the bank would be completely concealed when the device was not in use and problems of transportation and storage would be eliminated.

While the tread portion of the bank, as here shown, comprises a panel **10** fixed to a metal frame, it is contemplated that the panel and a stiffening frame therefor might be molded as a unit from suitable plastic, in particular a plastic reinforced with Fiberglas, and it is further contemplated that were it desired to make a bank of substantially greater dimensions than that herein indicated, the bank might be made in sections for ease in transportation with provision for connecting the sections together preparatory to use.

While one desirable embodiment of the invention has herein been disclosed by way of example, it is to be understood that the invention is broadly inclusive of any and all modifications falling within the scope of the appended claims.

I claim:

1. In combination, a room having a horizontal floor and corners defined by intersecting vertical walls, a portable bank for use in providing said room with a course for indoor foot racing, said bank comprising a single rigid, substantially flat panel of a character appropriate to constitute the tread surface at a turn in the race course, said panel having a substantially straight lower edge designed to be disposed parallel to the floor and in close proximity thereto, the panel being of a shape and size such that, when said lower edge is arranged to extend diagonally across the corner of the room with the ends of the panel substantially contacting the respective walls which define said corner, the panel may slope upwardly and rearwardly into said corner so that its tread surface is disposed at a suitable angle to the horizontal to provide the desired banking effect as a runner rounds the corner turn of a race course laid out on the floor, an open frame attached to said panel, a base designed to rest upon the floor, means securing the base to the frame, and brace means for holding the frame with its attached panel at a suitable angle to the horizontal to provide the desired banking effect.

2. A corner bank according to claim **1**, further characterized in that the means for securing the base to the frame comprises hinge devices whereby the frame, with its attached panel, may be moved from an inoperative folded position to an operative position at which the panel is inclined at such an angle to the horizontal as to provide the desired banking effect as the runner rounds the turn.

3. In combination, a room having a horizontal floor and corners defined by intersecting vertical walls, a portable bank for use in providing said room with a course for indoor foot racing, said bank comprising a single rigid panel of a character appropriate to constitute the tread surface at a turn in the race course, said panel having a substantially straight lower edge designed to be disposed parallel to the floor and in close proximity thereto, the panel being of a shape and size such that, when said lower edge is arranged to extend diagonally across the corner of the room with the ends of the panel substantially contacting the respective walls which define said corner, the panel may slope upwardly and rearwardly into said corner so that its tread surface is disposed at a suitable angle to the horizontal to provide the desired banking effect as a runner rounds the corner turn of a race course laid out on the floor, said bank comprising a base including a rear member of shallow U-shape and a substantially rectilinear front member, said members being of tubular metal, a panel-supporting frame having

a rectilinear front member which is rigidly connected to the front member of the base, hinge means connecting the ends of the U-shaped rear member of the base to the front member whereby the frame and the front member of the base may rock about the axis of the front member; at least one brace member hinged to the rear member of the base and which is operative, by engagement with the frame, to hold the panel in operative position in which it is inclined to the horizontal, and means whereby the brace may be disconnected from the frame permitting the frame to be folded down to inoperative positon.

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