

Oct. 25, 1927.

1,646,818

H. A. HOLLAND

PHYSICAL EXERCISING APPARATUS

Filed July 1, 1926

3 Sheets-Sheet 1

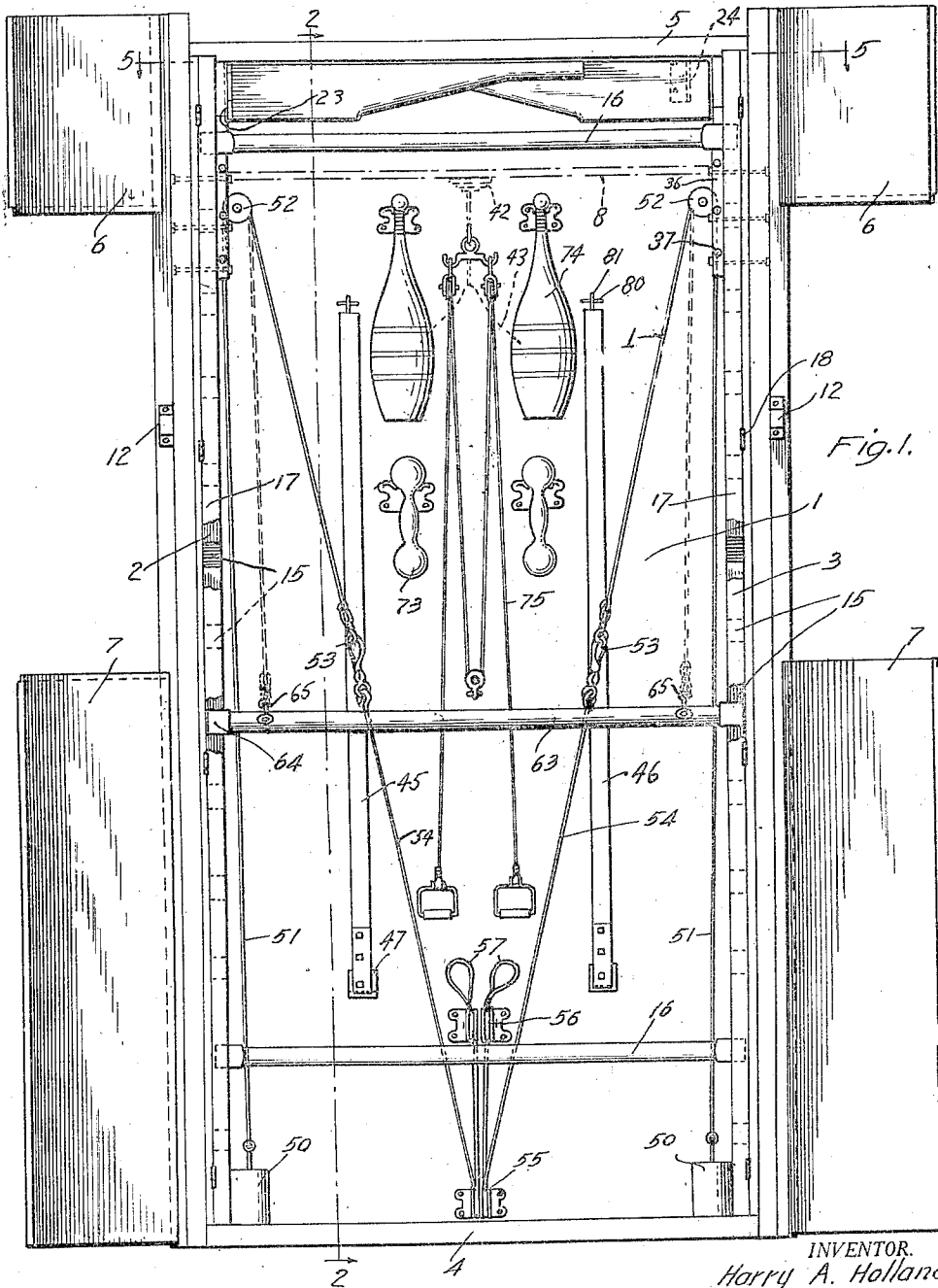


Fig. 1.

INVENTOR.

Harry A. Holland,

BY *Arthur P. Knight and*
Alfred W. Knight
ATTORNEY.

Oct. 25, 1927.

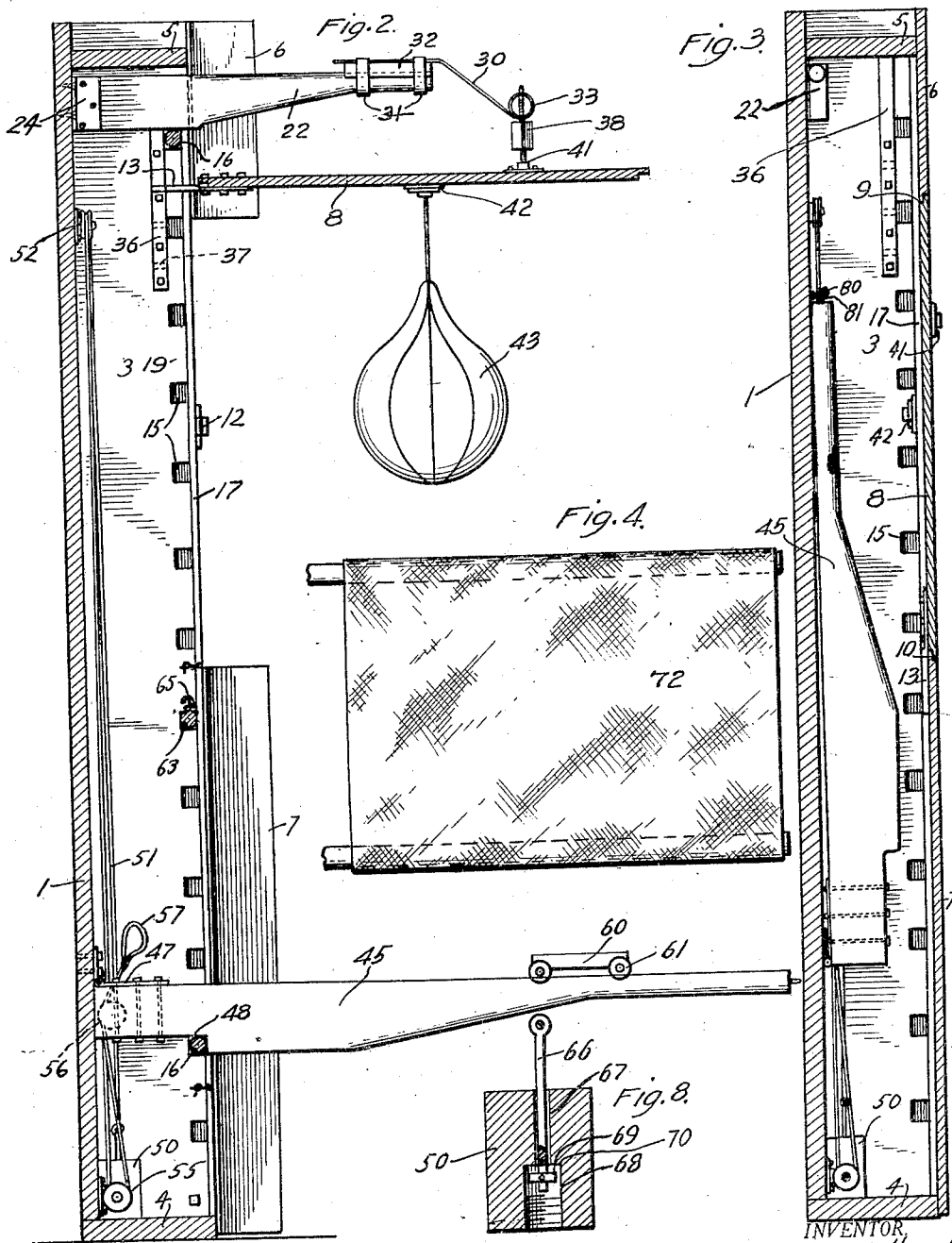
1,646,818

H. A. HOLLAND

PHYSICAL EXERCISING APPARATUS

Filed July 1, 1926

3 Sheets-Sheet 2



INVENTOR

INVENTOR,
Harry A. Holland,

BY *Arthur P. Knight and*
Alfred W. Knight
ATTORNEY

Oct. 25, 1927.

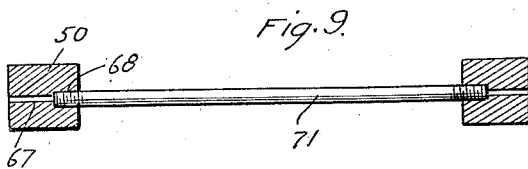
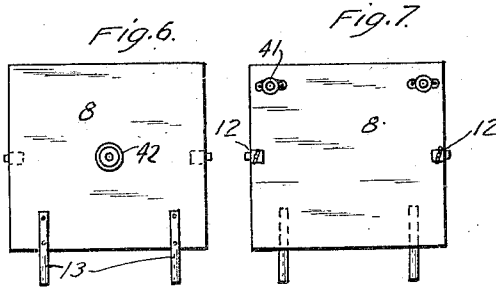
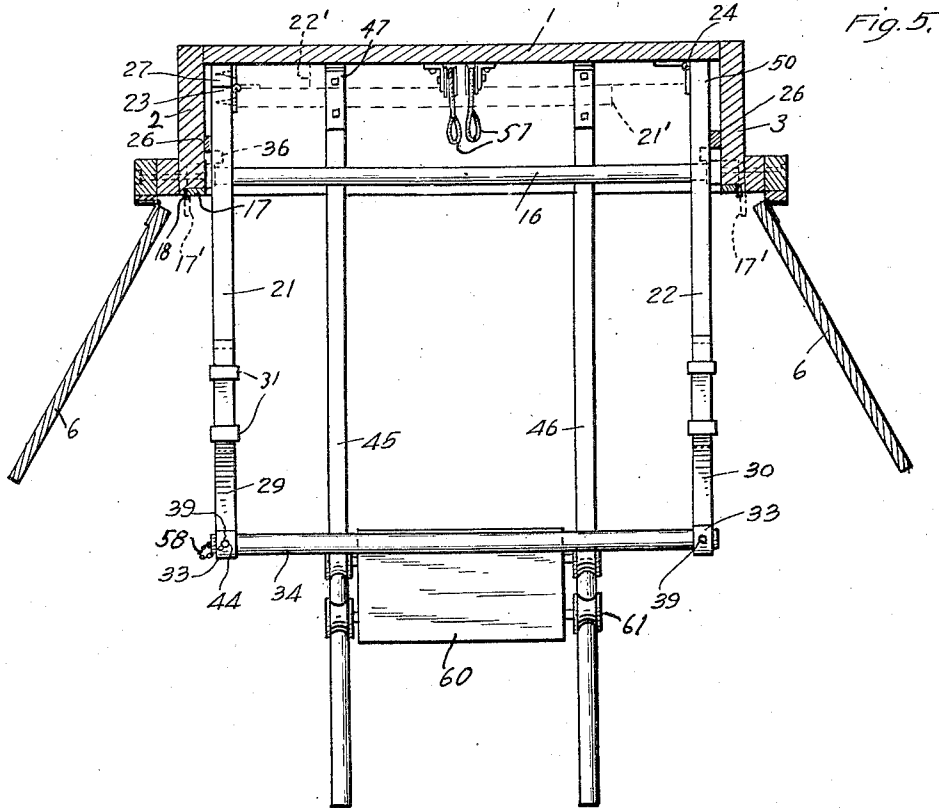
1,646,818

H. A. HOLLAND

PHYSICAL EXERCISING APPARATUS

Filed July 1, 1926

3 Sheets-Sheet 3



INVENTOR.
Harry A. Holland,
BY Arthur P. Knight and
Alfred W. Knight
ATTORNEY.

UNITED STATES PATENT OFFICE.

HARRY A. HOLLAND, OF LOS ANGELES, CALIFORNIA.

PHYSICAL-EXERCISING APPARATUS.

Application filed July 1, 1926. Serial No. 119,365.

This invention relates to apparatus for use in physical exercise and the principal object of the invention is to provide an apparatus which is compact and which may be used for a great variety of forms of physical exercise. A further object of the invention is to provide an apparatus comprising a large number of devices which may be folded or otherwise moved into an out-of-the-way position, or which may be moved into different positions and utilized in different manners in varied forms of exercise.

The apparatus of my invention comprises essentially a support preferably formed as a cabinet or casing and a plurality of exercising elements or devices mounted or placed thereon or therein in such manner that they may be moved into retracted or compact position on or within the support or cabinet so as to require minimum space when not in use, or may be moved into different positions with respect to the support or cabinet and to each other for exercising purposes as hereinafter described.

The accompanying drawings illustrate apparatus according to my invention and referring thereto:

Fig. 1 is a front elevation of a physical exercising apparatus with the front doors of the cabinet opened.

Fig. 2 is a vertical section on line 2—2 in Fig. 1, showing certain of the parts in position for use.

Fig. 3 is a view similar to Fig. 2 showing the position of the various elements or devices within the cabinet when not in use.

Fig. 4 is a plan view of the low parallel bars of the apparatus, showing the manner of placing a fabric covering thereon as hereinafter described.

Fig. 5 is a horizontal section on line 5—5 in Fig. 1 showing parts of the apparatus in position for use.

Fig. 6 is an inside view of the central portion of the front door of the cabinet.

Fig. 7 is an outside view of the same.

Fig. 8 is a detailed sectional view of one of the lifting weights.

Fig. 9 shows the use of the lifting weights to form a bar-bell.

The apparatus comprises a supporting means preferably formed as a cabinet or casing having a rear member or back 1, side members 2 and 3, bottom 4, and top 5. When all of the elements of the apparatus are in

position within the cabinet, that is when not in use, the front of such cabinet is closed by means of upper doors 6 and lower doors 7, hingedly mounted at the sides of the cabinet and by means of a removable flat member or door portion 8 (see Fig. 3). Said removable door portion is rabbeted at its upper and lower edges as indicated at 9 and 10 to engage similarly rabbeted portions on the doors 6 and 7 and is held in position by latch means 12 at its sides and by means of arms 13 which are mounted on the inside of said door portion adjacent the lower edge thereof and project below the same so as to extend inside the lower doors 7.

At the front edge of each side wall 2 and 3 are provided a plurality of vertically spaced opposing notches or recesses 15 adapted to receive the ends of horizontal exercising bars or rack bars 16, said recesses and the ends of bars 16 being preferably square or of other non-circular shape, or being otherwise formed so as to prevent turning of said bars in said recesses. A retaining strip 17 is hingedly mounted as at 18 at the front edge of each side wall 2 and 3 and extends over the notches or recesses 15 so as to hold the bars 16 in whatever notches they may be placed. Suitable means such as hooks 19 may be provided for releasably holding said retaining strips in retaining position. By releasing said hooks however said strips may be swung outwardly to the position indicated in dotted lines at 17' in Fig. 5, so as to permit the bars 16 to be withdrawn from notches 15 and thus permit said bars to be moved into any desired notches for adjustment of the height thereof. Any desired number of the rack bars 16 may be provided, but I prefer to provide at least two of such bars.

A pair of supporting arms 21 and 22 are hingedly mounted as at 23 and 24 at the respective sides of the supporting means or casing near the top thereof, the hinges 23 and 24 being off-set as shown, so that arm 22 folds inwardly directly against the back wall 1 of the casing as indicated in dotted lines at 22' in Fig. 5, and the arm 21 rests, when turned inwardly, against and in front of the arm 22 as indicated in dotted lines at 21'. The arms 21 and 22 when turned outwardly for use may be brought against the side walls of the casing as stops but I prefer to provide stop means 26 at these

points. The arms 21 and 22 are so placed that when one of the horizontal bars 16 is in place in the upper-most recesses 15 it serves as a support for said supporting arms 21 and 22 as shown in Fig. 2. Said supporting arms 21 and 22 are further supported by means of the hinges 23 and 24 and also by virtue of the fact that the inner end of arm 21 rests against block 27 and the inner end of arm 22 rests against the rear wall 1 of the casing. Supporting brackets 29 and 30 are removably mounted at the outer ends of arms 21 and 22, for example by means of rings 31 secured to said brackets and adapted to slide over the rounded end portions of arms 21 and 22. Blocks 32 are also secured to brackets 29 and 30 and extend within rings 31, said blocks having their lower faces shaped to conform to the upper faces of arms 21 and 22 so as to provide a firm fit thereon. The outer portions of brackets 29 and 30 are provided with sleeve portions 33 adapted to receive a horizontal turning bar as indicated at 34 in Fig. 5. Horizontal turning bar 34 is provided with a suitable pin bolt 44 at one end attached by a small chain 58 to bar 34, which may be plugged into hole 39 in the sleeve portion of one of the brackets 29 or 30, so as to make it fast and prevent the bar from turning in the sleeve or loop of brackets 29 and 30.

The removable wall portion 8 is adapted to be placed in the horizontal position shown in Fig. 2 so as to serve as a punching bag platform. For this purpose two supporting strips 36 may be mounted inside of side walls 2 and 3 and may be provided with a plurality of horizontal openings 37 extending in a direction from front to rear of the apparatus so as to receive the ends of the arms 13 when the member 8 is placed in the position shown in Fig. 2, said arms being of such shape and size as to fit snugly in openings 37. There are preferably a plurality of openings 37 provided in each supporting strip 36 so as to provide for adjustment of the member 8 to different heights. The member 8 is further supported by means of adjusting bolts 38, whose upper and lower ends are reversely threaded so as to engage respectively in threaded openings 39 in sleeve portions 33 and in threaded recesses in fittings 41 mounted on the member 8. The intermediate portion of each adjusting bolt 38 is suitably formed so as to permit turning thereof by hand in mounting the member 8 in the position shown. In order to provide for adjusting of the member 8 to different heights when used as a punching bag platform a number of adjusting bolts 38 of different lengths may be provided so that bolts of different lengths may be used depending upon which of the openings 37 are used for supporting the arms 13. A suitable fitting 42 is mounted

on the bottom of member 8, which is the inside of said member when in position as a part of the door of the cabinet, for receiving the supporting cord of a punching bag indicated at 43.

Two parallel bars 45 and 46 are hingedly mounted on the rear wall 1 of the cabinet so as to swing in vertical planes either into horizontal position in front of the cabinet as shown in Fig. 2 or in vertical position within the cabinet and against the rear wall of the same as shown in Fig. 3. Said parallel bars are so placed that when one of the horizontal exercising bars 16 is in position within a suitable pair of notches or recesses 15 it serves as a support for said parallel bars, which rest upon it as at 48. Said parallel bars are further supported by the hinges 47 and by virtue of the fact that the inner ends of said bars rest against the rear wall of the cabinet when the bars are in horizontal position. When said bars are placed in horizontal position they may be used as low parallel bars upon which a number of beneficial exercises may be performed. Said bars are preferably rounded at their outer ends and top edges as shown for this purpose. Suitable means such as hooks 80 and eyes 81 may be provided for holding bars 45 and 46 in vertical or folded position.

Two lifting weights 50 of suitable shape and size and formed preferably of metal such as iron or steel are also placed within the cabinet and normally rest upon the bottom 4 thereof and in the two rear corners of the cabinet as shown in Fig. 5. Cords 51 are suitably secured to weights 50 and extend up over pulleys 52 which are so positioned that the weights 50, when lifted off of the bottom of the cabinet, hang in the corners thereof and rest lightly against the rear wall 1 and side walls 2 and 3 which hence serve as guides for said weights. After passing through pulleys 52 the cords 51 extend downwardly and are connected by releasable connecting means such as hooks and eyes 53 to other cords 54 which pass through pulleys 55 and 56 and are provided at their ends with loops or handles 57 so as to permit grasping of said cords in the hands for lifting up of the weights. A particularly advantageous method of lifting the weights is provided for by means of a small travelling platform or member 60 which is provided with wheels 61 travelling upon the parallel bars 45 and 46 aforesaid as rails. By sitting upon the travelling platform 60, resting the feet against bar 48, and alternately pulling and releasing cords 54 at the loops or handles 57, the weights 50 may be raised and lowered while at the same time the travelling platform 60 slides back and forth upon the parallel bars 45 and 46 in much the same manner as in the rowing

machines with which many gymnasiums are provided. In fact this exercise may be made to approximate very closely that obtained by actual rowing.

Another round bar 63 may be provided whose ends are also round and are preferably provided with metal caps 64 adapted to fit within any suitable pair of opposing recesses 15 so as to permit turning of said bar 63. The cords 54 may be disconnected from cords 51 by means of hook and eye means 53 and the cords 51 may then be connected to hooks 65 on bar 63. When so connected bar 63 may be grasped in the hands and turned in either direction so as to wrap the cords 51 around said bar and lift weights 50, thus providing a wrist and forearm exercise. It will be seen that the bar 63 may be mounted at various heights so as to bring it at the most convenient level for grasping in the hands, depending upon the height of the user.

The weights 50 are preferably detachably secured to cord 51. For this purpose each of said weights may be provided as shown in Fig. 8, with a vertical central opening having a smaller portion 67 at the upper end and a larger portion 68 at the lower end, between which is provided shoulder 70. The cords 51 may be connected to connecting members 66 which extend through the smaller portions 67 of the openings in said weights and project into the enlarged portions 68 in the lower portions of said weights. The lower ends of connecting members 66 are provided with pivoted catch members 69 which may be swung at right angles to said connecting members as shown in Fig. 8 so as to engage shoulders 70 and thus cause said connecting members to lift the weights, or may be swung into position lengthwise of the connecting members 66 so as to permit said connecting members to be withdrawn through the openings 67 of said weights. The recesses 68 may be internally threaded so as to fit the threaded ends of a bar or pipe 71 of suitable size as shown in Fig. 9 to form a bar-bell.

A fabric cover 72 may be placed over the parallel bars 45 and 46 if desired, so that when the horizontal turning bar 34 is in position said fabric cover will serve as a protection in case of a fall from the bar. Fabric cover 72 when placed over parallel bars 45 and 46 will also serve as a bed or table on which the operators body can be reposed while operating some of the pulling devices with his feet and legs.

The rear wall 1 of the cabinet may also be utilized for hanging or otherwise mounting any desired exercising implements or apparatus such as dumb-bells 73, indian clubs 74, and elastic exerciser 75. Any loose attachments or connecting devices, such as turning bar 34, adjusting bolts 38, pipe 71,

cover 72, etc., may also be placed or mounted in any suitable manner within the cabinet when not in use.

The cabinet or casing may be built against the wall of a room, or may be "built-in" so that the front thereof is flush with the wall. Or the casing may be mounted on rollers so as to permit the same to be moved to any desired position, or it may be mounted in a closet or other space so as to swing outwardly into position into a room to supplant and act as a door (closet or otherwise) in which it is to be used; in much the same way as disappearing beds are commonly mounted. Furthermore in some cases the various exercising elements or devices may be mounted on fixed supporting means which do not form an actual casing. For example a portion of the wall of a room may serve as the rear wall or supporting member of the apparatus and lateral supporting members or walls may be provided in front of the wall of the room and may be so formed as to serve the same functions as the side walls of the above described cabinet.

I claim:

1. A physical exercising apparatus comprising a casing having an opening at its front and means for closing said opening, two supporting arms hingedly mounted within said casing and adjacent the respective sides thereof so as to swing horizontally into position within said casing or into position to project out through said opening, a turning bar, and means for mounting said turning bar on the outer ends of said supporting arms when in said latter position.

2. A physical exercising apparatus comprising a casing having an opening at its front and means for closing said opening, a flat member removably mounted at the front of said casing so as to form part of said closing means, two supporting arms hingedly mounted within said casing and adjacent the respective sides thereof so as to swing horizontally into position within the casing or into position to project out through said opening, means for mounting said flat member in horizontal position in front of said casing, said mounting means comprising means for securing the inner end of said flat member when in said horizontal position to the sides of said casing and means for securing said flat member to the outer ends of said supporting arms when said arms are in projecting position, said flat member being provided on its underside when in said horizontal position with means for supporting a punching bag.

3. A physical exercising apparatus as set forth in claim 2, said mounting means being adapted to mount said flat member at a plurality of different heights so as to permit vertical adjustment thereof.

4. A physical exercising apparatus com-

prising a casing having an opening at its front and also having two side walls, a plurality of vertically spaced and opposing recesses in the interior of each of said side walls and at the forward edge thereof, a bar whose ends are adapted to fit within opposing recesses, and means mounted on the forward edges of said side walls and movable into and out of position to close said recesses and retain said bar in position therein.

5. An apparatus as set forth in claim 4, said recesses and the ends of said bar being of non-circular cross-section so as to prevent turning of said bar when inserted in said recesses.

6. An apparatus as set forth in claim 4 and comprising in addition a pair of supporting arms hingedly mounted within said casing so as to swing horizontally into position within the casing or into position to project out through said opening, said recesses in the side walls including a pair of opposing recesses so positioned that when said bar is inserted therein it serves to support said supporting arms when in said projecting position.

7. An apparatus as set forth in claim 4 and comprising in addition two bars hingedly mounted within said casing so as to swing vertically into position within said casing or into position to project horizontally through said opening and parallel to one another, said recesses in the side walls of said casing including a pair of opposing recesses so positioned that when said bar is placed in said pair of opposing recesses it serves to support said hingedly mounted bars when the latter are in said horizontal position.

8. A physical exercising apparatus comprising a casing having a rear wall and an opening at its front, a pair of bars hingedly mounted on the rear wall of said casing so as to swing vertically upwardly into position within said casing or downwardly into position to project horizontally through said opening and parallel to one another, and means mounted on said casing for supporting said bars when in said latter position, said bars being hinged to the rear wall at the upper corners of their inner ends when said bars are in said latter position, and said inner ends of said bars abutting against the rear wall when in said latter position so as to limit the downward movement of said bars.

9. An apparatus as set forth in claim 8 and comprising in addition a travelling platform having wheels engaging said bars when in said horizontal position and slidable horizontally back and forth thereon, a pair of lifting weights mounted to slide vertically within said casing, and cord means connected to said lifting weights and extending over pulleys and having their ends presented in

position adjacent the inner ends of said bars when in said horizontal position.

10. In a physical exercising apparatus, fixed supporting means, a pair of lifting weights disposed adjacent said supporting means and each having an opening extending therethrough, said opening comprising a portion of smaller diameter and a portion of larger diameter so as to present a shoulder between said portions of said opening, upper and lower pulleys mounted on said fixed supporting means and above said weights, two cords extending through said pulleys, means for detachably connecting each of said cords to one of said lifting weights, each of said connecting means comprising a connecting member attached to the corresponding cord and extending through the smaller portion of said opening in the corresponding lifting weight, and a catch member mounted at the other end of said connecting member and movable into position to engage said shoulder and prevent withdrawal of said connecting member through said opening or into position of non-engagement with said shoulder so as to permit the withdrawal of said connecting member, said larger portion of the opening in each weight being threaded to receive a threaded bar so as to provide a bar dumb-bell.

11. A physical exercising apparatus comprising a casing having two side walls and an opening at its front between said side walls, two pulleys mounted within said casing, two lifting weights mounted to slide vertically within said casing and below the respective pulleys, a plurality of vertically spaced and opposing recesses in the interior of each of said side walls at the forward edge thereof and below said pulleys, a bar whose ends are adapted to fit rotatably within any pair of opposing recesses, means mounted on the forward edges of said side walls and movable into and out of position to close said recesses and retain said bar in position therein, and cords connected at one end to said lifting weights and extending over said pulleys and being removably connected at their other ends to said bar.

12. A physical exercising apparatus comprising supporting means, two arms hingedly mounted on said supporting means at the same level but spaced apart transversely of said supporting means so as to swing horizontally into folded position adjacent said supporting means or into position to project outwardly from said supporting means and parallel to one another, a turning bar, and means for mounting said turning bar on the outer ends of said arms when in said latter position.

13. A physical exercising apparatus comprising supporting means, two arms hingedly mounted on said supporting means at the same level but spaced apart transversely of

said supporting means so as to swing horizontally into folded position adjacent said supporting means or into position to project outwardly from said supporting means, a flat member, and means for mounting said flat member in horizontal position in front of said supporting means, said mounting means comprising means for securing the inner end of said flat member when in said horizontal position to said supporting means and also comprising means for securing said flat member to the outer ends of said supporting arms when said arms are in projecting position, said flat member being provided on its underside when in said horizontal position with means for supporting a punching bag.

14. In a physical exercising apparatus, two vertically extending side members spaced from one another, a plurality of vertically spaced and opposing recesses in said side members, said opposing recesses opening toward one another and also opening outwardly so as to permit insertion of a bar therein, a bar whose ends are adapted to fit within opposing recesses and means mounted on said side members and movable into and out of position to close the outward openings of said recesses and retain said bar in position therein.

In testimony whereof I have hereunto subscribed my name this 25th day of June 1926.

HARRY A. HOLLAND.