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2,817,387

WALKING FRAME

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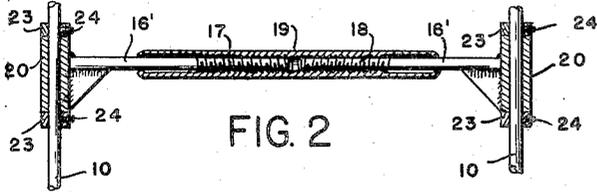


FIG. 2

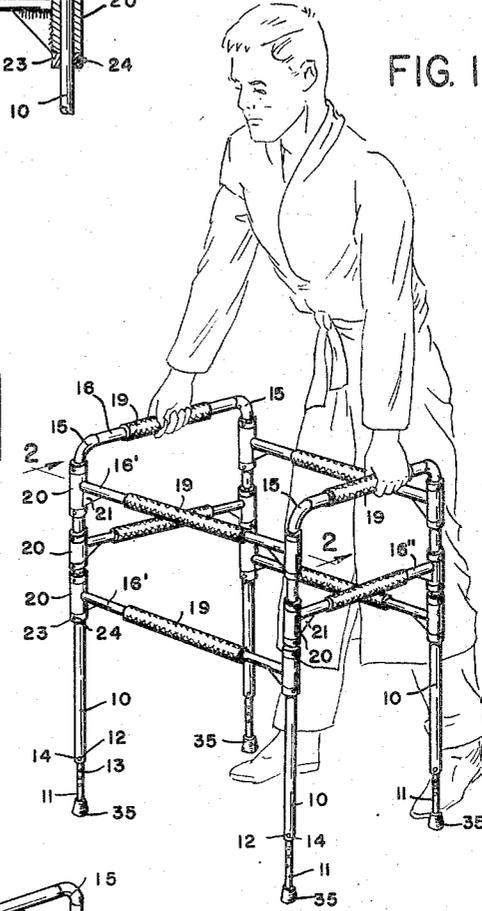


FIG. 1

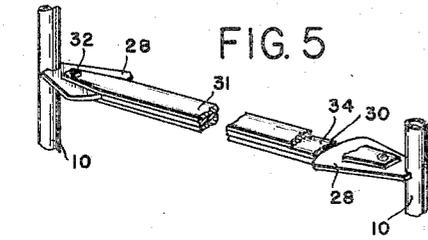


FIG. 5

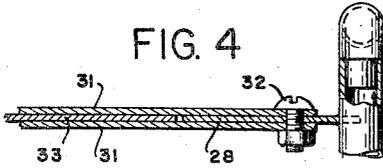


FIG. 4

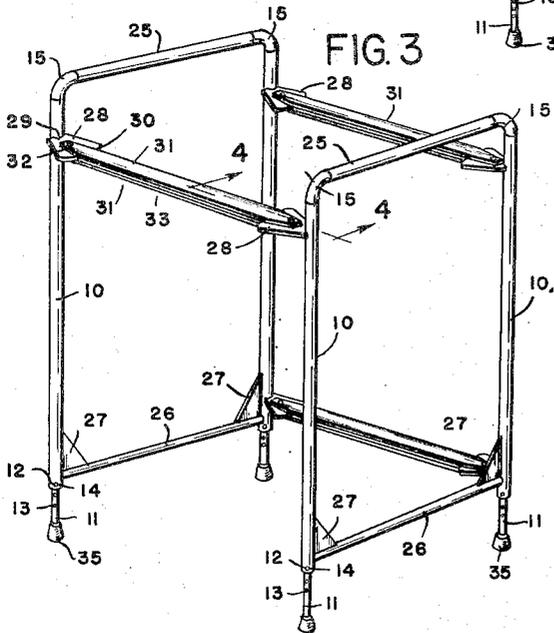


FIG. 3

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2,817,387

WALKING FRAME

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2 Claims. (Cl. 155—22)

This invention relates to appliances employed primarily in the exercise and training of the muscles of the human anatomy and particularly where usefulness at least to a degree has been lost by disease, accident or non-use, and which are intended to assist in the restoration of lost functions in persons of all ages.

The invention relates particularly to a walking frame for use by an invalid or other persons needing assistance in training or retraining of the foot and leg muscles and other related portions of the body in a manner to enable such person to walk, run, and otherwise use the feet, legs and associated parts of the body.

Numerous devices have been prescribed and employed in an effort to teach normal usage of the lower limbs with varying degrees of success. However, equipment of this kind has been complicated, expensive, cumbersome, heavy, difficult to use, not flexible or adjustable to size, and otherwise has fallen short of what was needed or desired.

It is an object of the invention to overcome the difficulties enumerated and to provide a relatively simple walking frame which is light in weight, easy to use, moderately priced, and possesses flexibility sufficient to aid a person learning to walk and to gain or regain possession of the functions of the feet, legs and coordinated portions of the body.

Another object of the invention is to provide a walking frame of adjustable height, width, and length, in order to accommodate different age groups, as well as differences in height, width or girth.

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

Fig. 1 is a perspective illustrating one application of the invention and the use of the same.

Fig. 2, a fragmentary detail partly in section illustrating a portion of the mounting and adjusting mechanism of the structure of Fig. 1;

Fig. 3, a perspective of a modified type of structure;

Fig. 4, a fragmentary detail on the line 4—4 of Fig. 3; and

Fig. 5, fragmentary detail of one of the pivotal connections.

Briefly stated, the invention comprises a pair of substantially rectangular side frames, the upper opposed portions of which are adapted to be gripped by the user, and with connections between such side frames for maintaining them in parallel relation at all times but permitting pivotal movement so that alternately they may be moved forward during walking.

The invention further contemplates a walker having side frames, the height and length and width of which can be easily adjusted, as well as a walker in which the user can stand and walk beside the shorter or larger dimension when using the same.

With continued reference to the drawing, the invalid's walking frame of the present invention comprises a substantially rectangular structure with corners connected by

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pivots so that one side of the rectangle can be moved relative to the other.

The rectangular frame includes four tubular corner posts 10 in the lower ends of which extensions 11 are adjustably received. The posts 10 are provided each with a transverse opening 12, and an extension 11 is provided with longitudinally spaced transverse openings 13 so that an opening 12 and one of the openings 13 may be disposed in alignment and the posts secured in fixed position by means of a locking pin 14.

A pair of the posts 10 receive in their upper ends a pair of elbows 15 between which a pair of tubes 16 with integral right and left hand threads 17 and 18 are engaged by the complementary threads on a turnbuckle 19. The pair of posts and the connection therebetween provide an inverted substantially U-shaped end frame. Two of such end frames are provided, one of which is adapted to be gripped by each hand so that between them they provide a support for the body but with such supports flexibly connected in a manner to permit them to swivel or move one relative to the other. In order to accomplish this purpose, a pair of sleeves 20 are mounted one about each of the corresponding corner posts, such sleeves having tubes 16' welded thereto and reinforced by brackets 21. The tubes 16' are identical with tubes 16 except for length and are connected by means of turnbuckles 19.

A pair of opposite sleeves 20, tubes 16' and turnbuckle 19 form a side bar, two of which are used to connect the inverted U-shaped end frames. An end bar of similar character may be disposed intermediate the ends of the legs of the U-shaped end frames, such bar including a turnbuckle 19, a pair of tubes 16'' and a sleeve 20 with a brace 21.

The sleeves 20 are adapted to be secured in fixed relation on the end posts 10 by means of collars 23 maintained in fixed position by means of set screws 24. Thus a frame is provided having a pair of substantially U-shaped end frames with a top bar, a bar spaced from the top, and a pair of side bars, with all of the bars except the post 10 disposed in horizontal relation for supporting the weight of a person using the frame.

As shown in Fig. 1, an individual may grasp the top of an end frame in each hand and rest a substantial portion of the body weight upon the frame but can then move either end frame ahead of the other due to the pivotal connections.

The height of the frame can be adjusted for individuals of different heights. Due to the fact that the ends and sides of the frame are of different dimensions, the frame can be used by a person standing at the side or at the end for persons of different width or breadth, and the horizontal dimensions of the frame can be changed by mere rotation of the turnbuckles 19.

Instead of the frame of Fig. 1, a frame such as that disclosed in Fig. 3 may be employed. This frame comprises four posts 10 and four elbows 15 with a pair of such elbows at each end of the frame connected by a tube 25, and with a transverse tubular brace 26 at the lower end of the end frame. If desired, a pair of brackets 27 may be added for connecting the brace 26 to the post 10 to add rigidity to the end frame.

A pair of the end frames are secured in spaced relation by means of three connectors which pivot. These connectors include quadrants 28 secured by welds 29 or in any desired fashion to the end posts such plates 28 having curved outer end surfaces. A pair of such plates 28 are connected by upper and lower identical strips 31 having their ends connected by pivot bolts 32 with the plates 28 and such strips 31 being held apart the thickness of the plate 28 by means of spacers 33, with upper and lower plates, welded or otherwise fastened together. The spacer

33 has curved ends 34 corresponding to the curvature 30 of the plate 28 as disclosed in Fig. 5. If desired, the extensions 11 may be provided with rubber tips 35.

It will be obvious to those skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore the invention is not limited by that which is illustrated in the drawing and described in the specification, but only as indicated in the appended claims.

What is claimed is:

1. A device for use to assist in walking, comprising a pair of opposed substantially rigid side frames each having a supporting bar near its upper portion, connecting means pivotally securing said side frames together in substantially parallel relation but allowing variation in angularity between said side frames and said connecting means whereby said side frames can be used alternately one as a stationary support while the other is swung lengthwise of the first in a manner similar to that of a person moving first one foot then the other as in walking, said connecting means including means to positively maintain said side

frames in substantially parallel relation as said side frames pivot relative to said connecting means.

2. The structure of claim 1 in which the spacing of the side frames is adjustable by means of turnbuckles.

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