

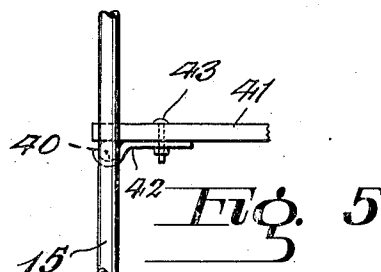
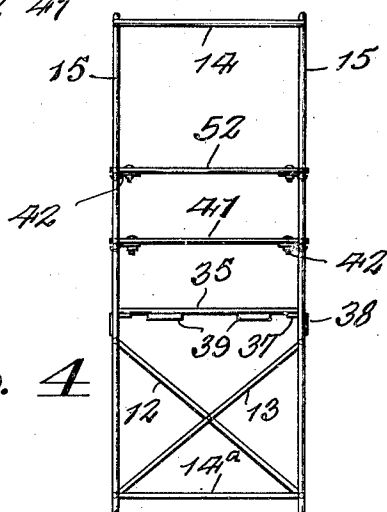
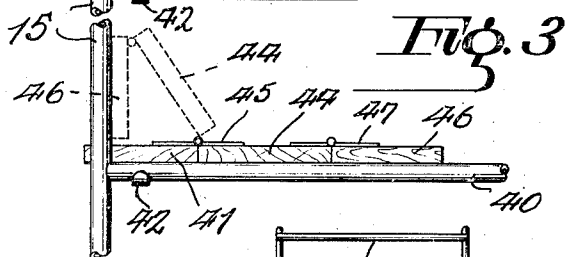
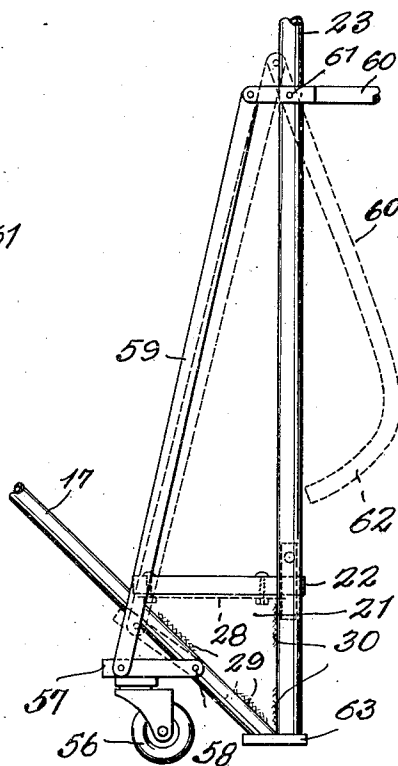
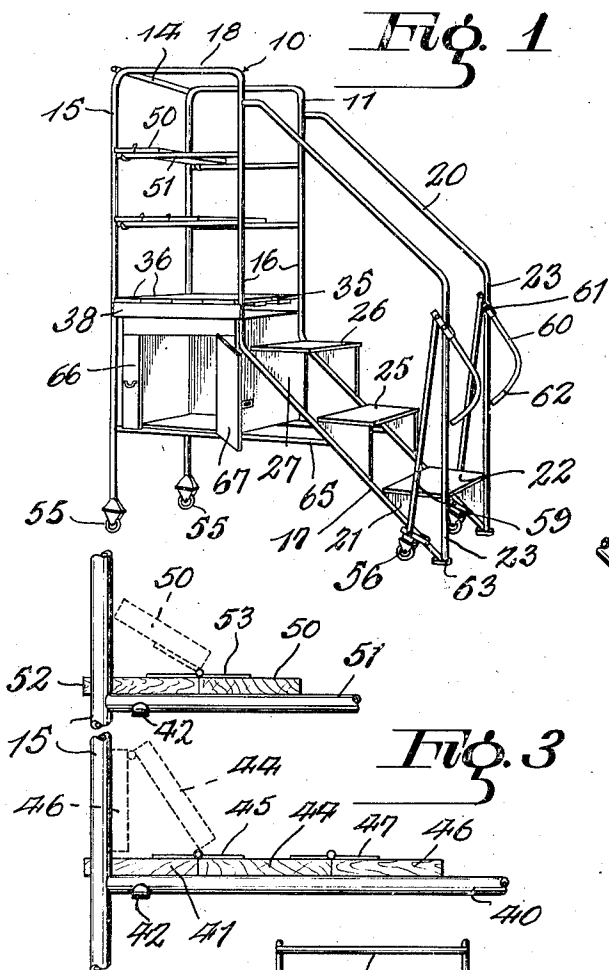
Aug. 23, 1949.

R. W. FIEROH

2,479,736

STAIR STAND

Filed Dec. 6, 1946



INVENTOR.
Robert W. Fieroh,
BY
Christian R. Nielsen
ATTORNEY

UNITED STATES PATENT OFFICE

2,479,736

STAIR STAND

Robert W. Fieroh, Chicago, Ill.

Application December 6, 1946, Serial No. 714,603

1 Claim. (Cl. 228—5)

1

This invention relates to stair stands. An object of the invention is the provision of a stair stand in which a metal frame-work mounted on wheels has a working platform between the top and bottom of the frame with a series of steps leading to the platform, the upper portion of the frame work forming a protective partial enclosure for the workman, the wheels at the front of the frame being maintained in contact with the floor when operating handles are horizontally disposed for moving the stand over said floor, said handles being movable to an inactive position for raising the first wheels so that feet on said stand will be lowered for engagement with the floor surface.

Another object of the invention is the provision of a stair stand which may be employed variously in buildings where an elevated working platform is desired, said stand being supported during transportation by front and rear pairs of wheels with one pair of wheels being so mounted that said pair may be raised above a floor by levers in the form of propulsion handles when feet on the associated end of the stand are lowered into engagement with the floor for retaining the stand against movement along the floor.

A further object of the invention is the provision of stair stand in which a metal frame-work mounted on wheels has a working platform intermediate the top and bottom of said frame-work, a series of steps leading to the platform with foldable steps forming treads of progressively decreasing widths rising above the platform so that the operator, when desired, may extend his field of operations.

The invention consists in the novel construction, arrangement and combinations of parts hereinafter more particularly described and claimed.

In the drawings:

Figure 1 is a view in perspective showing my stair stand.

Figure 2 is a fragmentary enlarged side view showing the means for raising or lowering a pair of supporting rollers.

Figure 3 is a fragmentary enlarged side view of auxiliary steps.

Figure 4 is a rear view in elevation of the stand, and

Figure 5 is a fragmentary enlarged end view showing means for retaining the auxiliary steps in position.

Referring now more particularly to the drawings, 10 and 11 designate a pair of parallel vertically disposed side frames connected together at the rear ends thereof by diagonally disposed

2

brace bars 12 and 13 adjacent the lower ends thereof and horizontal bars 14 and 14-a. The front portions of the frames at the entrance to the stand are connected together by steps in a manner which will be presently explained.

Each side frame includes a vertical rod 15, a shorter vertical rod 16 which terminates in an inclined rod 17 and a bridging portion 18 connecting the upper ends of the rods 15 and 16. It will be noted that each side frame is formed by bending a single piece of tubing to provide the various supporting elements. The frames also include hand rails 20 which have the upper ends thereof welded to the vertical rods 16 while the lower ends are secured to supports 21 for the bottom tread 22 of steps leading to the stand. The upper portions of the rails are inclined and parallel to the rods 17 while the lower portion 23 is vertically inclined.

The stairs which form the entrance to the stand includes a plurality of treads 25, 26 and the tread 22. The treads 25 and 26 are rigidly connected to the rods 17 by triangularly shaped plates 27 which are welded to said rods. The treads are bolted to horizontal flanges 28 on the upper ends of the plates 21 and 27. The plates 21 are not only welded at 29 to the rods 17 but are welded at 30 to the vertical portions 23 of the rails 20.

A platform 35 is spaced above the level of the top tread 26 and forms the main working support for the operator. The platform consists of a plurality of boards 36 disposed in a horizontal plane and bolted to horizontal flanges 37 of angle irons 38 which have the opposite ends thereof welded to the spaced pairs of vertical rods 15 and 16 of the side frames 10 and 11 (Fig. 4). Brace bars 39 connect the boards 36 together.

In Figure 3 are shown auxiliary steps which may be folded to inoperative positions when not desired. These steps may be employed as tables for supporting tools or materials required for some particular type of work when not used for elevating the operator.

A rod 40 has its ends welded to the pair of vertical rods 15 and 16 of each side frame. A board 41 is secured at its ends to the rods 40 by means of clips 42 bolted at 43 to the board. A tread 44 has one edge hinged at 45 to the inner edge of the board 41, while a tread 46 has its inner edge hinged at 47 to the free edge of the tread 44. By this construction, the treads 44 and 46 may be folded to the dotted line positions shown in Figure 3 when not in use.

A second auxiliary step is shown at 50 in Figure 3. A rod 51 in parallel relation with the rod

3

40 has its ends welded to the vertical rods 15 and 16 in each side frame to provide a support for a board 52 attached to the rod 51 in the manner shown in Figure 5, by the clips 42. The tread 50 is hinged at 53 to the inner edge of the board 52 and may be moved to the dotted line position as shown in Figure 3 when not in use.

The rear portion of the stand is supported by rollers 55 having rigid connections with the bottoms of the rods 15. These rollers cooperate with rollers 56 at the front of the stand for providing wheeled transportation for the stand.

Each roller 56 has a swiveled connection with a lever 57 at each side of the stand with the lever having one end pivoted at 58 on the lower end of the adjacently disposed inclined rod 17 (Fig. 2). A link 59 pivotally connects the other end of each lever with an operating rod 60 pivoted at 61 to each vertical portion 23 of the rails 20. Each rod 60 has a hand grip 62 which when elevated by the operator will force the rollers below the level of the rubber covered feet 63 on the lower ends of the rods 23 and 17. However, when the hand grips are lowered (shown in dotted lines) the rollers 56 will be raised from the floor and the feet 63 will retain the stand in position.

A brace bar 65 is connected between the lower end of each vertical bar and the inclined rod 17 of each side frame. The spaced parallel brace bars may be employed to support a storage box 66 which has a door 67.

The stand is moved from place to place on the rollers 55 and 56 when the rods 60 are disposed horizontally and when the hand grips 62 are used to propel the stand.

When the stand is in position of rest with the feet 63 engaging the floor, the auxiliary steps may be used, if desired. At this time they are placed in the positions shown in Figures 1 and 3.

4

Although a preferred and practical embodiment of the invention is disclosed herein, this is but an exemplary showing, and it is understood that various modifications may be made within the scope of the appended claim.

I claim:

A means for providing portability to a wheeled stand comprising a stair frame structure consisting of hand rails at the upper sides and a rod below each hand rail for support of stair treads, said hand rails terminating in vertical portions for support of the wheeled stand at one end, at times, a lever pivotally mounted at one end to each of the rods, a swiveled roller mounted upon the other end of each lever, a link pivotally connected to the other end of said levers and extended upwardly therefrom, a hand lever pivotally mounted upon each of the vertical portions of the hand rails and having an end pivotally connected to respective links whereby upon upward movement of said hand levers said swiveled rollers will be presented to a supporting surface and elevate said vertical portions of the hand rails thereabove.

ROBERT W. FIEROH.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,361,828	Clowes	Dec. 14, 1920
1,439,389	Willett	Dec. 19, 1922
2,207,445	Seidner	July 9, 1940
2,362,170	Swaisgood	Nov. 7, 1944

FOREIGN PATENTS

Number	Country	Date
522,207	Germany	Sept. 12, 1929