

Jan. 6, 1953

W. J. TILTON

2,624,590

PORTABLE WORKSTAND

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2 SHEETS—SHEET 1

Fig. 1.

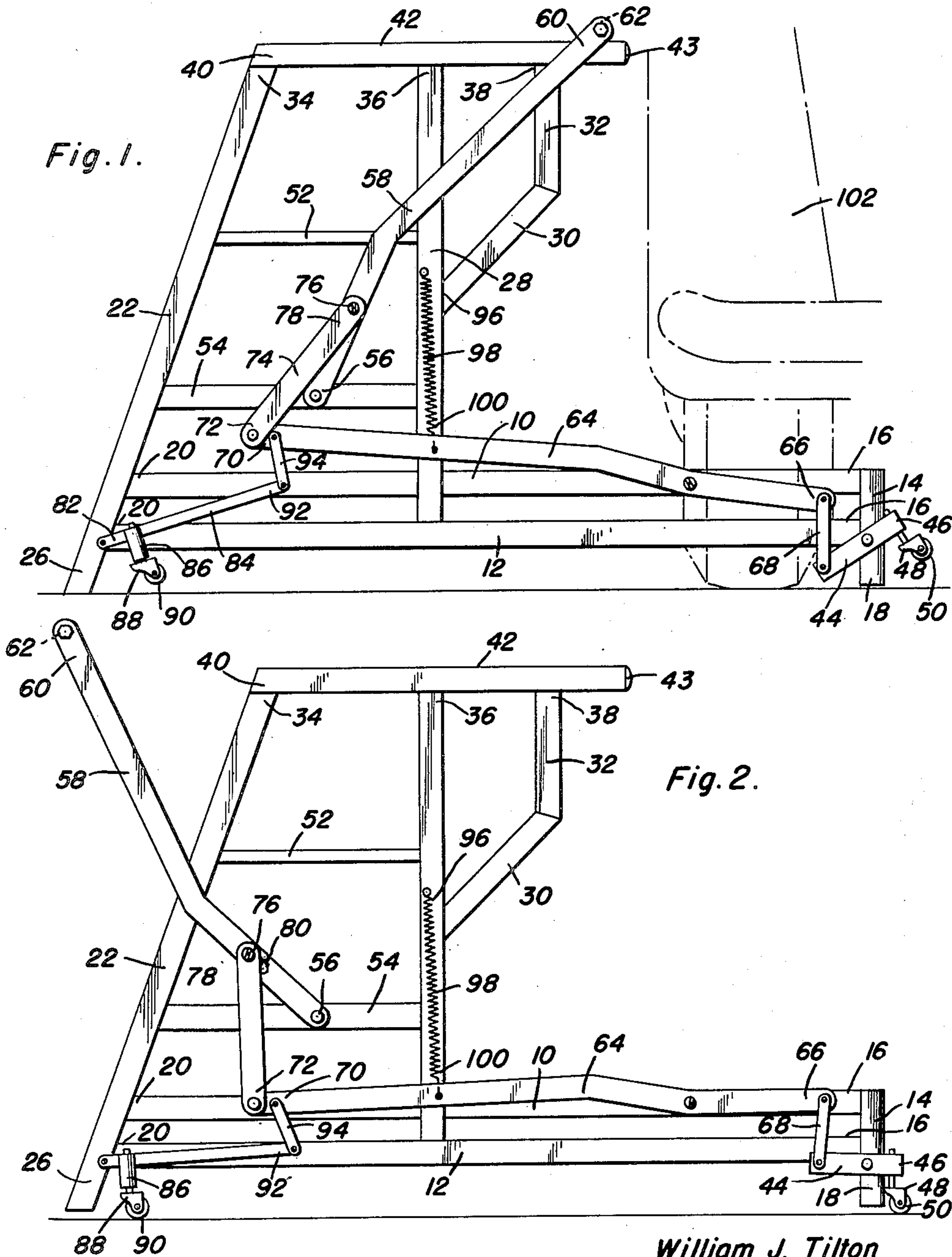


Fig. 2.

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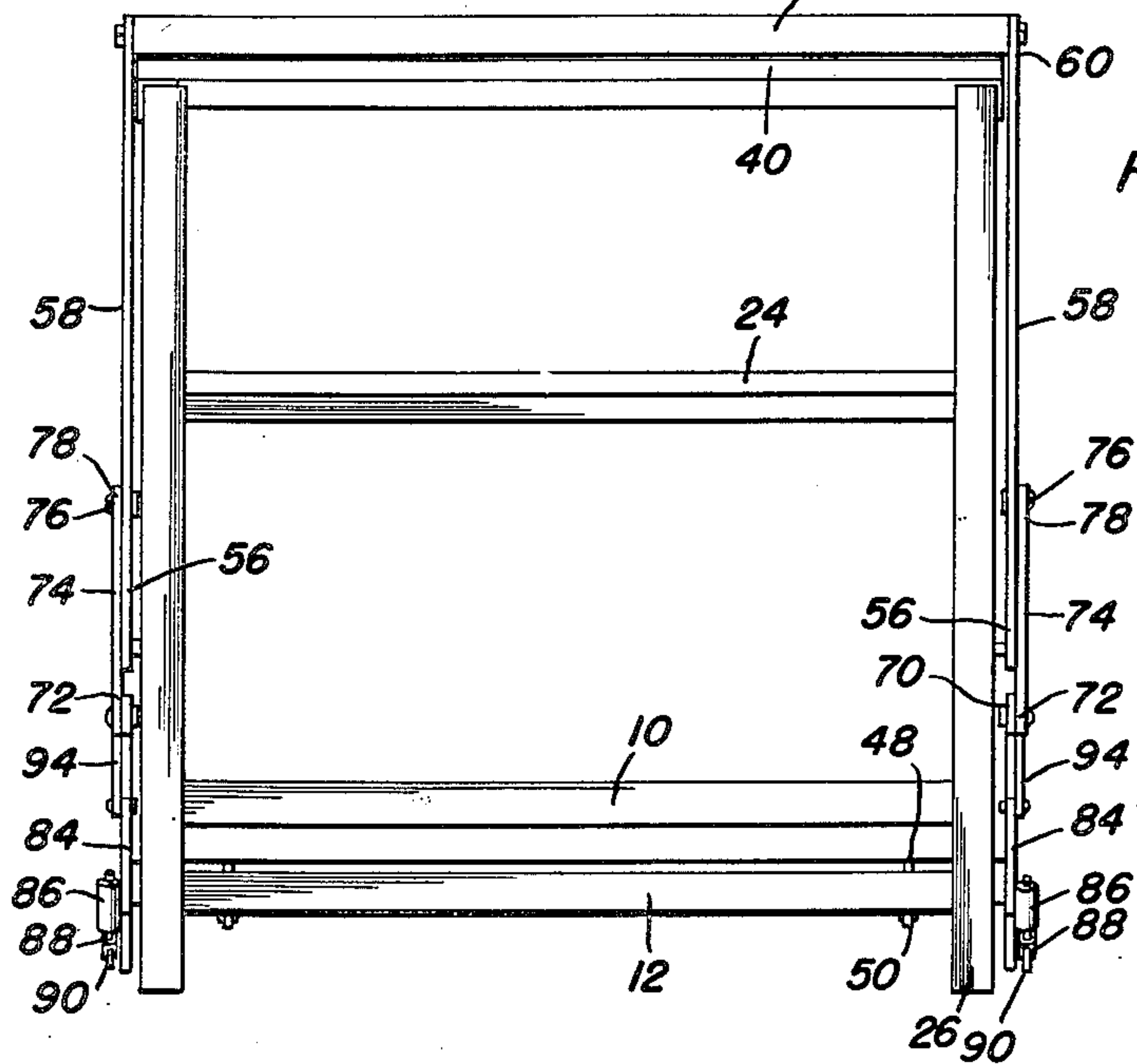
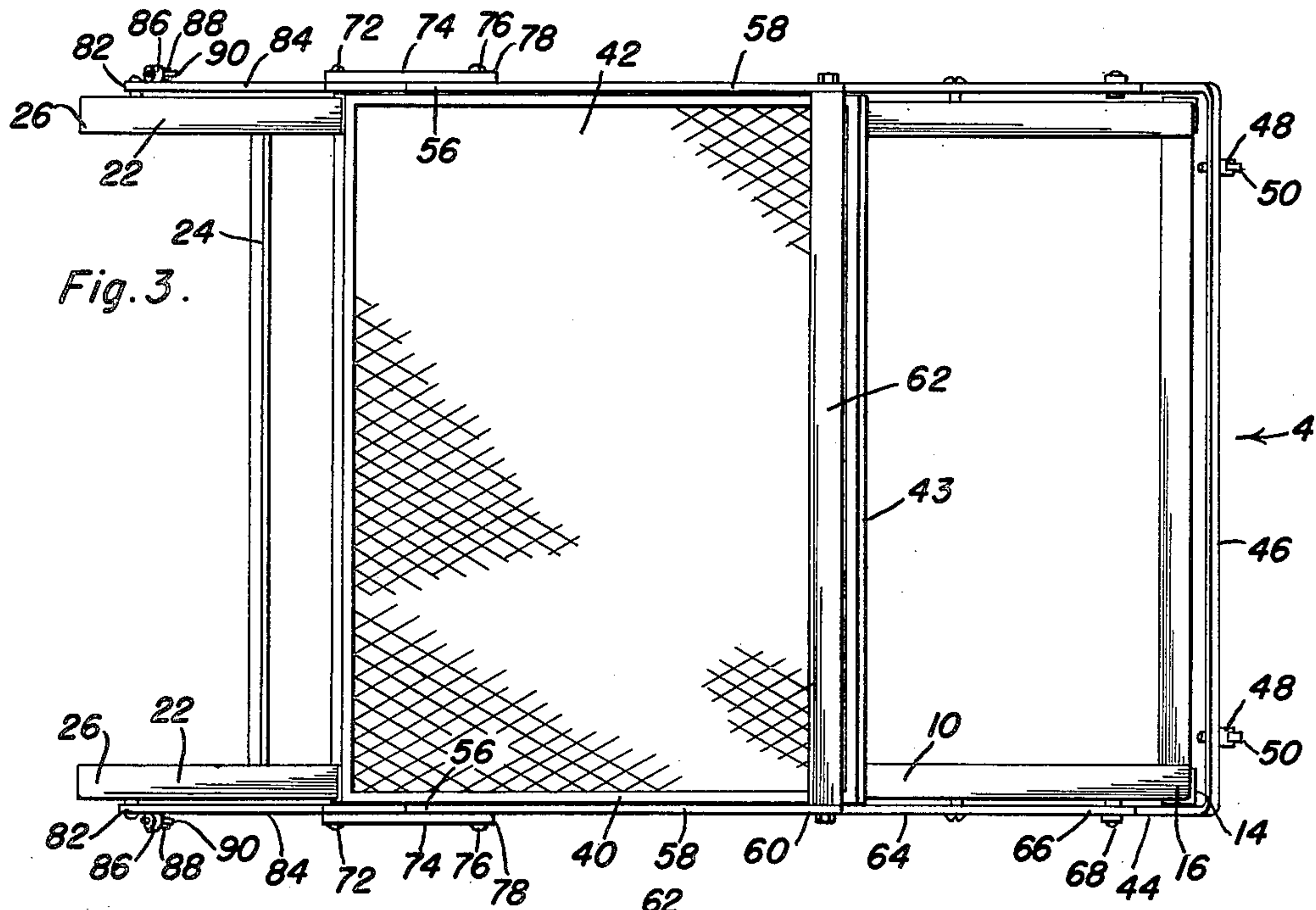
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2 SHEETS—SHEET 2



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PORTABLE WORKSTAND

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4 Claims. (Cl. 280—44)

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This invention relates to new and useful improvements in work stands and the primary object of the present invention is to provide a work stand including novel and improved means for selectively actuating wheel means pivotally carried by the same so that the stand will be supported by the wheel means and may be conveniently moved to a position for use.

Another important object of the present invention is to provide a portable work stand including a frame so designed as to facilitate the same to be partially extended beneath a vehicle or the like to afford maximum safe support to a user standing upon said stand.

A further object of the present invention is to provide a portable stand including an elevated platform and novel and improved means for safely ascending said platform.

A still further aim of the present invention is to provide a portable work stand that is simple and practical in construction, strong and reliable in use, neat and attractive in appearance, relatively inexpensive to manufacture, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a side elevational view showing the present stand in position for use relative to a vehicle, and showing the wheel means in a normally raised position;

Figure 2 is a side elevational view of the present stand and showing the wheel means in a lowered position for movement of the stand;

Figure 3 is a top plan view of Figure 1; and

Figure 4 is a front elevational view of the present stand, taken substantially in the direction of the arrow numbered 4 in Figure 3.

Referring now to the drawings in detail wherein, for the purpose of illustration, there is disclosed a preferred embodiment of the present invention, the numeral 10 represents a substantially rectangular upper frame that is retained spaced parallel to a similar lower frame 12 by connecting bars 14 that are rigidly secured to the forward, opposed corners 16 of each of said frames 10 and 12. The lower ends of these bars 14 project downwardly from the lower frame 14 to provide forward legs or feet 18 that support the forward portions of the frames 10 and 12 in an elevated position.

Rigidly secured to the rear corners 20 of the

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frames 10 and 12, to retain the frames spaced parallel to each other, is a pair of upwardly and forwardly inclined, spaced parallel side rails or inclined supports 22 between which there are fixedly secured a plurality of substantially horizontally extending spaced parallel rungs or steps 24. The lower terminals of the side rails 22 project downwardly from the lower frame 12 to provide rear feet or legs 26, the lower extremities of which are coplanar with the lower extremities of legs 18.

Projecting upwardly from the frames 10 and 12 is a pair of spaced parallel, substantially vertical, rigid supports or standards 28 to which there are fixedly secured upwardly and forwardly inclined portions 30 of a further pair of supports 32 that are spaced parallel to the standards 28. The upper terminals 34, 36, and 38 on the inclined supports 22, the standards 28 and the supports 32 terminate coplanar and are rigidly secured to a substantially rectangular platform 40 having a preferably resilient wearing surface or padding 42 on its upper face.

It should be noted that the forward transverse end 43 of the platform 40 terminates well rearwardly from the rear portions of the frames 10 and 12, for a purpose which will later be more fully described.

Pivoted to the legs 18 are the leg portions 44 of a substantially U-shaped member 46 that supports a pair of casters 48 having wheels 50.

Rigidly connecting the inclined supports 22 and the supports 28 is an upper connecting bar 52 and a lower connecting bar 54. Pivoted on the lower connecting bar 54 are the end portions 56 of a pair of substantially V-shaped actuating levers 58, the upper terminals 60 of which support a hand-gripping bar 62 that normally bears upon the wearing surface 42 adjacent the forward end 43 of the platform 40.

The numeral 64 represents a pair of main links that are pivoted adjacent their forward ends 60 to the longitudinal sides of the upper frame 10. The forward ends 66 of these links 64 are pivoted to pivotal links 68 that are carried by the free extremities of the leg portions 44 of the member 46. The rear terminals 70 of these main links 64 are pivoted to the lower terminals 70 of further links 74 that support guide pins or the like 76 at their upper terminals 78 which slidably and pivotally engage slots 80 provided in the levers 58 adjacent the terminals 56 thereof.

Pivoted on the rear legs 26 are the lower ends 82 of a pair of rear levers 84 that rigidly support journals 86 in which there are rotatably mounted rear casters 88 carrying wheels 90. The

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upper or free terminals 92 of the rear levers 84 are connected to the main links 64 adjacent the rear terminals 70 of said main links, by pivotal connecting links 94.

Fixed on the standards 28 are the upper terminals 96 of a pair of coil springs 98, the lower ends 100 of which engage the main links 64 to retain the main links in a normally raised position, the handle bar 62 upon the upper face of the platform adjacent the forward end 43 thereof, and the forward and rear casters in a raised position, as shown best in Figure 1 of the drawings.

To actuate the casters to a lowered position, so that the stand will be supported on the wheels carried by the casters, it is merely necessary to pull the handle bar 62 rearwardly, as shown in Figure 2, whereby the device may be conveniently moved to a position for use. The frames 10 and 12 may be positioned beneath the body of a vehicle 102 with the platform adjacent the side of the vehicle, so as to afford a safe bearing and supporting surface for a user on the platform without the same tipping.

In view of the foregoing description taken in conjunction with the accompanying drawings, it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention, the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and within the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A portable work stand comprising an elongated frame having supporting legs, a pair of vertically swingable links pivoted on one end of said frame, a further pair of vertically swingable links pivoted on the other end of said frame, a wheel mounted on each link of said pairs of links, a pair of elongated vertically rockable operating bars pivotally mounted on the sides of said frame, said bars having forward and rear end portions, pitmans connecting the forward end portions of said bars to said first mentioned pair of links, further pitmans connecting the rear end portions of said bars to said further pair of links, resilient means terminally attached to said bars and to the frame and yieldingly urging the rear ends of the bars raised, and manually operated means mounted on said frame above the rear ends of the bars and connected to the rear ends of the bars for pivoting the bars to urge the wheels below the lower ends of said legs.

2. A portable work stand comprising an elongated frame having supporting legs, a pair of vertically swingable links pivoted on one end of said frame, a further pair of vertically swingable links pivoted on the other end of said frame, a wheel mounted on each link of said pairs of links, a pair of vertically rockable operating bars pivotally mounted on the sides of said frame, said bars having forward and rear end portions, pitmans connecting the forward end portions of said bars to said first mentioned pair of links, further pitmans connecting the rear end portions of said bars to said further pair of links, resilient means terminally attached to the bars and to the frame urging the rear

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ends of the bars upwardly and holding the wheels above the lower ends of said legs, a pair of levers pivotally secured to said frame, connecting links terminally pivoted to said levers and to the rear end portions of said bars, said levers being manually actuated to pivot the bars and urge the wheels below the lower ends of said lugs.

3. A portable work stand comprising an elongated frame having supporting legs, a pair of links pivoted on one end of said frame, a further pair of links pivoted on the other end of said frame, a wheel mounted on each link of said pairs of links, a pair of operating bars pivotally mounted on the sides of said frame, said bars having forward and rear end portions, means connecting the forward end portions of said bars to said first mentioned pair of links, a further means connecting the rear end portions of said bars to said further pair of links, resilient means terminally attached to the bars and to the frame yieldingly urging the rear ends of the bars raised and holding the wheels above the lower ends of said legs, a pair of levers having lower ends pivoted to said frame, connecting links terminally pivoted to the levers and to rear end portions of said bars, and a hand gripping bar terminally secured to the upper ends of said levers, said hand gripping bar overlying said frame when said wheels are disposed above the lower ends of said legs, said hand gripping bar being moved manually away from said frame to swing the levers and urge the wheels below the lower ends of said legs.

4. A portable work stand comprising an elongated frame, a forward pair of vertically swingable links pivoted intermediate their ends to the frame, a rear pair of vertically swingable links pivoted at one of their ends to the frame, a pair of elongated vertically rockable bars pivoted intermediate their ends to the frame and including forward ends overlying the forward links and rear ends overlying the rear links, a wheel carried by each link of said pairs of links, pitmans connecting the forward ends of the bars to the forward links, additional pitmans connecting the rear ends of the bars to the rear links, a pair of unitary levers pivoted on said frame above said rear ends of said bars for vertical swinging movement, further links terminally pivoted to said levers and the rear ends of said bars, elongated spring members terminally attached to said frame and said bars yieldingly urging the rear ends of said bars raised, and a hand gripping rod terminally secured to said levers.

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