Jan. 8, 1946. R. H. FALKENSTEIN 2,392,584

FOLDING WORK STAND

Filed Jan. 16, 1945 2 Sheets-Sheet 1

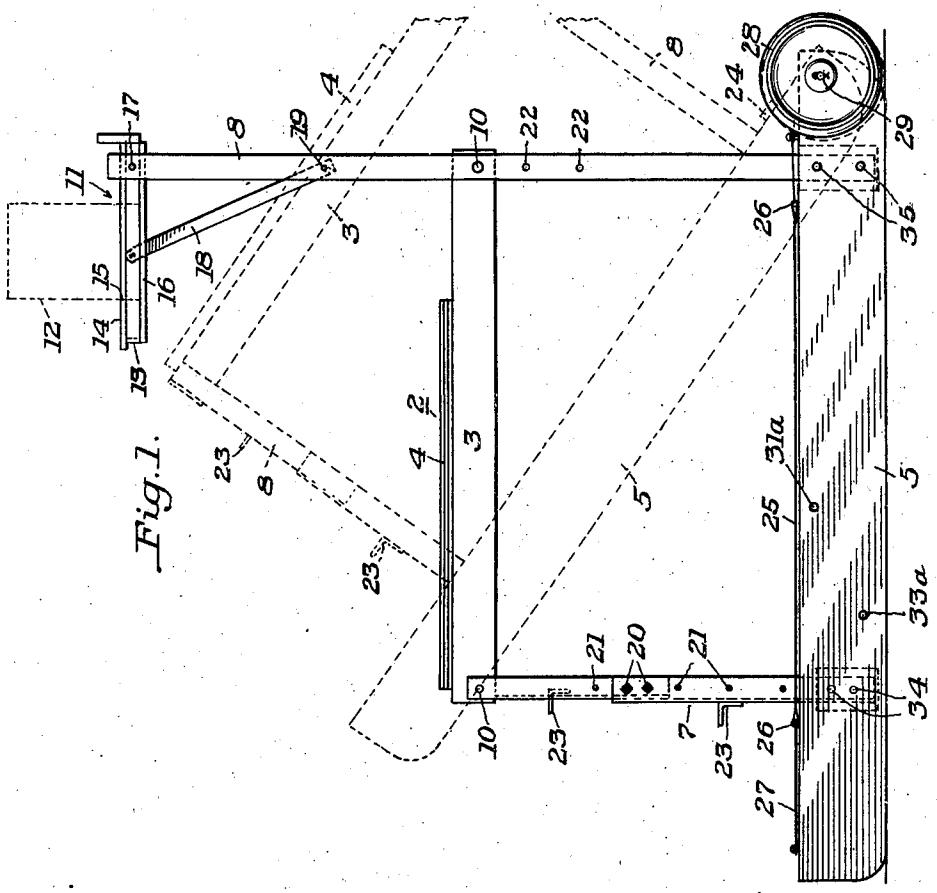


Fig. 1.

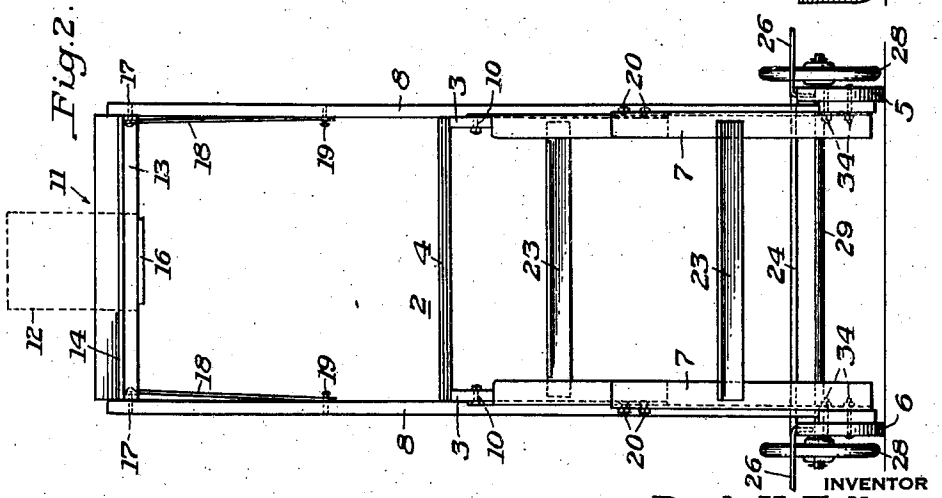


Fig. 2.

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Filed Jan. 16, 1945 2 Sheets-Sheet 2

Fig. 3.

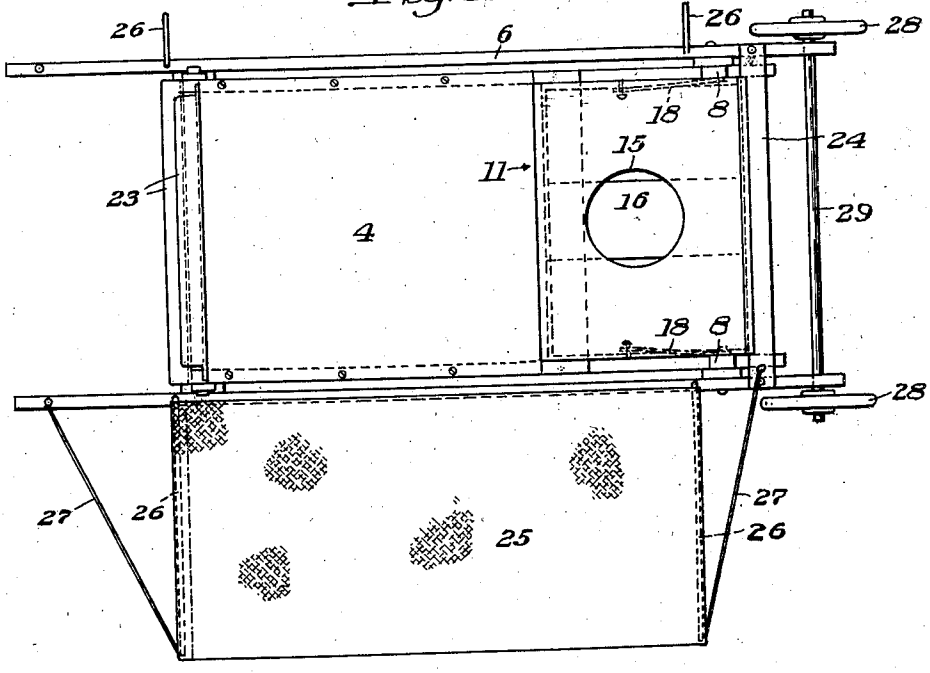


Fig. 4.

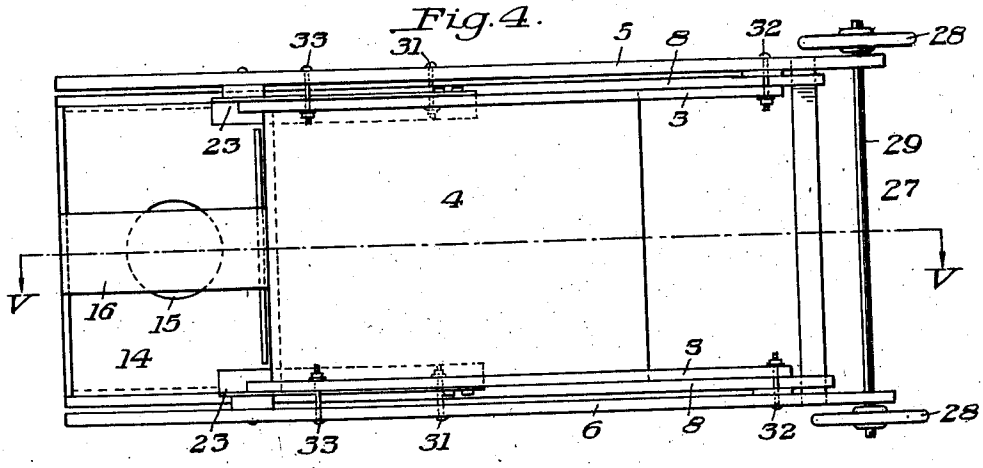
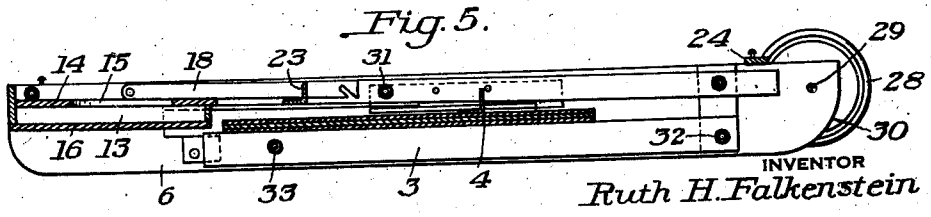


Fig. 5.



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UNITED STATES PATENT OFFICE

2,392,584

FOLDING WORKSTAND

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Application January 16, 1945, Serial No. 572,996

8 Claims. (Cl. 304—2)

My invention relates to a work stand, that is, to a device for supporting a workman at an interval above the level of a floor, say, where he will be in position more readily to perform work overhead.

The device has been particularly, though not exclusively, developed for use in painting or cleaning the walls in a home or other building, and in accordance with the objects of the invention the device provides an elevated platform upon which a person may stand and work with ease and with safety upon the ceiling, the upper wall portions, and the tops of the windows and door frames of a room. Additionally, the device includes a work-rest for supporting tools, and a bucket of paint, water, or the like, at an interval above the platform and handy to the workman standing thereon. It is further to be noted that the device includes provision to assist the workman in mounting the platform and dismounting.

In still further keeping with the objects of the invention the device is designed to rest flat upon the floor of a room, whereby there is no danger of the device sliding or tilting under the reaction of the movements of the worker standing on the platform, and yet, when in the progress of work it becomes desirable to move the device from place to place, the movement is readily effected.

And of equal importance it is to be noted that the entire structure is, when not in use, adapted to be folded into a compact unit that may be conveniently stored in minimum space within closet or other storage room within a home.

The invention will be understood upon reference to the accompanying drawings, in which:

Figure 1 is a view in side elevation of a work stand, comprising an exemplary embodiment of the invention;

Figure 2 is a view in end elevation of the work stand;

Figure 3 is a view in plan from above of the work stand, it being noted that this view shows only one of the aprons which are provided on the sides of the device, to catch drops of paint or other fluid that may fall from the hand of the workman;

Figure 4 is a plan view of the work stand in folded condition, whereas the three views first described show the device in erected or service position; and

Figure 5 is a sectional view of the folded structure, as seen in the plane V—V of Figure 4.

Referring to the drawings, I shall describe the work stand as it appears in its erected position in Figures 1 to 3. The reference numeral 2 is applied to the platform of the work stand, which platform comprises two spaced, parallel stringers 3 upon which a heavy board of plywood 4 is rigidly secured. Means are provided for firmly supporting the platform at an interval above the floor of the building or room in which overhead work is to be done. Such means comprise a base, advantageously in the form of a pair of spaced-apart boards 5 and 6 which form runner-like members or rails that stand on edge flat upon the floor. Secured to and rising from these rails are two pairs of legs 7, 7 and 8, 8 which are rigidly, though releasably, engaged one to each corner of the platform, as by means of bolts 10. The platform as thus mounted affords a secure and sturdy support upon which a worker may stand and work at an elevation above floor level, it being noted in Fig. 1 of the drawings that the point at which each leg is secured to the associate rail is located at a substantial interval inward from the adjacent end of the rail.

The device includes a work-rest 11 which is secured at an interval above the platform, to support a pail 12 of paint, or water, or the like, and/or wash cloths, paint brushes and other tools, in position where they are handy to the workman standing on the platform. The two legs 8, 8 are continued upward from the platform, providing uprights or means for securing the work-rest in desired position. The work-rest consists in this case in a tray-like member formed as a rectangular frame 13 upon which a sheet 14 of plywood is attached. The two uprights or legs 8, 8 are pivotally attached at their upper end portions to the two sides of the frame 13, bolts or pins 17 providing the pivots; associated with each leg 8 is a metal brace 18 which is pivoted at its upper end to the frame 13 and at its lower end is slotted, to latch upon a pin 19 projecting from the leg. The two braces serve in conjunction with the legs rigidly to secure the work-rest in horizontal position, while the two braces may be disengaged from latched engagement with the pins 19, whereby the work-rest may be swung on the pins 17, to permit the structure to be folded into collapsed position, as will presently be described in greater detail. The sheet 14 that forms the face of the work-rest includes an opening 15 to receive the bottom of the pail 12 (Figure 2), and a strip 16 is secured across the bottom of the frame 13, and vertically supports the pail. The pail as thus supported cannot slide from position on the work-rest. The

area of the work-rest around the supported pail provides support for cloths, paint brushes, or other tools.

The legs 7, 7 of the work stand are formed of angle iron, each being formed of two pieces of angle iron, overlapped medially and secured by a pair of bolts 20. The angle iron members include several holes 21, whereby the bolts 20 may be removed and the two angle iron sections of each leg relatively shifted to adjust the length of the legs. The bolts are inserted in newly aligned holes 21 and tightened. Thus, the effective length of the legs 7, 7 may be regulated and the position of the rear end of the platform vertically adjusted. The legs 8, 8 are provided with a series of correspondingly spaced holes 22, whereby the bolts 10 in such legs may be withdrawn and the front end of the platform vertically adjusted. Such organization manifestly provides for the ready adjustment of the height of the platform above floor level.

Between the legs 7, 7 two cross members 23 of angle iron extend, and are secured at their ends to the leg members, as shown. These cross members provide not only rigid reinforcement for the legs, but also provide steps by which the workers may readily mount the platform and dismount therefrom.

The cross-braced leg members 7, 7, bolted at their lower ends to the rails 5 and 6, form the means for securing the rails at the rear end of the structure, while at the front end a cross bar 24 integrates the rails.

Fabric aprons 25 may be spread from each of the two sides of the stand to catch drops of paint or water, etc., that fall during the work in progress. Each apron may consist in a rectangular piece of canvas hemmed at its two ends to receive rods 26; the rods 26 are provided with downturned ends that are received in sockets formed within the upper edge of the rails 5 and 6, and ties 27 may be run from the outer ends of the rods (or from the fabric of the aprons at such points), to hold the fabric taut, as shown in plan in Figure 3, it being remarked that only one of the aprons is shown in this figure, with the rods 26 of the other indicated fragmentarily.

In order to facilitate the movement of the work stand, a pair of wheels 28 is mounted at the front end of the structure. The wheels are mounted on an axle 29 extending through and between the rails 5 and 6, and it is important to note that the axle is arranged eccentrically of the arcuately curved ends 30 of the rails, in such manner that the rims of the wheels do not bear on the floor when the work stand is in normal position of service. The stand rests securely upon the edges of the rails, and when the work stand is in normal position the wheels offer no tendency to facilitate movement of the structure. When, however, it is desired to move the work stand, the stand is tilted into the position indicated fragmentarily in dotted lines in Figure 1, and in such tilting the wheels are lowered into contact with the floor, with the effect that the structure may be easily wheeled into the desired position and then returned to normal horizontal position.

It will be understood that the work stand of the invention is essentially a relatively large and sturdy structure, in order that adequate strength and rigidity shall be obtained for the intended service, but irrespective of its bulk, it is adapted to be folded into a compact unit for storage. This is a notable advantage.

In folding the structure the aprons 25 are first detached from the rails 5 and 6. Then, the two braces 18 are disengaged from the pins 19, and the work-rest is swung on its pivots 17 into common plane with the legs 8, 8. Next, the bolts 10 are removed and the platform 2 lifted from assembled position; following this the lowermost bolts of the pair of bolts 34 and 35 that secure the lower end of each leg 7, 7 and 8, 8 to the rails 5 and 6 are removed, and the rear legs 7, 7 are swung forward into horizontal position between rails 5 and 6, about the upper bolts 34 as pivots; then the legs 8, 8 are swung into horizontal position between the rails, the upper bolt 35 associated with each leg serving as the pivot. It will be understood that there is a vertical interval between the upper bolts 34 and 35, with the effect that the legs 8, 8 snugly overlie the legs 7, 7 when such legs are swung into horizontal position between the rails 5 and 6. When this has been accomplished, bolts 31 (Figures 4 and 5) are inserted through holes 31*a* in the respective rails 5 and 6 (Figure 1) and through holes 22 in the legs 8, 8. Nuts are applied to the bolts and tightened. With the legs 8, 8 thus rigidly secured to the rails, the structure is turned over and laid flat in the position in which it is shown in Figure 4. The platform 2 is then introduced between the rails, with the board 4 faced downward, and when it has been thus positioned bolts 32 are passed through the holes normally occupied by the lower bolts 35 in the erected structure and through the holes in the stringers 3, 3 of the platform which normally receive the bolts 10 for securing the platform to the legs 8, 8. The rails 5 and 6 are provided with auxiliary holes 33*a* (Figure 1) and through these holes are passed bolts 33 (Figures 4 and 5) to engage and secure the stringers 3, 3 of the platform adjacent to the ends remote from those first mentioned. Thus, the entire structure is assembled between, and substantially in the plane of, the two rails 5 and 6. As thus assembled, the structure provides a compact unit which may be readily stored in the closet of a home or the like. In Figure 5 the folded and secured unit is shown inverted from the position in which it is shown in Figure 4, in which the platform is introduced and secured between the rails 5 and 6, but a comparison of the two views will clearly indicate the compactness of the folded unit.

The folded unit may be transported by allowing the wheels to rest upon the floor, with the opposite end of the unit held up in the hands, whereby the thing pushed or drawn after the manner of a wheelbarrow.

In the foregoing specification, I have described a presently preferred embodiment of the invention, and it will be understood that within the terms and intent of the appended claims many modifications and variations may be made without departing from the spirit of the invention.

I claim as my invention:

1. A folding work stand comprising two rail members united in spaced apart relation and adapted to rest on edge on the floor of a room, a platform for a workman, legs extending upward from said rails to engage and support said platform at an interval above said floor, a work-rest, and at least one of said legs being continued upward from said platform to provide support for said work-rest at a substantial interval above said platform and handy to a workman standing thereon, and a wheel mounted eccentrically on the end of each rail member at one end of the

structure, whereby, by tilting the structure, said wheels may be lowered from position out of contact into position in contact with said floor for wheeling the structure on the floor.

2. A folding work stand comprising two rail members united in spaced apart relation and adapted to rest on edge on the floor of a room, a platform for a workman, legs extending upward from said rails to engage and support said platform at an interval above said floor, said rail members, legs and platform being releasably engaged to one another, whereby the legs and platform may be moved into position between said rail members and in substantially common plane therewith.

3. A folding work stand comprising two rail members united in spaced apart relation and adapted to rest on edge on the floor of a room, a platform for a workman, legs extending upward from said rails to engage and support said platform at an interval above said floor, a work-rest comprising a tray-like member, two of said legs extending upward from said platform and supporting between them said tray-like member at a substantial interval above said platform and handy to a workman standing thereon, said legs, platform and tray-member being releasably engaged to one another whereby they may be moved into position between said rail members and in substantially common plane therewith.

4. A folding work stand comprising two rail members united in spaced apart relation and adapted to rest on edge on the floor of a room, a platform for a workman, legs extending upward from said rails to engage and support said platform at an interval above said floor, a work-rest comprising a tray-like member, two of said legs extending upward from said platform and supporting between them said tray-like member at a substantial interval above said platform and handy to a workman standing thereon, and a wheel mounted eccentrically on the end of each rail member at one end thereof, whereby, by tilting the structure, said wheels are lowered from position out of contact with the floor into position in contact with the floor for wheeling the structure on the floor.

5. A folding work stand comprising two rail members united in spaced apart relation and adapted to rest on edge on the floor of a room, a platform for a workman, legs extending upward from said rails to engage and support said platform at an interval above said floor, a work-rest, means for supporting said work-rest at an interval above said platform; said work-rest and its supporting means, and said rail members, legs and platform being releasably secured in assembly, whereby the structure may be released and moved into position between said rail members and in substantially common plane therewith.

6. A folding work stand comprising two rail members united in spaced apart relation and adapted to rest on edge on the floor of a room, a platform for a workman, legs extending upward from said rails to engage and support said platform at an interval above said floor, a work-rest, at least one of said legs being continued upward from said platform to support said work-rest thereabove, said rail members, legs, platform and work rest being releasably secured in assembly, whereby the structure may be released and moved into and secured in position between said rail members and in substantially common plane therewith.

7. A work stand comprising a foldable assembly including a platform for a workman, two rail members united in spaced apart relation and adapted to rest flush on edge upon the floor of a room, a platform for a workman, a leg secured adjacent to but at a substantial interval inward from each end of each of said rail members and extending upward from the rail members and being engaged to said platform to support the platform at an interval above said floor, said legs being releasable in their engagement with said legs, whereby the several parts of the structure may be positioned substantially in a common plane.

8. A work stand comprising a foldable assembly including a platform for a workman, two rail members united in spaced apart relation and adapted to rest flush on edge upon the floor of a room, a platform for a workman, a leg secured adjacent to but at a substantial interval inward from each end of each of said rail members and extending upward from the rail members and being engaged to said platform to support the platform at an interval above said floor, and two wheels rotatably mounted on the rail members at one end of the assembled structure on an axis that is located outward from the points at which the legs at such end of the structure are secured to said rail members, said wheels at said end of the structure being out of contact with said floor when the structure is in service position and being movable downward into contact with the floor by lifting the opposite end of the structure upward.

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