VERTICALLY ADJUSTABLE PLATFORM ATTACHMENT FOR SHOES
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The present invention relates to a novel vertically adjustable platform attachment for shoes.

My novel shoe attachment is particularly useful for painters, paperhangers, etc., in facilitating their everyday work. Very often in painting the walls or ceilings of a room or papering walls, the painter or paperhanger cannot reach the upper portions of the wall or ceiling. This necessitates the use of a ladder, etc., by means of which he can reach the desired areas. This is not completely desirable, not only, from the safety point of view, in that, he may topple from the ladder, but it also is inconvenient, in that, he must from time to time climb up and down the ladder in changing his position or in obtaining fresh materials, etc.

In order to overcome the above disadvantages, I have invented my novel vertically adjustable platform shoe attachment. By utilizing my invention, the wearer may gradually increase his height as desired and is able to fix his height at any selected height.

Objects and advantages of the invention will be set forth in part hereinafter and in part will be obvious herefrom, or may be learned by practice with the invention, the same being realized and attained by means of the instrumentalities and combinations pointed out in the appended claims.

The invention consists of the novel parts, constructions, arrangements, combinations and improvements herein shown and described.

The accompanying drawings, referred to herein and constituting a part hereof, illustrate an embodiment of the invention, and together with the description, serve to explain the principles of the invention.

Figure 1 is a front view of one embodiment of my invention shown attached to a shoe.

Figure 2 is a bottom view of the embodiment shown in Figure 1.

Figure 3 is a right end view of the embodiment shown in Figure 1.

Figure 4 is a top view of the embodiment, shown in Figure 1.

Figure 5 is a horizontal sectional view looking in the direction indicated by the arrows in line 5—5 of Figure 1.

Figure 6 is a vertical sectional view looking in the direction indicated by the arrows in line 6—6 of Figure 1.

Figure 7 is a front view of another modification of my invention having different vertical adjustment means from the embodiment illustrated in Figure 1.

Figure 8 is a bottom view of the embodiment of Figure 7.

Figure 9 is a vertical sectional view looking in the direction indicated by the arrows in line 9—9 of Figure 7.

In general, my novel shoe platform attachment comprises a platform to be attached to the bottom of a shoe. This platform consists of a front plate, shaped to receive the front portion of a sole of a shoe and a rear plate, shaped to receive the heel of the said shoe, said rear plate having a heel guard. It should be realized that the wearer actually uses a pair of my devices, one shaped to receive a right shoe and one shaped to receive a left shoe. Means are provided for slidably adjusting the front and rear plates in a longitudinal direction of my platform to accommodate shoes of different sizes. Locking means are also provided for locking said plates at the selected length. Vertical adjustable supporting means are provided whereby the platform may be moved to a selected height above the ground and fixed at the selected height. Preferably, horizontal supporting means are provided for the vertical adjustable supporting means. It is also preferred that cushion means be provided at the bottom of the vertical supporting means.

Reference is now made to the Figure 1—6 of drawings, illustrating one embodiment of my invention, to explain my invention even further. As shown in Figure 1, the platform comprises front plate 1 shaped to receive the sole of right shoe 4 (shown in dotted lines) and rear plate 2 shaped to receive the heel of said shoe. Plate 1 has forked end 5, 5' and plate 2 has forked end 6, 6' which form slots 7 and 8, respectively. As best shown in Figures 1, 2 and 4, plate 1 comprises a flat portion 9 which inclines downwardly at 10 and becomes flat again at 11, said inclined portion 10 having a slot 12, flat portion 11 containing the work wearing, preferably, outer end. Rear plate 2 has a flat heel supporting portion 13 which inclines at 14, one-half the height of incline 16, and becomes flat again at 15, the outer end of flat portion 15 containing the fork member 5—6 which extends through slot 12 of front plate 1.

Accordingly, forks 5—6 of rear plate 2 underlie flat portion 9 of front plate 1 and forks 5—6' of front plate 1 underlie flat portion 15 of rear plate 2. Plates 1 and 2 are longitudinally adjustable to receive shoes of different lengths. A rivet 16, fixed to rear plate 2, is slidably mounted in slot 7 of plate 1, while a wing nut bolt 18 is provided which extends through an opening in plate 1 and slot 8 of plate 2. By this construction, when the nut 18 is loosened, plates 1 and 2 are slidable longitudinally with respect to each other. When the desired platform length is obtained by moving the plates to the selected longitudinal positions, wing nut 18 is tightened, locking the plates at the selected platform length.

Rear heel guard 3 is provided with slots 19 for receiving a rear strap 20 and front plate 1 is provided with slots 21 for the reception of front strap 22, said front plate being depressed at 23 to receive the thickness of strap 22 below the level of platform 9.

The vertically adjustable supporting means for my platform comprises two vertical end supporting units 24, 24' connected by a longitudinally adjustable reinforcing strut 25. Vertical supports 24—24' are identical in construction with unit 24 connected to plate 1 and unit 24' connected to plate 2.

Referring now to Fig. 5, it is seen that support 24 comprises a vertical outer channel 26 U-shaped in cross section, a telescoping inner channel 27, also U-shaped in cross section. Outer channel 26 is provided at its top with laterally extending lips 28, 29 and 30 welded to plate 1. The side walls 31—32 of channel 26 are provided with vertically spaced openings 33 for the reception of pins 34 and 35 of a manually operated locking member or latch 36.

Locking member 26 provides means by which the inner channel 27 may be adjusted vertically with respect to the outer channel 26. The locking member 26 includes fingers 37, 38, extending through opening 39 in channel 26, through opening 40 in channel 27. The cut portions 41 and 42 in channel 27, which provide opening 40, are bent at right angles thereto. The pins 34, 35 of locking member 26 have reduced inner ends 43, 44, respectively, extending through appropriate openings in fingers 37 and 38 and are urged away from each other by compression.
spring 45. Extending outwardly from each reduced end 43, 44 is the remaining body portion of each pin 34 and 35 which extends through bent members 41, 42 respectively, to side walls 46, 47 respectively of inner channel walls 31, 32 respectively of outer channel 26. Sleeves members 27, and through a selected opening 33 in side 48, 49, fixedly secured to pins 34, 35, respectively, limit their inner movement by the abutment of the sleeves 48, 49 against bent members 41—42, respectively, when fingers 37 and 38 are moved toward each other.

As mentioned hereinbefore, support 24 is identical to support 24 and has the corresponding members 25—49. Moreover, vertical supports 24 and 24 are reinforced by strut 25 comprising longitudinally adjustable horizontal members 50, 51 connected to inner channel members 27, 27 respectively. Preferably, the horizontal members 50, 51 are integral with the inner channel members 27, 27 by the following construction using channel 27 and horizontal member 50 as illustration. Integral with the front wall of channel member 27 and at right angles thereto, is a horizontal bottom or base member 52 which inclines upwardly at 53 to form a continuous surface with horizontal member 50. Extending upwardly from 52 and 53 are side members 54 and 55 welded to the walls 46 and 47, respectively. In like manner horizontal member 51 is integrally connected to inner channel 27. The horizontal members are longitudinally adjustable with respect to each other by means of wing nut 56 secured to member 50 and slidable in slot 57 in member 51. When the members 50 and 51 are adjusted to their desired position, nut 54 is tightened so that said members 50 and 51 are locked to each other.

Cushion members 55 and 59 are attached to the base members 52 and 52' in order that my device is more comfortable to wear and at the same time to prevent the device from scratching the floor.

In the modification shown in Figs. 7—9, a different vertical support arrangement is shown. The platform comprising plates 1 and 2 are of the same construction employed in the embodiment of Figs. 1—6. This platform is adjustably supported vertically by tubular supporting units 104 and 104' of identical construction, unit 104 being connected to plate 1 and 104' being connected to plate 2. Tubular support unit 104 comprises an outer tubular member 105 connected to plate 1 along curved lip members 106 and 107 which extend outwardly from the top of said tubular member. Opposing U-shaped cut out portions are provided at the upper margin of said outer channel which form continuous openings 108, 109 with the spaces between lip members 106 and 107, said openings 108, 109 receiving the forked end members 6—6' of plate 2.

As best shown in Fig. 9, the outer tube is internally threaded for the reception of an externally threaded inner tube 110. On the rotation of inner tube 110, it moves vertically with respect to the outer tube 105. The inner tube 110 is provided with opposing U-shaped cut out portions for the reception of a U-shaped channel member 111 connected to the wall of the inner tube adjacent the cut out portions. Preferably, a cushion member 114 is inserted in channel 111. Set screw 112 is provided for locking inner tubular member 110 to outer member 105 after the inner member has been moved to the selected vertical position.

Tubular support 104', connected to plate 2 is of the same construction as tubular support 104 and comprises members 105—114' corresponding to the members 105—114 of support 104.

The mode of operation of the present invention will be explained referring first to the embodiment shown in Figs. 1—6. Wing nuts 18 and 56, respectively, are loosened so that plates 1 and 2 and horizontal members 50 and 51, respectively, may be adjusted longitudinally to obtain the proper length.

When the necessary adjustment is made, the nuts are tightened. Straps 20 and 22 may then be tightened around the shoe 4. Inner channel members 27 and 27 are then adjusted vertically with respect to the outer channel members 26 and 26' by manually operating latches 36, 36'. In operating latch 36, for example, pressure is applied manually on fingers 37—38 moving said fingers toward each other causing pins 34 and 35 to come out of aligned openings 33. The inner channel 27 is then moved vertically to the desired vertical position whereupon the pressure on fingers 37—38 is released causing pins 34 and 35 to register with a different set of openings 33, in walls 31, 32 of outer channel 26.

In like manner, plates 1 and 2 of the embodiment shown in Figs. 7—9 are adjusted to the desired longitudinal position after which nut 18 is tightened. Straps 20 and 22 are then tightened. Inner tubular members 110, 110' are adjusted to the desired vertical positions with respect to outer tubular members 105, 105' respectively by rotation of said inner tubular members after which set screws 112, 112' are tightened.

The invention in its broader aspects is not limited to the specific mechanisms shown and described but departures may be made therefrom, within the scope of the accompanying claims, without departing from the principles of the invention and without sacrificing its chief advantages.

I claim:

1. A novel platform attachment for shoes of different sizes, comprising a longitudinally adjustable platform shaped to support the bottom of a shoe, vertically adjustable supporting means connected to the under surface of said platform, and longitudinally adjustable strut means connected to said vertically adjustable supporting means.

2. A platform attachment as defined in claim 1 wherein the vertically adjustable supporting means comprises two spaced vertically adjustable supports, each of said supports comprising an outer channel, U-shaped in cross section, fixedly secured to said platform, and a lower member consisting of an inner telescoping channel member, U-shaped in cross section, vertically adjustable with respect to said upper member.

3. A platform attachment as defined in claim 2 wherein the longitudinally adjustable strut means comprise horizontal plate members longitudinally adjustable with respect to each other.

4. A platform attachment as defined in claim 2 wherein the longitudinally adjustable strut means comprise horizontal plate members longitudinally adjustable with respect to each other, one horizontal plate being integral with the inner channel of one vertical support, and the other horizontal plate being integral with the inner channel of the other vertical support.

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