

Feb. 2, 1943.

J. P. REINHARDT  
EXTENSIBLE LADDER

2,310,119

Filed Jan. 20, 1942

3 Sheets-Sheet 1

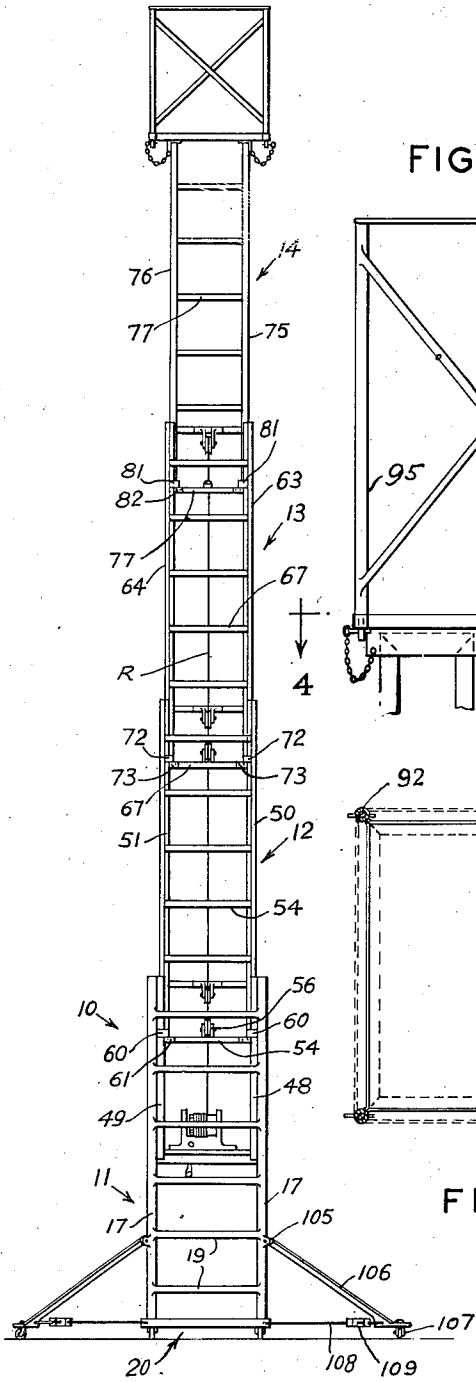


FIG. 1.

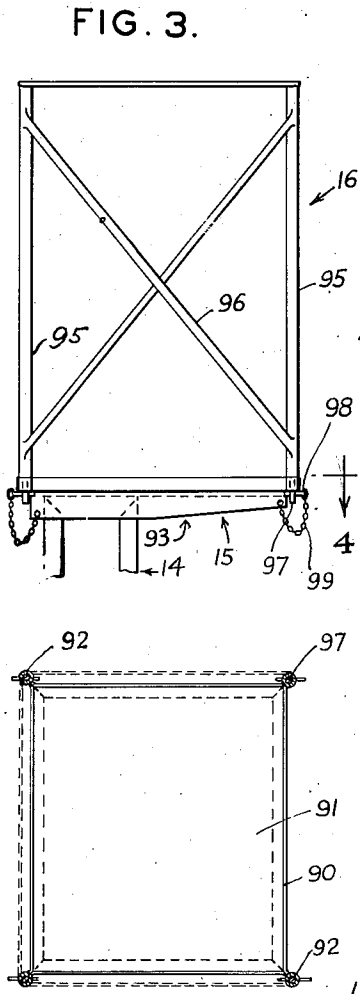


FIG. 3.

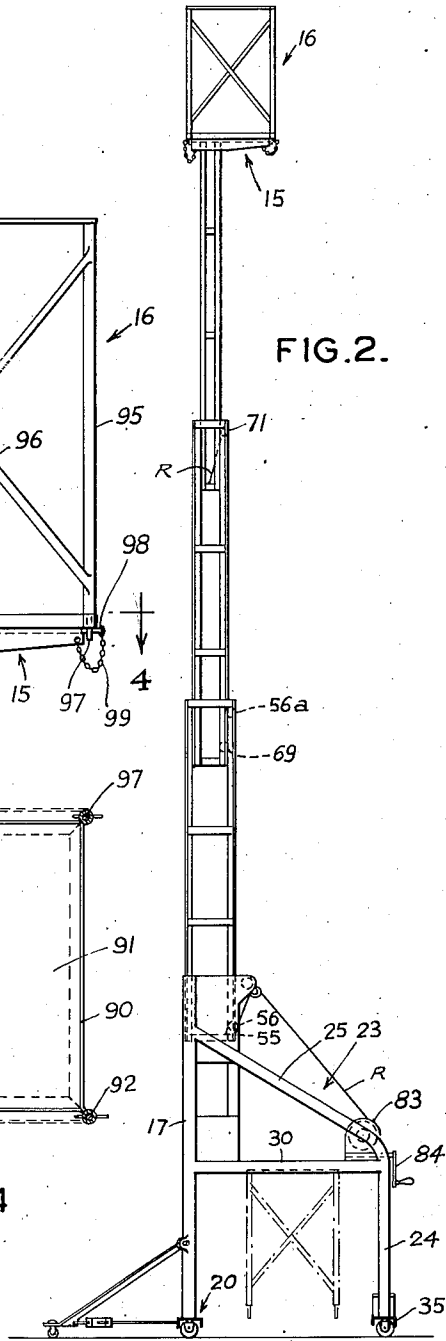


FIG. 2.

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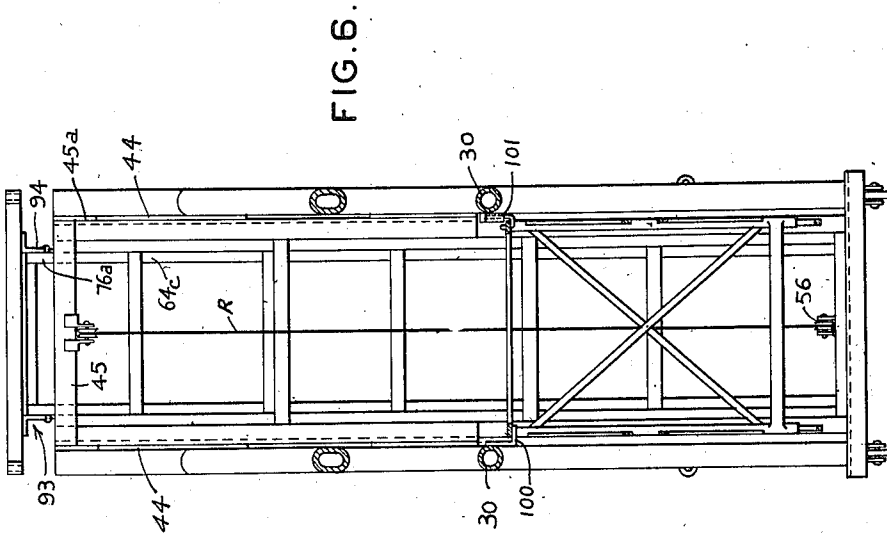
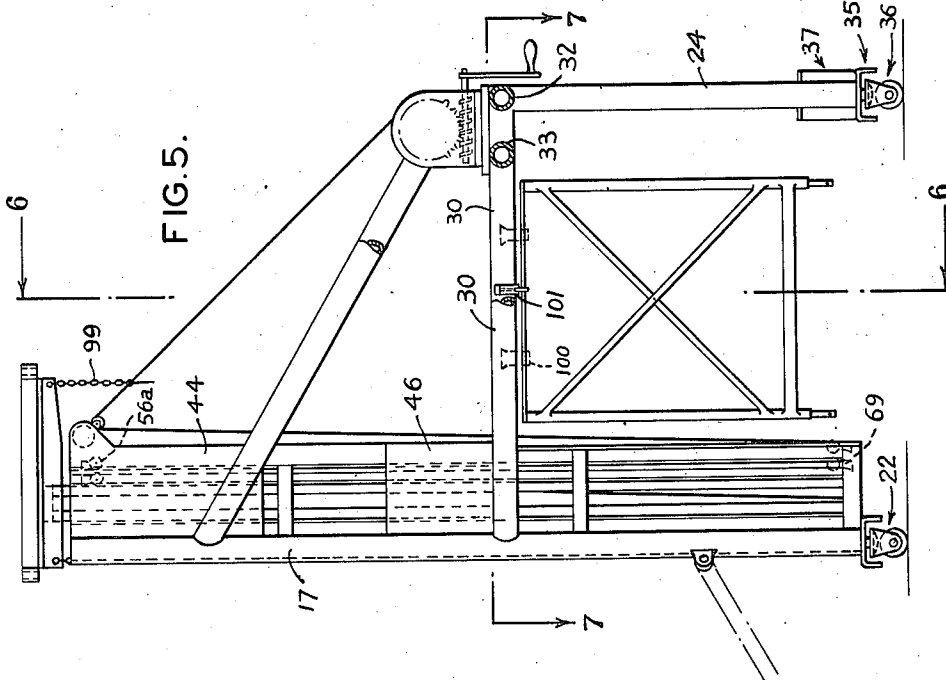
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3 Sheets-Sheet 2



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EXTENSIBLE LADDER

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3 Sheets-Sheet 3

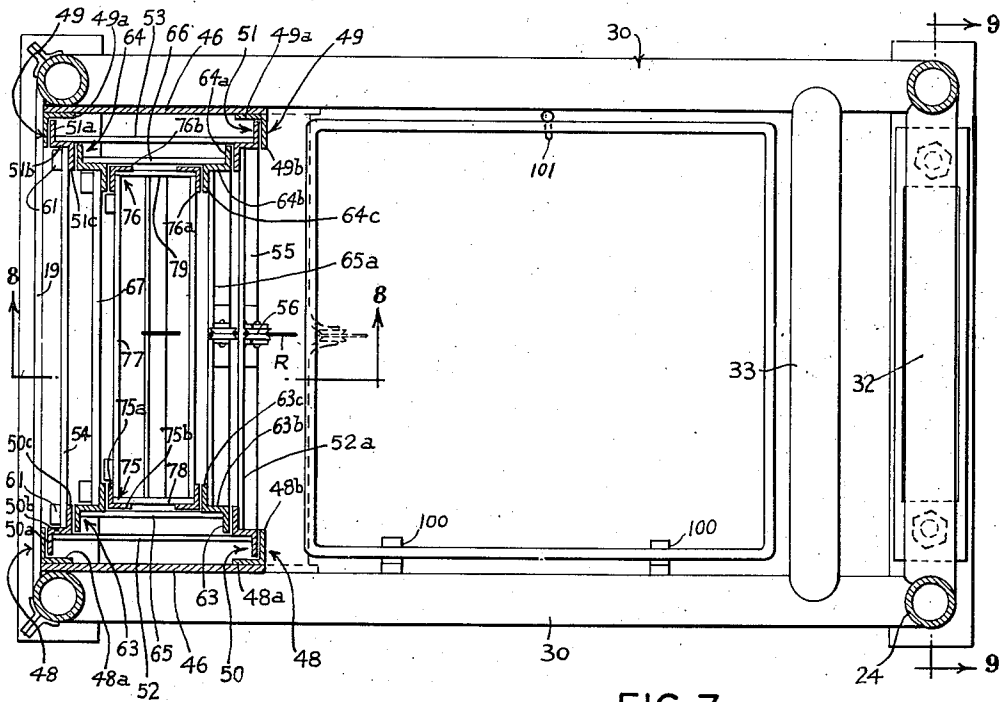


FIG. 7.

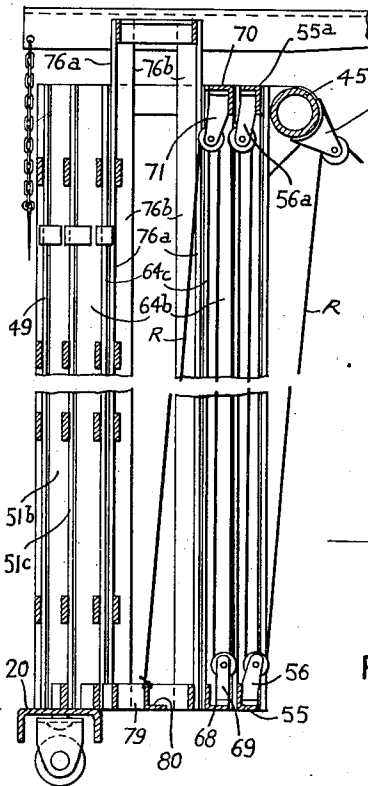


FIG. 8.

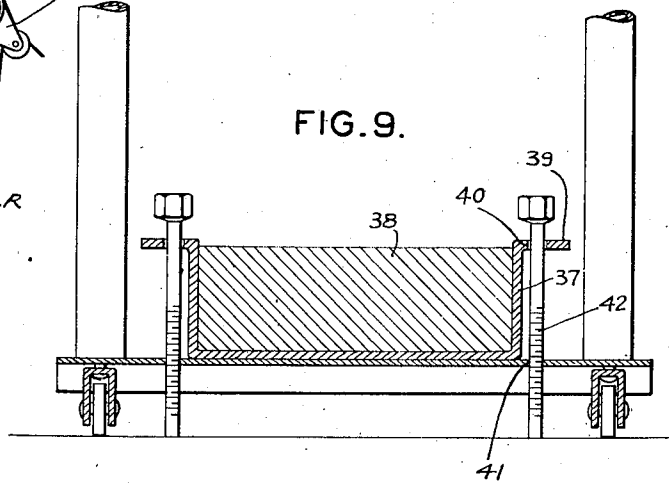


FIG. 9.

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# UNITED STATES PATENT OFFICE

2,310,119

## EXTENSIBLE LADDER

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Application January 20, 1942, Serial No. 427,455

15 Claims. (Cl. 228-5)

This invention relates to extensible ladders. It is particularly directed to a ladder which may be used in schools, courtrooms or auditorium, for replacing burnt out lamps on the ceiling, or for divers other purposes.

An object of this invention is to provide a ladder of the character described, comprising a base having spaced legs to straddle chairs, benches, or seats, the legs of the ladder being adapted to move between the rows of benches or seats.

A further object of this invention is to provide a ladder of the character described, having a platform on the top extension or section, and a railing mounted on the platform, said railing being removable from the platform, and the base of said ladder being provided with means to support the railing between the legs thereof.

Still a further object of this invention is to provide a ladder of the character described, having an outrigger to aid in supporting the ladder against tilting, and also having means to keep the ladder from rolling when in use.

Another object of this invention is to provide an extensible ladder of the character described, comprising a base and a plurality of extensible, telescoping sections, said base and each section comprising two pair of aligned, vertical corner members, rigidly interconnected and serving as a guide for an adjacent section or sections slidable relative thereto, means being further provided to limit relative movement between adjacent sections and between the base and the section slidable relative thereto.

Yet another object of this invention is to provide a ladder of the character described having a winch on the base thereof, and means for first lifting the innermost top section, then the top two sections together, and so on until all of the sections are fully raised, upon operating said winch.

Still another object of this invention is to provide a strong, rugged and durable ladder of the character described, which shall be easy to manipulate, smooth and positive in action, and yet practical and efficient to a high degree.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the construction hereinafter described, and of which the scope of application will be indicated in the following claims.

In the accompanying drawings, in which is

shown one of the various possible illustrative embodiments of this invention,

Fig. 1 is a front elevational view of the ladder in extended position;

Fig. 2 is a side elevational view thereof;

Fig. 3 is an enlarged, side elevational view of the platform and railing therefor;

Fig. 4 is a cross-sectional view taken on line 4-4 of Fig. 3;

Fig. 5 is a side elevational view of the ladder in collapsed condition;

Fig. 6 is a front elevational view of the ladder in collapsed condition;

Fig. 7 is a cross-sectional view taken on line 7-7 of Fig. 5;

Fig. 8 is a cross-sectional view taken on line 8-8 of Fig. 7; and

Fig. 9 is a cross-sectional view taken on line 9-9 of Fig. 7.

Referring now in detail to the drawing, 10 designates a ladder embodying the invention. The ladder comprises generally of a base 11 and a plurality of ladder extensions 12; 13 and 14. Section 14 carries a platform 15 at its upper end, on which is removably mounted a railing member 16.

The support or base 11 comprises a pair of vertical front posts or pipes 17 interconnected by a plurality of rungs 19. Fixed to the lower ends of vertical side members 17, is a horizontal channel shaped member 20. Fixed to the underside of the channel shaped member 20, are a pair of spaced swivel wheels 22. The rungs 19 may comprise metal bars welded at the ends thereof to the vertical hollow posts or side members 17.

Fixed to the posts 17 are a pair of similar members 23 disposed in parallel planes, likewise made of hollow metal pipe, each having a vertical portion 24, parallel to member 17, and a portion 25 included upwardly and forwardly from the upper end of portion 24. The upper ends of portions 25 are welded or otherwise fixed to side members 17 at points below the upper ends thereof. Interconnecting side members 17 with substantially the upper ends of portions 24 of members 23, are horizontal members 30, likewise made of hollow pipe welded or otherwise fixed at their opposite ends to the post 17 and to members 23. Members 23 may be interconnected by a horizontal transverse pipe 32, located substantially at the level of pipes 30. Pipes 30 may be interconnected by a transverse horizontal pipe 33 parallel to pipe 32, and spaced therefrom.

It will be noted that said pipes 17, 23, 30, 32

are welded or otherwise secured together to form a strong rigid support for the ladder.

Fixed to the lower ends of portions 24 of members 23, is also a horizontal channel shaped member 35, similar and parallel to the channel shaped member 20. Fixed to the ends of channel shaped member 35, is also a pair of swivel wheels 36. Mounted on the top of the channel shaped member 35 is a metal box 37 filled with lead, as at 38, forming a counterweight to prevent tilting of the ladder.

The box 37 has horizontal, outwardly extending flanges 39 at its upper end formed with through openings 40. The top wall of channel shaped member 35 is formed with screw threaded openings 41 aligned with openings 40. Extending through the openings 40, and screwed within the openings 41 are screws 42 adapted to contact the floor, to prevent rolling or movement of the ladder when in use. Thus, when the ladder is in position for use, the screws 42 may be rotated until the lower ends thereof press against the floor to prevent rolling of the ladder.

Welded or otherwise fastened to the insides of the upper ends of side members 17 and 23, are parallel, vertical plates 44. The upper rear corners of plates 44 are interconnected by a horizontal transverse pipe 45, for the purpose hereinafter appearing. Pipe 45 is located substantially at the level of the upper ends of posts 17. Plates 44 extend to somewhat below the upper ends of members 23.

There is furthermore welded, or otherwise secured, to the inner sides of posts 17 and members 30, a pair of vertical, parallel plates 46, having the same width as plates 44. The lower edges of plates 46 are substantially at the level of the pipes 30. The plates 44 and 46 are spaced from one another, as shown in Fig. 5 of the drawings.

Welded, or otherwise secured, to the inner surfaces of plates 44 and 46, adjacent the front and rear edges thereof, are pairs of vertical angle shaped guide members 48 and 49 extending from the upper ends of plates 44 to substantially the lower ends of plates 46. The pair of members 48 are aligned with the pair of members 49. The members 49 have walls 49a extending toward each other; and members 48 likewise have 48a extending inwardly toward each other. Members 48 furthermore have walls or flanges 48b extending towards members 49; and members 49 have walls or flanges 49b, extending towards members 48. Thus, the members 48 and 49 constitute vertical corner guide pieces fixed to the base or frame and rigid therewith in which section 12 telescopes.

Section 12 comprises two pairs of similar, symmetrically disposed, vertical, Z-shaped members 50 and 51 slidably engaging the angle shaped members 48 and 49, respectively. Z-shaped members 50 have walls 50a contacting the inner surfaces of walls 48b of members 48, and walls 50b extending inwardly from walls 50a, and walls 50c extending towards members 51. Members 51 have walls 51a contacting the inner surfaces of walls 49b of members 49, and walls 51b extending inwardly toward each other, and walls 51c extending towards members 50. Members 50 are interconnected by transverse horizontal metal strips 52, welded or otherwise secured to the walls 50b thereof. Members 51 are interconnected by transverse horizontal metal strips 53, welded, or otherwise secured, to walls 51b thereof. The members 50, 51 at the rear of section 12 are interconnected by transverse members 52a welded,

or otherwise secured to walls 50c, 51c thereof. Members 50, 51 at the front of the ladder are connected by horizontal rungs 54.

It will be noted that section 12 is substantially the same height as the post 17 and rests on channel sloped member 20 when the ladder is collapsed. Members 50, 51 at the front of section 12 are interconnected by a transverse horizontal angle shaped member 55 on the central portion of which is mounted an upwardly extending pulley 56, for the purpose hereinafter appearing. The upper ends of members 50, 51 of sections 12 are interconnected by a transverse member 55a, on the central portion of which is mounted a downwardly extending pulley 56a, for the purpose hereinafter appearing.

It will now be understood that section 12 may slidably move up and down, being guided by members 48 and 49 of the base.

Means is provided to limit upward movement of ladder section 12. To this end, there is fixed to the posts 17 below the upper ends of said posts, a pair of inwardly extending stop members 60. Fixed to the ends of the lowermost rung 54 of section 12 are a pair of stop members 61 adapted to contact the stops when the ladder 12 has been moved upwardly. It will be understood that when the stops 60, 61 contact, section 12 overlaps the upper end of base 11 to a considerable extent, so as to prevent swaying of section 12.

Section 13 is telescoped within section 12, and is of the same length as said section. It comprises pairs of similar, symmetrically disposed Z-shaped corner members 63 and 64 of the same length as posts 17 guided by Z-shaped members 50 and 51 of section 12. Members 63 comprise walls 63a contacting walls 50c of members 50, and walls 63b extending inwardly therefrom, and walls 63c extending towards the members 64.

Members 64 comprise walls 64a contacting walls 51c of members 51. Walls 64b extend inwardly toward each other, and walls 64c extend towards members 63. Members 63 are interconnected by horizontal, transverse strips 65, welded, or otherwise secured, to walls 63b thereof. Members 64 are interconnected by horizontal, transverse strips 66, welded, or otherwise secured, to walls 64b thereof. The members 63, 64 at the front of section 13 are interconnected by rungs 67 spaced apart the same as the rungs 54 and 19. Members 63, 64 at the rear of section 13 are interconnected by horizontal, transverse strips 65a, welded, or otherwise secured, to walls 63c, 64c thereof.

The lower ends of the members 63, 64 at the rear of section 13, are interconnected by a transverse member 68, on the mid portion of which is an upwardly extending pulley 69. The upper ends of the sections 63, 64, at the rear of section 13, are interconnected by a transverse horizontal member 70, on the central portion of which there is mounted a downwardly extending pulley 71, for the purpose hereinafter appearing.

Section 13 also rests on channel 20 when the ladder is collapsed.

Means is provided to limit movement of section 13 relative to section 12. To this end, there is fixed to members 50, 51 at the front of section 12, at points spaced from the upper ends thereof, stop members 72. Fixed to the ends of the lowermost rung 67 of section 13 are stop members 73 adapted to contact the stop members 72 to limit upward movement of section 13, relative to section 12.

It will be noted that the stop members 72 are

a considerable distance below the upper end of section 12, so that sections 13 overlap section 12 in its extended position, to prevent swaying of section 13 when extended.

Section 14 is telescoped within section 13. Said section 14 comprises pairs of similar, symmetrically disposed, angle shaped members 75 and 76. Angle shaped members 75 comprise walls 75a contacting walls 63c of member 63, and walls 75b extending inwardly toward each other. Member 76 comprises walls 76a contacting wall 64c of member 64, and walls 76b extending inwardly toward each other. Members 75 are interconnected by transverse, horizontal strips 78, welded, or otherwise secured, to walls 75b thereof. Members 76 are interconnected by transverse, horizontal strips 79, welded, or otherwise secured, to walls 76b thereof. The members 75, 76 at the front of section 14 are interconnected by rungs 77. Members 75, 76 at the rear of section are interconnected by horizontal, transverse strips 78a, welded, or otherwise secured, to walls 75a, 76a thereof. The members 78, 79 at the lower end of section 14 are interconnected by a horizontal angle shaped member 80, for the purpose hereinafter appearing:

Means is provided to limit upward movement of section 14 relative to section 13. To this end, there is fixed to members 63, 64 at the front of section 13, a considerable distance below the upper ends thereof, stop members 81. Fixed to the ends of the lowermost rung 77 of section 14, are stops 82, adapted to contact stops 81, to limit upward movement of section 14 relative to section 13:

Fixed to the central portion of pipe 45 is a forwardly extending pulley 45a. Mounted on the members 32, 33 is a winch 83 adapted to be operated by a crank handle 84. The rope R from the winch 83 is passed over pulley 45a, then around under pulley 56, then around over pulley 56a, then around under pulley 69, then around over pulley 71, and is tied to the mid-portion of member 80, as shown in Fig. 8 of the drawings.

Thus, when the winch is turned, the rope R will first cause section 14 to move upwardly relative to section 13. Then sections 13 and 14 move upwardly together relative to section 12, and then sections 12, 13 and 14 move upwardly together, relative to the base.

The platform 15 is fixed to the upper end of section 14. Said platform comprises an angle shaped, horizontal, rectangular frame 90, having inwardly extending, horizontal flanges and upwardly extending, vertical flanges, and supporting a board or floor 94. Fixed to the corners of the frame 90 are vertical sleeves 92. Welded to the underside of the frame 90, are a pair of parallel, transverse, angle shaped members 93, having downwardly extending flanges 94. The upper end of the section 14 is welded to flanges 94, closer to the forward end of said flanges than to the rear ends thereof. Thus, the center of the platform is disposed rearwardly of the center of section 14, as illustrated in the drawings.

The railing 16 comprises vertical corner parts or members 95 interconnected by transverse, diagonal, crossing brackets 96, and having pins 97 at the lower ends thereof received in the sleeves 92. Any suitable cotter pins 98, attached to flanges 94 by chains 99, may be employed to retain the railing on the platform.

When the ladder is not in use, the railing 16 may be removed, and hung on a pair of hooks 100, fixed to one of the members 30, and dis-

engageably engaged by a swinging hook 101 mounted on the other member 30.

Outrigger means may be provided to aid in supporting the ladder. To this end, the posts 17 are formed with aligned slotted ears 105. Pivoted to the slotted ears 105 are downwardly, outwardly and forwardly inclined members 106 supported on swivel wheels 107. The outer ends of member 20 are interconnected to the lower ends of members 106 by connecting rods 108 in which there is interposed turnbuckles 109. The outrigger may be detached from the ladder when desired.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved, and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiment above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A ladder comprising a base having front and rear legs, and means above the lower ends of said legs interconnecting said legs, whereby said ladder may straddle benches, the front of said base being provided with a plurality of rungs, an extensible ladder section slidably mounted on said base and provided with a plurality of rungs, a second extensible section slidably mounted on the first extensible section, a third extensible section slidably mounted on the second extensible section, a winch on said base and disposed rearwardly of said front legs, a pulley on the upper end of said base, a pulley at the lower end of the first extensible section, a second pulley at the upper end of the first extensible section, a pulley at the lower end of the second extensible section, another pulley at the upper end of the second extensible section, and a rope on the second extensible section, and a rope on the second extensible section, and a rope on the base, and beneath the pulley at the lower end of the first extensible section, and over the pulley at the upper end of the first extensible section, and around the pulley at the lower end of the second extensible section and around the pulley at the upper end of the second extensible section, said rope being attached to the lower end of the third extensible section, said rope, pulley and winch being located substantially centrally of the ladder between the sides thereof.

2. An extensible ladder comprising a base, a plurality of rungs on the base, two pair of vertical, aligned, angle shaped guide members fixed to said base, one pair of angle shaped members being aligned with the other pair of angle shaped members, an extensible section telescoped within said angular guide members, and comprising two pair of Z-shaped members, one pair of Z-shaped members being aligned with the other pair of Z-shaped members, one pair of Z-shaped members slidably engaging one pair of angle shaped members and the other pair of Z-shaped members slidably engaging the other pair of angle shaped members, transverse members interconnecting each pair of Z-shaped members, and rungs interconnecting the Z-shaped members at the front of said extensible sections.

3. An extensible ladder comprising a base, a plurality of rungs on the base, two pair of vertical, aligned, angle shaped guide members fixed

to said base, one pair of angle shaped members being aligned with the other pair of angle shaped members, an extensible section telescoped within said angular guide members, and comprising two pair of Z-shaped members, one pair of Z-shaped members being aligned with the other pair of Z-shaped members, one pair of Z-shaped members slidably engaging one pair of angle shaped members and the other pair of Z-shaped members slidably engaging the other pair of angle shaped members, transverse members interconnecting each pair of Z-shaped members, rungs interconnecting the Z-shaped members at the front of said extensible sections, and means to limit relative movement between said extensible section and said base.

4. An extensible ladder comprising a base, a plurality of rungs on the base, two pair of vertical, aligned, angle shaped guide members fixed to said base, one pair of angle-shaped members being aligned with the other pair of angle shaped members, an extensible section telescoped within said angular guide members, and comprising two pair of Z-shaped members, one pair of Z-shaped members being aligned with the other pair of Z-shaped members, one pair of Z-shaped members slidably engaging one pair of angle shaped members and the other pair of Z-shaped members slidably engaging the other pair of angle shaped members, transverse members interconnecting each pair of Z-shaped members, rungs interconnecting the Z-shaped members at the front of said extensible sections, means to limit relative movement between said extensible section and said base, a second extensible section telescoped within the first extensible section and comprising a pair of vertical Z-shaped members slidably engaging a pair of Z-shaped members of the first extensible section, and a second pair of Z-shaped members slidably engaging the other pair of Z-shaped members of the first extensible section, transverse members interconnecting each pair of Z-shaped members of the second extensible section, and rungs interconnecting the Z-shaped members at the front of the second extensible section.

5. An extensible ladder comprising a base, a plurality of rungs on the base, two pair of vertical, aligned, angle shaped guide members fixed to said base, one pair of angle-shaped members being aligned with the other pair of angle shaped members, an extensible section telescoped within said angular guide members, and comprising two pair of Z-shaped members, one pair of Z-shaped members being aligned with the other pair of Z-shaped members, one pair of Z-shaped members slidably engaging one pair of angle shaped members and the other pair of Z-shaped members slidably engaging the other pair of angle shaped members, transverse members interconnecting each pair of Z-shaped members, rungs interconnecting the Z-shaped members at the front of said extensible sections, means to limit relative movement between said extensible section and said base, a second extensible section telescoped within the first extensible section and comprising a pair of vertical Z-shaped members slidably engaging a pair of Z-shaped members of the first extensible section, a second pair of Z-shaped members slidably engaging the other pair of Z-shaped members of the first extensible section, transverse members interconnecting each pair of Z-shaped members of the second extensible section, rungs interconnecting the Z-shaped members at the front of the second extensible section,

and a third extensible section telescoped within the second extensible section and comprising two pair of vertical angle shaped members, one pair of angle shaped members slidably engaging a pair of Z-shaped members of the second extensible section, and the other pair of angle shaped members of the third extensible section slidably engaging the other pair of Z-shaped members of the second extensible section, transverse members interconnecting each pair of angle shaped members of the third extensible section, and rungs interconnecting the angle shaped members at the front of the third extensible section.

6. An extensible ladder comprising a base, a plurality of rungs on the base, two pair of vertical, aligned, angle shaped guide members fixed to said base, one pair of angle shaped members being aligned with the other pair of angle shaped members, an extensible section telescoped within said angular guide members, and comprising two pair of Z-shaped members, one pair of Z-shaped members being aligned with the other pair of Z-shaped members, one pair of Z-shaped members slidably engaging one pair of angle shaped members and the other pair of Z-shaped members slidably engaging the other pair of angle shaped members, transverse members interconnecting each pair of Z-shaped members, rungs interconnecting the Z-shaped members at the front of said extensible sections, means to limit relative movement between said extensible section and said base, a second extensible section telescoped within the first extensible section and comprising a pair of vertical Z-shaped members slidably engaging a pair of Z-shaped members of the first extensible section, a second pair of Z-shaped members slidably engaging the other pair of Z-shaped members of the first extensible section, transverse members interconnecting each pair of Z-shaped members of the second extensible section, rungs interconnecting the Z-shaped members at the front of the second extensible section, a third extensible section telescoped within the second extensible section and comprising two pair of vertical angle shaped members, one pair of angle shaped members slidably engaging a pair of Z-shaped members of the second extensible section, and the other pair of angle shaped members of the third extensible section slidably engaging the other pair of Z-shaped members of the second extensible section, transverse members interconnecting each pair of angle shaped members of the third extensible section, rungs interconnecting the angle shaped members at the front of the third extensible section, and a platform mounted on the upper end of the third extensible section, and a removable railing on said platform.

7. A ladder comprising a base having front and rear vertical leg portions, and a horizontal interconnecting portion, spaced sufficiently above the lower ends of said legs whereby said ladder may straddle a bench, telescoping extensible ladder sections slidably mounted on the front leg portion, a winch on said base, a counterweight mounted on the rear leg portion, pulleys on said base and sections, and a single rope operated by said winch to extend said sections, said pulleys, rope and winch being located substantially centrally of said ladder and between the sides thereof.

8. A ladder comprising a base having front and rear vertical leg portions, and a horizontal interconnecting portion, spaced well above the lower ends of said legs whereby said ladder may strad-

die a bench, an extensible ladder section slidably mounted on the front leg portion, a counterweight mounted on the rear leg portion, said front and rear leg portions being supported on swivel wheels, and an outrigger attached to the front leg portion of the base and extending forwardly and outwardly therefrom and engaging the floor to aid in preventing tilting of the ladder.

9. A ladder comprising a base having front and rear vertical leg portions, and a horizontal interconnecting portion, spaced above the lower ends of said legs, an extensible ladder section slidably mounted on the front leg portion, a counterweight mounted on the rear leg portion, said front and rear leg portions being supported on swivel wheels, means on the base adapted to engage the floor to prevent rolling of the ladder, and an outrigger attached to the front leg portion of the base, and extending forwardly and outwardly therefrom, and engaging the floor to prevent tilting of the ladder.

10. An extensible ladder comprising a base having spaced front and rear legs, means interconnecting the front and rear legs, said interconnecting means being located a substantial distance above the lower ends of the legs and forming a space below said interconnecting means and between said legs to straddle furniture, a counterweight on the rear legs, and a plurality of telescoping extensible ladders on the base adjacent the front legs.

11. An extensible ladder comprising a base having spaced front and rear legs, means interconnecting said legs, substantially above the lower ends of said legs, a counterweight on the rear legs, a plurality of telescoping extensible ladders on the base adjacent the front legs, means to limit relative movement between adjacent extensible sections and between one of the sections and the base, a platform fixed to the uppermost extensible sections, a railing removably mounted on said platform, and means on the base to dependently support said railing when removed from said platform, between the front and rear legs and below said interconnecting means.

12. An extensible ladder comprising a base having a vertical front leg, a vertical rear leg, and a horizontal member interconnecting the upper end of the rear leg with a portion of the front leg, and an inclined member interconnecting the rear leg with an upper portion of the front leg, said ladder having a space below the interconnecting portion and between said front and rear legs, sufficient to permit the ladder to straddle benches and the like furniture, and a plurality of extensible sections on the front leg of said base.

13. An extensible ladder comprising a base having a vertical front leg, a vertical rear leg, and a horizontal member interconnecting the upper end of the rear leg with a portion of the front leg, and an inclined member interconnecting the rear leg with an upper portion of the front leg, said ladder having a space below the interconnecting portion and between said front and rear legs, sufficient to permit the ladder to straddle benches and the like furniture, and a plurality of extensible sections on the front leg of said base, said base having a plurality of rungs, and said extensible sections being telescoped and each having two pairs of aligned corner members, the front corner members being interconnected by horizontal rungs.

14. An extensible ladder comprising a base,

rungs at the front of the base, two pairs of parallel, vertical, aligned, corner guide members fixed to said base, an extensible section slidably mounted within said guide members, and having two pairs of vertical corner guide members engaging said first pair of corner guide members, means to rigidly interconnect the guide members of said section, including rungs at the front of said section, a second extensible section telescoped within the first extensible section, and having two pairs of vertical corner guide members engaging the vertical guide members of said first extensible section, means to rigidly interconnect the guide members of said second section, including rungs at the front of said section, a third extensible section telescoped within said second extensible section and comprising two pairs of vertical guide members engaging the guide members of said second section, means to rigidly interconnect the guide members of said third section, including rungs at the front of said third section, a platform at the upper end of said third extensible section, a winch on said base, a pulley at the upper end of said base, a pulley at the lower end of said first extensible section, a pulley at the upper end of said first extensible section, a pulley at the lower end of said second extensible section, a pulley at the upper end of said second extensible section, and a rope extending from the winch around the pulley at the upper end of the base, around the pulley at the lower end of the first extensible section, around the pulley at the upper end of the first extensible section, around the pulley at the lower end of the second extensible section, around the pulley at the upper end of the second extensible section, and being attached to the lower end of the third extensible section, said ladder comprising a pair of spaced front and rear vertical legs, said extensible sections being mounted on the front leg of said ladder, a member interconnecting the front and rear legs and disposed above the lower ends of said legs, said ladder having a space below said last interconnecting means and between said legs, to permit the ladder to straddle benches and the like furniture.

15. An extensible ladder comprising a base, rungs at the front of the base, two pairs of parallel, vertical, aligned, corner guide members fixed to said base, an extensible section slidably mounted within said guide members, and having two pairs of vertical corner guide members engaging said first pair of corner guide members, means to rigidly interconnect the guide members of said section, including rungs at the front of said section, a second extensible section telescoped within the first extensible section, and having two pairs of vertical corner guide members engaging the vertical guide members of said first extensible section, means to rigidly interconnect the guide members of said second section, including rungs at the front of said section, a third extensible section telescoped within said second extensible section and comprising two pairs of vertical guide members engaging the guide members of said second section, means to rigidly interconnect the guide members of said third section, including rungs at the front of said third section, a platform at the upper end of said third extensible section, a winch on said base, a pulley at the upper end of said base, a pulley at the lower end of said first extensible section, a pulley at the upper end of said first extensible section, a pulley at the lower end of said second extensible section, a pulley at the upper end of said second



extensible section, and a rope extending from the winch around the pulley at the upper end of the base, around the pulley at the lower end of the first extensible section, around the pulley at the upper end of the first extensible section, around the pulley at the lower end of the second extensible section, around the pulley at the upper end of the second extensible section, and being attached to the lower end of the third extensible section, said ladder comprising a pair of spaced 10

front and rear vertical legs, said extensible sections being mounted on the front leg of said ladder, a member interconnecting the front and rear legs and disposed above the lower ends of said legs, said ladder having a space below said last interconnecting means and between said legs, to permit the ladder to straddle benches and the like furniture, and a counterweight on the rear leg of said base.

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