Jan. 22, 1963 E. E. PELKY 3,074,507

LADDER DOLLY

Filed Aug. 8, 1961

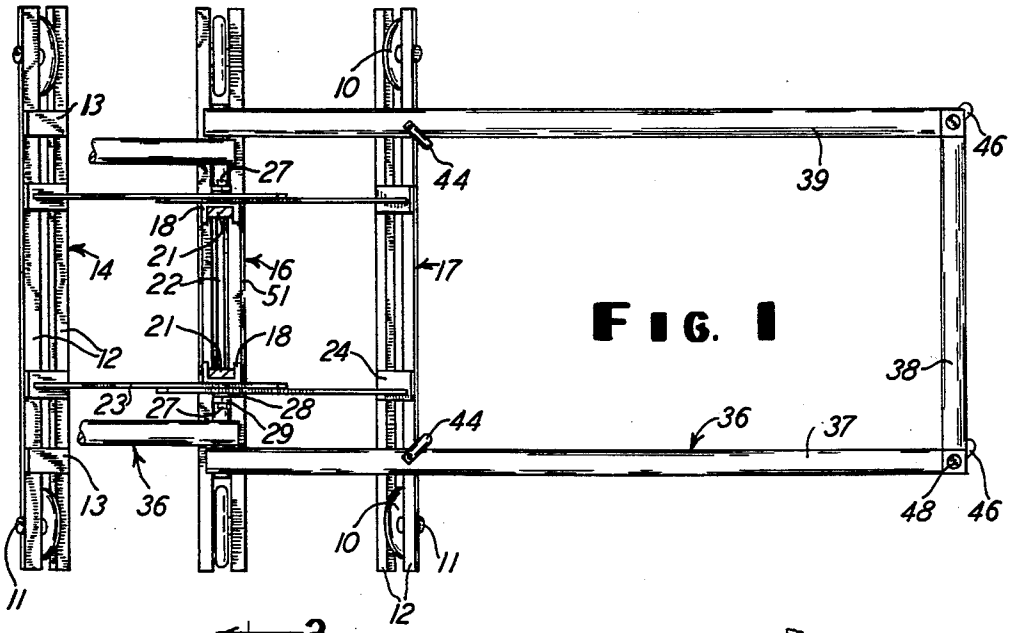


FIG. 1

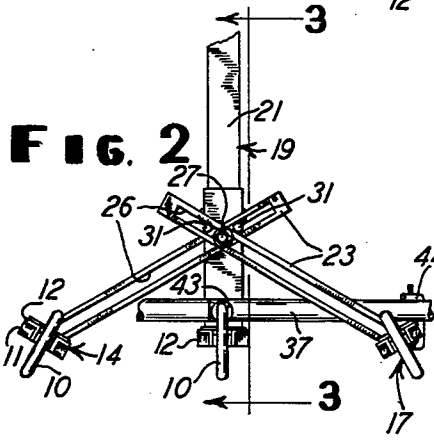


FIG. 2

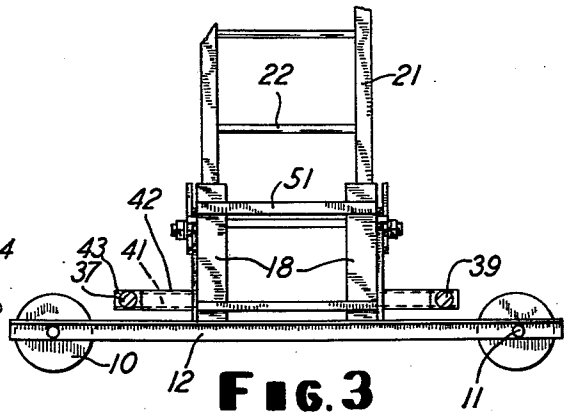


FIG. 3

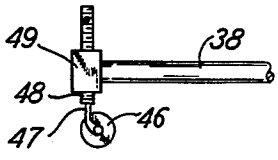


FIG. 4

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LADDER DOLLY

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This invention relates to a ladder dolly, and more particularly it relates to a dolly for supporting a straight type of ladder such that the ladder can be used in either an upright or a tilted position.

It is an object of this invention to provide a ladder dolly of an improved type and particularly to provide one which will securely hold the lower end of the ladder in a fixed position of either a vertical or a tilted attitude.

Still another object of this invention is to provide a ladder dolly which is adjustable to adjust for irregular ground or the like support so that the ladder can be securely supported in a selected upright position.

A still further object of this invention is to provide a ladder dolly which is adjustable for securely holding the ladder in a number of selected adjusted positions varying from a vertical position to tilted positions and it would therefore permit the ladder to be used without leaning the ladder against any additional support as the dolly will completely support the ladder.

A still further object of this invention is to provide a ladder dolly wherein the user can place the ladder in an upright position and mount the same, and then he can move the ladder along the ground or like support without getting off the ladder, and this can be accomplished without supporting the ladder against a building or the like.

Other objects and advantages will become apparent upon reading the following description in light of the accompanying drawings wherein:

FIG. 1 is a top plan view of a fragment of a preferred embodiment of this invention.

FIG. 2 is a front elevational view of a part of the embodiment shown in FIG. 1.

FIG. 3 is a side elevational view of a part of the embodiment shown in FIG. 2.

FIG. 4 is a view of a fragment of the embodiment shown in FIG. 1.

The same reference numerals refer to the same parts throughout the several views.

The drawings show the dolly or support to consist of a plurality of wheels **10** which are rotatably supported on their axle **11** which in turn are mounted on frame members or angle irons **12**. Thus, it will be noted that each pair of angle irons **12** has a wheel **10** at each end thereof and the pairs of angle irons **12** are secured together by means of a plate **13** which can of course be welded or otherwise attached to the angle iron **12**.

Thus it will be noted that three sets of wheels are provided and these wheel means are designated **14**, **16**, and **17**.

The center wheel set **16** has two spaced-apart U-shaped brackets or mounting means **18** attached thereto by welding or the like at the lower ends of the mounting means **18** so that the ladder extends upright from the angle irons **12**. It will further be noted that a conventional type of ladder generally designated **19** has its side rails **21** disposed within the brackets **18** with the ladder rungs **22** extending therebetween. Thus the two brackets **18** securely support the ladder **19** in the vertical position shown as long as the dolly with the three wheel sets **14**, **16**, and **17** are in the position shown.

At this time it will be noted that the wheel sets **14** and **17** are angularly disposed so that their four wheels **10** are disposed at approximately a 45 degree angle while their supporting braces or connectors **23** are disposed at approximately a 30 degree angle. The braces or connectors **23** are therefore attached to the wheel sets **14** and **17** through the plates **24** which can be welded to the respective angle irons **12** so that the braces **23** and the sets **14** and **17** are rigidly secured together.

Further, it will be noted that the braces **23** are provided with slots **26** extending lengthwise in the braces, and the slot **26** of each of the braces **23** receives an adjusting bolt **27** which is mounted on the brackets **18** with one bolt of course on each bracket **18** and with the bolt extending beyond the braces **23** so that the washer **28** and nut **29** provide for clamping the braces **23** to the brackets **18**. Further, pins **31** which are guides are also secured to the brackets **18** and extend therefrom to project through the slots **26** and the braces **23** to thus guide the braces **23** in their sliding movement along the clamping bolt **27** and the pins **31**.

It will therefore be understood that the wheel units **14** and **17** are adjustable so that their respective wheels **10** can be raised and lowered and thus they can both adjust for irregular ground on which they rest so that the ladder **19** can be disposed in a vertical position, or they can of course adjust so that the ladder can be disposed at an angle and yet all six of the wheels **10** can remain in contact with the supporting ground or the like. With this arrangement, the ladder **19** is securely supported on the dolly and the entire rig with the ladder **19** can be moved in the direction of the orientation of the wheels **10** as it is desired to move along the building on which one may be working by painting or repairing or other types of work including carpentry. It will further be understood that the dolly in the position shown in the drawings will support the ladder in a vertical position so that the ladder **19** can be used as a structural supporting member for angling other ladders therefrom at the upper end of the ladder **19** to form a tripod to support three ladders, namely one to each side of the ladder **19**, and this arrangement permits scaffolding to be mounted on the three ladders, or the ladder **19** can simply be retained in the upright or vertical position shown so that one can climb the ladder and work on the position he is in with the ladder **19** in the vertical attitude shown.

Where it is desired to go to extreme heights with the ladder **19** supported solely by the dolly, or where the ladder **19** may be disposed at an angle which could be better sustained by additional dolly support, an additional rig or support generally designated **36** is applied to the dolly. In this instance, it will be noted that the rig **36** exits on each side of the dolly described and consists of three members **37**, **38**, and **39**. These members may of course be tubular as shown and they are preferably pivotally mounted on the dolly by providing a shaft designated **41** in FIG. 3 which is rigidly attached to and extends from the bracket **18**, and a first sleeve **42** is disposed over the shaft **41** and this supports the rig **36** to the left as viewed in FIGS. 1 and 2, and therefore this rig **36** is pivoted from the lowered horizontal position shown to the upright position parallel with the ladder **19** when its deesired to transport the entire structure. Another sleeve **43** is shown to be rotatably mounted over the outer end of the shaft **41** and this sleeve is welded or otherwise connected to the rig members **37** and **39** at each side of the rig **36** so that the ladder can also be pivoted with respect to the dolly from the lowered horizontal position to the upright and substantially vertical position.

Thus the two rigs **36** can be placed in the horizontal position shown and clamps or other fasteners such as the C clamps **44** can be secured to the members **37** and **39** of the rig **36** and to the angle irons **12** of the dolly to rigidly fasten the rig **36** with respect to the dolly and thus secure the two together as shown.

It will of course therefore be understood that the rigs **36** are both secured to the dolly by means of clamps **44**

so that a firm rectangular base is provided. It will also be noted that supporting wheels such as the castering wheels **46** are mounted on the outer corners of the rig **36** for the purpose hereinafter mentioned. It will be noted that the caster wheels **46** are rotatably mounted in their arms **47** which in turn are connected to a threaded screw **48** which of course operates through the nut member **49** secured to the corners of the rig **36** in any conventional manner. Thus, upon operation of the jack screw **48**, the caster wheels **46** are raised and lowered so that the wheels **46**, for instance can be lowered into engagement with the ground and then the wheels **10** are raised off the ground and the entire support of the rig is on the caster wheels **46**. This of course permits a firm base because of the lateral extent of the supporting wheels **46**, and it of course also provides for universal movement of the entire rig since the caster wheels will permit it to be moved in any direction desired.

It will therefore be understood that sturdy and stable support is provided for a ladder, but nevertheless the support or dolly permits the ladder to be moved so that the user can actually move the ladder and the entire support from his position at the top of the ladder and he need not therefore return to the ground each time the ladder must be moved. Further, the dolly disclosed permits the ladder to be moved to the work site in the vertical position and it need not be carried as it can be rolled off the dolly and the latter is then available for firmly supporting the base of the ladder when the ladder is leaned against a building or even when it is retained in the upright position. In all instances, all six wheels **10** are available for supporting the ladder in a stable condition. It will also be noted that braces **51** are suitably connected between the brackets **18** by welding or the like to stabilize the construction.

While a specific embodiment of this invention has been shown and described, it will be understood that certain changes could be made therein and the invention therefore should be limited only by the scope of the appended claims.

What is claimed is:

1. A ladder dolly comprising uprightly disposed mounting means for receiving the lower ends of the side rails of a ladder to fixedly support the same with respect to said dolly, first wheel means rotatably attached to said mounting means for mobily supporting the latter and disposed therebelow in an upright direction and fixedly attached thereto in the upright plane of said mounting means for non-pivotally supporting the latter and directed in the upright plane through said mounting means, second wheel means disposed offset to one side of said upright plane through said first wheel means and being tilted toward said mounting means and mobily supporting the latter and being directed in the direction of said first wheel means, and an adjustable connector extending between said mounting means and said second wheel means and being attached to the latter two for adjustably securing them together at a selected angle to dispose said ladder at a corresponding angle when both said wheel means are engaged with the ground.

2. A ladder dolly comprising a pair of spaced-apart brackets for securing the lower ends of the side rails of a ladder, first ground-engaging wheels connected to said brackets and spaced apart a distance greater than the space between said brackets and being directed in the one plane extending through both said brackets and being fixedly connected thereto for non-pivotal support thereof, second ground-engaging wheels disposed to each side of said barckets offset from said plane and being

angled to the latter to tilt toward said brackets and being spaced apart on said each side a distance greater than the space between said brackets and being disposed on a level therebelow for mobily supporting said brackets and being directed in the same direction as said first ground-engaging wheels, and an adjustable brace connecting said second ground-engaging wheels and said brackets together at a selected angle therebetween.

3. A ladder dolly comprising mounting means having two spaced-apart sections for securing the lower ends of the side rails of a ladder in a vertical plane, a pair of wheel frame members of a length greater than the spacing of said sections and disposed one to each side of said vertical plane, a ground-engaging wheel mounted on each opposite end of said frame members and being angled with respect to said vertical plane to tilt toward said mounting means and being disposed on a level therebelow for mobily supporting said mounting means and directed parallel to the common plane of said side rails, an adjustable brace connecting said wheels and said mounting means together at a selected angle therebetween and being rigidly attached to each said frame member and adjustably attached to said mounting means, releasable fastening means connecting each said brace and said mounting means, and additional ground-engaging wheels being connected to said mounting means and being disposed therebelow in said vertical plane thereof and spaced apart a distance greater than the space between said sections for mobily supporting said mounting means and directed in the direction of the other said wheels and fixedly connected to said mounting means.

4. A ladder dolly comprising mounting means for receiving the lower ends of the side rails of a ladder to fixedly support the same, first and second wheel means rigidly attached to opposite sides of said mounting means for mobily supporting the same at a fixed angle and with said wheel means being directed in the common plane of said side rails, and a pair of elongated rigs pivotally connected to each side of said mounting means for movement between an upper inoperative position and a lower operative position, said rigs extending across and beyond each said wheel means in said lower operative position and being attached thereto and engagable with the ground for stabilizing said dolly.

5. A ladder dolly comprising mounting means for receiving the lower ends of the side rails of a ladder to fixedly support the same, first and second wheel means rigidly attached to opposite sides of said mounting means for mobily supporting the same at a fixed angle and with said wheel means being directed in the common plane of said side rails, a pair of elongated rigs pivotally connected to each side of said mounting means for movement between an upper inoperative position and a lower operative position, said rigs extending across and beyond each said wheel means in said lower operative position and being attached thereto, and wheels connected to the free ends of said rigs and engagable with the ground for mobily supporting and stabilizing said dolly.

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