Our invention relates generally to a portable and adjustable work platform offering widespread utility in widely diversified fields of application. More particularly, it concerns a novel mechanism-supporting dolly for servicing automotive vehicles, stationary engines and the like.

An object of our invention is to provide a dolly which is particularly adapted for servicing engines on automotive, marine or stationary internal combustion equipment and which, simple and uncomplicated in construction and fabricated through a minimum number of manipulative steps, to that end demanding but a comparatively few operators with minimum plant facility, while employing materials which are readily available and low in cost; is comparatively light in weight, is readily portable, effectively protects against electrical shock and is almost completely adjustable, both horizontally and vertically, through a 90° vertical angle, which brings the mechanism closely overlying his work region regardless of the location thereof relative to the motor mounting; which is practically foolproof and tip-proof; is of long useful life; and which requires but little, if any, standby time for servicing or the like.

All the foregoing, as well as many other highly practical objects and advantages, attend the practice of our invention, which will in part be obvious and in part more fully pointed out herein during the course of the following disclosure, particularly as construed in the light of the disclosure of the accompanying drawings.

Accordingly, our invention may be seen to reside in the several parts, elements, features and materials of construction, as well as in the interrelation of each of the same with one or more of the others, the scope of the application of all of which is more fully set forth in the claims at the end of this specification.

In the several views of the drawings, wherein we have disclosed that embodiment of our invention which we prefer at present, the assembled dolly is disclosed, in perspective, in Figure 1;

Figure 2 discloses the dolly, in side elevation, as overlying the motor of a conventional automobile, the latter being skeletonized and disclosed with hood raised; while

Figure 3 is a fragmentary elevation, parts being disclosed in section, disclosing the manner in which the adjustable supporting strut pivotally engages the top of the vertically swingable ladder base, the longitudinal rails of the upper ladder portion being disclosed as telescopically adjustable in the side rails of the ladder base.

Throughout the several views of the drawings, like reference characters denote like structural parts.

To permit a more ready and thorough understanding of our invention it may be noted at this point in the disclosure that constant emphasis is presently placed upon increased efficiency and power output of modern-day internal combustion equipment. However, motors of increased complexity and size are constantly being introduced. And this is true, despite the increased use of lightweight metals and the like. Moreover, the trend is to house this equipment in regions of restricted compass, difficult of access. While such equipment has proved highly reliable in operation, yet this very increased complexity of design, coupled with efficiency in output and increase in compression ratio, makes periodic servicing imperative. Indeed, the difficulty of access to the modern automobile engine housing has made it well nigh impossible for a mechanic of moderate height and with comparatively short reach, to gain satisfactory access to the parts undergoing servicing. The same difficulties are even more severely impacted upon the maintenance and conditioning of truck equipment, where height above floor adds to the challenging problems just outlined.

The desirability and indeed, the necessity, for ready access to the motor and auxiliaries located under the hood of automotive equipment has long been recognized. Considerable attention has been directed to this general problem. Efforts have been made to permit the mechanic, while securely positioned, to overlie the motor over which the protective hood has been opened. For one reason or another, however, available equipment has proved unsatisfactory. Either the mechanism support which is provided has proved unstable, with tendency to tip readily, thus unseating the mechanic; it has not been adequately and readily adjustable, so that it displays utility, if at all, for but limited variation in motor size or type of mounting; or it does not provide the mechanic with ready access to the motor itself and its essential auxiliaries. Tendency exists for such known equipment to scar or damage the highly finished, delicate and ornamental parts of the motor housing, as for example, the fenders and body of an automobile. It is not sufficiently portable; or the support is not sufficiently locked down and stabilized in adjusted position. Almost invariably, and in some one or more of the foregoing respects, amongst others, known and available equipment have proved unsuitable in actual use, and have fallen short of complete acceptance in the art.

Accordingly, an important object of our invention is to provide a dolly of the general type described, which is particularly adapted for the servicing of the modern-day complicated automotive equipment, either truck or passenger, and regardless of size; which is simple in design; readily portable; can be readily disassembled when not in use, folded and stored; which has long useful life; which has essential adjustability through a vertical angle; which is practically tip-proof; which can be extended both vertically and horizontally and thereby positioned to overlie closely the underlying automobile engine and auxiliaries; and in which the mechanic-bearing supports or ladder rungs can be independently adjusted.

And now, having more particular reference to the disclosure in the several views of the drawings, and with special reference to that of Figure 1, it will be seen that essentially, our new dolly comprises three component parts: a carrier frame; a ladder base pivotally carried on said carrier frame and braced or strutted therefrom through a vertical angular swing of approximately 90°; and a platform-carrying upper ladder telescopically adjustable in said ladder base. These three elements will be separately described. Following this, description will be had concerning the manner in which these several elements cooperate to provide requisite close access for the mechanic to the particular job undergoing servicing.

It is essential that the carrier frame be so dimensioned that the mechanic, carried on the platform which overlies this frame, is not subject to tipping over, and thereby upending both the mechanic and the dolly on which he is working. To achieve this end, the design and construction must be such that the center of gravity of the assembled dolly, with mechanic positioned thereon, re-
mains within the projection of the floor-borne carrier on the underlying floor on which it rests. In this connection, it is to be understood that the particular position of the frame is made to exist while the machine is mounting the ladder, in a period of constantly shifting center of gravity. Such stability is requisite, not only for protection of the mechanism but also to prevent the fall from tipping against and damaging the underlying floor. Consequently, the moving frame, be it automobile or other object. Thus it is essential to spread the carrier frame, in its floor-parallel extent. In both longitudinal and lateral directions relative to the major axis of such frame. This is essential to an extent consistent with re-able motility of the frame and reasonable ease in positioning it relative to the composite unit which comprises the motor underdrive, service unit and its support. Illustratively and when servicing on automobile, the carrier frame must be positioned between the wheels of the automobile, either laterally or from the front of the machine, and this must be readily possible regardless of the height of the motor whether it be a passenger or truck motor. In turn, this requires that the laterally or transverse terminal portions of the frame be comparatively wide, while it is desired that the intermediate longitudinal spacing between the lateral supports, and along the major axis of the frame, the transverse width be kept somewhat, for ready positioning under the work piece.

To this end, we provide a composite of what we term a double-H box-type frame together with an X-frame superposed thereon and made fast thereto. Typically this frame, indicated generically at 19 in Figure 1, is comprised of the double H-element 11 that includes paired, spaced and co-extensional end or leg members 11A, 11A comprising the legs of the H-frame 11. These legs 11A are formed of angle iron, the horizontal extent of which is disposed between the pommelets. Snaking apart these legs 11A, 11A, and extending longitudinally of the dollies, are disposed members 11B, 11B, 11B, 11B of angle iron. These elements 11B, 11B comprise the double arms of the H-frame 11. They are received on and are carried by and made fast to the legs 11A, 11A, intermediate their lengths. In desired suitable manner, as by welding or the like. The projection between the arms 11B, 11B is nicely calibrated through the intersection of brace plate 11C, typically formed of channel iron with web unperforated. Brace plate 11C is made fast in desired suitable manner to the arms 11B, 11B at a selected point intermediate the length thereof, preferably at the center, as by welding or the like. This brace plate 11C is used to stiffen the double H-frame element and impart stability to the entire structure. Brace plate 11C is of such length, and the spacing between arms 11B, 11B is such, as together will readily facilitate passage of the portable frame beneath the engine underlying servicing, whether applied laterally, as for example, in the rear of the front tire of an automobile vehicle, or from the front end of the engine, beneath the front tires thereof. At the same time, the length of the legs 11A, 11A is so dimensioned, and they project beyond their junction with the respective arms 11B, 11B to such an extent, that adequate stability is imparted to the carrier frame laterally of the confines of the ladder which is carried thereon. Sidewise tipsire is effectively protected against.

Considering for the moment that leg 11A of the frame element 11 which is disposed at the upper left in Figure 1, it will be seen that this leg carries at each end thereof a related caster bracket 12 in which is mounted a suitably roller 13. It is by means of these rollers that the carrier frame can be readily positioned under a particular vehicle and in desired relation thereto. To this end, it is sufficient simply to lift slightly the other leg 11A of the frame element 11 to a distance sufficient to remove it from the floor, and then, through rollers 13, to trundle the frame into proper working position. Where desired, it is possible, not only to apply the casters 12 in pivotal manner to the ends of the particular leg 11A, as through the use of kingpin-type bushings or the like.

Concerning the platform section 14 which is shown at the lower right in Figure 1, we fix platforms 14 to the underside thereof, adjacent each end. These platforms are of a height preferably equal to the radius of the rollers 13. Viewed electrically, we desire the dollies to be practically shockproof. According to the present embodiment, we prestress the rollers 13 and the platforms 14 of some suitable electrical insulating material which at the same time will display requisite mechanical strength and effectively resist attack by substances characteristically encountered in garage practice, of which grease, oil and the like are typical. Suitable for such purposes are conventional, inexpensive and readily available fibers, plastic or rubber materials. At this point in the disclosure a consideration of the drawings will emphasize that, while the H-frame is adequately braced against either lateral or longitudinal force components (as viewed from a consideration of the arms 11B, 11B establishing the major axis of there is still some effective resistance provided against twisting or torsional forces asserted about the terminal regions of the legs 11A, 11A. To impart added rigidity and strength to the carrier frame 10, therefore, we superimpose upon the H-frame element 11 an X-frame 15 having four arms 15A, 15A, integrally joined together at central junction point 15B. The frame 15 can be die-cast, stamped, pressed, molded or otherwise formed as a unit. Or it may be a composite and fabricated structure, welded or otherwise conventionally assembled at junction 15B. The outer extremities of the arms 15A are made in desired suitable manner, within the web of legs 11A, 11A. Preferably this is at the extremities thereof, and against the web portions of these angle iron elements, as by welding or the like, as at 15C. In the embodiment disclosed the X-frame 15 is formed of metal displaying a characteristically T-section. As shown, the head of the T is disposed uppermost, with the leg of the T extending downwardly. The leg of the T is indicated at 15D, and this leg 15D is slotted at 15E for ready reception over and around the upstanding leg of the angle iron elements from which the arms 11B, 11B of frame 11 are formed. To prevent chafing of the 15B relative to the arms 11B, we may form these arms 15A of metal of sufficient section and rigidity, or we may obtain increased strength by securing the arms together at the cuts 15E, as by welding or the like. Or if desired, may provide sound-insulating material at these joints.

In the foregoing manner we have provided a perfectly rigid carrier frame of composite structure, so dimensioned as to insure that the overlying mechanical-bearing platform, later to be described and comprising part of the upper ladder, will at all times have its center of gravity provided within its confines. At the same time, this portable frame can be readily positioned underneath the automobile engine, without impendence from the wheels or other portions of this vehicle.

Removably fast to one transverse end of the frame 10, we pivotally mount a ladder base indicated generally at 16 in Figure 1. This ladder base 16 thus is swingable about a horizontal axis which is disposed transversely to frame 10, and through a vertical plane which coincides with the longitudinal axis of the frame. To that end, we mount ladder base 16 to those ends of the arms 11B of H-frame element 11 which are adjacent to that sidereal or leg 11A of said frame which is at the lower right in Figure 1. Preferably, we form ladder 16 of siderails 16A, 16A, together with interconnecting rung 16B and a top brace 16C. In the preferred embodiment these siderails 16A, 16A are formed of hollow metal rods, preferably square in transverse cross-section. Rung 16B is constructed of rodding of any suitable material and section. Preferably we form it of light-weight aluminum. While disclosed
As a solid rod, we can also form this element of hollow tubing. At their lower ends, we pivotally bolt hinge or otherwise joint, as at 16E, these siderails 16A to the arms 11B of lateral adjustment. We achieve this by receiving these siderails 16A in supporting ears which are comprised of the upper and lower ends of the angle-iron arms 11B and cooperating brackets 11F made fast, as by welding or the like, to the legs 11A on the sides of the rails 16A opposite to the upper portions of arms 11B. Thus, the ladder base 16 is swingable through a vertical angle which passes through the longitudinal axis of the carrier frame 10.

It remains to brace this ladder brace 16 in its elevated position in manner such as to provide resistance in compression against its collapse onto the top surface of the frame 10. Preferably this brace element, now to be described, should in itself provide for vertical adjustability, to permit adjustment of the ladder base 16 throughout wide vertical arc within the particular quadrant through which this ladder brace 16 swings. To this end, we provide a telescopic brace element indicated generally at 17 and comprised of cooperating telescopic tubing and sleeve element 17A, 17B, respectively. Centrally and transversely of the top surface of the brace plate 11C of the frame element 11, we provide an upstanding, trunnion-like and double-eared boss element 18. In generally similar manner we provide (see Figures 2 and 3) a second and like trunnion-like and double-eared boss 18 which projects outwardly and downwardly from the rear surface of the brace rungs 16C of the ladder base 16. The bottom end of the telescopic tubular element 17A is made pivotally fast, in desired suitable manner, as by a bolt or pin 18A, to the bottom boss 18. In like manner, the top end of the telescopic tubular element 17A is made pivotally fast to the upper boss 18 in desired suitable manner, as by bolt or pin 18B. A pin 19, pinned through 19A at 19B to the underside of rung 16C, passes through paired openings 17C, 17C and strut elements 17A, 17B to secure these elements in adjusted position. The pilot hole to which the strut is adjustably opened determines the throw of the ladder base 16 through a vertical angle. The greater the opening of the elements of the strut, the closer to vertical is the approach of the ladder base 16.

It will be seen that, as normally employed, the ladder brace 16 is inclined at an angle to the vertical. This is brought about through adjustment of the trunnion-like boss element 17. Thus, any adjustment of the upper ladder relative to the ladder base 16 will bring about a compound movement of the mechanic-bearing platform 33, to be described, both to the horizontal and to the vertical. Illustratively, movement of the siderails 22, 22 longitudinally away from the siderails 16A, 16A of the ladder base 16 will cause the platform 33 to move downwardly and inwardly. The extent to which such horizontal and vertical components of motion are introduced into this platform movement is dependent upon the degree of telescoping of the brace element 17. Illustratively, should the element 17 be telescoped, thereby to reduce the vertical angle by which the ladder base 16 departs from the horizontal, then the element 17 of the mechanic-bearing platform 33 is thereupon increased for unit linear and bodily movement of the upper ladder relative to the lower ladder 16, while the vertical component of such movement is correspondingly reduced. Conversely, with brace element 17 open, so that rod 17A and sleeve 17B are extended relative to each other, then longitudinal movement of upper ladder relative to the ladder base 16 is accompanied by increased component of vertical movement of the platform 33 with reduction in lateral movement thereof.

From the foregoing it will be seen that the lower extent of the siderails 22, 22 of the upper ladder are in the prolongation of the siderails 16A, 16A of the ladder base. It is along this portion of the upper operator rests his feet while positioned on the working platform 33, shortly to be described. The rungs of the upper ladder 21 are readily adjustable along the lengths of the siderails 22, 22, to facilitate access of the particular workman to the platform, and for comfortable positioning while resting thereon, and this, regardless of the height of his arms. Overlying the platform 33, the workman braces his feet against one or more of these ladder rungs, 28, 31.

To facilitate such adjustment, each ladder rung 28 of the upper ladder terminates in a follower plate or keeper 29, preferably rectangular in configuration, The keepers 29 are made fast, one at each end of each rung 28. They are dimensioned in conformity to and are received within the inner web of the related I-beam siderails 22, 22. Each follower plate 29, 29 is drilled at some point along its length, in manner similar and complementary to the bores 23 in the webs of the siderails 22, 22. Moreover, these follower plates 29, and hence the related rungs 28, are made removably fast to siderails 22, 22 in selected adjusted position and in desired suitable manner, as by bolts 30. Preferably these bolts 30 pass loosely through the bores in the follower plates 29 and the double-eared boss 18. In this manner, the rungs 28 may be adjusted as desired relative to the siderails, and may compensate for the extent of collapse or telescoping within or extension from the upper ladder within the ladder base 16. Where desired, and as shown, the uppermost rung or rungs 31 of the upper ladder 21 may be made stationary, and fast to the siderails 22, 22.

In a typical embodiment there may be one such adjustable rung 28. In such instance, and with upper ladder 21 extended, the rung followers 29 will be in the bottom of their travel in the webs of the siderails 22, 22. Typically, and in such instance, stop 29A will be provided in the interior webs of these siderails 22, 22 against which the bottom of the follower plates 29, 29 will abut. With ladder 21 collapsed within ladder base 16, however, the follower plates 29, 29 will travel upwardly in the guides provided by the siderails 22, 22, away from the stops 29A, 29A, and in the continuation of the siderails 22, 22 will abut against the terminal edges of the siderails 16A, 16A of the ladder base 16 and will be firmly positioned thereagainst. Of course, it is obvious from a consideration of the disclosure of Figure 1 that the follower plates 29, 29, in such instance, will not depart from the stops 29A, 29A until the rung 28 has been contacted by the top edge of the siderails 16A, 16A.

From the foregoing it is apparent that the mechanic climbs up to the platform 33 through the use of both the rungs 16B and 16C of the ladder base 16 and the rungs 28 and 31 of the upper ladder 21. So positioned, he remains standing on either the rung 28 or 31 of the upper ladder 21, or a combination thereof. It is further apparent that the ladder base 16 and the upper ladder 21 are swung, through the use of the element 17, into proper positioning of the platform 33 closely overlying the particular machine which is undergoing servicing. It also becomes evident that to this end, the upper ladder 21 is telescoped within or extended from the ladder base 16 to desired extent. Illustratively, in Figure 1 the upper ladder 21 is shown as extended, so as to adapt the dolly for servicing a truck, or a like motor; a type which is supported relatively high from the garage floor or the like. In Figure 2, on the contrary, the upper ladder 21 is telescoped within the ladder base 16, because of generally like consideration.

It is apparent, that in the use of the dolly of this general type, with the mechanic positioned on the upper
ladder portion 21 in manner already described, there is a tendency for him to bend forward at the region of the knees, towards the horizontal, to bring the upper portion of his body substantially parallel with the under- 
moving motor. To facilitate this I impart a general bend to the siderails 22, 22, and at one obtuse angle, as at 22A, 22A, shortly above the upper rung 31. This bend is im-
parted to the underside of the siderails, thereby to im-
port the brace and the intermediate portions 22B, 22B of these 
siderails 22, 22, a more acute angle to the horizontal. An 
apron 32, of metal, fabric, plastic or other suitable 
material, encompasses the uppermost face of at least the 
upper part of this intermediate extent 22B, 22B of the 
ladder, 21, and serves as a rest for the upper legs of the 
operator.

Recalling that it is the trunk portion of the operator 
which it is desired to have assume a position parallel or 
neary parallel to the floor, and hence to the motor 
which immediately underlies the mechanic to that end we 
impart a second bend 22C, 22C to the siderails 22, 22 
at a region defining the demarcation between the upper 
and outermost extremities 22A, on the one hand, and the 
intermediate portions 22B, on the other hand, of the 
siderails 22, 22. The angle between the parts 22A and 
22B is gentle and obtuse, and provides a still more acute 
such as to comfortably receive the mechanic. In any event, 
its underside is padded, as at 34, to avoid marring the 
finish of the fender or other part of the underlying 
vehicle or other work site.

It is apparent from the foregoing that our new dolly 
is both collapsible and portable. Thus, when the dolly 
is to be stored out of use, the pins 25 are pulled from 
between the upper ladder 21 and the ladder base 16. The 
upper ladder 21 is then removed from the ladder base 16, 
and stored in any convenient location. Next, the pin 19 
is removed from the rod 17A and sleeve 17B of the brace 
element 17. Chained as it is to the rung 16C of the lower 
bearing 16, it is safeguarded effectively against lost. The 
rod 17A is then folded down adjacent the plane of the 
carrier frame 10, and closely overlapping the X-frame 15. 
At the same time we fold down the sleeve element 17B 
into the plane of the ladder base 16. At this time we 
progress into position closely overlapping the carrier 
frame 10, on which it is mounted. This 
portion of the dolly is then trundled away for storage, 
and along with it, the upper ladder 21. Usually, in such 
storage, this upper ladder is longitudinally bridged over 
the collapsed and relatively flat ensemble comprised of 
frame 10 and ladder base 16.

When restoring the dolly to use, the collapsed dolly 
is rolled into the approximate region of use. The ladder 
base 16 is then swung from the frame 10 upwardly about 
trundled joint 16E, into a nearly vertical plane. Cooper-
ating rods 17A and sleeve 17B of brace element 17 are 
themselves swung from the frame 10 and ladder base 16,
respectively, into alignment with each other. The ladder 
base 16 is then swung counterclockwise through a vertical 
angle, back towards the frame 10, until desired tele-
scooping has been achieved between the rod 17A and sleeve 
17B. Once the ladder base 16 is brought to desired 
position relative to the vertical. The pin 19 is then in-
serted in a selected adjusting hole in the rod 17A, and 
serves to make the brace 17 fast in its adjusted position.

Upper ladder 21 is then positioned over the ladder 
bases 16, the siderails 22, 22 telescopically received 
within the frame 16A, 16A of the ladder base 16. In the 
adjusted position of ladder 16, the pins 25 are inserted 
through the openings 24, 24 of the siderails 16A, 16A 
and into the bores 23 of the siderails 22, 22. Through 
follower plates 29, 29 the rung 28 is then adjusted to 
the position which is best suited for the particular me-
chanic. The ladder is thus properly located, and all 
adjustments are made.

The wide extent of the carrier frame 10, both longi-
tudinally and laterally, with respect to the garage floor 
or other bearing surface, insures that the platform is 
virtually tip-proof. At the same time, the comparatively 
restricted central zone of this frame, as defined by the 
arms 11B, 11B of the frame 11 and the central portion 
of the X-frame 15, insures that the dolly can be effec-
tively positioned underneath the motor supports. The 
rollers 13 permit ready trundling of the dolly into desired 
positions, as well as its removal therefrom upon com-
pletion of the job. The electrically insulated nature of 
rollers plate 13 shown in FIG. 14 insures that the dolly is, for all practical purposes, shockproof against 
all electrical currents. The dolly is sturdy, practically 
fool-proof, and requires little standby attention of any 
sort, as for repairs or the like. It is comparatively light 
in weight, yet sturdy in assembly. In operation, little 
if any, hazard exists of the mechanic being unseated 
from his purchase on the dolly. The dolly is readily 
produced, with but little investment in plant and labor, 
and from materials of construction which are readily 
available at low cost.

All the foregoing, as well as many other highly prac-
tical advantages, attend the practice of our invention.

It is apparent from the foregoing that, once the broad 
aspects of our invention are disclosed, many embody-
ments thereof will readily suggest themselves to those 
skilled in the art, together with many modifications of 
that embodiment which will not depart from the spirit 
and scope of our invention. Accordingly, we intend the 
forgoing disclosure to be con-
strued as simply illustrative, and not as comprising 
limitations.

We claim:

1. A mechanic-bearing portable garage dolly for 
servicing internal-combustion engines and adjustable both 
through a vertical angle and, within its vertical angular 
radius, for any given angular setting, and also 
adjustable, through a combination of said angular and 
radial adjustments, to limited horizontal extent, with 
the said dolly movable at will, as a complete unit and 
in its entirety, on the floor of the garage, to any 
region of use for servicing said internal-combustion 
engines regardless of size and type thereof, and in the 
complete independence of load-bearing relationship 
thereof, and said dolly comprising, in combination, a 
floor-borne carrier frame; a ladder base carried 
by and pivotally and adjustably struttled, through a 
vertical angle, from said carrier frame; and an upper 
ladder telescopically received within and made removable 
out of the said ladder base, and extensible laterally therefrom, 
and itself terminating in a nearly horizontal platform 
which substantially overlies the carrier frame, in adjust-
ably spaced relation thereto.

2. A mechanic-bearing portable garage dolly for 
servicing internal-combustion engines and adjustable both 
through a vertical angle and, within its vertical angular 
radius, for any given angular setting, and also 
adjustable, through a combination of said angular and 
radial adjustments, to limited horizontal extent, with 
the said dolly comprises a carrier frame; a ladder base 

9 pivoted thereto for angular swing through a vertical angle; means carried by said frame for adjustably bracing said ladder base in its adjusted angular position; an upper ladder telescopically received within said ladder base for linear adjustment longitudinally of any relative to said ladder base, said upper ladder having rungs therein, and including side rails; the rails of said upper ladder serving as trackways, and at least one rung of said upper ladder terminating at each end thereof in adjustable keeper plates engaging within said trackways and adjustably and lockingly positionable therealong to permit positioning of said adjustable rung linearly along said upper ladder to position best suited for the particular mechanic.

3. A mechanic-bearing portable garage dolly for servicing internal-combustion engines and adjustable both through a vertical angle and, within its vertical angular range, radially for any given angular setting, and also adjustable, through a combination of said angular and radial adjustments, to limited horizontal extent, which said dolly comprises a carrier frame; a ladder base pivoted to said carrier frame for angular swing through a vertical angle; means carried by said frame for bracing said ladder base in its adjusted position; and platform-carrying upper ladder telescopically received within said ladder base for linear adjustment longitudinally of and relative to said ladder base; said upper ladder being transversely bent intermediate its length at several points, at obtuse angles, whereby the platform, in assembly, extends nearly horizontally and will closely overlie, at adjusted vertical height, the object undergoing work function.

4. A dolly according to claim 1, wherein the component elements thereof bear such geometrical and mechanical relationship to each other that the center of gravity of said dolly at all times lies within the horizontal projection of the carrier frame on the underlying floor or other support on which it is carried.

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