

Sept. 20, 1971

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3,605,941

AERIAL LIFT WITH ROTATABLE AND ENCLOSABLE BASKET

Filed Jan. 9, 1969

3 Sheets-Sheet 1

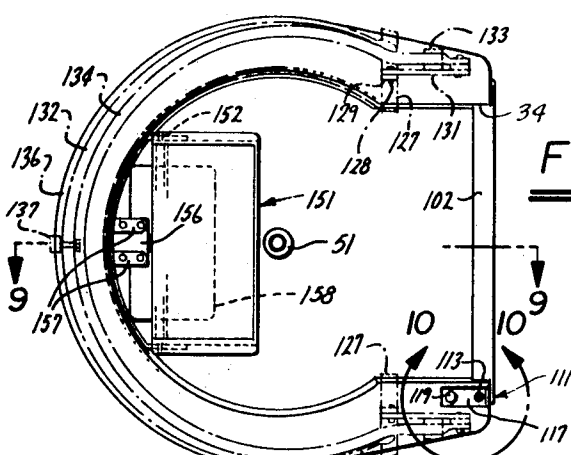


Fig. 3

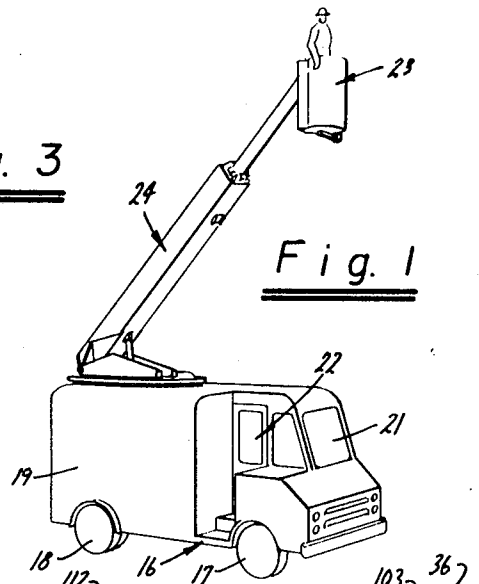


Fig. 1

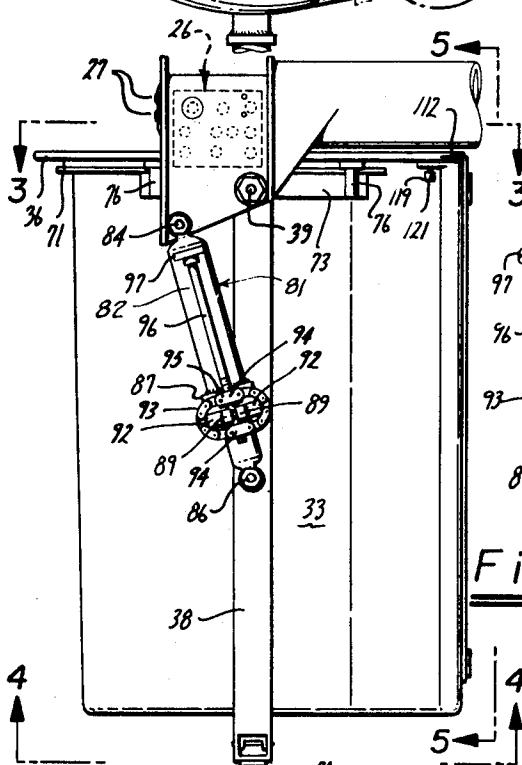


Fig. 2

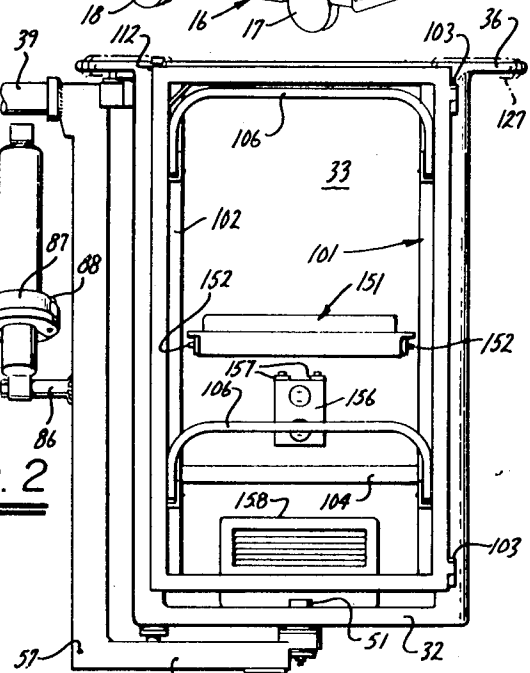


Fig. 5

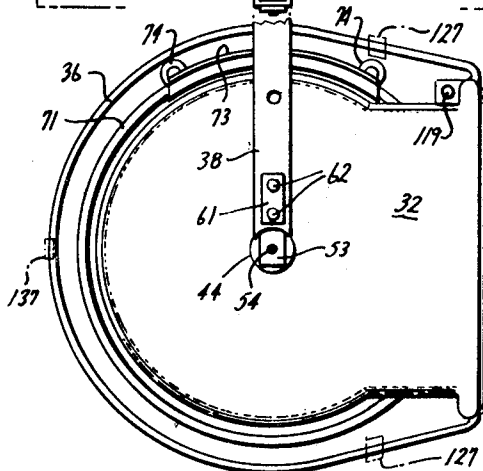


Fig. 4

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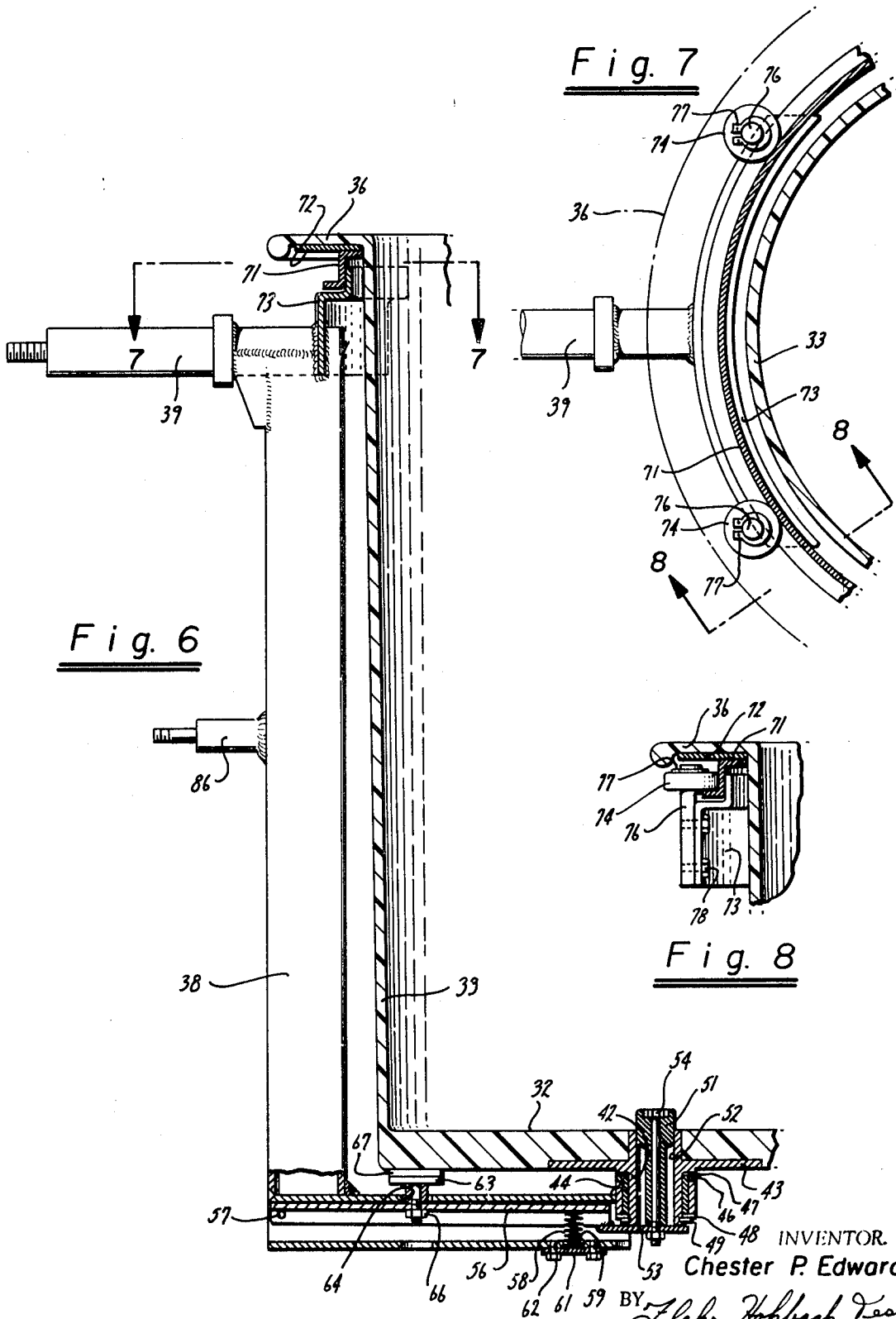
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3 Sheets-Sheet 2



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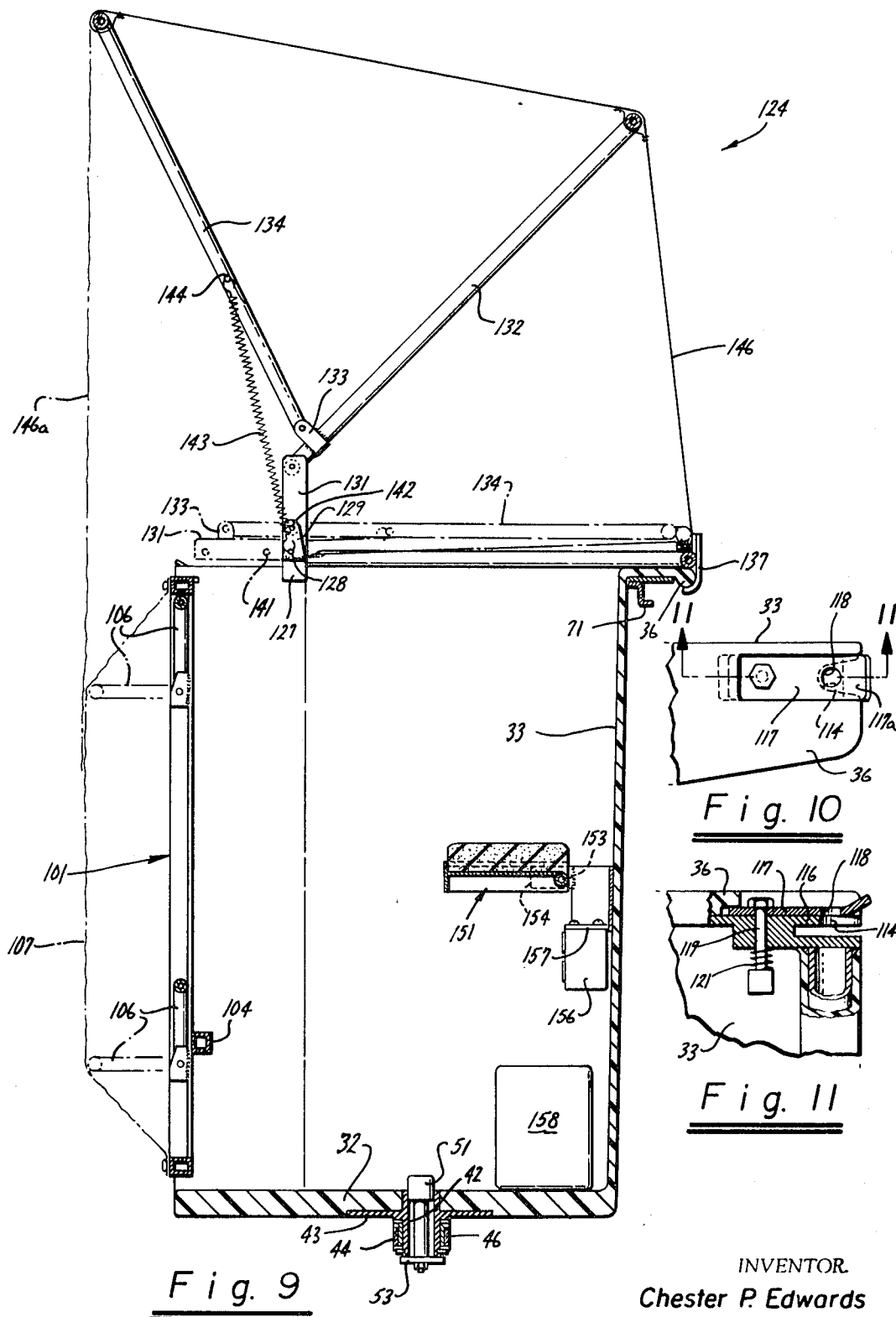
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Filed Jan. 9, 1969

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**AERIAL LIFT WITH ROTATABLE AND
ENCLOSABLE BASKET**

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General Cable Corporation, San Carlos, Calif.
Filed Jan. 9, 1969, Ser. No. 790,006
Int. Cl. B66f 11/04

U.S. Cl. 182—2

21 Claims

ABSTRACT OF THE DISCLOSURE

Aerial lift with rotatable and enclosable workman's basket which serves as an aerial workshop having means permitting rotation of the basket in a substantially horizontal plane through substantially more than 90° and having means for enclosing the basket to protect the workman against inclement weather and providing light and heat and ventilation.

BACKGROUND OF THE INVENTION

In the past, cable splicers have been provided with work platforms which have been brought to the site by truck and erected at the site and left in place until the cable splicer is finished with the job. This has been disadvantageous because to utilize such a workman's platform, it has been necessary to provide means to permit the workman to enter and leave the platform after it has been erected. In addition, it has required several personnel and considerable effort to erect the platform and then to take it down. Attempts have also been made to utilize baskets carried by the ends of booms for use by cable splicers. However, such baskets have had disadvantages in that the cable splicer could only have one position, i.e., standing up. If the basket was made large enough so that the workman could sit down, the basket also was too large which made it difficult for the cable splicer to get close enough to his work. To overcome this problem, attempts have been made to pivot the basket on the outer end of the boom. This, however, also has had disadvantages in that the amount of rotational or pivotal movement of the basket with respect to the boom in a horizontal plane was limited particularly because the vertical axis for pivoting the basket was adjacent the boom and outside of the basket. In addition, such baskets have provided inadequate or practically no protection to the workman from the elements and thus made the apparatus unsuitable for use in inclement weather. There is therefore a need for a new and improved basket and mounting therefor which can be utilized by cable splicers and others for performing work.

SUMMARY OF THE INVENTION AND OBJECTS

The aerial lift with a rotatable and enclosable workman's basket consists of a boom structure, the outer end of which can be raised and lowered about a horizontal axis, rotated about a vertical axis and moved toward and away from the platform carrying the boom structure. A basket having a size at least large enough to accept a human being is provided. Means is provided for mounting the basket on the boom structure to permit rotation of the same in a generally horizontal plane through an angle substantially in excess of 90° so that the basket can be positioned by the workman so that it is convenient to the work to be performed. Means is provided for enclosing the basket so that the workman can operate in inclement weather within a substantially enclosed enclosure and in which means is provided for maintaining a comfortable environment in the enclosure for the workman.

In general, it is an object of the present invention to provide an aerial lift with a rotatable and enclosable workman's basket which can be readily positioned by the workman so that the workman can be in a position convenient to his work.

Another object of the invention is to provide a basket of the above character which can be readily enclosed to provide protection against inclement weather.

Another object of the invention is to provide a basket of the above character which can serve as an aerial workshop for the workman.

Another object of the invention is to provide a basket of the above character which has means for maintaining the proper environment for the worker.

Another object of the invention is to provide a basket of the above character which can be locked in a desired position to provide a stable base or platform from which the workman can work.

Another object of the invention is to provide a basket of the above character which can be entered by the workman as he is standing up.

Another object of the invention is to provide a basket which is designed so that the workman will be working at the same level regardless of whether he is seated or standing.

Another object of the invention is to provide a basket of the above character which provides a contoured rest for the workman while he is sitting in the basket.

Another object of the invention is to provide a basket of the above character in which the workman is provided with arm rests which can be utilized while he is working.

Another object of the invention is to provide a basket of the above character which can be readily rotated in a horizontal plane through an angle substantially greater than 90° by the workman while he is in the basket.

Another object of the invention is to provide a basket of the above character which automatically is locked in a predetermined position as soon as the workman releases a foot-operated lever.

Another object of the invention is to provide a basket of the above character which will remain level as the basket is raised and lowered and which can be locked in a horizontal position against rotation about a vertical axis so that a stable platform is provided for the workman.

Additional objects and features of the invention will appear from the following description in which the preferred embodiments are set forth in detail in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of an aerial lift with a rotatable and enclosable basket incorporating the present invention.

FIG. 2 is an enlarged side elevational view of the basket shown in FIG. 1.

FIG. 3 is a top plan view looking along the line 3—3 of FIG. 2.

FIG. 4 is a bottom plan view looking along the line 4—4 of FIG. 2.

FIG. 5 is a front elevational view looking along the line 5—5 of FIG. 2.

FIG. 6 is an enlarged partial cross-sectional view of the basket.

FIG. 7 is a cross-sectional view taken along the line 7—7 of FIG. 6.

FIG. 8 is a cross-sectional view taken along the line 8—8 of FIG. 7.

FIG. 9 is a cross-sectional view of the basket showing the canvas coverings in place.

FIG. 10 is an enlarged view taken along the line 10—10 of FIG. 3.

FIG. 11 is a view looking along the line 11—11 of FIG. 10.

DESCRIPTION OF THE PREFERRED EMBODIMENT

An aerial lift which includes a rotatable and enclosable basket of the type incorporating the present invention is shown in FIG. 1. It consists of a mobile chassis 16 which is provided with front and rear ground engaging wheels 17 and 18. A van-type body 19 is mounted on the chassis 16. The van-type body provides space for a driving station behind the windshield 21 and a space 22 adjacent the driving station for receiving a workman's basket 23. A boom structure 24 is mounted upon the van-type body 19 in the manner described in co-pending application, Ser. No. 697,887, filed Jan. 15, 1968. As hereinafter described, the basket 23 is mounted on the outer end of the boom structure. As disclosed in said co-pending application, means is provided for causing rotation of the outer end of the boom structure about a vertical axis for raising and lowering the same about a horizontal axis and for moving the outer end of the boom structure toward and away from the van-like body. In addition, there is provided control means accessible to the operator or workman in the basket 23 whereby the workman can control his positioning while he is in the basket. Such controls are indicated at 26 and are provided on a control panel at the outer end of the boom structure. In addition, there are provided electrical outlets 27 at the outer end of the boom structure which can be utilized for operating power tools and the like.

The workman's basket 23 is in reality a basket assembly and can typically be described as an aerial workshop for use in all four seasons for reasons hereinafter explained. The basket or basket assembly 23 consists of a basket structure 31 which is formed of a suitable material such as molded fiberglass. As can be seen from FIGS. 1, 2, 3 and 4, the basket structure 31 is generally in the shape of a horseshoe when viewed in horizontal cross-section. It is provided with a bottom wall 32 which is also horseshoe shaped and an arcuate or contoured vertical wall 33 which has an opening 34 in its front side extending through the top side which is sufficiently large to permit ingress and egress by a human being. The basket or structure 31 also includes a top horizontal flange 36 which is also horseshoe shaped and which can serve as an arm rest as hereinafter described.

Means is provided for mounting the basket structure 31 on the outer end of the boom structure to permit rotation of the basket in a horizontal plane through an angle which is substantially in excess of 90° so that the basket can be positioned so that it is convenient to the work to be performed by the workman in the basket. This means consists of a large L-shaped arm or bracket 38 which is provided with a large pivot pin 39 which is pivotally mounted in a fitting 41 provided on the outer end of the boom structure 24 to permit pivotal movement of the basket structure 31 about a horizontal axis.

Means is provided for supporting the basket structure 31 on the bracket 38 to permit pivotal or rotational movement of the basket about a generally vertical axis which is within the confines of the basket and particularly generally coincident with the vertical axis of the basket. Thus, as shown, the basket structure 31 is provided with a hollow sleeve 42 formed of metal which is carried by a metal plate 43 embedded within the bottom wall 32. It will be noted that the bottom wall 32 has a substantially greater thickness than the vertical wall 33. This is because the bottom wall is provided with suitable reinforcing such as a polystyrene inner core portion 32a. A holder 44 is mounted on the outer end of the bracket 38 and carries a flanged bushing 46 which is rotatably mounted on the sleeve 42. A spacer washer 47 is mounted above the bush-

ing 46 and similarly a spacer washer 48 is mounted below the bushing 46 and is held in place by a snap ring 49 which engages the sleeve 42.

Means is provided for preventing rotation or for locking the basket structure 31 in a predetermined angular position with respect to the vertical axis and consists of a foot-operated plunger 51 which extends through a vertical hole 52 provided in the bottom wall of the basket structure 31 and which also extends through the hollow sleeve 42. The plunger 51 is mounted on a plate 53 by a bolt 54. The plate 53 is secured to an angle member 56 mounted within the hollow arm or bracket 38 and is pivotally connected thereto by a pivot pin 57. The angle member 56 is yieldably urged in an upward direction by a spring 58 which has one end engaging the angle member 56 and has the other end extending through a hole 59 provided in the bracket 38. The spring 58 is retained in the hole by a cover plate 61 held in place by screws 62. A brake member 63 extends through a hole 64 provided in the bracket 38 and is secured to the angle member 56 by a nut 66. A resilient member 67 formed of a suitable material such as rubber is mounted on the upper end of the brake member 63 and is adapted to engage the outer margin of the bottom surface of the bottom wall 32 of the basket structure 31 about a vertical axis. The brake member 63 can be moved out of frictional engagement with the bottom surface of the basket by the operator in the basket pushing downwardly on the plunger 51 against the force of the spring 58 to operate the lever means hereinbefore described. As soon as the operator removes the force supplied to the plunger 51, the spring 58 will return the braking member 66 into frictional engagement with the bottom surface of the basket structure to prevent further rotation thereof about the vertical axis.

Means is provided for also supporting the upper margin of the basket structure 31 to permit rotation of the same about the vertical axis and consists of a generally Z-shaped track member 71 which is secured to a metal plate 72 embedded within the lower surface of the fiberglass flange 36 of the basket structure 31. The track member 71 is adapted to cooperate with another generally Z-shaped member 73 secured to the bracket 38 (see FIG. 6). The track members 71 and 73 cooperate with each other to maintain the basket in generally vertical alignment with the bracket 38 regardless of the angle of position of the basket structure 31 with respect to the vertical axis. In order to reduce the frictional engagement between the track members 71 and 73, suitable roller means such as roller bearings 74 rotatably mounted on posts 76 and secured thereon by snap rings 77 are utilized. The posts 76 are secured to the track member 73 by screws 78 and have the rollers engaging the track member 71. If desired, additional rollers can be provided to also reduce the loading in a horizontal direction between the track members 71 and 73.

Dash pot or damping means is provided in the form of a hydraulic shock absorber 81 which is provided with an outer sleeve 82 and an inner sleeve 83 to dampen motion of the basket structure 31 about the horizontal axis formed by the pivot pin 39. The shock absorber has the outer sleeve 82 mounted upon the pivot pin 84 carried by the fitting 41 and has the inner sleeve 83 pivotally engaging a pivot pin 86 provided on the arm 38. When the shock absorber 81 is free to move, the basket 23 will assume a vertical position because of the force of gravity.

Means is provided for locking the basket structure 31 in a predetermined position with respect to rotation about the horizontal axis and consists of a collar 87 which is secured to the outer sleeve 82 by suitable means such as welding. The collar 87 is provided with three bolts 88. A pair of semi-circular split ring sections 89 have opposite ends pivotally connected to one of the bolts 88 and are provided with slots (not shown) which loosely accommodate the other bolts 88. The inner margins of the split ring sections 89 are provided with a brake lining

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(not shown) which is adapted to engage the inner sleeve 83 of the shock absorber 81. Means is provided for urging the ends of the split rings 89 which are not pivotally mounted on one of the bolts 88 in a direction so that they engage the inner sleeve 83. Such means consists of a pair of sprocket sections 92 which are secured to the free ends of split ring sections 89. Two lengths 93 of chain sprocket engage the sprocket sections 92 and have their ends secured to a pair of spaced members 94 by bolts 95. An elongate threaded rod 96 is threaded through the members 94 and is provided with a handle 97 which extends toward the upper extremity of the basket structure 31 so that it can be engaged by the operator. The rod 96 and the members 94 are threaded in such a manner that when the rod 96 is rotated in one direction, the members are urged apart from each other to stretch the chain lengths 93 and to pull the ends of the split rings 89 together to cause the brake lining carried thereby to frictionally engage the inner sleeve 83 to thereby prevent any further longitudinal movement of the inner sleeve with respect to the outer sleeve. Conversely, when the rod 96 is rotated in the opposite direction, the members 94 are brought closer together which loosens the chain lengths 93 and permits the ends of the split rings 89 to separate and to permit sliding movement of the inner sleeve with respect to the outer sleeve of the shock absorber 81.

A gate 101 is mounted upon the basket structure 31 to close the opening 34. The gate 101 consists of a rectangular framework 102 formed of a suitable material such as steel and which is pivotally mounted on one side of the basket structure 31 by a pair of hinge pins 103. The framework 102 is provided with a cross bar 104 which can serve as a foot rest as hereinafter described. As shown the framework 102 is generally open and is provided with a pair of vertically spaced U-shaped bows 106 pivotally mounted upon the framework 102 for movement about horizontal axes. As can be seen the bows 106 are adapted to be folded upwardly into a position in which they are generally in alignment with the plane formed by the framework 102. They are also movable into a position in which they extend outwardly in a horizontal direction from the framework. In this position, they provide knee space for the operator or workman in the basket and permit a windproof canvas covering 107 to be mounted upon the framework 102 as shown in FIG. 9. The canvas covering 107 is secured to the framework 102 by suitable means such as snaps mounted on the framework and on the canvas covering.

A latch assembly 111 is provided for latching the gate 101 in a closed position. The latch assembly consists of a plate 112 carried by the framework 102 of the gate. A pin 113 is mounted on the plate and is adapted to enter a generally V-shaped slot 114 provided in a plate 116. A latching member 117 having a forwardly upwardly turned end portion 117a is provided with a hole 118 which is adapted to receive the pin 113. The latching member 117 is yieldably urged into a downward direction by bolt 119 secured to the latching member 117 and which has a spring 121 mounted thereon to yieldably urge the latching member 117 in a downward direction.

The latch assembly 111 is such that when the gate 101 is in a closed position, the gate 101 serves to reinforce the basket, i.e., gives it additional rigidity and structural strength. In particular, it prevents sidewise distortion of the basket structure 31 relative to the opening 34.

A removable canopy assembly 124 is provided for the top of the basket structure 31 and consists of a collapsible framework 126. The collapsible framework 126 consists of a pair of brackets 127 which slip over the opposite ends of the flange 36 of the basket structure 31. Upstanding ears 129 are provided on the brackets 127. Links 131 are pivotally connected to the ears 129 by pivot pins. A generally U-shaped bow formed of suitable material such as tubing is pivotally connected to the links

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132. Ears 133 are provided adjacent the lower extremities of the bow 132 and pivotally carry another bow 134. A fixed member 136 is secured to the brackets 127 and has a generally horseshoe shaped configuration and is adapted to overlie the top of the flange 36. It is provided with a spring clamp 137 which is adapted to engage the rear side of the flange 36 to retain the collapsible framework 126 on the basket structure 31.

The collapsible framework 126 also includes means for retaining the collapsible framework in an erected position and consists of spring loaded pins 141 which are mounted in the members 131 and are adapted to engage holes 142 in ears 129 to hold the members 131 in an upright position. The bow 134 is held in an upright over center position by springs 143 which engage pivot pins 128 and pins 144 carried by the bow 134.

A windproof covering 146 is fastened to the stationary member 136 and is also fastened to the bows 132 and 134 and serves to enclose the entire upper side of the basket structure 31. The covering is provided with a portion 146a which extends downwardly in a forward direction over the front of the basket as shown particularly in FIG. 9 so that there is provided with respect to the basket structure 31 a relatively tight enclosure to protect the workman from the elements. The collapsible framework has been designed so that when it is erected, there is sufficient head room in the covering for the basket structure 31 so that the workman in the basket structure can stand in an upright position and carry out his normal work. If desired, the covering 146 can be formed of a translucent or transparent material so that during daytime work, it would be unnecessary to provide a light within the enclosure. Alternatively, if desired, the covering can be formed of canvas.

A cushioned seat 151 is provided within the basket structure 31 and is provided with two pins 152, one of which is spring-loaded, which fit into holes provided in a pair of brackets 154 molded into the side wall of the basket structure. The seat 151 is movable from an out-of-the-way position which is shown in dotted lines in FIG. 9 to a generally horizontal position shown in solid lines in FIG. 9. The seat 151 is positioned at an elevation in the basket so that when the workman is sitting down, his arms are in effect at the same elevation as if he would be standing up. It is for this reason that the bar 104 has been provided as a foot rest at an elevation which is substantially above the bottom wall 32 of the basket structure 31 so the workman will have a foot rest when he is sitting down.

Means is provided for controlling the environment within the closure formed by the basket structure 31 and the coverings. Thus, there is provided an outlet box 156 which is secured to brackets 157 also mounted on the side wall of the basket structure 31. This outlet provides a place where the operator can plug in a light to be utilized within the enclosure so that the operator can work when it is dark. In addition, the outlet is provided so that the operator can plug in a thermostatically controlled heater 158. Also, a fan (not shown) can be provided when the basket is being utilized in hot weather.

Operation and use of the aerial lift with a rotatable and enclosure basket may now be briefly described as follows: Let it be assumed that the aerial lift has been moved to the desired location to accomplish the cable splicing operation. It is merely necessary for the operator to step from the driving station into the basket and to utilize the controls accessible to him in the basket to move the outer end of the boom structure to the general location desired. The operator can then position the basket so that it is in the most convenient position for him to perform the work which is to be done. In the event the operator desires to rotate the basket about a vertical axis, the operator merely steps on the plunger 51 to disengage the braking member 67 from the lower surface of the basket structure 31. The operator then at

the same time with one hand grasps the flange 36 and with the other hand grasps the outer end of the boom structure and rotates himself to the desired angular position. This can be accomplished with relative ease because the weight of the basket and the weight of the workman in the basket is centered over the pivot point which is coincident with the centerline of the basket. This greatly reduces the stresses on the basket structure in comparison to a side mount for the basket structure. Thus, there is no binding or the like because of unequal distribution of weight in the basket. This freedom of movement is enhanced by the action of the rollers 74 with respect to the track members 71 and 72. Even though the man may be relatively heavy, he can with relative ease rotate himself to the desired position. The rotation which can be accomplished is substantially greater than 90° and rotation up to 180° can be readily accomplished. As soon as the operator has rotated himself to the desired position, the plunger 51 can be released by his foot and the basket structure 31 thereafter will be held locked in the desired angular position.

At this time, the operator can also lock the basket so it will not rotate or pivot with respect to the horizontal axis. This is accomplished by rotating the handle 97 to cause the split rings 89 to frictionally engage the inner sleeve 82 to prevent relative movement between the outer sleeve 82 and the inner sleeve 83 as hereinbefore described. Thus, it can be seen that the basket can be locked so that it cannot rotate about the vertical axis. Similarly, it cannot rotate about a horizontal axis to provide an absolutely stable platform from which the operator or workman can work.

The basket structure 31 is normally elevated to a position so that the cable or other work which is to be performed is at the desired elevation immediately in front of the gate 102. The gate 102 can be removed if it is not needed for inclement weather. The construction of the basket structure 31 is such that the operator can then work without shifting the vertical position of the basket either in a standing position or a sitting position. This is because the seat 151 which is utilized is positioned at a relatively high elevation in the basket so that when the operator or workman sits down, his arms are in the same general vertical position within the basket as if he were standing. The foot rest 104 provides a support for his feet. The U-shaped contour of the basket structure provides a contoured back support for the operator or workman. The flange 36 provided on the basket structure 31 also serves as an aid to the workman in the basket in that it can serve as an arm rest for the workman in the basket. Thus, it can be seen that the basket in effect provides arm-chair comfort for the workman. If he gets tired working in a standing position, he can readily shift to the sitting position without the necessity of shifting the basket in any way.

When it is necessary for the workman to work in inclement weather, the canvas covering 107 can be mounted upon the gate framework 102 and similarly, the removable canopy assembly 124 can be mounted upon the flange 136 to provide an enclosure in which the workman can operate in relative comfort. The thermostatically controlled heater 158 will provide the necessary heat and the necessary lighting can be obtained by plugging in a light to the outlet 156. The bows 106 of the gate 101 project outwardly as shown in FIG. 9 to hold the canvas in an outward position and thus give the operator knee room when he is sitting down. The canopy assembly 124 is of sufficient height so that the operator can readily stand up within the basket structure 31 if he so desires.

From the foregoing, it can be seen that there has been provided an aerial lift with a rotatable and enclosable basket which readily can serve as an aerial workshop for the workman and which is suitable for use in all seasons. The wind coverings can be removed in warm weather if the workman so desires. The 180° rotation provided

for the basket makes it possible for the workman to work on both sides of the cable, i.e. on the roadside and the field side of the cable, without difficulty. The basket is of a small and compact design which gives a man ample room for freedom of movement but which still makes it much easier for the workman to locate himself close to his work. Armchair comfort is in effect provided for the workman in that arm rests, a seat and a rounded back support are provided. The small size of the workman's basket lends itself to doing many types of work, particularly work in conjunction with telephone poles where there is a congestion of guy wires, brackets, conduits, street lighting fixtures and the like.

Although the aerial lift has been described as being particularly useful for cable splicing, it is useful throughout the communications industry. For example, it can be utilized with CATV as well as telephone work. It also can be utilized in electric power applications for splicing and repair, transformer repair, replacing and servicing of street lights. It also can be used for performing work within buildings at elevations. It is particularly useful in locations where the freedom of movement of the vehicle on which it is mounted is restricted by the highway, vehicles, curbs on streets or other traffic.

I claim:

1. In an aerial lift, a platform, a boom structure, means mounting the boom structure upon the platform, means for causing rotation of the outer end of the boom structure about a vertical axis, for raising and lowering the same about a horizontal axis and for moving the same toward and away from the platform, a basket having a bottom wall, and means mounting said basket adjacent the outer end of the boom structure including means engaging the bottom wall of the basket to permit rotation of the basket in a horizontal plane about a substantially vertical axis which is generally coincident with the vertical axis of the basket through an angle which is substantially in excess of 90° so that the basket can be positioned so that it is convenient to the work to be performed by the workman in the basket.

2. An aerial lift as in claim 1 together with means for locking said basket in a predetermined angular position in a horizontal direction with respect to said vertical axis.

3. An aerial lift as in claim 1 wherein said basket is enclosed together with means in said basket for controlling the environment in said basket.

4. An aerial lift as in claim 1 together with a seat mounted in said basket, said seat being positioned at an elevation in said basket so that the arms of the workman are generally in the same vertical position with respect to the basket regardless of whether the workman is standing in the basket or is sitting on the seat in the basket.

5. An aerial lift as in claim 1 wherein said means mounting the basket includes a bracket, means pivoting the bracket adjacent the outer end of the boom structure for permitting pivotal movement of the bracket about a generally horizontal axis, means carried by the bracket for supporting the upper portion of the basket and to permit rotation of the same and means engaging the bottom wall of the basket and pivotally mounted on said bracket to permit said rotation of the basket about a generally vertical axis.

6. An aerial lift as in claim 5 wherein said bracket is generally L-shaped.

7. An aerial lift as in claim 5 together with means for locking said basket in a predetermined angular position in a vertical direction with respect to the horizontal axis.

8. A basket for use with an aerial lift of the type having a boom structure, a basket structure having a bottom wall and a side wall and being open at the top, said side wall having an opening therein extending through the top and removable gate means hingedly mounted on said basket structure and closing said opening and latch means for retaining said gate means in a closed position.

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9. A basket as in claim 8 together with means mounted on said basket for substantially enclosing said basket.

10. A basket as in claim 8 together with a seat mounted in said basket at an elevation so that the arms of the workman are at the same general elevation regardless of whether he is standing or sitting.

11. In an aerial lift, a platform, a boom structure, means mounting the boom structure upon the platform, means for causing the rotation of the outer end of boom structure about a vertical axis, for raising and lowering the same about a horizontal axis and for moving the same toward and away from the platform, a basket, a bracket, means pivoting the bracket adjacent the outer end of the boom structure for permitting pivotal movement of the bracket about a generally horizontal axis, means engaging the bottom wall of the basket and pivotally mounted on the bracket for permitting pivotal movement of the basket about a generally vertical axis through an angle which is substantially in excess of 90° so that the basket can be positioned so it is convenient to the work to be performed by the workmen in the basket, and means for locking said basket in a predetermined angular position in a vertical direction with respect to the horizontal axis, said means for locking said basket in a predetermined angular position with respect to the horizontal axis including a dashpot connected between the boom structure and the basket, said dashpot including first and second parts and means for locking said first and second parts to prevent movement of one with respect to the other to thereby lock said basket in a predetermined angular position with respect to the horizontal axis.

12. In an aerial lift, a platform, a boom structure, means mounting the boom structure upon the platform, means causing rotation of the outer end of the boom structure about a vertical axis, for raising and lowering the same about a horizontal axis and for moving the same toward and away from the platform, a basket, said basket being provided with a bottom wall and a side wall, said side wall having an opening therein which extends through the top side, movable gate means mounted on the basket and movable into a position in which it closes the opening in said basket, said gate means including means forming a space accessible from within the basket and extending beyond the general outline of the basket and means mounting said basket adjacent the outer end of the boom structure to permit rotation of the basket in a horizontal plane through an angle which is substantially in excess of 90° so that the basket can be positioned so that it is convenient to the work to be performed by the workmen in the basket.

13. An aerial lift as in claim 12 wherein said gate means is provided with an opening therein and a flexible covering mounted in said opening in said gate for closing the same.

14. In an aerial lift, a platform, a boom structure, means mounting the boom structure upon the platform, means for causing rotation of the outer end of the boom structure about a vertical axis, for raising and lowering the same about a horizontal axis and for moving the same toward and away from the platform, a basket, means mounting said basket adjacent the outer end of the boom structure to permit rotation of the basket in a horizontal plane through an angle which is substantially in excess of 90° so that the basket can be positioned so that it is convenient to the work to be performed by the workmen in the basket and a removable canopy assembly substantially enclosing the top side of the basket, said canopy assembly including a collapsible framework mounted on the top side of the basket and a covering carried by said collapsible framework.

15. In an aerial lift, a platform, a boom structure, means mounting the boom structure upon the platform, means for causing rotation of the outer end of the boom structure about a vertical axis, for raising and lowering the same about a horizontal axis and for moving the same

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toward and away from the platform, a basket, means mounting said basket adjacent the outer end of the boom structure, said basket having a sidewall with an opening formed therein, gate means mounted on said basket for closing said opening in said sidewall, a seat mounted in said basket, said seat being positioned at an elevation in said basket so that the arms of the workman are generally in the same vertical position with respect to the basket regardless of whether the workman is standing in the basket or is sitting on the seat in the basket, and a foot rest carried by the gate, said foot rest being at such an elevation that the operator can place his feet on the foot rest while he is seated on the seat in the basket.

16. In an aerial lift, a platform, a boom structure, means mounting the boom structure upon the platform, means for causing rotation of the outer end of the boom structure about a vertical axis, for raising and lowering the same about a horizontal axis and for moving the same toward and away from the platform, a basket, means mounting said basket adjacent the outer end of the boom structure, said basket having a side wall with an opening therein, and gate means mounted on the basket and movable into a position to close the opening in the basket, said gate means including means forming a space accessible from within the basket and extending beyond the general outline of the basket.

17. In an aerial lift, a platform, a boom structure, means mounting the boom structure upon the platform, means for causing rotation of the outer end of the boom structure about a vertical axis, for raising and lowering the same about a horizontal axis and for moving the same toward and away from the platform, a basket, means mounting said basket adjacent the outer end of the boom structure and a removable canopy assembly substantially enclosing the top side of the basket, said assembly including a removable collapsible framework mounted on the top side of the basket and an impervious covering carried by said collapsible framework.

18. In an aerial lift, a platform, a boom structure, means mounting the boom structure upon the platform, means for causing rotation of the outer end of the boom structure about a vertical axis for raising and lowering the same about a horizontal axis and for moving the same toward and away from the platform, a basket, a basket pivotally mounted on the outer end of said boom structure for permitting pivotal movement of the bracket about a generally horizontal axis, said basket having a bottom wall, said bracket extending below the bottom wall and means pivotally mounting the bottom wall of the basket upon the bracket so as to permit rotational movement of the basket about a generally vertical axis and means carried by the bracket engaging the upper margin of the basket to maintain the basket in alignment with the bracket and to permit rotation of the same with respect to the bracket.

19. An aerial lift as in claim 18 wherein said means for mounting said basket on said bracket is mounted generally on the vertical center line of said basket.

20. In an aerial lift, a platform, a boom structure, means mounting the boom structure upon the platform, means for causing rotation of the outer end of the boom structure about a vertical axis, for raising and lowering the same about a horizontal axis and for moving the same toward and away from the platform, a basket, means mounting said basket adjacent the outer end of the boom structure, a seat mounted in said basket, said basket having a sidewall with an opening therein, a gate mounted on said basket for closing said opening, and a foot rest carried by the gate and upon which the operator can place his feet while seated on the seat in the basket.

21. An aerial lift as in claim 20 wherein said gate is provided with a covering extending outwardly from the basket permitting the operator to place his knees within the same.

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