Oct. 30, 1962 J. T. TAYLOR 3,061,041

GUTTER POSITIONING AND SUPPORTING DEVICE

Filed July 8, 1960

Fig. 1

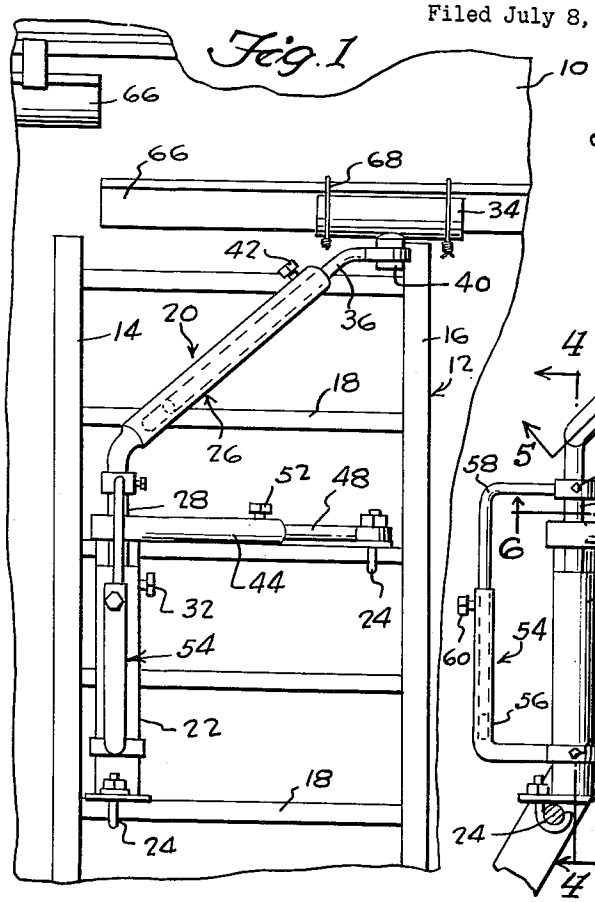


Fig. 2

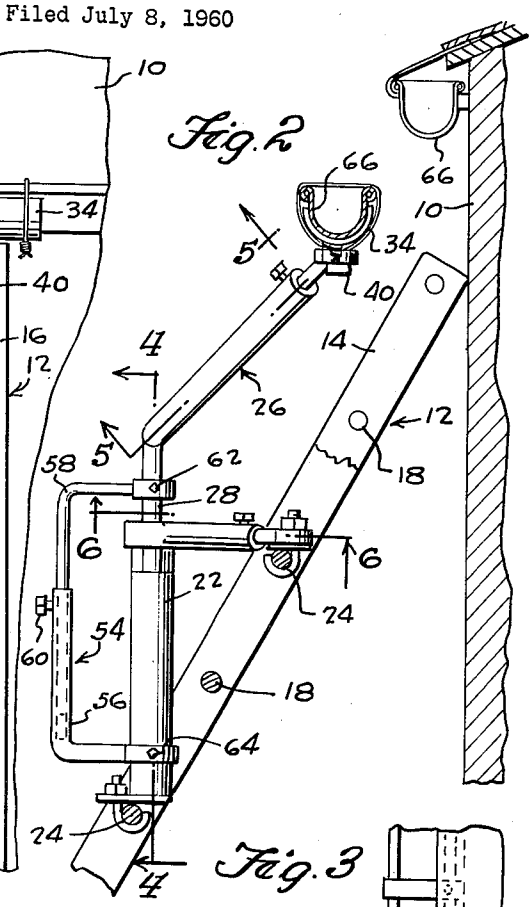


Fig. 3

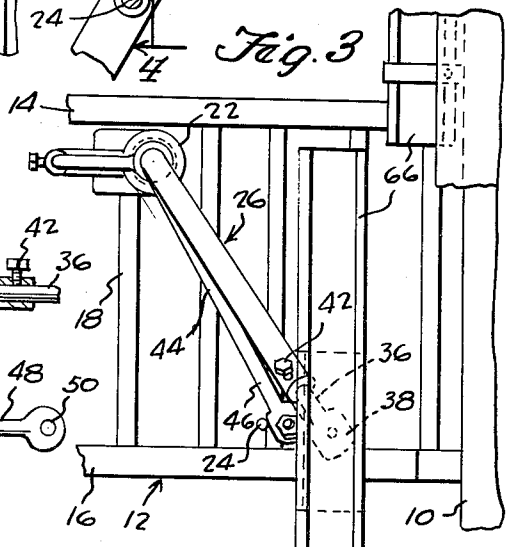


Fig. 4

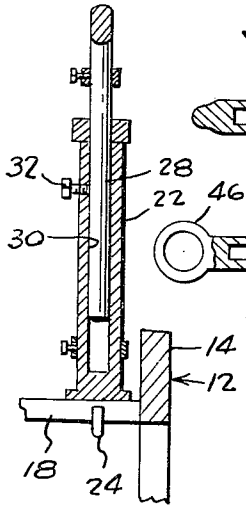
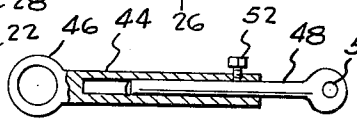


Fig. 5



Fig. 6



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United States Patent Office

3,061,041
Patented Oct. 30, 1962

3,061,041

GUTTER POSITIONING AND SUPPORTING DEVICE

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Filed July 8, 1960, Ser. No. 41,582
4 Claims. (Cl. 182—129)

The present invention relates to supports generally, and in particular to a device for positioning and supporting a gutter while it is being secured to a building.

In the sheet metal industry, the erection of sheet metal gutters on the side of a building has generally required the services of at least two workmen. This is due to the fact that a length of gutter is unwieldly and has a tendency to twist out of shape if supported by one end while it is being erected on a building, or being dismantled from a building for repair. It has, therefore, been the practice to use two ladders with a workman on each ladder and with each workman supporting a portion of a gutter inwardly of the end thereof, with the workmen moving upwardly or downwardly on the ladders to erect the gutter on the building, or to dismantle the gutter from the building.

An object of the present invention is to provide a gutter positioning and supporting device which obviates the need for a second workman.

Another object of the present invention is to provide a gutter positioning and supporting device which enables a single workman to erect a gutter on a building with ease and facility, and to detach a gutter from a building with ease and facility, without bending or twisting the gutter and without damage to the same.

A further object of the present invention is to provide a gutter positioning and supporting device which is simple in structure, one which may be constructed from common materials, one which is economical to manufacture and assemble, and one which is highly effective in action.

These and other objects and advantages of the present invention will become fully apparent from the following description when taken in conjunction with the annexed drawing, in which:

FIGURE 1 is an elevational view of a portion of the side of a building, showing the upper end portion of a ladder leaning against the building and supporting a gutter and the device of the present invention which is attached to the ladder,

FIGURE 2 is a side elevational view of the assembly shown in FIGURE 1,

FIGURE 3 is a top plan view of the assembly shown in FIGURES 1 and 2,

FIGURE 4 is a view taken on the line 4—4 of FIGURE 2,

FIGURE 5 is a view taken on the line 5—5 of FIGURE 2, and

FIGURE 6 is a view taken on the line 6—6 of FIGURE 2.

Referring in greater detail to the drawing, in which like numerals indicate like parts throughout the several views, the reference numeral 10, in FIGURES 1 to 3, designates generally a building on which a gutter is to be erected. The numeral 12 designates a ladder having spaced side rails 14 and 16 and a plurality of rungs 18 arranged in vertical spaced relation and extending along the side rails 14 and 16.

The device of the present invention is designated generally by the reference numeral 20 and it comprises a post 22 having its lower end detachably secured by means of a hook-type bolt 24 to one of the rungs 18.

An arm 26 is arranged in an upwardly sloping direction and is positioned adjacent the upper end of the post 22. Support means, embodying a spindle 28, is formed

integrally with the arm 26 and connects the lower end of the arm 26 to the post 22 for movement of the arm 26 upwardly and downwardly with respect to the post 22, and also for rotary movement of the arm 26 about the post 22 as an axis.

As shown in FIGURE 4, the post 22 is formed with a bore 30 extending inwardly from the upper end thereof and terminating at a point spaced from the lower end of the post 22. The spindle 28 extends loosely into the bore 30 and is releasably held against sliding upward and downward movement and against rotary movement by means of a set screw 32. The set screw 32 extends through a threaded bore provided in the post 22 inwardly of the upper end of the latter.

Saddle means, in the form of a short trough 34, is positioned above the upper end of the arm 26 and is connected to the upper end of the arm 26 for swinging movement about a vertical axis.

The upper end portion of the arm 26 is tubular in cross section and contains a telescopically-arranged arm section 36 having a portion within the arm 26 and a portion exteriorly of the arm 26 provided with a hole, as shown in dotted lines in FIGURE 3, and designated by the numeral 38.

The trough 34 has a bearing member 40 on its under face intermediate the ends thereof rotatably supported in the hole 38 in the adjacent end portion of the arm section 36. Another set screw 42 is threaded in the bore in the arm 26 and is engageable with the arm section 36 for locking the section 36 in any position of its adjusted upward or downward movement with respect to the arm 26.

Brace means extends from the arm support means or spindle 28 to the portion of another of the rungs 18 adjacent the other rail 16. This brace means is shown in FIGURE 6 and consists in a tubular member 44 having a ring 46 on one end thereof embracing the spindle 28 and having a telescopically-arranged section 48 insertable into and withdrawable from the tubular member 44 through the open end remote from the ring 46. A hole 50 is provided in the section 48 for receiving therethrough another of the hook-type bolts 24, as shown most clearly in FIGURE 2. Another set screw 52 is threaded in a bore provided in the side of the tubular member 44 and engages the section 48 for holding the section 48 in any position of adjustment relative to the member 44.

An operating handle 54 has its lower section 56 adjustably connected to the post 22 adjacent the lower end thereof and has its upper section 58 adjustably connected to the spindle 28, as shown most clearly in FIGURE 2. A set screw 60 secures the sections 56 and 58 together in any position of their adjusted movement. Another pair of set screws 62 and 64 secure the sections 58 and 56 to the spindle 28 and post 22, respectively.

In use, a length of gutter 66 is placed within the trough 34 and temporarily secured therein by tie wires 68, as shown in FIGURE 1. The trough 34 may be placed adjacent one end of the gutter 66 or it may assume an intermediate position as found practical. The length of gutter 66 may be raised into position in end-to-end relation with respect to a length of gutter 66 already installed upon the building 10, by loosening of the set screws 32 and 42 and shifting the arm 26 upwardly and the arm section 36 outwardly in consecutive steps. When the length of gutter 66 is in the proper position, the set screws are tightened and then the proper procedural steps may be taken to secure the adjacent ends of the gutters 66 together.

What is claimed is:

1. The combination with a ladder having laterally spaced rails and a plurality of rungs arranged in vertical spaced relation and extending along said rails, of a gutter

positioning and supporting device comprising a post positioned adjacent to and inwardly of one of said rails of said ladder and having the lower end detachably secured to one of said rungs, an arm arranged in an upwardly sloping direction positioned adjacent the upper end of said post, support means embodying a spindle on the lower end of said arm and extending loosely into a bore provided in said post connecting the lower end of said arm to said post for movement of said arm upwardly and downwardly with respect to said post and for rotary movement of said arm about said post as an axis, means on the upper end of said arm for supporting a gutter in a horizontal position, brace means embodying a tubular member carried by said spindle and a section telescoping within said member and attached to another of said rungs adjacent the other rail, and means on said post and releasably engageable with said spindle for locking said arm in any position of its upwardly, downwardly or rotary movements.

2. The combination with a ladder having laterally spaced rails and a plurality of rungs arranged in vertical spaced relation and extending along said rails, of a gutter positioning and supporting device comprising a post positioned adjacent to and inwardly of one of said rails of said ladder and having the lower end detachably secured to one of said rungs, an arm arranged in an upwardly sloping direction positioned adjacent the upper end of said post, support means embodying a spindle on the lower end of said arm and extending loosely into a bore provided in said post connecting the lower end of said arm to said post for movement of said arm upwardly and downwardly with respect to said post and for rotary movement of said arm about said post as an axis, brace means extending from said arm spindle to the portion of another of said rungs adjacent the other rail, means on the upper end of said arm for supporting a gutter in a horizontal position, and means on said post and releasably engageable with said support means for locking said arm in any position of its upwardly, downwardly or rotary movements.

3. The combination with a ladder having laterally spaced rails and a plurality of rungs arranged in vertical spaced relation and extending along said rails, of a gutter positioning and supporting device comprising a post positioned adjacent to and inwardly of one of said rails of said ladder and having the lower end detachably secured to one of said rungs, an arm arranged in an upwardly sloping direction positioned adjacent the upper end of said post, support means embodying a spindle on the lower end of said arm and extending loosely into a bore provided in said post connecting the lower end of said arm to said post for movement of said arm upwardly and downwardly with respect to said post and for rotary movement of said arm about said post as an axis, brace means embodying a tubular member carried by said spindle and a section telescoping within said member and attached to another of said rungs adjacent the other rail, saddle means adjacent the upper end of said arm for holding a gutter in a horizontal position, means connecting said saddle means to said arm for swinging movement about a vertical axis, and means on said post and releasably engageable with said spindle for locking said arm in any position of its upwardly, downwardly or rotary movements.

4. The combination with a ladder having laterally spaced rails and a plurality of rungs arranged in vertical spaced relation and extending along said rails, of a gutter positioning and supporting device comprising a post positioned adjacent to and inwardly of one of said rails of said ladder and having the lower end detachably secured to one of said rungs, an arm arranged in an upwardly sloping direction positioned adjacent the upper end of said post, support means embodying a spindle on the lower end of said arm and extending loosely into a bore provided in said post connecting the lower end of said arm to said post for movement of said arm upwardly and downwardly with respect to said post and for rotary movement of said arm about said post as an axis, brace means embodying a tubular member carried by said spindle and a section telescoping within said member and attached to another of said rungs adjacent the other rail, saddle means adjacent the upper end of said arm for holding a gutter in a horizontal position, telescopic means connecting said saddle means to said arm for upward and downward movement with respect to said arm and for swinging movement about a vertical axis, and means on said post and releasably engageable with said spindle for locking said arm in any position of its upwardly, downwardly or rotary movements.

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