Aug. 28, 1928.

1,682,439

D. J. SULLIVAN

SAFETY HOISTING DEVICE

Filed Dec. 28, 1927

Fig. 1.

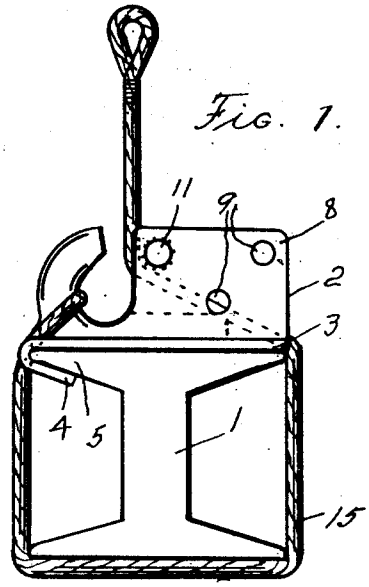


Fig. 2.

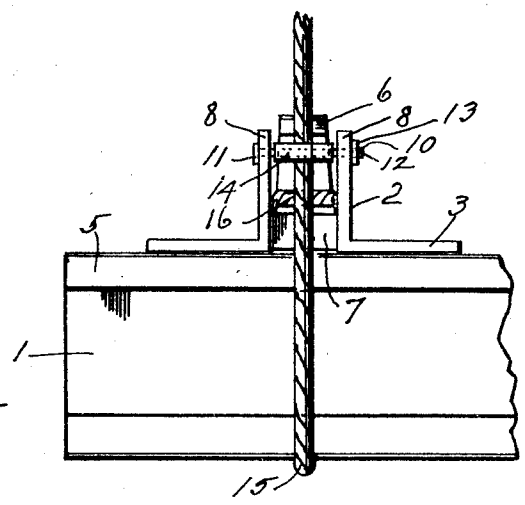


Fig. 3.

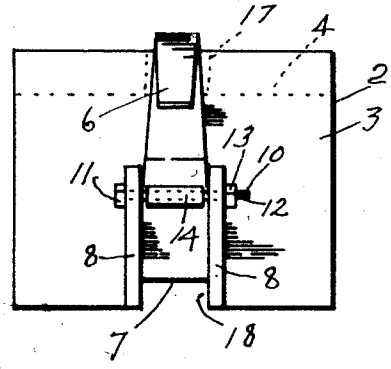


Fig. 4.

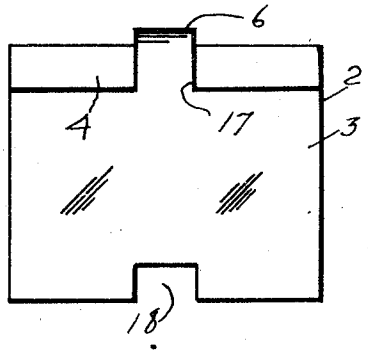
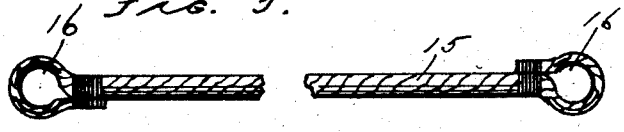


Fig. 5.



INVENTOR

Daniel J. Sullivan

BY

M. C. Gillham

ATTORNEY

Patented Aug. 28, 1928. 1,682,439

UNITED STATES PATENT OFFICE.

DANIEL J. SULLIVAN, OF TULSA, OKLAHOMA.

SAFETY HOISTING DEVICE.

Application filed December 28, 1927. Serial No. 243,105.

My invention relates to safety hoisting devices, and the object of the invention is to provide an inexpensive and efficient device of this character which is usable in connection with hoisting means for hoisting steel girders and other members to place in a building structure with safety, accuracy, and dispatch.

A further object of the invention is to provide the device with facilities for adjusting the device to various widths of girders so that the same shall be hoisted by their centers in position to be delivered into place and without tilting or canting of the load.

I attain these objects and other advantages by means of the structure and combination of parts illustrated in the accompanying drawing in which—

Figure 1 is an elevation of a device embodying my invention, and showing the same applied to a steel girder in operative position thereon.

Figure 2 is an end view of the device, and showing a side elevation of the girder to which it is applied.

Figure 3 is a plan view of the upper side of the device apart from the girder, the cable sling being omitted.

Figure 4 is a plan view of the lower side of the device, and showing the guiding recesses for the sling, the cable sling being omitted.

Figure 5 is a plan of the cable sling associated with the device.

Similar reference numerals refer to corresponding parts throughout the several views.

Referring to the drawings, the numeral 1 designates a steel girder member of a building structure and 2 a safety hoisting device constructed in accordance with my invention. The safety hoisting device comprises a base plate 3 having at its forward edge an inwardly and downwardly extending flange 4 adapted to receive the usual flange 5 on the girder and allow the base plate to bear upon the upper side of the girder, a hook 6 integral with the base plate and located intermediate of the length thereof and at the forward edge of the same, said hook extending transversely of the base plate at right angles to the flange 4 and the body portion of the hook is raised above the upper surface or face of the plate, as shown at 7 on Figures 2 and 3. Vertically extending spaced apart lugs 8 are formed integral with the base plate and with the sides of the body portion of the hook 6 and are provided with a plurality of oppositely disposed registering bolt holes 9 to removably receive a bolt 10 having a head 11 and screw end 12 adapted to receive a screw nut 13, the shank of said bolt being adapted to receive a tubular roller 14 for a purpose that will hereinafter appear. A flexible cable 15, preferably a steel cable, having at its opposite ends eyes or loops 16 is hooked by its one eye over the hook 6 and extended from the hook through a guiding recess 17 in the flange 4 below the plate or base of the device and through a guiding recess 18 in the rearward margin of the base and aligned with the recess 17 and the inner end of the body of the hook 6 and thence between the lugs 8 and below the roller 14 to a suitable distance beyond the upper side of the device to provide a length of cable adapted to form below the device a sling adapted to receive a girder or other object to be carried thereby. The bolt holes 9 in the lugs 8 may be arranged to receive the roller 14 so that it will be substantially vertical over the centers of the load. In Figure 1 the roller is shown vertical over the centers of the girder 1.

The safety device is placed upon the girder at the center of its length, or approximately at the center, the flange 4 being hooked over the flange of the girder. The lower end of the cable 15 is then passed around the girder and the eye or loop 16 thereon is hooked over the hook 6, the cable being entered in the guiding recesses 17 and 18. Then the hook on the end of a hoisting cable may be hooked into the eye or loop 16 at the upper end of the cable 15, not shown, and the hoisting of the girder will draw the cable 15 tightly around the girder and suspend the same by a pull vertically of the center of the same, thereby carrying the girder in position to be set to place in the building structure with dispatch, the device and the cable sling associated therewith co-operating to prevent the girder from slipping endwise or sidewise. If a girder of greater width is to be hoisted the bolt 10 may be removed from the holes 9 and placed with the roller thereon in the registering holes 9 at or near the centers of the girder. This provision makes the device adjustable to girders of greater or less widths.

It is my experience that heretofore cable and chain slings have been placed around the girders centrally of their lengths and the hoisting cable hooked thereto. This practice frequently necessitated re-arrangement

of the sling because the girder slipped in the sling either lengthwise or rolled sidewise and could not be swung to place in the structure intended for it.

The use of my invention prevents any shifting of the girder while being hoisted because of the provision for the pull of the hoisting cable to be vertical above the centers of the girder.

Having described my invention what I claim is—

A safety hoisting device consisting of a girder attaching member adapted for lifting the girder in horizontal plane at its center lines of gravity, said member comprising a bearing plate having rearwardly a guiding recess and forwardly a girder hooking flange provided with a guiding recess in line with the guiding recess in the hooking flange, a hook integral with the upper side of said plate and in line with said guiding recesses, spaced apart vertical lugs integral with the upper side of said plate and aligned with the sides of said recesses and said hook and having a plurality of oppositely disposed registering bolt holes selectively arranged therein, a roller interchangeably arranged between said lugs with respect to the holes therein, and a flexible cable sling having loop engaged by said hook and adapted to extend therefrom through said guiding recesses and on the lower side of said roller and upwardly from the latter above the device.

Dated, Tulsa, Oklahoma, December 20, 1927.

DANIEL J. SULLIVAN.