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DEVICE FOR LIFTING WEIGHTS

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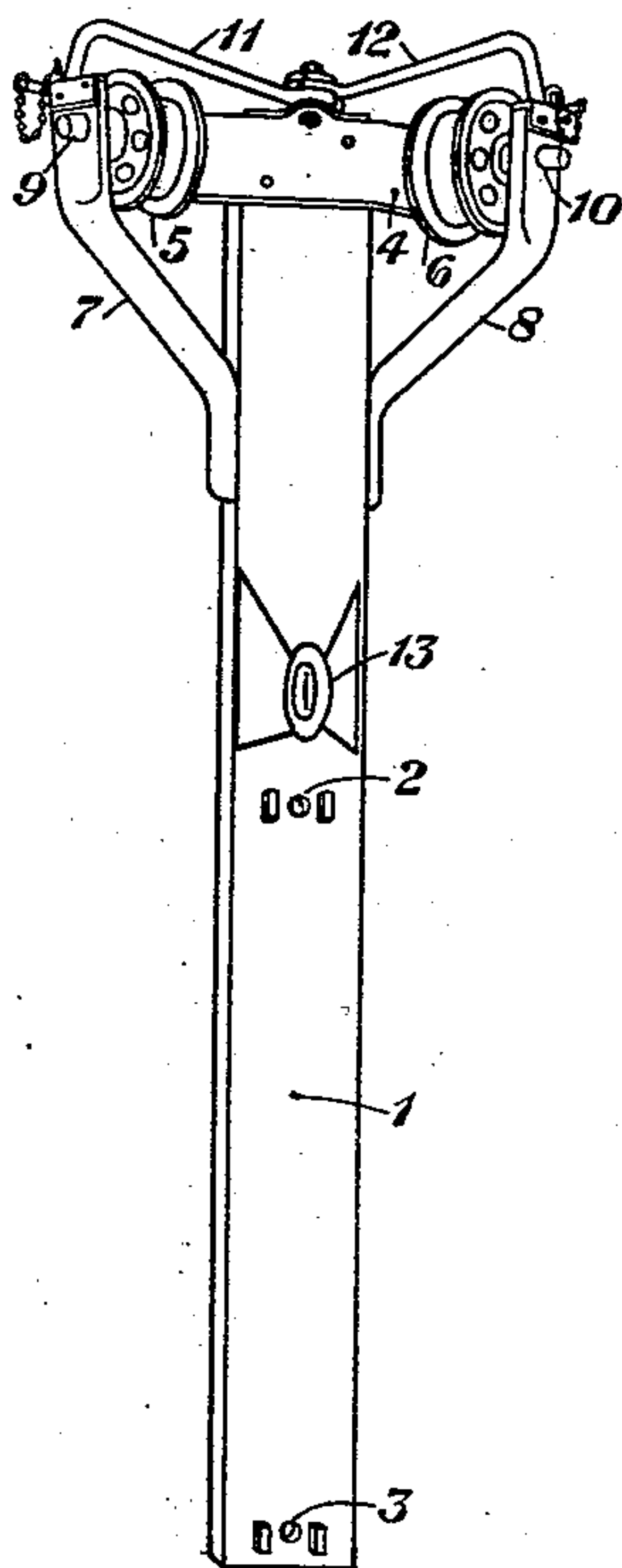


Fig. 1

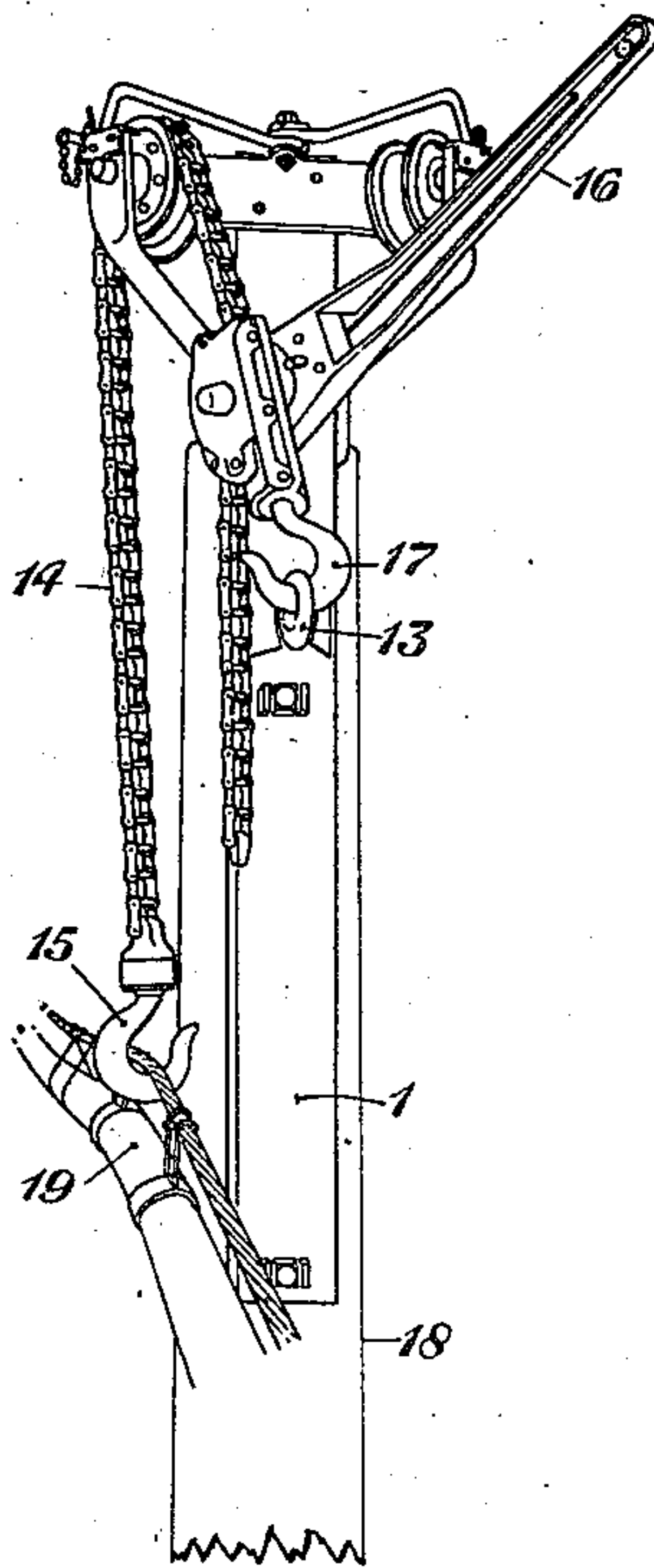


Fig. 2

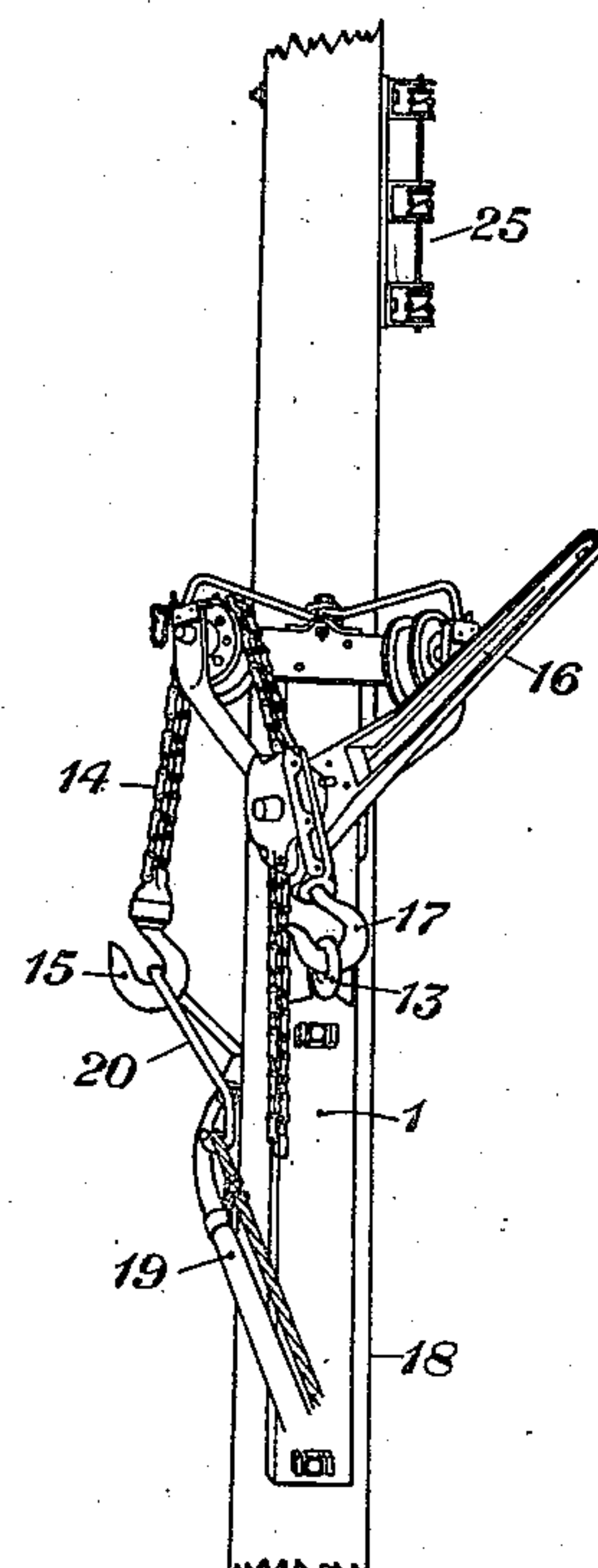


Fig. 3

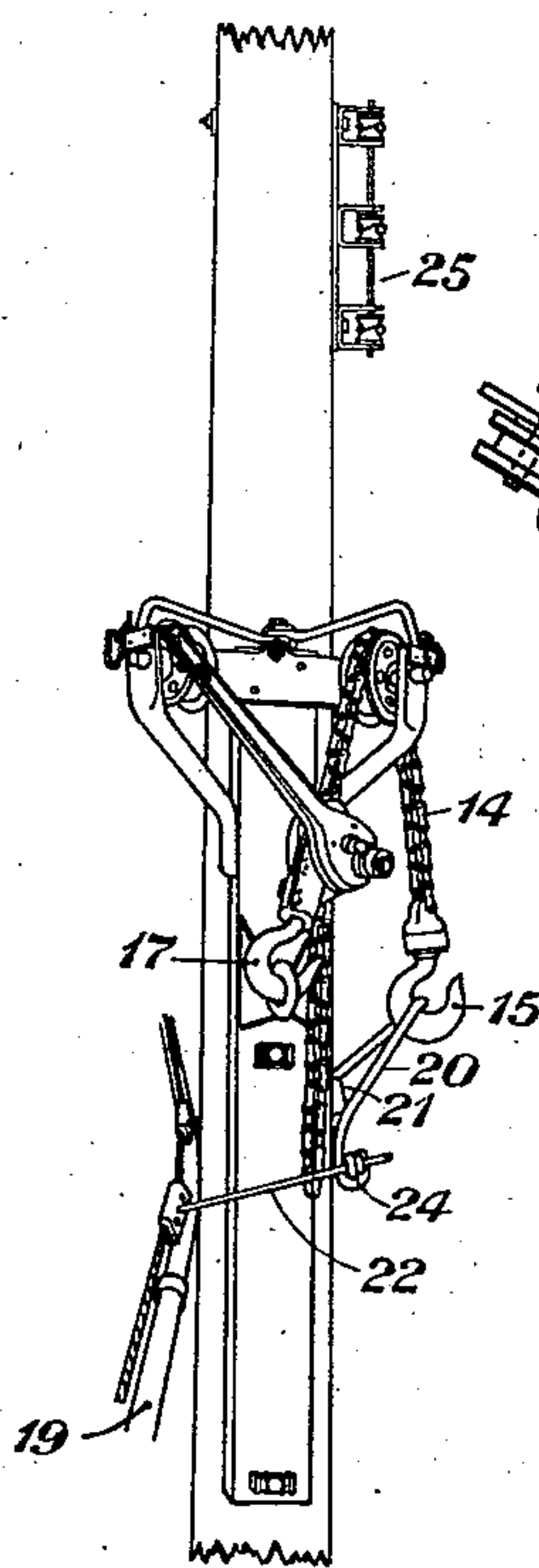


Fig. 4

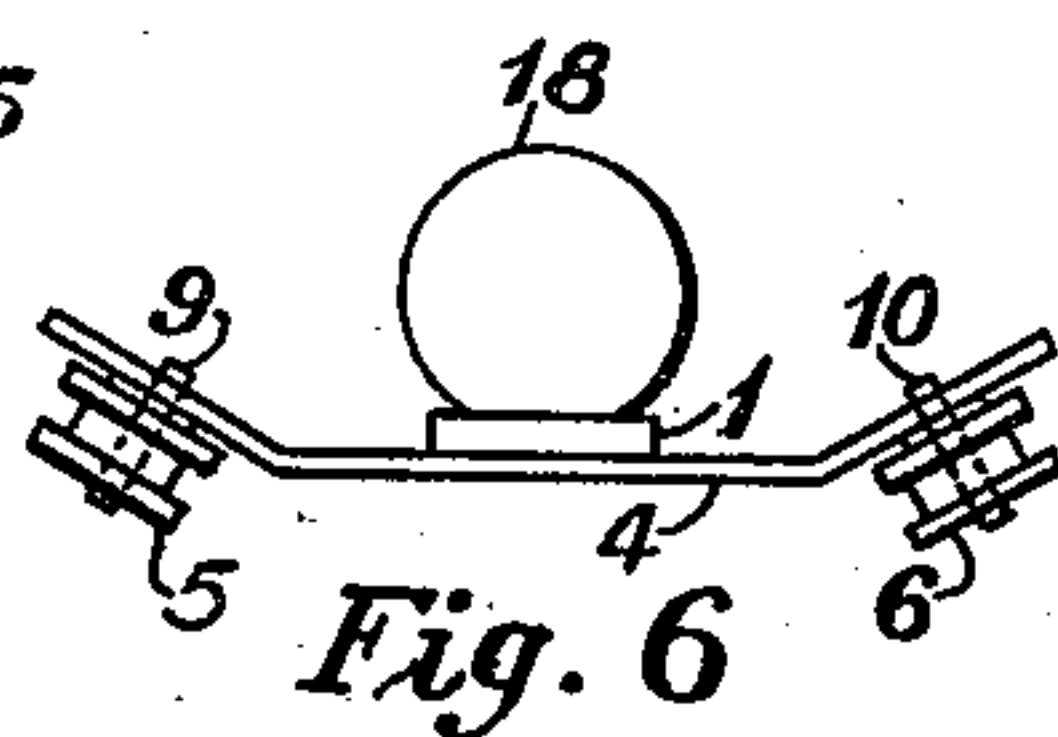


Fig. 6

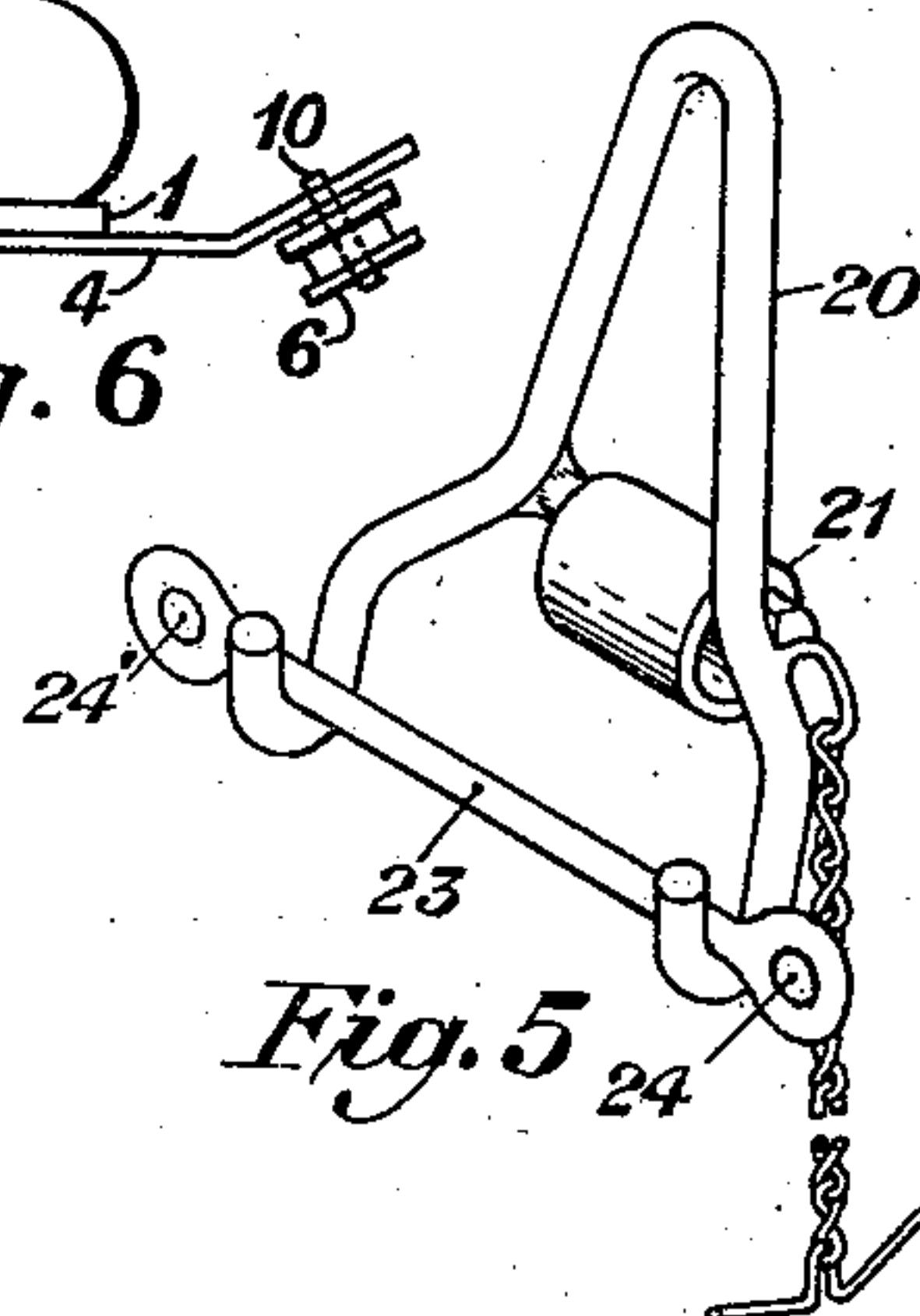


Fig. 5

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DEVICE FOR LIFTING WEIGHTS

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3 Claims. (Cl. 254—139)

This invention relates to an instrument for lifting or supporting weights or, in other words, the type of instrument often referred to as a gin.

The instrument of this invention is particularly adapted for use in hoisting or supporting aerial conductors, such as cables, usually supported by telephone poles. One of the features of the instrument of the invention is that it is particularly adapted for hoisting or supporting conductors, such as cables, on different kinds of poles, such as a straight-line pole or a pole located at a corner of a line. A further feature of the instrument or tool of the invention resides in the fact that it may be used at various positions on the pole as, for example, at the top of the pole or at a point below the top of the pole. A further feature of the instrument of the invention is that it may advantageously be used on joint-use poles, namely, poles supporting power lines as well as communication lines. Other features and objects of the invention will appear more fully from the detailed description thereof hereinafter given.

The invention may be more fully understood from the following description together with the accompanying drawing in the Figures 1 to 6 of which the invention is illustrated. In Fig. 1 is shown the gin of this invention. In Fig. 2 the gin is illustrated with hoisting mechanism for use in lifting a cable on a straight-line pole. In Figs. 3 and 4 the gin is illustrated with hoisting mechanism for use in lifting cables on different types of corner-poles. In Fig. 5 is shown in detail a standard cable shifting tool which could be used with the gin under conditions illustrated in Figs. 3 and 4. Fig. 6 is a sectional view looking down on a portion of the top of the gin shown in Fig. 1. Similar reference characters have been utilized to denote like parts in all of the figures.

In Fig. 1 is shown the gin device of the invention. It consists of an oblong member 1 which may be fixed in a vertical position on a supporting member, such as a telephone pole, by means of bolts inserted in the bolt holes 2 and 3. If the supporting member has a rounded surface, such as a telephone pole, the oblong member might well be made from a channel bar. Affixed to the oblong member in a horizontal position with respect thereto and near the top thereof would be the cross-bar 4. The extremities of the cross-bar 4 would be bent to form an angle with respect to the central portion thereof and to these extremities of the cross-bar there would be affixed by any suitable means, such as pins 9 and 10, the sheaves 5 and 6. This is more clearly shown

in Fig. 6 which is a sectional view looking down on a portion of the top of the gin shown in Fig. 1. Bracing members 7 and 8 would be affixed to the sides of the oblong member and connected to the extremities of the cross-bar by means of the pins 9 and 10. A device 13, such as an eye bolt, would be affixed to the oblong member below the cross-bar and sheaves. Guard members 11 and 12 would be pivotally attached to the top of the cross-bar and arrangements provided to attach them to the bracing members 7 and 8.

In Fig. 2 the gin is shown cooperating with mechanism, such as a chain hoist, to lift or support a cable 19 on a straight-line telephone pole 18. The chain hoist mechanism comprises a chain 14 with a hook 15 at one end thereof. The hook 15 would be affixed to the suspension strand of the cable 19. The chain 14 would be passed over the sheave 5 and would pass through ratchet mechanism operated by a lever 16. This ratchet mechanism would be attached by the hook 17 to the eye bolt 13 affixed to the oblong member 1. Obviously other types of hoisting mechanism, such as a rope operated device, could be used in place of the chain hoist. In Fig. 2 the gin is shown as placed at the top of the pole 18.

In Fig. 3 the gin is shown cooperating with mechanism to lift or support a cable 19 on a corner telephone pole with respect to which the pull of the cable would be towards the pole. On this type of pole it is advisable to use the standard cable shifting tool shown in Fig. 5 in cooperation with the hoisting mechanism. The standard cable shifting tool comprises a hooked member 20. The hook 15 of the hoisting mechanism would be passed through the top of the hooked member 20. The lower hooked portions of the hooked member 20 would be affixed to the suspension strand of the cable 19. On the hooked member 20 of the cable shifting tool there is a fixed roller mechanism 21 which would bear against the pole 18. As the cable shifting tool 20 is curved, as shown, and as the roller mechanism 21 would bear against the pole, the cable shifting tool would assume the position shown in Fig. 3. Accordingly, when the hoisting mechanism operates in cooperation with the cable shifting tool, it will serve to exert a pull away from the pole. In Fig. 3 the gin is shown on a pole which may be jointly used not only for supporting a cable but also for supporting power lines by means of the mechanism 25. In this case the gin is placed at a safe distance below the power line mechanism 25, as shown.

In Fig. 4 the gin is shown cooperating with

hoisting mechanism to lift or support a cable on a corner pole with respect to which the cable exerts a pull away from the pole. In this case the hoisting mechanism would be placed over the sheave 6 rather than over the sheave 5. The cable shifting tool would be utilized with additional mechanism. This additional mechanism would comprise two members such as 22 (only one of which is shown) which would be affixed to the suspension strand of the cable 19. A bar 23 having eye holes such as 24 and 24' would also be utilized. The members 22 would be inserted through the eye holes 24 and 24' of the bar 23. The cable shifting tool would then be attached to the bar 23. In this case, due to the curvature of the cable shifting tool and the roller mechanism 21, the pull in hoisting the cable would be away from the pole.

In Figs. 3 and 4 the gin is shown on poles which may be jointly used not only for supporting a cable but also for supporting power lines by means of the mechanism 25. When used in this connection the gin of the invention has certain advantages over the prior art. In hoisting cables in certain arrangements of the prior art a lashing rope would first be placed around the pole. The hook 15 of the chain hoist mechanism would be attached to the lashing rope. The hook 17 fixed to the ratchet mechanism would be attached to the member 20 of the standard cable shifting tool. The cable could then be hoisted toward the lashing rope but could not rise above a level slightly below the hook 17 on the ratchet mechanism. With the gin of this invention the cable may be raised to a level just below the sheaves, which level is above that of the hook 17 of the ratchet mechanism. For the sake of the line-man's safety the apparatus must always be placed on the pole so that the ratchet mechanism (particularly the lever thereof) is at a certain distance below the power lines. Accordingly, with the gin of this invention the ratchet mechanism may be kept at a safe distance from the power lines while at the same time the cable may be hoisted closer to such power lines than heretofore.

While the invention has been disclosed as embodied in certain specific forms which are deemed desirable, it is understood that it is capable of embodiment in many other and widely varied forms without departing from the spirit of the invention as defined in the appended claims.

What is claimed is:

1. A gin for hoisting materials comprising an

oblong member, means for affixing said oblong member in a vertical position to an upright member, a flat surfaced cross-bar affixed in a horizontal position to the top portion of said oblong member so that the flat surface of the cross-bar is in the same plane as the main surface of said oblong member, said cross-bar having its extremities bent toward said upright member to form an angle with respect to the central portion of said cross-bar, sheaves affixed to the extremities of said cross-bar and adapted to cooperate with hoisting mechanism, and means on said oblong member whereby said hoisting mechanism may be affixed thereto below said cross-bar.

2. A gin for hoisting aerial cable comprising an oblong member, means for affixing said oblong member in a vertical position to a pole, a flat surfaced cross-bar affixed in a horizontal position to the top portion of said oblong member so that the flat surface of the cross-bar is in the same plane as the main surface of said oblong member, sheaves affixed to the extremities of said cross-bar and adapted to cooperate with hoisting mechanism, and means on said oblong member whereby said hoisting mechanism may be affixed thereto below said cross-bar, the extremities of said cross-bar being bent partially around said pole so that the position of the sheaves on said extremities will cause said hoisting mechanism to exert a vertical upward pull at a side of the pole with respect to the position thereon of said oblong member.

3. A gin for hoisting materials comprising an oblong member, means for affixing said oblong member in a vertical position to an upright member, a flat surfaced cross-bar affixed in a horizontal position to the top portion of said oblong member so that the flat surface of the cross-bar is in the same plane as the main surface of said oblong member, bracing members affixed to said oblong member and the extremities of said cross-bar, guards affixed to the central portion of said cross-bar and to said bracing members, said cross-bar having its extremities bent partially around said upright member, sheaves affixed to the extremities of said cross-bar and adapted to cooperate with hoisting mechanism, and means on said oblong member whereby said hoisting mechanism may be affixed thereto below said cross-bar.

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