J. R. HELDEN.

HANGER.

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1,433,616.

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Fig. 1.

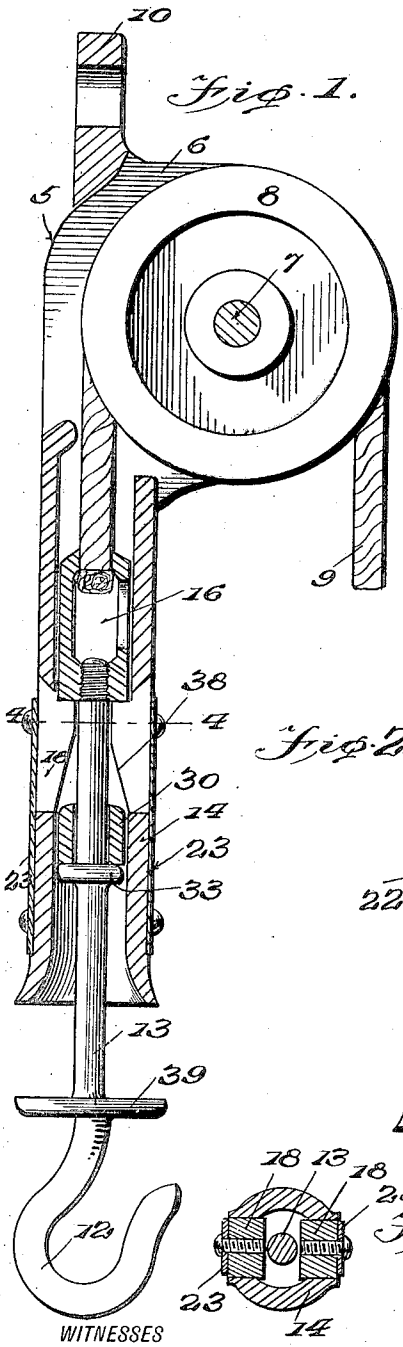


Fig. 2.

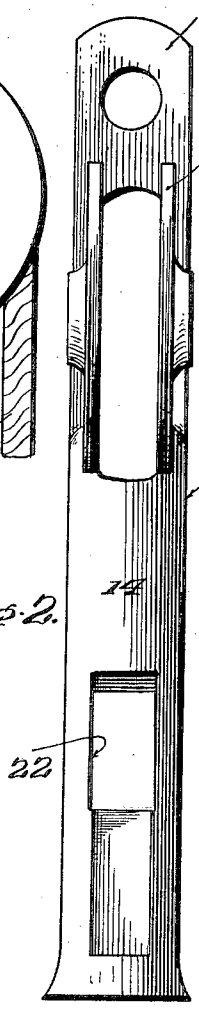


Fig. 3.

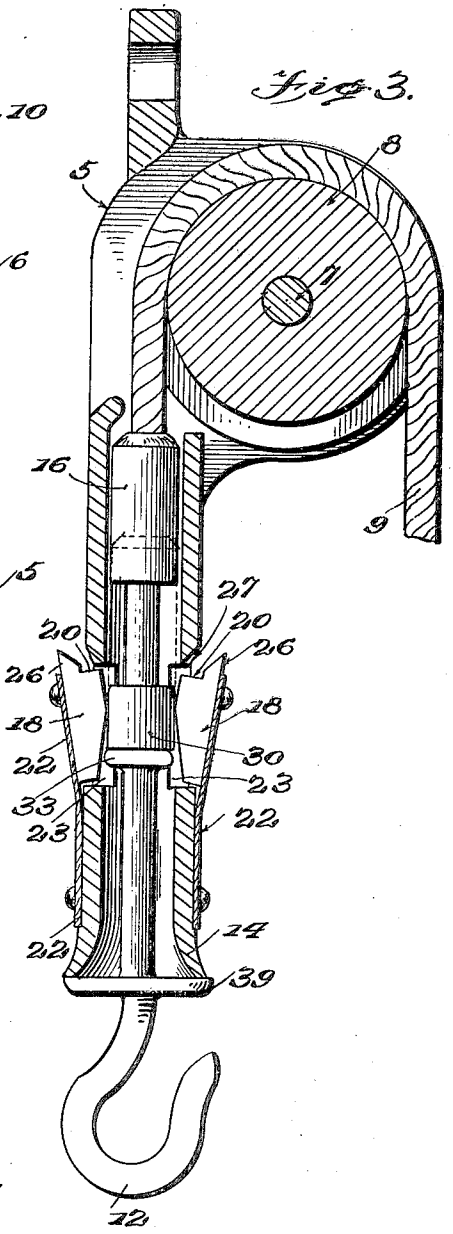


Fig. 4.

WITNESSES

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UNITED STATES PATENT OFFICE.

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HANGER.

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To all whom it may concern:

Be it known that I, JOHN R. HELDEN, a citizen of the United States, and resident of North Birmingham, in the county of Jefferson and State of Alabama, have invented certain new and useful Improvements in Hangers, of which the following is a specification.

This invention relates to hangers especially adapted for supporting articles in elevated positions.

An important object of this invention is to provide a hanger having novel means for supporting articles in elevated positions and having novel means whereby the holding means may be released when desired to permit the article to be lowered.

A further object is to provide a hanger which is simple to operate, of highly simplified construction and durable in use.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawing forming a part of this application and in which like numerals are employed to designate like parts throughout the same.

Figure 1 is a vertical sectional view through the improved hanger, the view illustrating the holding means in operation.

Figure 2 is a front elevation of the body or frame of the hanger.

Figure 3 is a vertical sectional view through the hanger illustrating the holding means in their inactive positions.

Figure 4 is a vertical transverse sectional view on line 4—4 of Figure 1.

In the drawing wherein for the purpose of illustration is shown a preferred embodiment of the invention the numeral 5 generally designates a body which consists of a pair of spaced apertured ears 6 having a shaft 7 to which a pulley 8 is connected, the said pulley being provided with the usual groove to receive a cable 9 or other flexible element. The improved hanger may be supported at a point considerably above the floor or in any other elevated position by means of an attaching ear 10 which is apertured for the reception of a suitable hook.

An article supporting hook 12 is provided with a shank 13 slidable through the depending tubular body 14, of the body and the said shank is provided with a threaded terminal portion connected to a cylindrical head 16 to which the terminal portion of the cable is connected.

When an object to be elevated is connected to the hook 12 the rope or flexible element 9 is pulled thereby elevating the object and as the head 16 moves past a pair of locking pawls 18 the lower end of the head is engaged with the shoulders 20 formed on the upper portions of the pawls. The pawls which are supported by leaf springs 22 rest upon the lower ends of openings 23 in opposite sides of the tubular member 14 so that when the weight of the object is transmitted to the pawls 18 the leaf springs 22 are not subjected to any strain. It is thus seen that the downward thrust is transmitted from the head 16 through the pawls 18 to the tubular body. The inward movement of the several pawls 18 is limited by means of triangular stop lugs 26 formed on the upper ends of the pawls and engaging the beveled upper ends 27 of the openings 23 in the tubular member.

When it is desired to release the hook for the purpose of lowering the object it is merely necessary to pull downwardly on the flexible element 9 so that a spreader sleeve 30 slidably mounted on the shank 13 will move upwardly and thereby position the pawls 18 as illustrated in Fig. 3. The spreader sleeve 30 is confined between an annular rib 33 and the lower end of the head 16 and when the cable 9 is subsequently released the spreader sleeve 30 remains in contact with the pawls 18 at a point spaced from the upper ends of the same so that the head 16 may move downwardly between the pawls. Of course when the heads 16 moves beneath the pawls 18 the object may be lowered to the desired point. As illustrated in Figure 1 the opposed sides of the pawls are inclined as indicated at 38 so that the rounded upper end of the spreader sleeve 30 may readily move the pawls outwardly.

In operation a stop flange 39 formed adjacent the lower portion of the shank 13 contacts with the flared lower end of the tubular member and thereby limits the upward movement of the hook so that the spreader sleeve 30 is prevented from moving beyond the upper ends of the pawls.

In carrying out the invention the pulley 8 may be dispensed with and a double sheave employed in lieu thereof when it is desired to lift weighty objects.

Having thus described the invention what I claim is:—

1. An automatic hanger comprising a tubular body having longitudinal openings, a load supporting shank movable through said body and having a head, elongated pawls arranged in said openings and adapted for engagement by said head, the lower ends of said pawls being engaged with the lower end walls of said openings whereby the entire load on said head is transmitted through the pawls to said body.

2. The construction set forth in claim 1, and springs connected to said body and supporting said pawls, said springs urging the pawls inwardly.

3. The construction set forth in claim 1, and a spreader sleeve arranged on said shank, the inner longitudinal edges of said pawls being inclined for engagement with said spreader sleeve.

4. The construction set forth in claim 1, the upper ends of said pawls being provided with extension lugs engaging the upper ends of said openings whereby to limit the inward movement of the pawls.

JOHN R. HELDEN.