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ADJUSTABLE LIFT CHAIN FOR HOISTS

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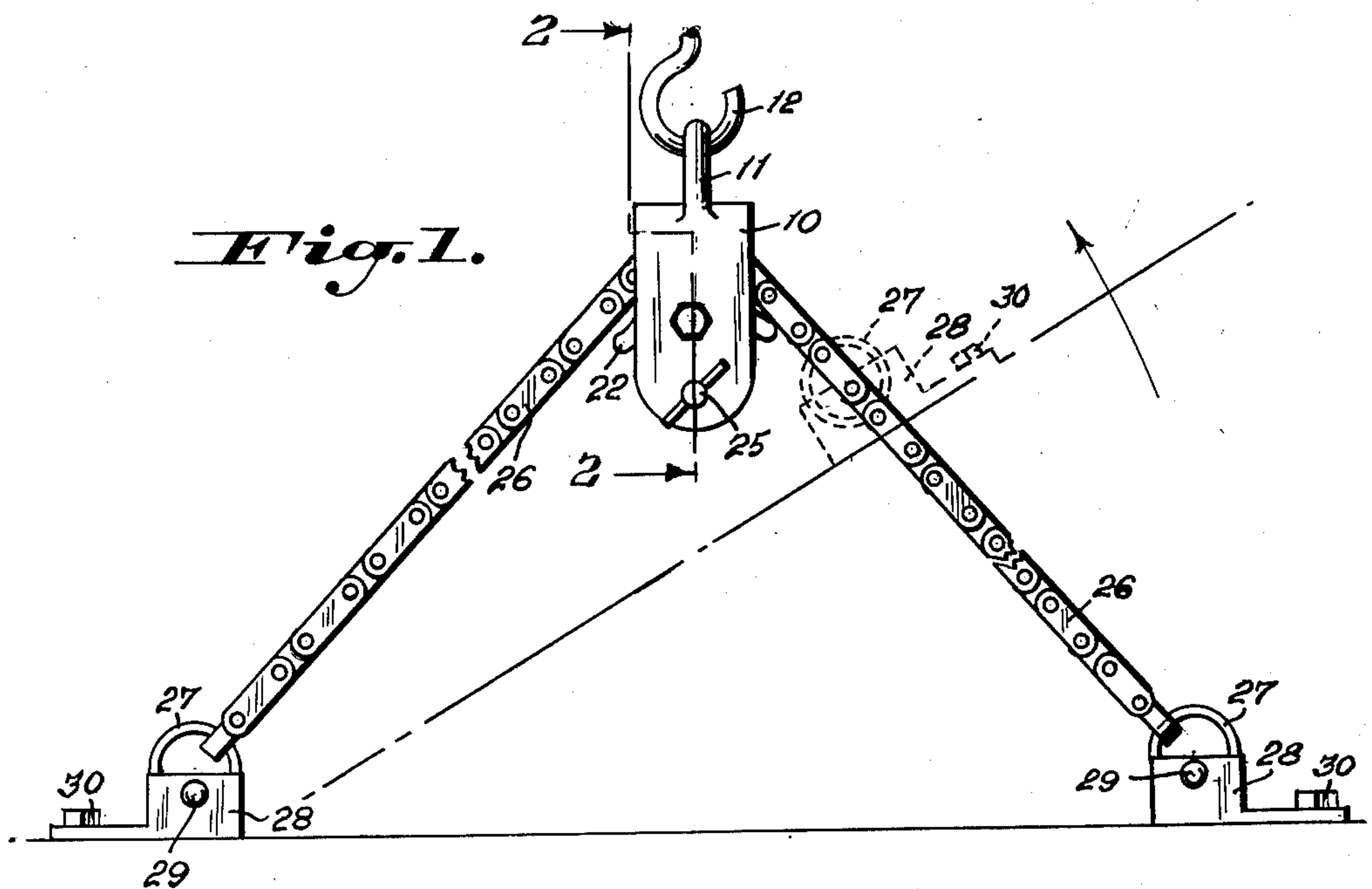


Fig. 2.

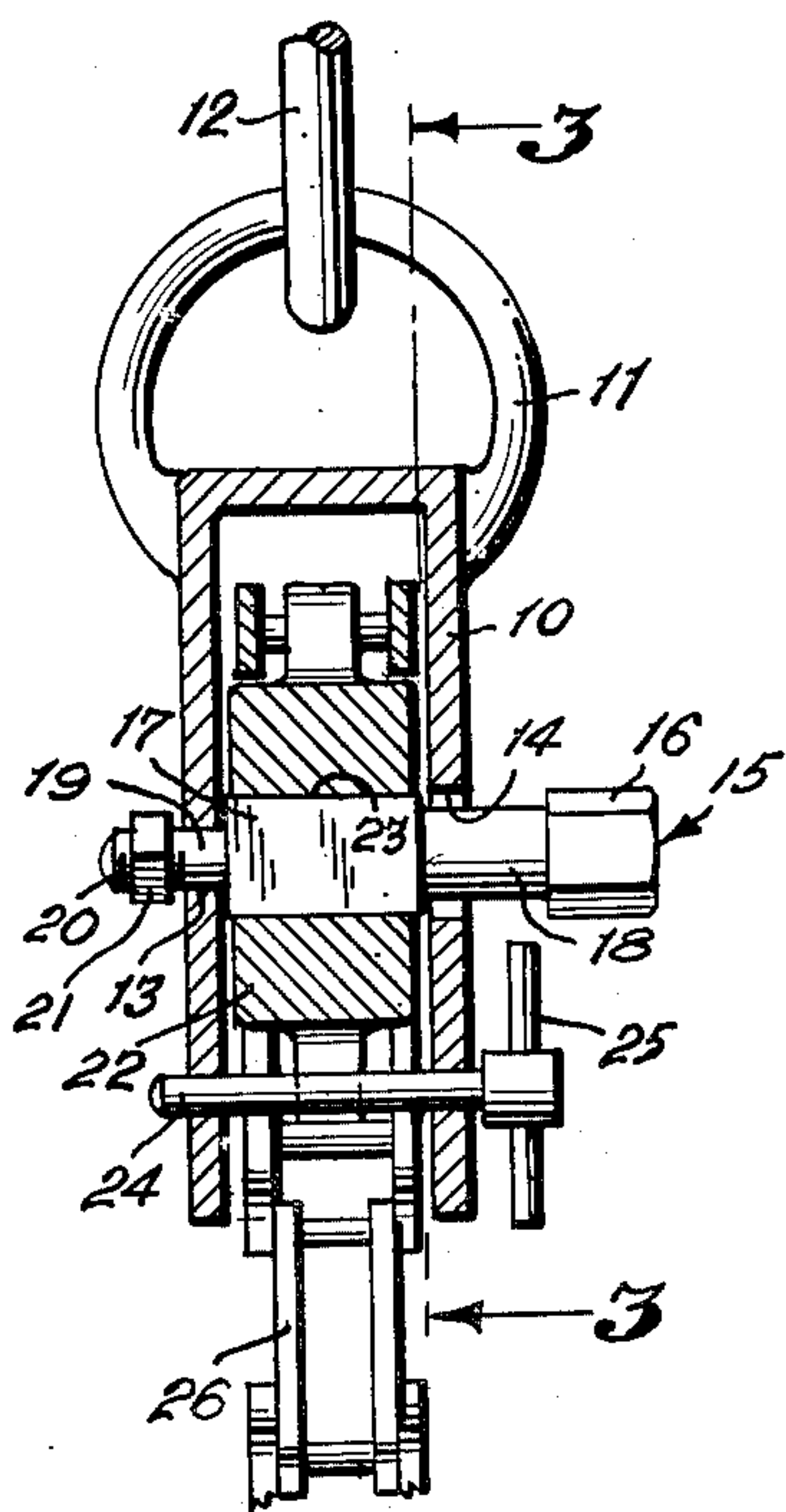
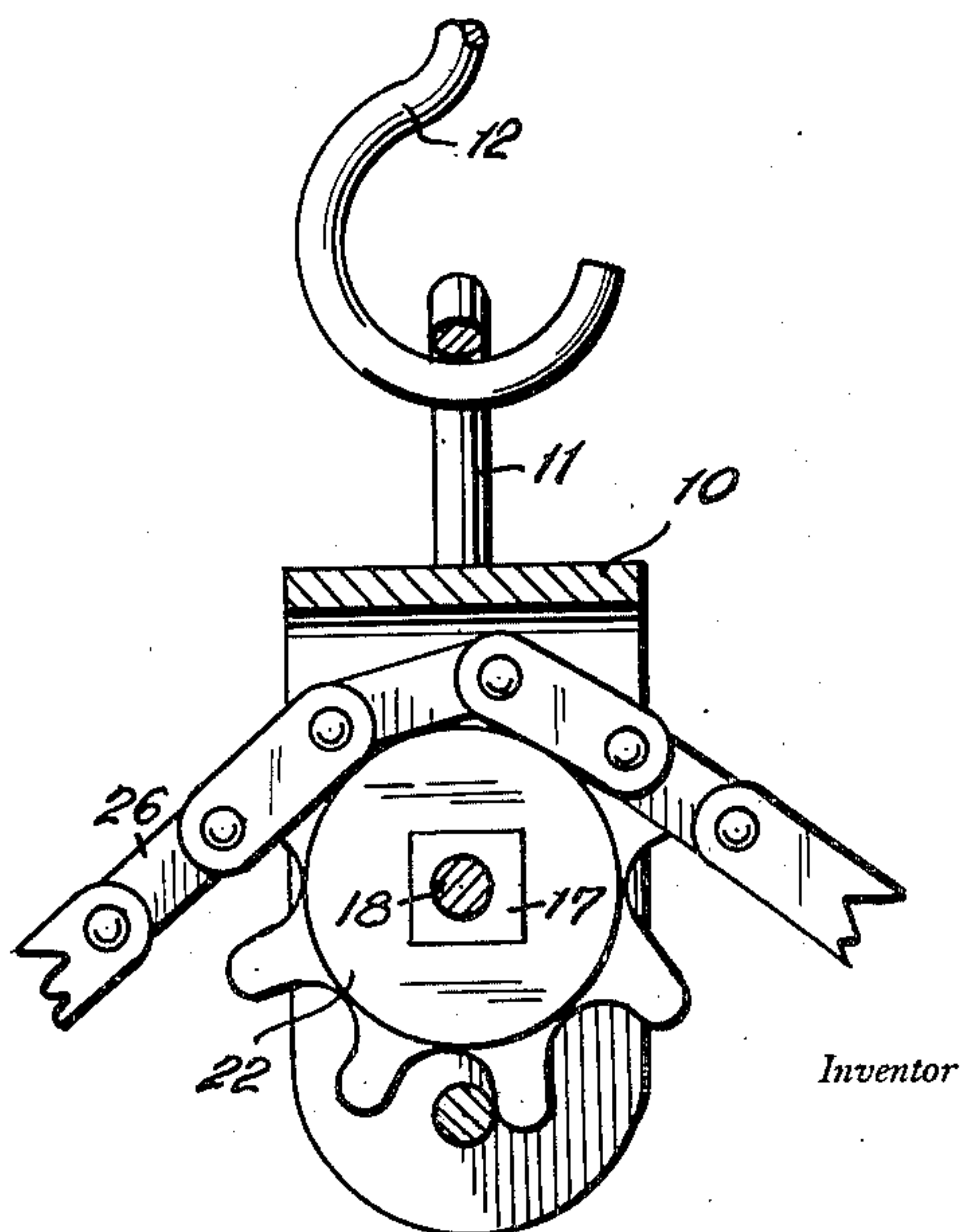


Fig. 3.



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ADJUSTABLE LIFT CHAIN FOR HOISTS

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1 Claim. (Cl. 294—74)

1

The present invention relates to adjustable lift chains for hoists and it consists in the combinations, constructions and arrangements of parts hereinafter described and claimed.

Generally, the invention comprises an inverted U-shaped sheave having an eye for the attachment of the same to a hoisting apparatus and having a hub extending therethrough. The hub is provided with a squared portion which is adapted to lie between the sides of the sheave and with an outwardly extending hexagonal head whereby the same may be turned. A pin is removably mounted in the lower end of the sheave and sprocket gear is mounted upon the squared portion of the hub. A standard roller chain extends through the sheave and is enmeshed with the sprocket gear and the ends of the chain are provided with eyes for attachment to the load to be lifted. Removal of the pin allows the sprocket gear to be turned by means of a wrench or other tool whereby to tilt the load to a desired angle after which the pin may be replaced in the sheave to hold the gear against further movement.

It is accordingly an object of the invention to provide a device of the character set forth which is simple in construction, inexpensive to manufacture and yet efficient and effective in use.

Another object of the invention is the provision of a device of the character set forth having simple and effective means for tilting a load while the same is in lifted position.

A further object of the invention is the provision of novel locking means for a sprocket gear forming a part of the invention.

Other and further objects of the invention will become apparent from a reading of the following specification, taken in conjunction with the drawings, in which:

Figure 1 is a front elevational view of an embodiment of the invention,

Figure 2 is an enlarged sectional view taken along line 2—2 of Figure 1, and

Figure 3 is a sectional view taken along line 3—3 of Figure 2.

Referring more particularly to the drawing, there is shown therein an inverted U-shaped sheave 10 to the upper end of which is integrally attached an eye 11 whereby the same may be connected with, for example, a hoisting hook 12.

One arm of the sheave 10 is provided with a relatively small opening 13 and the other arm is provided with a relatively large opening 14.

A hub, generally indicated at 15, is provided with a hexagonal head 16, a squared portion 17,

2

a reduced cylindrical portion 18 interconnecting the head and the squared portion and a further reduced portion 19 at the free end of the hub. The portion 19 is provided with threads 20 for the reception of a nut 21.

The squared portion 17 lies between the arms of the sheave 10 and there is mounted thereon a sprocket gear 22 which is provided with a squared opening 23 for receiving the same. A pin 24 extends transversely through the arms of the sheave 10 in suitable openings provided therefor and is provided with a handle 25 at one end thereof.

A roller chain 26 extends through the sheave 10 and is enmeshed with the gear 22 and is provided at its outer ends with rings 27 which may be fastened directly to the load to be lifted or which may be provided with end clips 28 having removable pins 29 for latching the rings 27 therein and which clips may be affixed to a load such as, for example, an automobile motor, by means of bolts 30 or the like.

In operation, it will be apparent that the chain 26 may first be connected with a load to be lifted by means of the rings 27 or by means of the rings 27 in conjunction with the clips 28 and that thereafter, when the load has been lifted a short distance, the pin 24 may be removed and the sprocket gear 22 revolved by turning the hub, this latter being effected by engaging the hexagonal nuthead 16 with a wrench or other tool. This will cause the chain to pass through the sheave and to thereby tilt the load to desired position. When such position has been reached, the pin 24 may be reinserted in the openings provided therefor in the sheave 10, thereby locking further movement of the sprocket gear 22 due to the fact that the pin 24 is adapted to lie between the teeth of the gear 22.

It will also be apparent that the hub may be inserted into the sheave and gear 22 through the opening 14 and that thereafter the nut 21 may be placed upon the reduced portion 19.

While but one form of the invention has been shown and described herein, it will be readily apparent to those skilled in the art that many minor forms of the invention may be made without departing from the spirit of the invention or the scope of the appended claim.

What is claimed is:

In an adjusting lift chain device for a hoist an inverted U-shaped casing, an eye formed at the upper end of the casing whereby the same may be connected to a lift hook, a hub removably and transversely mounted in the casing and hav-

3

ing a squared portion between the arms of the casing, a gear non-rotatably mounted on said squared portion, a nuthead formed at one end of the hub, a nut threadably engaged at the other end of the hub, a chain extending through the casing and enmeshed with the upper portion of said gear, eyes attached to the outer ends of said chain for attachment to a device to be lifted and means for locking the gear in selected positions in said casing, said means comprising a pin removably mounted in the arms of the casing and engageable with the teeth of the gear.

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4

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
679,856	McCloskey	Aug. 6, 1901
737,846	Jennings	Sept. 1, 1903
842,866	Curtis	Feb. 5, 1907
1,399,326	Taylor	Dec. 6, 1921
1,464,259	Coffing	Aug. 7, 1923