March 10, 1953 F. L. LE BUS 2,630,609

LOAD BINDER

Filed Aug. 27, 1949 2 SHEETS—SHEET 1

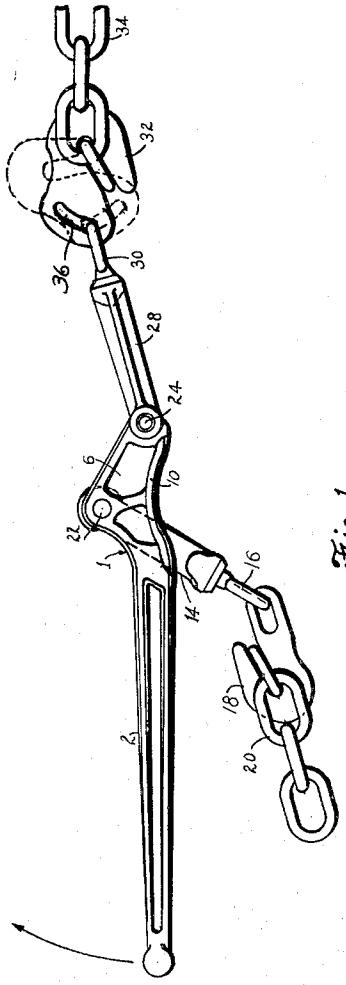


Fig. 1

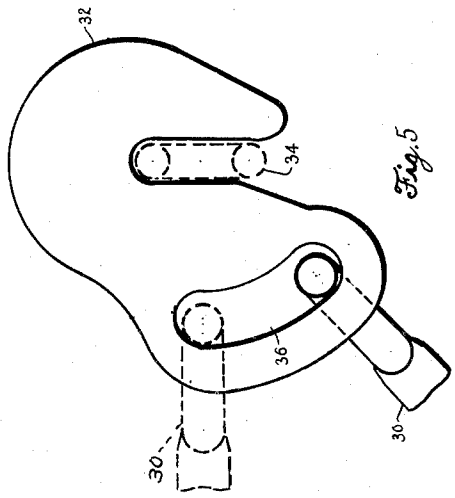


Fig. 5

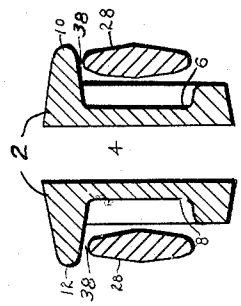


Fig. 4

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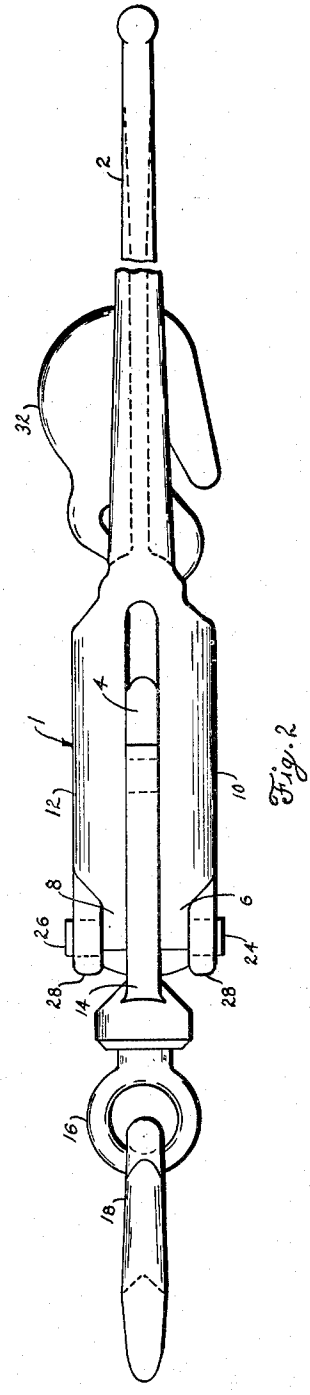


Fig. 2

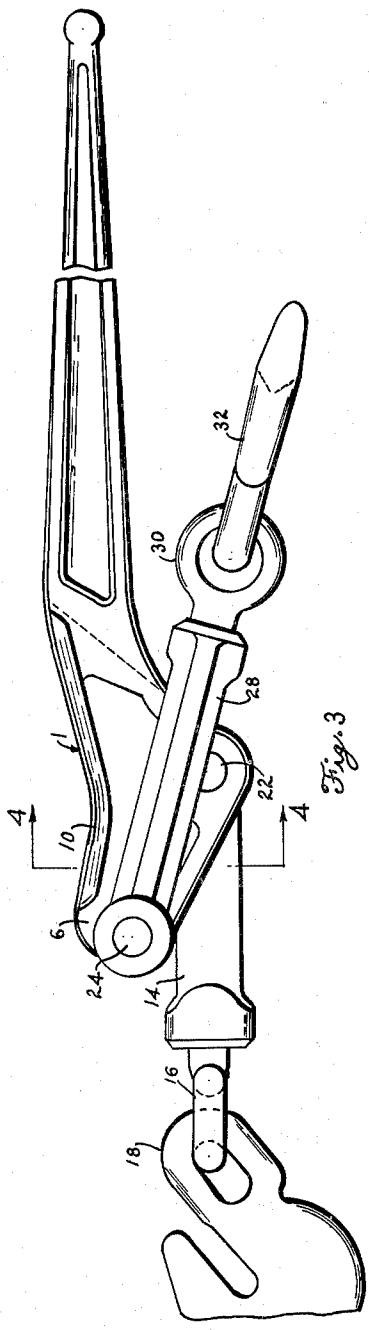


Fig. 3

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LOAD BINDER

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Application August 27, 1949, Serial No. 112,715

1 Claim. (Cl. 24—68)

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This invention relates to improvements in load binders and more particularly, but not by way of limitation, to load binder handles and hooks.

The present day slotted handles of load binders usually have a weakness in the slotted or open end thereof, which tends to permit the handles to spread or flare outwardly under heavy loads when the load binders are in a locked position. Furthermore, in placing the conventional load binder hooks over the loose ends of a load holding chain, a link of the chain is pressed over the end of the hook and then placed into the hook seat, resulting in an excess of slack in the load holding chain which must be taken up by the eccentric action of the load binder.

An important object of this invention is to provide an improved load binder handle of such construction that it will not bend or spread apart under heavy loads when the load binder is in a locked position.

Another important object of this invention is to provide an improved load binder handle which will not interfere with the conventional free and simple operation of the load binder.

Another important object of this invention is to provide an improved load binder handle which will not interfere with a lock-over center on any shape of load.

Another important object of this invention is to provide an improved load binder hook which will hold all of the slack which may be pulled out of a load holding chain by hand, thereby permitting the load binder to utilize its entire locking action.

Other objects and advantages of the invention will be evident from the following detailed description, read in conjunction with the accompanying drawings, which illustrate my invention.

In the drawings:

Fig. 1 is a side elevation of a load binder in its unlocked position, illustrating the use of the improved load binder hooks.

Fig. 2 is a plan view of a load binder in its locked position.

Fig. 3 is a side elevation of a load binder in its locked position.

Fig. 4 is a sectional elevation taken on line 4—4 of Fig. 3.

Fig. 5 is a detail of the improved load binder hook.

Referring to the drawings in detail, reference character 1 discloses a load binder device, having a handle 2 divided by a slot 4, thereby forming two sections 6 and 8 essentially channel shaped in cross section, and disposed in spaced back-to-back relationship with outwardly extending upper flanges 10 and 12, respectively, in order to increase the strength thereof. A link 14 having a swivel eye 16 is adapted to loosely connect with a conventional hook 18 in turn hooking into a chain 20. The link 14 is connected to the lower portion of the divided yoke sections 6 and 8 of the handle 2 by a link hinge pin 22. The yoke end of the divided sections 6 and 8 is connected by clevis hinge pins 24 and 26 to a clevis 28 provided with a swivel eye 30 and making a loose connection with a hook 32 normally used to hook into a chain 34. The hook 32 has an elongated opening or slot 36, of a generally arcuate configuration in that a center axial line therethrough would form an arc about the center of a chain link placed in the hook seat (Fig. 5).

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Operation

When it is desired to bind a load, such as logs, pipe and the like, the load binder is unlocked or opened, as shown in Fig. 1, and the conventional hook 18 is hooked into the load holding chain 20, whereupon the slack is taken out of the chain manually and the hook 32 is hooked into the opposite free end of the load holding chain 20 in a manner as shown by the dotted lines in Fig. 1. The hook is then turned to the position shown by the solid lines, thereby holding the slack that has been taken out of the load holding chain 20. The handle 2 is then moved in a clockwise direction, as shown by the arrow in Fig. 1, whereupon the handle 2 rotates about the clevis hinge pins 24 and 26 into the clevis 28, and the link 14 is rotated about the link hinge pin 22 and through the slot 4 of the handle 2. The handle comes to rest in its lock-over center position, as shown in Fig. 3, and the load is ready to be transported.

To unbind the load, the handle 2 is rotated in the opposite counter-clockwise direction (Figs. 1, 3), whereupon the handle 2 turns about the clevis hinge pins 24 and 26 away from the clevis 28 and the link 14 is again turned about the link hinge pin 22 through the slot 4 of the handle 2. The handle 2 comes to rest in the position shown in Fig. 1, whereupon the hooks 18 and 32 may be removed from the load holding chain.

The clevis 28 and the divided sections 6 and 8 are in their nearest relationship when the handle 2 is in its lock-over center position, and as illustrated in Fig. 4; however, sufficient clearance 38 is provided at this position between the extended upper flanges 10 and 12 of the divided sections 6 and 8 and the clevis 28. Since the divided sections 6 and 8 in effect swing up and away from the clevis 28 during the unlocking operation and the link 14 turns through the slot 4 in the

handle 2, the extended upper flanges 10 and 12 do not interfere with the conventional operation of the load binder.

From the foregoing it will be apparent that the present invention provides a load binder which is particularly adaptable for heavy loads wherein the handle of the binder is strengthened by the outwardly extending flanges so that the forked portions of the handle will not spread apart or flare outwardly under heavy loads when the binder is in locked position. The outwardly flared flanges accomplish the above without any obstruction or unusual operation of the load binder itself. Furthermore, the load binder also provides a novel type of hook having an eccentric eye or slot which is capable of being latched into one end of the load chain and then turned into a holding position at the opposite end of the load chain, thereby taking up any slack that may be present in the chain in the hook itself and thus eliminating the taking up of the slack from the eccentric operation of the load binder, per se.

Changes may be made in the combination and arrangement of parts as heretofore set forth in the specification and shown in the drawings, it being understood that any modification in the precise embodiment of the invention may be made within the scope of the following claim without departing from the spirit of the invention.

I claim:

A load binder comprising a handle, one end portion of said handle being bifurcated to provide two parallel sections, a clevis pivotally secured to the outer ends of the parallel sections, a link pivotally secured to the lower portion of the parallel sections in spaced relation to the clevis, a strengthening flange on the outer side of each parallel section extending substantially the length thereof, each of said strengthening flanges disposed along the upper side of a respective parallel section and extending radially outward to a position overlying the clevis in order to strengthen the handle and prevent spreading when the handle is in a locked position, chain hooks secured to the link and clevis, each of said chain hooks having a straight hook seat, and at least one of said chain hooks having an arcuate eye provided in the body thereof on the arc of a circle and having its center line in the center of the seat of the respective chain hook.

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