Jan. 28, 1958 G. BOYES ET AL 2,821,003

LOG BINDER RELEASE

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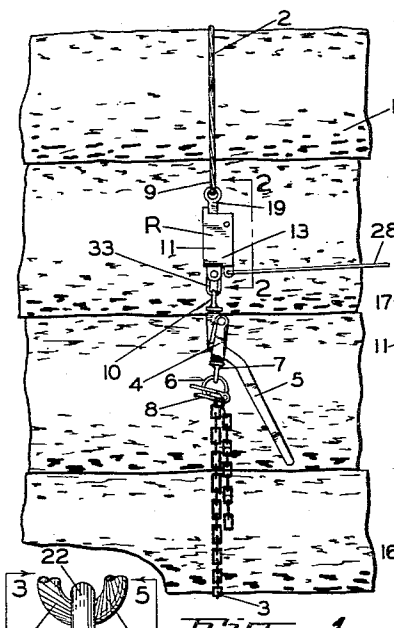


Fig. 1

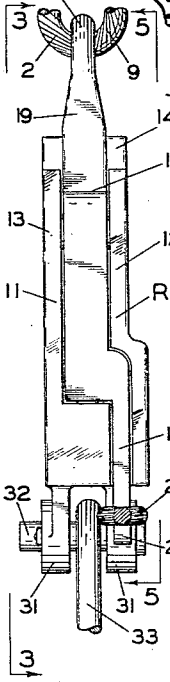


Fig. 2

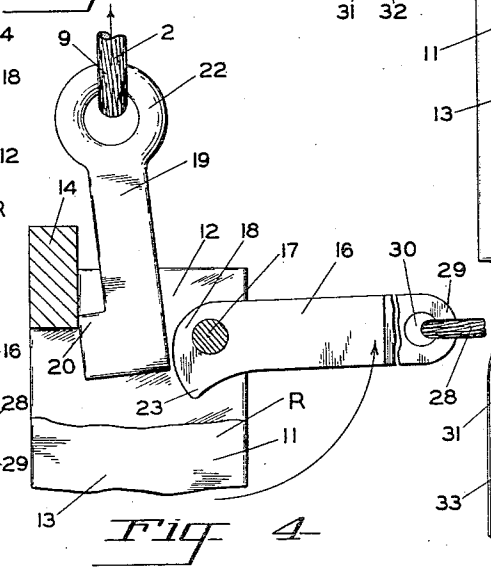


Fig. 4

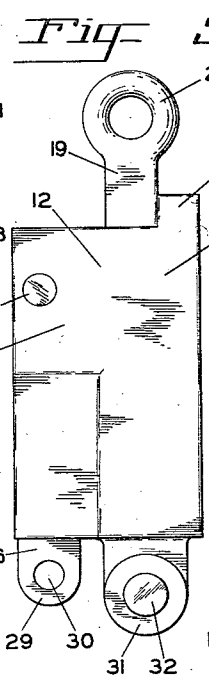


Fig. 5

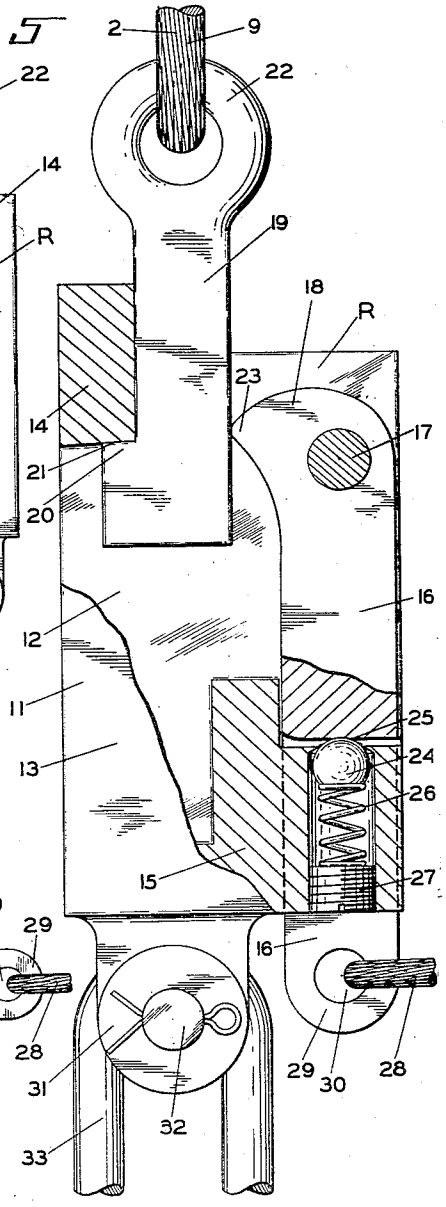


Fig. 3

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LOG BINDER RELEASE

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2 Claims. (Cl. 24—230)

This invention relates to a remotely controllable quick release device particularly adapted for use in log binders to provide emergency release in the event if circumstances rendering manipulation of the conventional binder hazardous.

It is therefore among the primary objects of the invention to provide a novel, simple, effective and efficient release means acting as an auxiliary connection in the usual binder assembly.

Another object of the invention is to provide a binder release which may be actuated from a remote position so as to preclude injury to the operator as a consequence of a sudden release of the bound logs.

Another object is to provide a quick release device operable by a simple unidirectional motion to permit release of the binding strain and subsequent operation of the conventional binder mechanism without subjecting the operator to the danger of unexpected release of the load.

The novel features that are considered characteristic of the invention are set forth with particularity in the appended claims. The invention itself, however, both as to its organization and its method of operation, together with additional objects and advantages thereof, will best be understood from the following description of a specific embodiment when read in connection with the accompanying drawing, wherein like reference characters indicate like parts through the several figures and in which:

Figure 1 shows our new and improved binder release in holding position within a binding cable or chain;

Figure 2 is a side view of the release, taken on line 2—2 of Figure 1;

Figure 3 is a side view, taken on line 3—3 of Figure 2, partially broken away for convenience of illustration;

Figure 4 is a fragmentary view illustrating how the release is accomplished, and

Figure 5 is a side view of the release, taken on line 5—5 of Figure 2.

Referring to Figure 1 of the drawings the bound logs are indicated by numeral 1, a conventional binding cable 2 and the chain 3 connected together by suitable means such as a well known binding mechanism indicated at 4 adapted to stretch the cable and chain tightly around the logs by the action of the lever 5. The chain 3 is secured to the load binder mechanism 4 in the usual manner by way of the chain passing through a ring 6, which in turn is part of the swivel connection 7 of the binder. The chain is held to the desired adjustment by the usual U-shaped lock 8, which embraces one of the links of the chain and over the top of the ring 6. Usually the end 9 of the cable 2 connects directly with the link 10 of the load binder 4.

The present binder release is indicated by the letter R and it includes a body 11 comprising two side walls 12 and 13, spaced apart and connected together by integral webs 14 and 15. A lever 16 is pivotally mounted between the said side walls 12 and 13 upon a pin 17 and

is provided at one end with a cam 18 formed adjacent the pivot pin 17.

An eye bolt 19 having a shoulder 20 is adapted to engage under the transverse web 14, as at 21, while its opposite end is connected to the end 9 of the cable 2 by way of the eye portion 22. The shoulder 20 of the bolt 19 is held under the transverse web 14 by the action of the tip 23 of the cam 18 when the lever 16 is in the position shown in Figures 1, 2, 3 and 5. This lever is held in this position by the spring loaded ball 24 engaging the socket 25 of the lever 16, as best illustrated in Figure 3.

The ball 24 is biased by a spring 26 and the tension of the spring 26 can be varied by the threaded plug 27 to the proper tension of the ball 24 within the socket 25. A pull cord 28 is secured to the end 29 of the said lever 16 by way of the hole 30. Ears 31 form part of the body 11 and extend downwardly, having a cross pin 32 passing therethrough adapted to connect to the link 33, which in turn connects to the swivel 10 of the load binder. This is best illustrated in Figures 1, 2 and 3. In use the cable 2 of the binding assembly is connected to the bolt 19 of the present quick release unit by way of the eye 22. The main body 11 of the unit is connected to the load binder unit 4 by the link 33 passing over the pin 32 and between the ears 31. The load binder 4 is permanently connected to the chain 3. When the binding unit is placed around the logs, the bolt 19 is passed down between the cam 23 of the lever 16, as illustrated in Figure 4, after which the lever 16 is brought to the position shown in Figures 1, 2, 3 and 5. The ball 24 registering with the socket 25 holding the lever in this position, causing the tip 23 of the cam 18 to bear against the side of the bolt 19, holding the shoulder 20 under the web 14 at 21.

The chain 3 is then roughly adjusted within the ring 6 while the load binder is in its released position. The lever 5 is then brought down to the position shown, tightening the binding chain 3 and cable 2 around the logs. When it is desired to release the binder unit from around the logs, the operator stands quite some distance from the load and pulls the pull cord 28, which pulls the lever 16 to the position shown in Figure 4, allowing the bolt 19 to disengage itself from the body member 11. This is done by the tip of the cam 23 moving to the position shown in Fig. 4, allowing the shoulder 20 of the bolt to release itself from under the cross member 14. A slight slope to the shoulder and to the web 14 allows the shoulder to release easily. When the bolt 19 is released as above described, the whole binding unit, including the cable 2, chain 3, binder 4 and our quick release falls to the ground in a single connected unit so that the same can be quickly and easily applied in another binding operation.

Although a certain specific embodiment of the invention has been shown and described, it is obvious that many modifications thereof are possible. The invention, therefore, is not to be restricted except in so far as is necessitated by the prior art and by the spirit of the appended claims.

What we claim is:

1. A quick release device for anchoring cables, log binding elements and the like, comprising in combination, a body portion having first and second ends and first and second sides and including spaced side walls and a connecting web, said side walls defining a slot open at said first end and at said first side of said body portion and said web providing a web shoulder adjacent said second side and facing said second end, a catch bolt of a thickness substantially equal to the width of said slot and insertible longitudinally in the open end of said slot,

said bolt having on the insertible end thereof a laterally extending lug forming a shoulder engageable with said web shoulder with said bolt longitudinally engaging the inner face of said web and extending beyond the open end of said body portion, means on the other end of said bolt for attachment to one end of a binding element, a pivot extending between said walls substantially opposite said web shoulder and adjacent the open side of said body portion, a lock lever pivotally mounted on said pivot adjacent one end thereof, said lever having a thickness substantially equal to the width of said slot and having a locking cam portion extending laterally from the pivoted end thereof and facing said web shoulder when said lever is swung into said slot in locking position, said cam portion in locking position being spaced from the inner side of said web a distance substantially equal to the thickness of said bolt to retain said bolt against said web with said web and bolt shoulders in abutment, said cam portion tapering around the pivoted end of said lever to permit movement of said bolt from said web and disengagement of said shoulders when said lever is swung outwardly through the open side of said body portion, means on the free end of said lever for connection to a pull member for swinging said lever to release position, stop means between said side walls adjacent said second end and spaced from said first side of said body portion and constituting an abutment for said lever in locking position, latch means on said lever intermediate the ends thereof, and complementary latch means carried by said body portion between said stop means and said first side for cooperation with said lever latch means when said lever is swung into said slot to releasably retain said lever in locking position.

2. A device according to claim 1, including a pair of spaced ears on said second end of said body portion and having axially aligned apertures, and a pin removably mounted in said apertures for releasably securing said body portion to the other end portion of a binding element.

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