Dec. 2, 1941. F. A. DORSA 2,264,936

ROPE SLING CLAMP

Filed Dec. 19, 1940

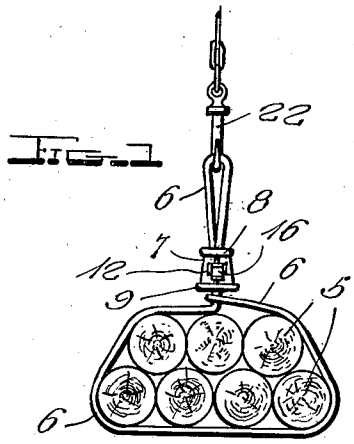


FIG. 1

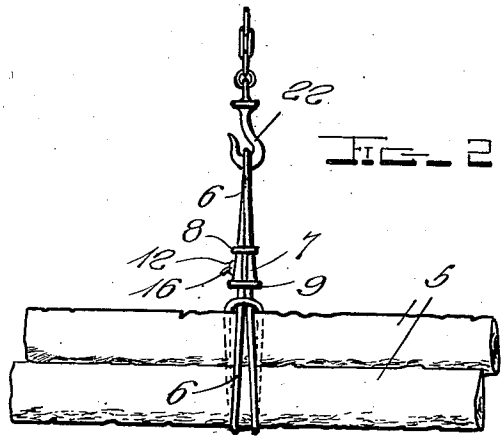


FIG. 2

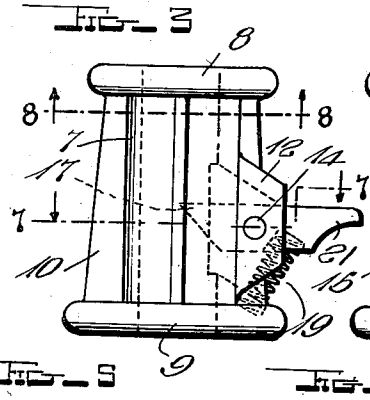


FIG. 3

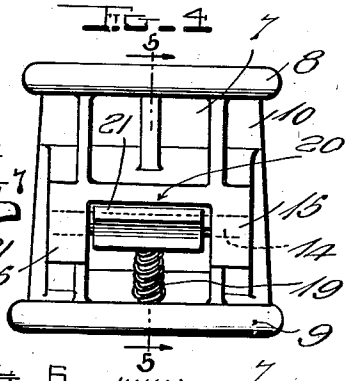


FIG. 4

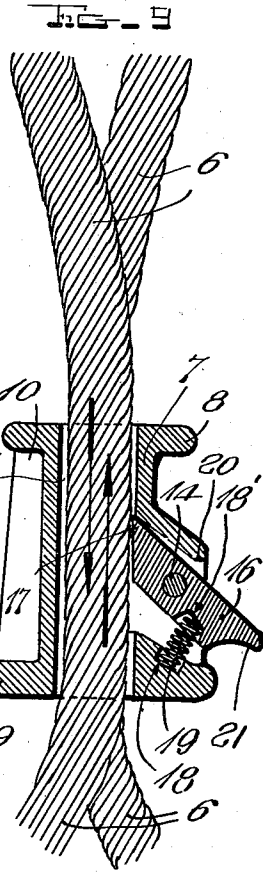


FIG. 9

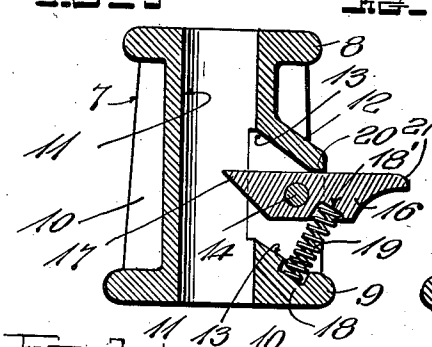


FIG. 5

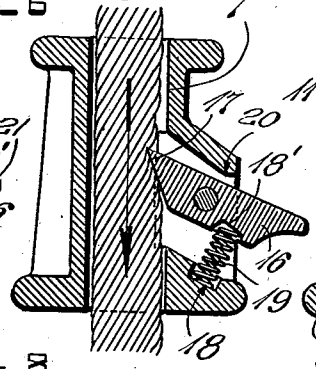


FIG. 6

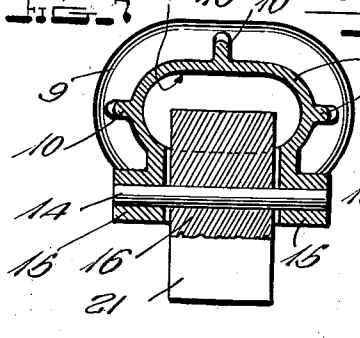


FIG. 7

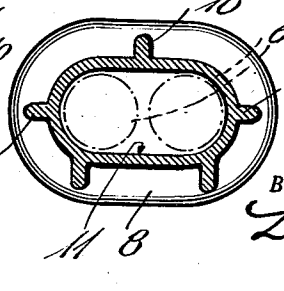


FIG. 8

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ROPE SLING CLAMP

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Application December 19, 1940, Serial No. 370,870

7 Claims. (Cl. 24—132)

This invention relates to rope clamps and more particularly to a clamp especially designed for use on rope slings for loading and unloading logs and the like.

The object of the invention is to provide a rope sling clamp of simple and inexpensive construction capable of being readily positioned on the sling and by means of which several logs may be securely held together when raising or lowering the same.

A further object is to provide a rope sling clamp comprising a tubular member or casing slidably mounted on the rope sling and provided with a pivoted pawl adapted to grip the rope and hold the casing in a selected position of adjustment thereon.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency as well as to reduce the cost of manufacture.

In the accompanying drawing forming a part of this specification and in which similar numerals of reference indicate corresponding parts in all the figures of the drawing:

Figure 1 is an end view of the rope clamp showing it in position on a rope sling and clamping several logs together for the purpose of raising or lowering the same,

Figure 2 is a side elevation,

Figure 3 is an end view of the clamp detached,

Figure 4 is a front view,

Figure 5 is a vertical sectional view showing the spring actuated pawl in normal position,

Figure 6 is a similar view showing the clamping action between the pivoted pawl and rope,

Figure 7 is a transverse sectional view taken on the line 7—7 of Figure 3,

Figure 8 is a similar view taken on the line 8—8 of Figure 3, and

Figure 9 is a vertical sectional view showing the pivoted pawl moved to inoperative position to permit passage of the rope therethrough.

The improved device forming the subject-matter of the present invention is principally designed for clamping a plurality of logs in assembled position when raising and lowering the same, and in Figure 1 of the drawing there is illustrated several logs 5 held in bunched relation to each other by means of a looped rope or sling 6.

The device comprises a tubular member or casing 7 having upper and lower flanges 8 and 9 connected by spaced vertically disposed reinforcing ribs 10. The bore of the tubular member 7 is preferably substantially elliptical in shape in cross section, as indicated at 11, to accommodate adjacent strands of the rope 6 and permit said tubular member to be adjusted vertically of the sling to facilitate clamping the logs in assembled position.

Extending laterally from one side of the tubular member or casing 7 is a hollow boss 12, the inner walls 13 of which are inclined in the direction of the bore of the casing and disposed parallel to each other, as best shown in Figure 6 of the drawing. Extending transversely of the boss 12 is a rod or pin 14 having its opposite ends journaled in suitable bearings 15 formed in the boss 12, and secured to said pin is a spring pressed pawl 16, the beveled end 17 of which normally projects within the bore of the tubular member or casing 7.

The body portion of the casing and the pawl 16 are provided with depressions or sockets 18 and 18', and fitted in said sockets are the adjacent ends of a coiled spring 19 which serves to normally and yieldably hold the upper surface of the pawl in contact with a flat surface or abutment 20 on the hollow boss and prevents downward turning movement of the inner end of the pawl. The outer or free end of the pawl is cut away to form a finger-piece 21, by depressing which the pointed end of said pawl may be swung laterally to a position in alinement with the bore of the casing so as to permit the casing to slide freely on the rope or sling when desired.

In operation, the rope or sling 6 is looped around the logs 5 and the two strands of the rope passed through the casing 7 and fitted over the hook 22 of a suitable clevis or other elevating device. The finger-piece 21 of the pawl is then depressed so as to clear the rope and the clamp moved downwardly on the sling or loop to tighten said loop around the logs. Pressure on the finger-piece 21 of the pawl is then removed, thereby causing the spring to force the beveled end 17 of the pawl against the rope so that any pressure of the bight of the loop against the bottom flange of the casing will securely clamp said casing in position. To remove the clamp, it is merely necessary to again depress the finger-piece 21 so as to release the pawl when the companion strands of rope constituting the sling may be readily withdrawn from the casing. By reference to Figure 7 of the drawing, it will be noted that the pawl 16 is of sufficient width to simultaneously grip both strands of the sling 6 so as to securely hold the clamp in adjusted position.

While the device is especially adapted for

handling logs, it will, of course, be understood that said device may be used with equally good results for loading or unloading boxes, crates, sacks and the like.

It will also be understood that the devices may may be made in different sizes and shapes and constructed of any suitable material without departing from the spirit of the invention.

Having thus described the invention, what is claimed as new is:

1. A clamp for rope slings provided with a hollow boss having inclined walls and an abutment intersecting one of said walls, a gripping pawl pivotally mounted within the boss, and a spring interposed between one of said inclined walls and the pawl for normally holding said pawl against said abutment, the pawl being movable into gripping engagement with a rope for locking the clamp in a set position of adjustment thereon.

2. A clamp for rope slings comprising a casing having a substantially elliptical shaped bore adapted to receive companion strands of a rope sling, a hollow boss extending laterally from the casing and provided with oppositely disposed inclined walls, a spring actuated gripping pawl pivotally mounted within the boss for engagement with said companion strands of rope, and an abutment formed on the hollow boss and intersecting the adjacent inclined wall for limiting the pivotal movement of the pawl.

3. A clamp for rope slings comprising a casing having a substantially elliptical shaped bore adapted to receive companion strands of a rope sling, a hollow boss communicating with said bore and provided with upper and lower inclined walls, bearings formed in said boss, a pin journaled in the bearings, a gripping pawl movable with the pin and adapted to engage and hold the casing in adjusted position on the rope sling, and a spring interposed between the casing and said pawl.

4. A clamp for rope slings comprising a casing having a central bore and provided with upper and lower flanges connected by vertical reinforcing ribs, a hollow boss integral with the casing and communicating with the bore thereof, the inner walls of said boss being inclined and one of said walls provided with a flat portion forming an abutment, a gripping pawl pivotally mounted within the boss, and a spring interposed between the pawl and casing for holding said pawl in contact with the abutment.

5. A clamp for rope slings comprising a casing having a central substantially elliptical shaped bore to accommodate two strands of a rope, a hollow boss extending laterally from one side of the casing and communicating with said bore, the interior walls of said boss being disposed parallel with each other and inclined in the direction of the bore, a gripping pawl pivotally mounted within the boss and provided with a terminal portion of sufficient width to engage both strands of the rope, and a spring interposed between the casing and the outer portion of the gripping pawl.

6. A clamp for rope slings comprising a casing having a hollow substantially elliptical shaped bore, a hollow boss extending laterally from one side of the casing and communicating with the interior of the bore, the inner walls of said boss being inclined in the direction of the bore and one of said walls formed with a straight portion constituting an abutment and the other with a seating socket, a pawl pivotally mounted within the boss and provided with a seating socket, and a coiled spring having one end thereof seated in the socket in the inclined wall and the other seated in the socket of said pawl.

7. A clamp for rope slings comprising a casing having a hollow bore and formed with upper and lower laterally extending flanges, reinforcing ribs disposed on the outside of the casing and connecting said flanges, a hollow boss extending laterally from one side of the casing and communicating with the bore, said boss being provided with upper and lower inclined walls and one of said walls formed with an abutment, bearings formed on the boss, a pin journaled in said bearings, a gripping pawl carried by the pin and having its inner end beveled for engagement with a rope and its outer end reduced to form a finger-piece, and a spring interposed between the casing and said pawl for normally holding the pawl in engagement with the abutment.

FRANK A. DORSA.