Oct. 9, 1928. 1,686,581

W. H. STEWART

ROPE CLAMP

Filed April 4, 1928

Fig. 1

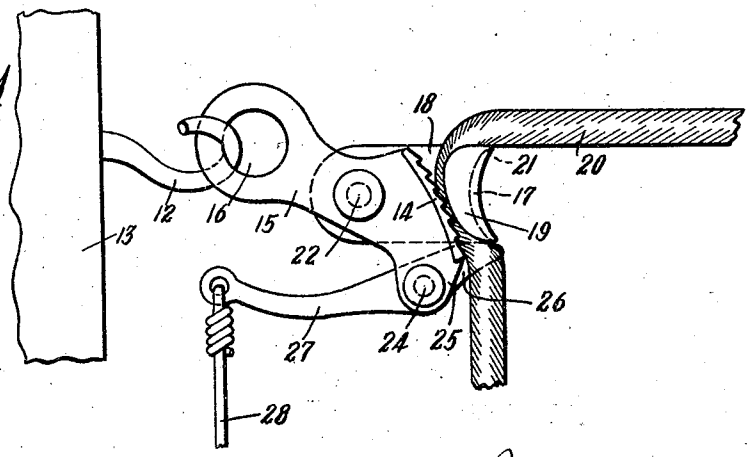



Fig. 2

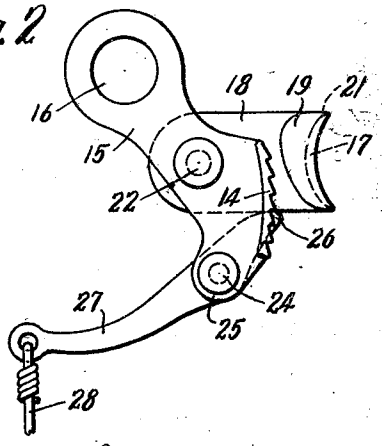



Fig. 3

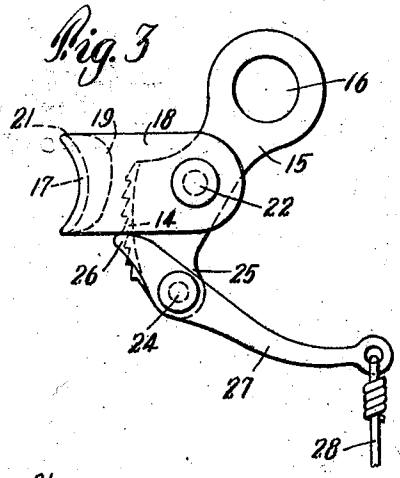
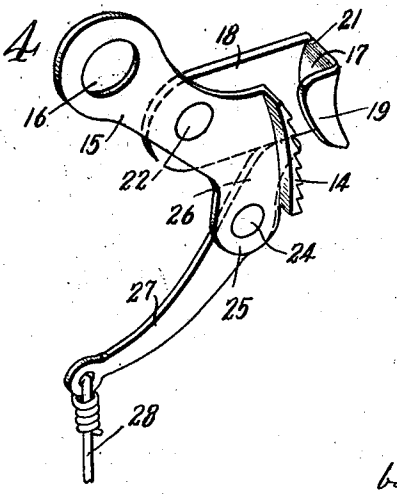



Fig. 4




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# UNITED STATES PATENT OFFICE.

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## ROPE CLAMP.

Application filed April 4, 1928. Serial No. 267,411.

This invention relates to a clamp adapted to be engaged with a fixed support and connect an end portion of an elongated rope with the support in such manner that when the main portion of the rope is tensioned, the end portion thereof is automatically gripped and firmly held, to prevent endwise movement of the main portion of the rope away from the support.

One object of the invention is to provide a clamp of improved construction including opposed gripping jaws, one of which is an inner jaw, adapted to be engaged with a fixed support, and the other an outer jaw adapted to be caused by tension on the main portion of a rope to cooperate with the inner jaw in firmly gripping an end portion of the rope, in such manner as to prevent endwise movement of the main portion away from the support.

Another object is to provide improved means for displacing the outer jaw to release the rope.

Of the accompanying drawings forming a part of this specification,—

Figure 1 is a side view, showing a clamp embodying the invention engaged with a support and with a portion of a rope.

Figure 2 is a side view, showing the outer jaw displaced to release the rope.

Figure 3 is a side view looking toward the opposite side of the clamp, and showing the clamp in the condition shown by Figure 2.

Figure 4 is a perspective view, showing the clamp in the condition shown by Figures 2 and 3.

The same reference characters indicate the same parts in all of the figures.

The clamp support shown by Figure 1, includes a hook 12, and a fixed body 13 to which the hook is attached. The fixed body 13 may be a post constituting an element of a clothesline support, or it may be an element of any other support with which a rope is to be connected by the clamp next described.

14 designates an inner jaw having a curved and preferably serrated gripping face, and a shank 15, from one end of which the jaw 14 projects laterally. The opposite end of the shank is adapted to be engaged with a supporting member, such as the hook 12, preferably by providing said end with an orifice 16 loosely receiving the hook, so that the clamp, as a whole, may swing freely on the hook.

17 designates an outer jaw having a curved face, which is preferably smooth, and is opposed to the gripping face of the inner jaw 14. The outer jaw 17 is provided with a shank 18, from which said jaw projects laterally, and an ear 19, arranged to cooperate with the shank 18 in laterally confining, on the outer jaw, a portion of a rope 20 interposed between the jaws. The rope may be a clothesline, used to support fabrics being dried, or may be otherwise used.

One end 21 of the jaw is rounded, and constitutes a bearing across which the rope 20 may be bent, as shown by Figure 1. 22 designates a pivot connecting an end portion of the shank 18 with a midlength portion of the shank 15.

The inner jaw 14 is eccentric to the pivot 22, one of its ends being nearer the pivot than the opposite end.

The arrangement is such that when the rope 20 is interposed between the jaws, bent across the bearing end 21 of the outer jaw, tensioned, and attached to another support, (not shown), the opposed faces of the jaws form the opposite sides of a tapering throat which is contractible by pressure of the tensioned rope on the bearing edge 21, to grip the interposed portion of the rope.

The outer jaw 17 is displaceable by a swinging movement of its shank on the pivot 22, to widen said throat, as shown by Figures 2, 3 and 4, and thus release the rope.

To cause the described displacement of the outer jaw, I provide a displacing or release lever, fulcrumed at 24 to an ear 25, on the shank 15. Said lever has a shorter arm 26, bearing on one edge of the outer jaw shank 18, and a longer arm 27, on which a pull in one direction may be exerted by a pull member 28, to move the shorter arm in the opposite direction, and thereby displace the outer jaw, as shown by Figures 2, 3 and 4. The pull member 28 may be a cord or wire, sufficiently elongated to permit it to be grasped at a point at any desired distance from the clamp and its support.

The opposed faces of the jaws 14 and 17 preferably have a convex curvature, as shown, so that limited portions of said faces are adapted to indent the rope and form a more effective nip, than would be the case if the faces were straight.

The clamp may be used with a rope employed for various purposes other than the support of fabrics being dried, without departing from the spirit of the invention. For example, the clamp may be engaged

with a securing member on the body of a motor truck, to connect therewith a rope employed as a load binder, the clamp when so used, being preferably of greater strength than when used with a clothesline. The clamp may also be engaged with a securing member on a boat or other navigable vessel, to hold one end of a rope.

It will be seen that the shank 15 having the inner jaw 14 engaged at its outer end with a support 12, the shank 18 having the outer jaw 17, and the pivot 22 connecting the shanks between the jaw 14 and the support-engaging end of the shank 15, constitute a toggle adapted to be rendered active and cause the jaws to grip the rope by the pressure exerted on the jaw end 21 by the tensioned rope, said pressure tending to move the jaws in opposite directions to the relative positions shown by Figure 1, and hold them gripped on the rope. The pivot 22 located between the jaw 14 and the support-engaging end of the shank 15 is therefore an important feature.

I claim:

1. A rope clamp comprising an inner jaw having a curved gripping face and a shank from one end of which the jaw projects laterally, the opposite end of the shank being adapted to be engaged with a supporting member, an outer jaw having a curved face opposed to the gripping face of the inner jaw, a shank from which the outer jaw projects laterally, and an ear, cooperating with the shank in laterally confining a rope on the jaw, one end of the outer jaw constituting a bearing across which a rope may be bent, and a pivot connecting an end portion of the outer jaw shank with a portion of the inner jaw shank, between the inner jaw and a support with which the shank of said jaw is engaged the inner jaw being eccentric to said pivot, the arrangement being such that when a rope is interposed between the jaws, bent across the bearing end of the outer jaw, and tensioned, the opposed faces of the jaws form opposite sides of a tapering throat which is contractible by pressure of the tensioned rope on the bearing edge, to grip the interposed portion of the rope, the outer jaw being displaceable by a swinging movement of its shank on the pivot to widen said throat and release the rope, said jaws, shanks, and pivot being arranged to constitute a toggle.

2. A rope clamp comprising an inner jaw, having a curved gripping face and a shank from one end of which the jaw projects laterally, the opposite end of the shank being adapted to be engaged with a supporting member, an outer jaw having a curved face opposed to the gripping face of the inner jaw, a shank from which the outer jaw projects laterally, and an ear, cooperating with the shank in laterally confining a rope on the jaw, one end of the outer jaw constituting a bearing across which a rope may be bent, a pivot connecting an end portion of the outer jaw shank with a mid-length portion of the inner jaw shank, the inner jaw being eccentric to said pivot, the arrangement being such that when a rope is interposed between the jaws, bent across the bearing end of the outer jaw, and tensioned, the opposed faces of the jaws form opposite sides of a tapering throat which is contractible by pressure of the tensioned rope on the bearing edge, to grip the interposed portion of the rope, the outer jaw being displaceable by a swinging movement of its shank on the pivot to widen said throat and release the rope, and an outer jaw-displacing lever fulcrumed on the shank of the inner jaw and having a shorter arm bearing on one edge of the shank of the outer jaw, and a longer arm on which a pull in one direction may be exerted to move the shorter arm in the opposite direction, to thereby displace the outer jaw.

In testimony whereof I have affixed my signature.

WALTER H. STEWART.