April 5, 1927. 1,623,615

S. BONA

ROPE CLAMP

Filed Oct. 27, 1925

Fig. 1.

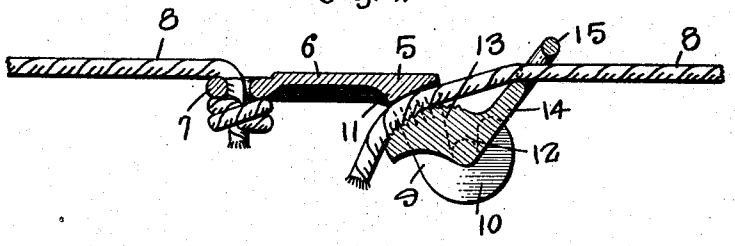


Fig. 2

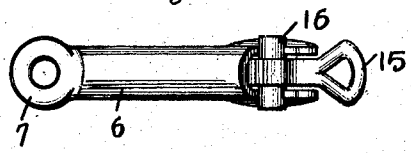
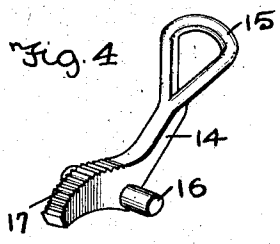


Fig. 3.



Fig. 4



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UNITED STATES PATENT OFFICE.

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ROPE CLAMP.

Application filed October 27, 1925. Serial No. 65,202.

This invention relates to rope clamping devices and has particular reference to a clamp especially intended for use on clothes lines and the like.

An important object of the invention is to provide a rope clamp designed so as to permit convenient engagement with a clothes line for retaining the same tightly in position.

A further object of the invention is the provision of a rope clamp arranged so as to permit convenient disengagement of the rope when desirable.

Another object of the invention is the provision of a clamp of the above character by means of which a clothes line may be held in desirable tension and is arranged so that weight on the clothes line will tighten the connection of the clamp.

Still another object of the invention is the provision of a simple and durable clamp of the above character designed to operate efficiently and which may be placed upon the market at a comparatively low cost.

Other objects and advantages of the invention will become apparent as the description progresses.

In the accompanying drawing forming a part of this specification and in which like numerals are employed to designate corresponding parts throughout the same:

Figure 1 is a longitudinal sectional view through a clamp constructed in accordance with my invention, shown in operative engagement with a clothes line,

Figure 2 is a top plan view of the clamp.

Figure 3 is an end elevation of the clamp frame, and

Figure 4 is a perspective view of the movable line engaging element.

In the drawing, wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 5 generally designates the frame structure of my improved clamping device embodying a longitudinal body 6 of substantially semicircular formation in cross section and provided on its forward end with a loop 7. This loop is preferably formed integral with the body 6 and is adapted to engage one end of a clothes line 8. The rear extremity of the frame 5 is provided with a pair of downwardly extending brackets 9 of durable structure provided on the lower ends with U-shaped bracket ears 10. This frame structure is preferably of durable metallic construction, the under side of the body portion between the brackets 9 being preferably provided with a tapered pad 11 the purpose of which will become apparent as the description progresses.

Removably mounted in association with the frame structure 5 so as to permit disengagement when the device is not in use, is a line engaging member 12. This member comprises a segmental cam 13 of tapered formation as shown to advantage in Figure 1, and has formed integral therewith an angular radially extending lever 14. The upper extremity of the lever 14 is provided with a substantially triangular shaped loop 15 through which the free end of the clothes line is adapted to project. Formed on the sides of the cam body 13 at its connection with the lever 14 are a pair of transversely extending pivot pins 16 preferably of circular cross section and formed integral with the cam body. These pivot pins are adapted to be loosely engageable with the recesses formed in the ears 10 so that the unitary member 12 may be conveniently rotated. In order that the free end of the clothes line or rope may be tightly wedged between the upper arcuate edge of the cam 13 and the frame pad 11 the cam is provided with transversely directed teeth 17 adapted to firmly engage the rope and prevent movement thereof.

In use, one end of the clothes line or rope 8 is inserted through the loop 7 formed on the forward extremity of the frame 5 and a knot formed on the end thereof to prevent removal. The opposite end of the line 8 is adjustably associated with the clamp by actuating the lever 14 to a substantially vertical position so that the cam 13 will be in a substantially remote position from the pad 11 and permit the rope 8 to be inserted through the loop 15 and the opening formed between the upper cam face and the frame pad. To cause the cam to firmly grip the rope, the lever 14 is actuated in an arcuate manner away from the clamp frame so that the serrated edge of the cam will tightly wedge the rope between the cam and the frame pad. With reference to Figure 1 of the drawing, it is evident that any weight carried by the clothes line or rope 8 will tend to increase the gripping capacity of the device, due largely to the position of the lever 14 and loop 15 formed thereon. As can be readily noted, from this figure, the

loop is in a substantially elevated position relative to the cam and any tendency to draw downwardly on the clothes line will also cause similar movement of the cam 13, and will thus cause the rope to be tightly wedged in the clamp.

It is thus apparent, that a very simple and efficient clamping device is provided, permitting clothes lines and similar apparatus to be firmly attached. While the device is particularly intended for use upon clothes lines, it is by no means restricted to this particular use and may be advantageously employed for the connection of various types of ropes and cables.

It is to be understood that the form of my invention herewith shown and described is to be taken as the preferred example of the same, and that various changes as to the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. A clamp comprising, in combination, a frame structure including a longitudinal body portion, a rope engaging loop formed on the rear extremity of the body, a pair of oppositely disposed brackets extending downwardly at the forward portion of the body, a pair of U-shaped ears formed on the lower extremities of the brackets, a detachable rope engaging member associated with the frame embodying a tapered segmental cam, transversely directed teeth formed on the upper arcuate edge of the cam, an angular radially directed lever formed on the forward edge of the cam, a loop formed on the upper edge of the lever, the said rope engaging member being pivotally connected upon the bracket ears by a pair of transversely directed pins mounted on the sides of the said cam.

2. A clamp comprising, in combination, a frame structure embodying a longitudinal semi-circular shaped body, a rope engaging loop formed on the rear extremity of the body, a pair of downwardly extending brackets formed on the forward extremity of the body, U-shaped bracket ears formed on the lower extremities of the brackets, a rope engaging member detachably mounted on the said bracket ears embodying a tapered segmental cam, teeth formed on the upper arcuate edge of the cam, an angular arm formed on the forward edge of the cam, a loop formed on the upper extremity of the lever, a pair of transversely extending pins formed on the cam at the intersection of the cam and lever, engageable with the bracket ears adapted to permit pivoted movement of the engaging member so that a rope may be firmly secured between the cam and frame structure.

3. A rope clamp comprising in combination, a support frame having a rope engaging loop on one end, a pair of bracket ears formed on the opposite end of the same, a detachable rope engaging member pivotally mounted in the said ears, the said engaging member including a cam co-operating with the frame to tightly engage the free ends of a rope, a lever formed integral with the cam and extending at a forward angle with respect to the frame having a loop through which the rope is threaded to detachably engage the rope in alignment with the same.

In testimony whereof I affix my signature.

STEPHEN BONA.