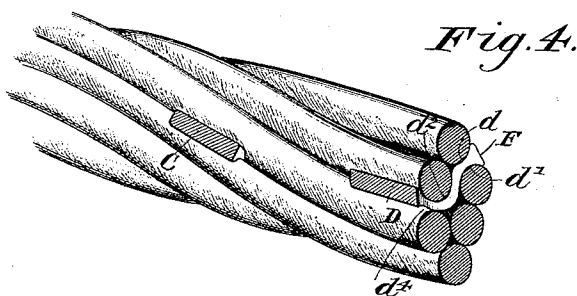
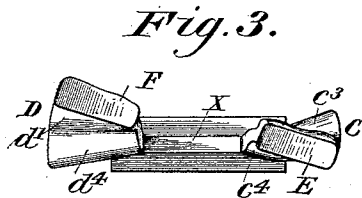
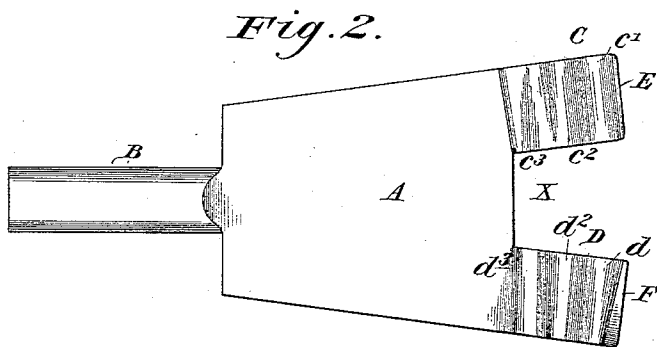
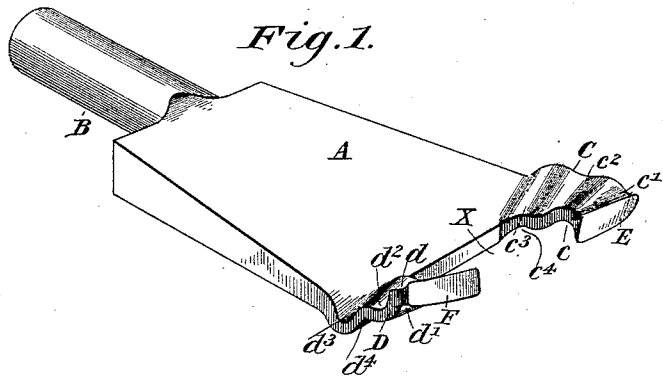


(No Model.)

A. PAINTER.
CLIP FOR WIRE ROPE WAYS.

No. 569,228.

Patented Oct. 13, 1896.



Witnesses

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UNITED STATES PATENT OFFICE.

ARTHUR PAINTER, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO
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CLIP FOR WIRE-ROPE WAYS.

SPECIFICATION forming part of Letters Patent No. 569,228, dated October 13, 1896.

Application filed July 28, 1896. Serial No. 600,761. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR PAINTER, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Clips for Wire-Rope Ways, of which the following is a specification.

The object of my invention is to provide an improved clip for attachment to wire-rope ways or cables to support the hangers or similar devices to which are connected hods or similar carriers.

Clips have heretofore been used which were clamped around the body of the cable or have been inserted into the cable either by removing a portion of the core thereof and replacing it by a head on the clip or by inserting a single hooked end spirally grooved to conform to the contour of the strands. Where the clip encircles the cable, it forms an obstruction to the smooth running of the cable over the pulleys. This clip encircling the cable is a thin metallic band, which in running over the pulleys is subject to much wear. Consequently its life is very short. Where a portion of the cable is cut away to accommodate the clip, it weakens it, and where a single grooved end of the clip is inserted in the cable all the strain is confined to one part of the cable, and there is liability of the clip slipping out of place. Where the clip with a single head is made wide to provide the requisite strength, it is apt to distort the strands, thus not only obstructing the smooth running of the cable, but the clip is also apt to slip. In the ordinary form of clip which goes through the center of the cable the body portion of the clip has a very small clearance (sometimes not over an eighth of an inch) of the flange of the pulley, as the cable is nearly half-encircled in the groove of the pulley. Consequently when the cable wears down the groove of the pulley even slightly the body portion of the clip rides on the flange of the pulley, causing a rapid wearing away of both the pulley and the clip. In order to obviate this difficulty and allow a greater clearance between the body portion of the clip and the pulley-flange, it would be necessary to have

the clip come out almost at the top of the cable. This construction is prohibited by the grip and depression pulleys on which the cable runs.

My improved clip enters between the cable-strands in nearly a straight line at a point which is so far above the flange of the pulley as to give a clearance of nearly half an inch, so that no matter how much the cable may wear down the groove of the pulley the body portion of the clip will never ride on the pulley-flange.

Another important advantage which my improved clip has over the ordinary clip is that it will never pull out of the cable, should the bucket or hod get caught, while those heretofore mentioned will be very apt to do so.

According to my invention, I provide the body portion of the clip with two or more, preferably two, hooks separated by a comparatively wide space. These hooks are grooved and flanged and adapted to be inserted between the strands of the cable and conform to their contour. The arrangement is such that the hooks enter between different strands, thus distributing the strain, preventing a wide opening in the cable and making a much more secure connection. Longitudinal movement or slipping of the clip on the cable is also effectively prevented.

In the accompanying drawings, Figure 1 is a perspective view of my improved clip. Fig. 2 is a plan view thereof. Fig. 3 is a front elevation. Fig. 4 is a detail view in perspective of a section of cable, showing how the hooked ends of the clip are applied.

The body portion A is preferably made thin at its front edge and gradually thicker toward its rear edge, where it is provided with an arm B, to which any suitable hanger may be attached. The hooks C and D are arranged at opposite ends of the front edge, there being a space X between the hooks somewhat greater than the width of either one of them. The hook C is formed on its upper and lower surface with grooves $c\ c'\ c^2\ c^3\ c^4$, and the hook D is in like manner formed with grooves $d\ d'\ d^2\ d^3\ d^4$, which are arranged spirally to conform to the strands of the cable to which they are applied, as indicated in Fig. 4. The front

edges of the hooks are enlarged or flanged at E and F, as indicated, to aid in preventing the withdrawal of the clip laterally. These flanges conform to the grooves on the outside of the cable, as indicated in Fig. 4.

5 The clip may be readily applied to a cable by separating the strands thereof and inserting the hooks laterally. When the cable is drawn taut or when the strands are released, 10 they will assume, approximately, their normal position, as the hooks are so grooved as to permit them to do so. Of course there will be a slight bulge in the cable where the hooks are applied, but this bulge is reduced to a 15 minimum by the special arrangement which I have adopted.

An inspection of Fig. 4 will show that the lateral movement of the clip on the cable will not occur in ordinary use.

20 I claim as my invention—

1. A clip for wire-rope ways, consisting of a body portion provided with grooved hooks separated from each other and adapted to

engage with different strands in the cable, substantially as set forth.

25 2. A clip for wire-rope ways consisting of a body portion having at one end an arm to receive a hanger and at its opposite end a pair of hooks separated from each other and adapted to engage with different strands of a rope- 30 way and having grooves on their opposite sides, substantially as set forth.

3. A clip for wire-rope ways consisting of a body portion provided at one end with a 35 suspending arm and at its opposite end with a pair of hooks separated from each other, spirally grooved on opposite sides and having at their front ends flanges, substantially as set forth.

In testimony whereof I have hereunto subscribed my name. 40

ARTHUR PAINTER.

Witnesses:

A. M. JOHNSON,
P. B. C. TURNER.