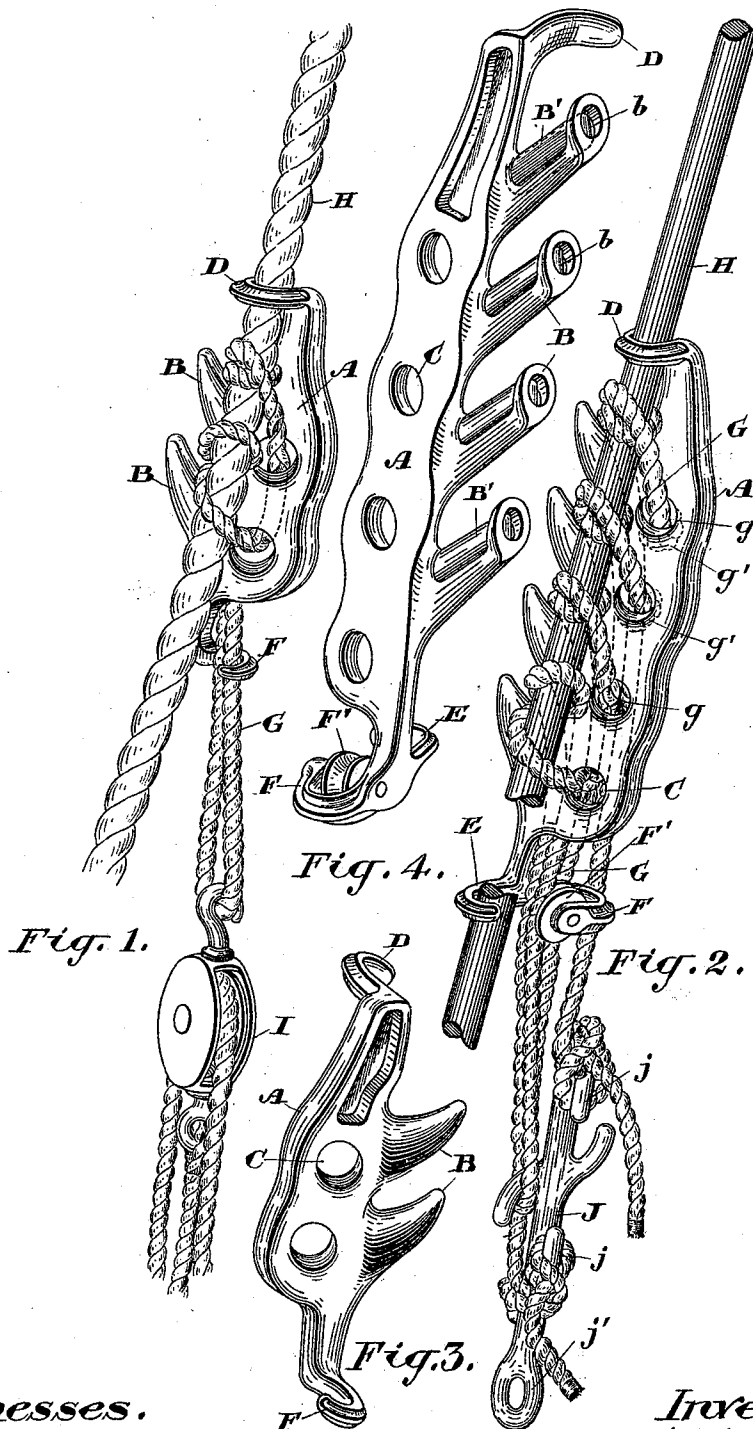


(No Model.)

A. K. EVANS.
ROPE GRIP.

No. 518,880.

Patented Apr. 24, 1894.



Witnesses.

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UNITED STATES PATENT OFFICE.

ARTHUR KELLY EVANS, OF TORONTO, CANADA.

ROPE-GRIP.

SPECIFICATION forming part of Letters Patent No. 518,880, dated April 24, 1894.

Application filed November 10, 1893. Serial No. 490,513. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR KELLY EVANS, civil engineer, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Rope-Grips, of which the following is a specification.

My invention relates to improvements in rope-grips and the object of the invention is to design a simple and cheaply constructed device whereby a sure grip may be held on a rope, wire or bar, so that any desired strain may be imparted to it and it consists essentially of a metal plate provided with laterally extending hooks and holes made in the body of the plate and preferably end hooks extending out from the top and bottom plate at right angles to it, the plate being shaped and the hooks arranged to co-act with the gripping rope or ropes to which the power is applied as hereinafter more particularly explained.

Figure 1, is a perspective view of my rope grip applied to a heavy rope. Fig. 2, is a view of an alternative form showing it applied to a truss rod. Fig. 3, is a detail of the rope grip before attached. Fig. 4, is another alternative form.

In the drawings like letters of reference indicate corresponding parts in each figure.

A, is the body of the plate and, B, the laterally extending hooks and, C, the holes made in the body of the plate.

D, is a retaining hook, which is placed upon the rope, wire or rod as the case may be at the end nearest the portion of the rope to which the strain is to be applied.

E, is a retaining hook situated at the opposite end of the body of the plate, A, and designed to grip the rope at the portion farthest away from the portion of the rope where the strain is to be applied.

F, is a guiding hook and, G, the gripping rope, which is formed in the shape of a loop. The gripping rope, G, is spliced together and one end of the loop is always held to the plate by passing through the holes, C, C. In order to grip the rope the looped rope, G, is first passed over the rope, wire or rod, H, then under and over again and then down against the top of the hooks, B, against which it is drawn tight and then passed down within the guiding hook, F. To the lower portion of the

loop is secured a block and tackle, I, by which the desired power is to be imparted to the gripping rope, so as to impart the desired strain to the rope, wire or rod, H.

In Fig. 1, of the drawings I have shown the gripping rope, G, passed twice over the rope, H, but it will of course be understood that it may be passed several times around if desired to make the grip more sure. I find, however, in practice that twice or three times is quite sufficient.

In Fig. 2, in which I show my device applied to a rod it will be seen that I show longer than that shown in Fig. 1, and provide four laterally extending hooks, B. In this figure I show three gripping ropes, which are also passed twice over the bar, H. By this means I am enabled to more securely grip the rods, which is much more difficult thing to do than a rope. To the bottom of the hooks, G, is suitably secured the block and tackle by which the power is applied for imparting the desired strain to the rope.

In order that the strain may be imparted to the gripping ropes I preferably provide a bar, J, with cleats, *j*. One gripping rope, G, is looped on one of the cleats and is spliced together at, *g*, being passed over the two lower hooks, B, in the same manner as the rope, G, as shown in Fig. 1. This will be understood on following the course of the dotted lines in Fig. 2. On the uppermost gripping rope, G, I form a Turk's head, *g'*, and pass the rope twice over the rod, H, and over the top hook, B, down to the cleat *j*, formed at the top of the bar, J. The course of the rope is indicated in dotted lines in this figure. Upon the second gripping rope from the top I also form a Turk's head, *g'*, and pass it over the rod, H, in the same manner as the upper one and down over the second hook, B, shown in this figure to the lowest cleat, *j*, of the bar, J. To the eye, *j'*, at the lower end of the bar, J, I attach the block and tackle.

Within the guiding hook, F, I journal a pulley, F', over which I pass the two members of the lower looped gripping rope, G.

In Fig. 4, in which I show an alternative form of my device shown in Fig. 2, it will be seen that I provide within the guiding hook, F, a pulley, F', similar to that shown in this

figure. The hooks, B, are provided with rollers, B', which fit within corresponding recesses made in the hooks. The recesses are open at the top and at one end and the rollers are secured in position in the recess by the stop pins, b, extending through the ends of the hooks. In this form of hook the rollers being friction rollers serve to provide for the free movement or pull of the gripping rope over the hooks so as to obtain the greatest possible grip of the rope.

By means of the retaining hook, D, used in connection with the laterally extending hooks, E, and gripping rope it will be seen that the rope, H, and the gripping rope are practically in alignment, which is a very important matter in putting a strain upon the rope, H, as by providing this means any possibility of the grip being disengaged from the rope, H, is avoided. To further insure this alignment of the gripping rope I provide a guiding hook, F, within which the gripping rope is passed. I also provide the retaining hook, E, but both might be dispensed with except in the case of putting a strain upon rods.

Although I describe and show in the drawings one manner of applying the gripping rope it will of course be understood that there are various other alternative ways in which the gripping rope might be applied to the rope upon which it is desired to impart the strain and yet accomplish the object which I attain by my invention. It will be seen from this description that my device will be particularly useful in taking up the slack of the electric light wires, standing rigging and various other purposes which it is desired to tighten or impart a strain upon ropes, wires or rods.

What I claim as my invention is—

1. In a rope grip the combination with the body plate having laterally extending hooks and a corresponding number of holes made in the body plate of a gripping rope designed to be passed over the rope to be gripped, over the hooks, through the holes and have the

power applied to it as specified, the said body plate having a retaining hook extending from the body nearest the portion of the rope to which the strain is to be applied as and for the purpose specified.

2. In a rope grip the combination with the body plate having laterally extending hooks and a corresponding number of holes in said body plate, of a gripping rope adapted to be passed over the rope to be gripped, through the holes, and have power applied as specified, the said body plate having arms or hooks E F extending from opposite sides of its lower end with a pulley journaled in one of said hooks, substantially as described.

3. In a rope grip the combination with the body plate having laterally extending hooks and a corresponding number of holes made in the body plate of a gripping rope designed to be passed over the rope to be gripped, over the hooks, through the holes and have the power applied to it as specified, the said body portion having a retaining hook extending from the body nearest the portion of the rope to which the strain is to be applied and an oppositely turned retaining hook situated on the opposite end of the body of the plate as and for the purpose specified.

4. In a rope grip the combination with the body plate having laterally extending hooks recessed and having rollers rotatably secured within such recesses and a number of holes corresponding in number to the hooks made in the body plate of a gripping rope designed to be passed over the rope to be gripped, over the hooks, through the holes, and have the power applied to it as specified, the said body plate having a retaining hook extending from the body of the plate nearest the portion of the rope to which the strain is to be applied as and for the purpose specified.

ARTHUR KELLY EVANS.

Witnesses:

B. BOYD,
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