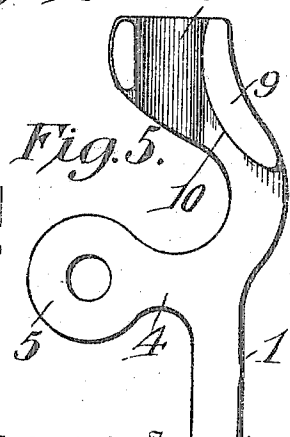
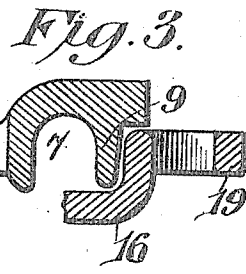
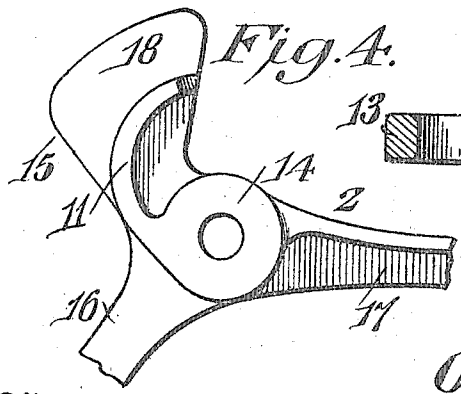
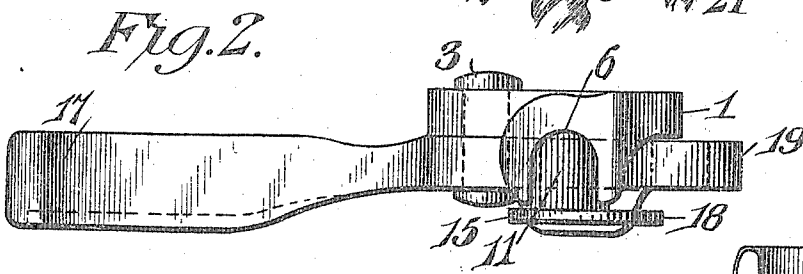
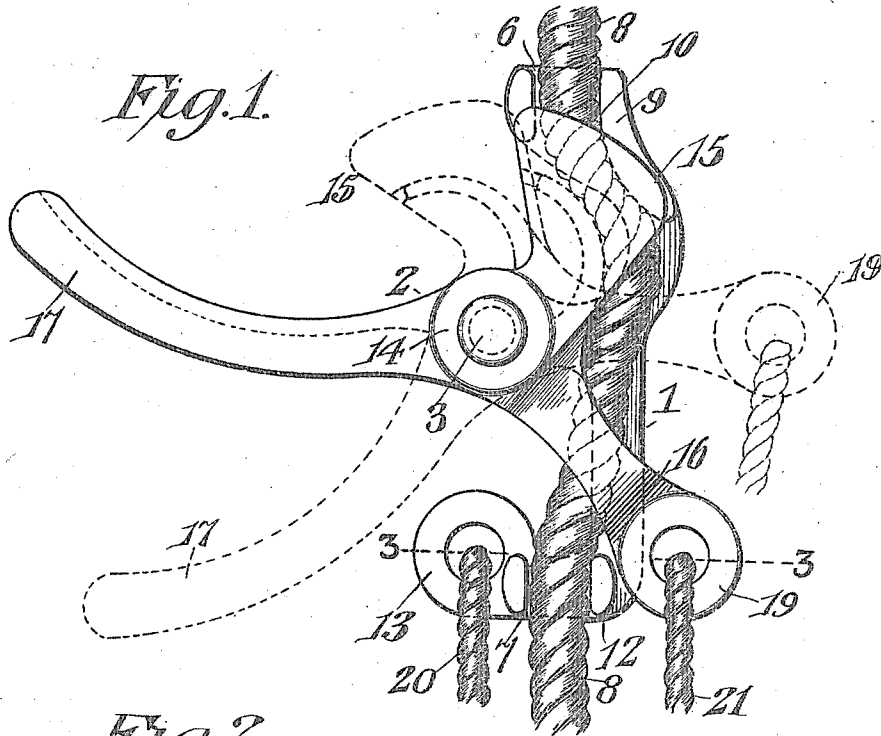


O. SORENSON.
 ROPE GRIPPING DEVICE FOR FIRE ESCAPES, &c.
 APPLICATION FILED JUNE 30, 1909.

951,748.

Patented Mar. 8, 1910.



Witnesses
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UNITED STATES PATENT OFFICE.

OLAF SORENSON, OF GRASS VALLEY, CALIFORNIA.

ROPE-GRIPPING DEVICE FOR FIRE-ESCAPES, &c.

951,748.

Specification of Letters Patent.

Patented Mar. 8, 1910.

Application filed June 30, 1909. Serial No. 505,269.

To all whom it may concern:

Be it known that I, OLAF SORENSON, a citizen of Norway, residing at Grass Valley, in the county of Nevada and State of California, have invented a new and useful Rope-Gripping Device for Fire-Escapes, &c., of which the following is a specification.

The invention relates to improvements in rope gripping devices for fire escapes and the like.

The object of the present invention is to improve the construction of rope gripping devices for fire escapes, etc., and to provide a simple inexpensive and efficient device of this character, adapted for positively controlling the descent of a person, and capable also of advantageous use by painters, sailors, etc., and of enabling the same to readily ascend the rope.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims here-
to appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a side elevation of a rope gripping device, constructed in accordance with this invention. Fig. 2 is a plan view of the same. Fig. 3 is a horizontal sectional view, taken substantially on the line 3—3 of Fig. 1, the rope being removed. Fig. 4 is a detail view of a portion of the controlling lever or member. Fig. 5 is a detail view of the upper portion of the rope guiding member.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

The gripping device comprises in its construction two levers or members 1 and 2, connected together at points between their ends by a suitable pivot 3. The lever or member 1, which constitutes a rope guiding member, is arranged in an upright position and is provided between its ends with an approximately horizontal arm 4, having a terminal eye 5 for the reception of the pivot 3. The said member 1 is also provided at its upper and lower ends with rope guides 6 and 7 of approximately semi-cylindrical

form to partially embrace and conform to the configuration of a rope 8. The eyes are formed by horizontally projecting flanges or portions, and the rear flange or portion 9 of the upper guide 6 is extended and is provided with a longitudinally curved rope-engaging face 10, extending from the upper to the lower end of the rear side or flange of the upper guide, and coöperating with a cam-shaped flange 11 of the lever or member 1 to grip the rope. The lower arm of the member 2 is provided with an approximately horizontal portion 12, carrying the lower rope guide 7 and provided with a terminal eye 13.

The lever or member 2 is provided at a point between its ends with an eye 14 for the reception of the pivot 3, and it consists of an intermediate inclined clamping arm 15, a lower supporting arm 16, and an operating arm or handle 17, arranged in substantial alinement with the downwardly extending inclined supporting arm 16. The cam-shaped flange 11, which is formed integral with the inner face of the clamping arm 15, is located at a point intermediate of the ends thereof, and the projecting outer portion 18, extends across the space between the sides or walls of the upper guide and crosses the outer face of the rope and confines the rope therein. The lower inclined supporting arm 16 crosses the outer face of the rope and the lower or supporting portion of the rope guiding lever or member, and is provided with a terminal eye 19. The eyes 13 and 19 are adapted to receive ropes 20 and 21 of a sling or belt, adapted to be placed around the body of the operator, or used as a seat by the same in descending the rope. The weight of the person is equally divided between the two clamping members, and owing to the closed lower arms thereof, operates to maintain the rope-engaging faces or portions of the members firmly in contact with the rope with sufficient force to hold the operator at any point along the rope edge. When it is desired to slip or move downward on the same, it is necessary to pull downward on the operating arm or handle of the controlling lever to relieve the rope of a portion of the pressure. This will enable a person to descend the rope as slowly or as rapidly as desired.

In practice the rope 8 may be equipped with a hook, or any suitable means for enabling it to be secured to a window sill, or

other support, and the device will form an efficient fire escape. The rope gripping device is also susceptible of various other analogous uses and may also be employed for ascending the rope. This operation is effected by placing one foot in the sling or supporting belt of the gripping device and the other foot in a loop formed in the rope below the gripping device. When the weight is placed upon the rope, the gripping device will be moved upward on the same and by supporting the weight upon the gripping device, a loop may be formed higher up in the rope. By alternately placing the weight upon the device and upon the rope, the latter may be easily oscillated with considerable rapidity.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A rope gripping device comprising a rope guiding member provided with upper and lower guides open at one side of the guiding member, and a controlling lever pivotally connected with the rope guiding member at the open side of the said guide and crossing the outer face of the rope and arranged to confine the same in the open guides, said controlling lever being provided with an arm cooperating with the upper rope guide to grip the rope.

2. A rope gripping device including an upright rope guiding member provided with upper and lower rope guides open at one side of the guiding member, and a controlling lever pivoted at an intermediate point to the said member between the upper and lower guides thereof and arranged at the open sides of the latter and provided at an intermediate point with an upwardly extending clamping arm cooperating with the upper guide to grip the rope, said lever having one of its arms extending downwardly and closing the lower portion of the member to provide opposite supporting portions, whereby the weight will be divided and will operate to cause the rope to be gripped between the upper guide and the upper clamping arm.

3. A rope gripping device including a rope guiding member having upper and lower rope guides open at one side of the guiding member, and a cooperating controlling lever pivotally connected with the member between the upper and lower guides thereof and consisting of an upwardly extending clamping arm cooperating with the

upper portion of the said member to grip the rope, a downwardly extending arm crossing the lower portion of the said member, and an outwardly extending operating arm or handle, said upwardly and downwardly extending arms being arranged at the open sides of the guides to confine a rope therein.

4. A rope clamping device including a rope guiding member provided with upper and lower guides open at one side of the guiding member and having an eye at its lower end, and a controlling lever pivoted at an intermediate point to the said member between the guides thereof and consisting of a downwardly extending arm crossing the lower portion of the member and having an eye, an upwardly extending clamping arm confining the rope in the upper guide and cooperating with the same to grip the rope, and an approximately horizontal operating arm, said upwardly and downwardly extending arms being arranged at the open sides of the guides to confine a rope therein.

5. A rope gripping device including an upright rope guiding member having spaced upper and lower open guides and provided between the same with an intermediate arm, and a controlling lever pivoted to the intermediate arm at the open side of the guides, said controlling lever including a downwardly extending supporting arm, and an upwardly extending clamping arm, said arms crossing the outer face of the rope and arranged to confine the latter in the open guides, and an operating arm adapted to swing the clamping arm upward to relieve the rope of pressure.

6. A rope gripping device including a rope guiding member having upper and lower open guides, one of the walls of the upper guide being extended to form a gripping surface, and a controlling lever pivoted to the said member and provided with a clamping arm having a cam-shaped engaging portion cooperating with the engaging face of the said member to grip the rope, said clamping arm being also extended beyond the cam-shaped portion and extending across and confining the rope to the upper guide.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

OLAF SORENSON.

Witnesses:

EMIL NELSON,
W. O. WILLIAMS.