(No Model.)

O. L. W. JOHANSON.

CLIMBING APPARATUS

No. 428,812. Patented May 27, 1890.

Fig. 1

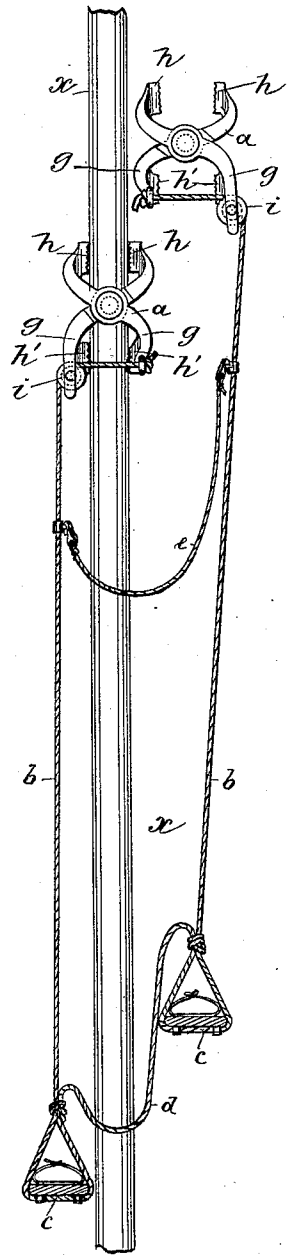
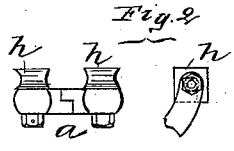


Fig. 2



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UNITED STATES PATENT OFFICE.

OSSIAN LAURENTIUS WILHELM JOHANSON, OF TROLLHATTAN, SWEDEN.

CLIMBING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 428,812, dated May 27, 1890.

Application filed November 20, 1889. Serial No. 331,044. (No model.) Patented in Sweden December 27, 1888, No. 1,682.

To all whom it may concern:

Be it known that I, OSSIAN LAURENTIUS WILHELM JOHANSON, a subject of the King of Sweden, and a resident of Trollhattan, Sweden, have invented certain Improvements in Climbing Apparatuses, (for which a patent has been granted in Sweden, No. 1,682, dated December 27, 1888,) of which the following is a specification.

My invention relates to a device or apparatus for enabling a person to climb a pole, tree, column, rope, or the like, or even the wall or side of a building if there be a projecting list, strip, or narrow pilaster on the face thereof; and the object of my invention is to provide a simple and inexpensive device for this purpose, which will require no special skill or experience on the part of the user, and which will be reasonably safe, provided ordinary care is taken while climbing.

My invention will be fully described hereinafter and its novel features carefully defined in the claims.

In the accompanying drawings, illustrative of my invention, Figure 1 is a general view of a climbing apparatus embodying my improvements; and Fig. 2 is a detail view of a part thereof, that will be hereinafter described.

My climbing apparatus is essentially double—that is, it is composed of two like parts or sides, one of which is under the control of the right hand and right foot of the climber, and the other of which is under control of his left hand and left foot. Each of these parts comprises a clamp, which is adapted to be shifted by the hand of the climber, a stirrup to receive the foot of the climber, and a connector, preferably in the form of a rope, which unites these two elements and enables the climber to close the jaws of the clamp by the pressure of his foot in the stirrup.

As both sides or parts of the apparatus are precisely alike, I have used the same letters of reference in both, and it will only be necessary for me to minutely describe one of these sides or parts.

a represents the clamp, which consists of two pieces pivotally connected together in the manner of ice-tongs. The construction is such that when the handles *g* of the clamp are drawn forcibly together or toward each other the jaws *h* thereof will also be drawn inward toward one another and be made to clamp on a pole *x* or the like between them. A rope or other connector *b* is secured to one handle of the clamp *a* and passes over a sheave or pulley *i*, mounted on the other handle thereof. The free or pendent end of this connector *b* is attached to a suitable stirrup *c*, to receive the foot of the climber.

It will be readily understood that when the jaws of the clamp *a* are made to embrace the pole *x* and the climber inserts his foot in the stirrup and applies his weight the jaws of the clamp will be made to forcibly clasp the pole and cling firmly thereto.

In order to facilitate climbing with a step-by-step movement, first with the arm and leg on one side of the body and then with the arm and leg on the other side of the body, alternately, two such devices are employed as that already described, whereby the climber is enabled to support himself with one hand and foot while he is shifting the clamp controlled by the other hand and foot.

To prevent the stirrups *c* from swinging too far apart, they will be connected, preferably, by a short rope or cord *d*, and the connectors *b b* will or may be united at the proper height by a rope, strap, cord, or the like *e*, to form a sort of sling, that may be made to support the back of the climber in some degree.

In order to climb with the apparatus, the climber takes the clamps *a* one in each hand and places his feet one in each stirrup *c*. He then places one of the clamps on the pole, list, or other object to be climbed at a point as high as he can reach, raising the foot on that side of the body to facilitate this. He then supports his weight in that stirrup, thus closing the clamp firmly on the pole, and raises himself thus, so that he may place the other clamp at a still higher point on the pole. He proceeds thus, raising each clamp alternately, until he reaches the desired height. He may return or descend by merely reversing the operation.

To facilitate placing the clamp *a* on the pole, it may have a coil-spring at the pivot of sufficient strength to throw open the jaws *h* when the weight of the climber is removed

from the stirrup. This is a common device and will require no special illustration or description herein.

The stirrup *c* may be constructed in any manner. As herein illustrated, it is formed of a loop in the rope *b*, which is properly distended by the sole-piece of wood or metal.

The jaws *h* of the clamp are made to project laterally from the faces of the pieces forming the clamp, in order that they may be able to grasp the pole or list *x*, as will be readily understood. The faces of these jaws, which embrace the pole, list, rope, or the like, may be formed to fit the shape of the same; but this is not at all essential.

In Fig. 2, where the clamp *a* is seen in plan, (at the left,) the jaws are pivotally mounted on the clamp and have parti-circular grooves in their faces to fit a rope. The faces of the jaws may be serrated or roughened, as seen in Fig. 1, if desired.

I may also provide the handles *g* with clamping-jaws *h'*, as seen in Fig. 1; but these are not essential to my invention. If employed, these jaws will be so arranged as to clasp the pole or other object simultaneously with the other jaws *h*.

Having thus described my invention, I claim—

A climbing apparatus consisting of the two clamps *a a*, provided with pulleys or sheaves *i i*, the two connected stirrups *c c*, and the two connectors *b b*, which unite the respective stirrups with the clamps, each connector *b* passing over the sheave *i* on one handle of the clamp and secured to the other handle thereof, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

OSSIAN LAURENTIUS WILHELM JOHANSON.

Witnesses:

NERE A. ELFWING,

ERNST SVANGVIST.