

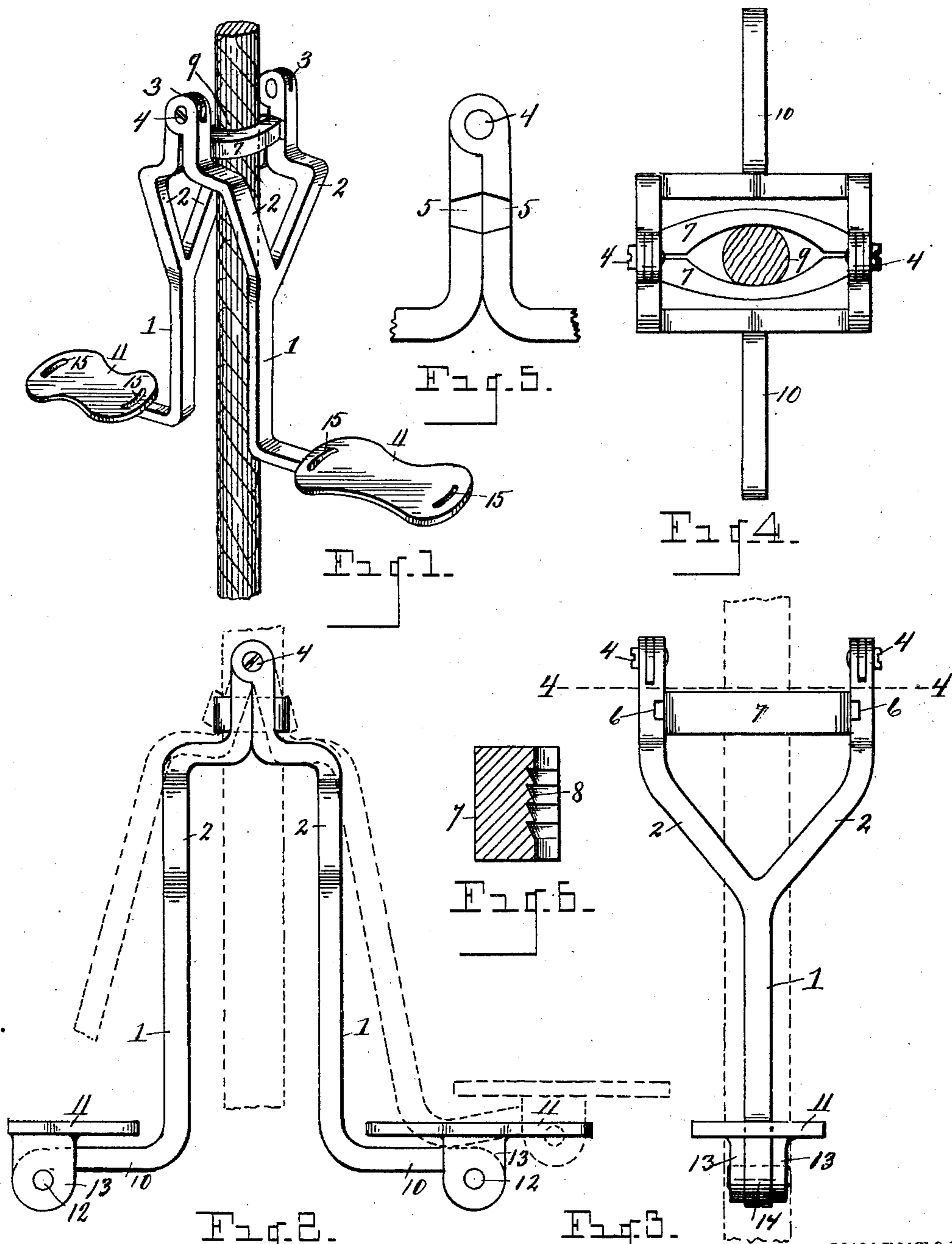
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Patented Oct. 14, 1902.

C. E. KNOP.
ROPE CLIMBING DEVICE.

(Application filed May 10, 1902.)

(No Model.)



WITNESSES.

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ROPE-CLIMBING DEVICE.

SPECIFICATION forming part of Letters Patent No. 711,251, dated October 14, 1902.

Application filed May 10, 1902. Serial No. 106,839. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. KNOP, a citizen of the United States, residing at Detroit, in the county of Wayne, State of Michigan, have invented certain new and useful Improvements in Rope-Climbing Devices; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to a rope-clamping device especially designed for use in building trades; and it consists in the construction and arrangement of parts hereinafter fully set forth, and pointed out particularly in the claims.

The object of the invention is to produce a rope-clamping device of simple and inexpensive construction adapted for attachment to the feet of the operator and in which the arrangement is such as to enable the operator to readily ascend or descend the rope at will without the use of any other appliance or support and which will enable the operator to arrest and support himself at any point upon the rope whenever desired.

The above object is attained by the device illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved clamp for rope-climbing applied to a rope. Fig. 2 is an elevation thereof, showing the movement of the members of the clamp by dotted lines. Fig. 3 is an elevation at right angles to Fig. 2. Fig. 4 is a plan view showing the rope between the jaws of the clamp. Fig. 5 is an elevation of the inner face of the hinged clamping members, showing the dovetailed channels adapted to receive the clamping-jaws. Fig. 6 is an enlarged cross-section through one of the jaws of the clamp.

Referring to the characters of reference, 1 designates the standards of the opposed members of the clamp, each of which is provided with a forked upper end 2, and said forked ends are hinged or united by a knuckle-joint 3, the bolt or pintle 4 of said joint being re-

movable to allow the forked parts of the clamp to be separated when desired. Formed in the inner opposite faces of the forked members of the clamp is a dovetailed way or channel 5, adapted to receive a corresponding tenon 6 on the opposite ends of the jaws 7 of the clamp, said tenons being adapted to slide into said dovetailed ways, so as to secure the jaws of the forked members of the clamp in a manner to allow said jaws to be removed, so as to permit them to be changed for various sizes of rope. The jaws 7 are curved, and their inner faces are provided with serrations or notches 8, adapted to grasp the rope when the jaws are brought together thereon, the rope lying between the concaved faces of said jaws, as shown at 9 in Figs. 1 and 4.

Projecting at right angles from the lower ends of the standards 1 of the clamp are the horizontally-extending portions 10, to the outer ends of which are pivoted the foot-plates 11 by means of the pins or bolts 12 passing through the ears 13 on said plates and through the interposed eye 14 on the end of said extending portions, whereby said foot-plates are pivotally secured thereto.

On referring to Fig. 2 it will be seen that by swinging the lower ends of the standards 1 of the clamp outwardly the jaws carried by the forked members of the clamp will be separated, so as to free them from the rope passing therethrough, and that by swinging the lower ends of said standards of the clamp inwardly the jaws will be brought forcibly together upon the rope, thereby securely locking the clamp thereto.

In the employment of this device in building trades and other capacities it is designed for use where a swing-staging is impracticable or too difficult to handle. In the use of this device but a single rope is required, the upper end of which is securely fastened in any suitable manner and upon the lower end of which the clamp is mounted by passing the rope between the jaws thereof. The operator then fastens his feet to the plates 11 by straps (not shown) running through the slots 15 therein, when by separating the feet the clamp may be caused to slide upwardly upon the rope by an upward movement of the legs, the weight of the operator being

supported by the arms. When the feet have been drawn upwardly as far as practicable, they are swung together, thereby securely clamping the rope between the jaws 7, so that
5 the clamp will sustain the weight of the operator. The legs are then straightened and a second hold of the rope is taken with the hands, the legs again drawn upwardly, and the operation repeated, by which means the
10 operator is enabled to readily ascend the rope to the point where the work is to be done, when by standing upon the plates 11 the jaws are held firmly clamped to the rope, allowing the operator to maintain said position as long
15 as desired and affording a free use of the hands and arms for accomplishing the work. The device is especially adapted for use in mending water-pipes, painting chimneys, and performing other work of like character.
20 By swinging the feet outwardly, so as to relieve the pressure upon the jaws, the operator may descend the rope at will. The pivoting of the plates 11 in the manner shown allows them to always maintain a horizontal
25 position without regard to the angle at which the standards 1 may stand.
By withdrawing the pivot-bolts 4 the clamp

may be applied to the middle of the rope, thereby obviating the necessity of drawing a great length of rope through the jaws. 30

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

1. In a clamp for rope-climbing, the combination of the hinged members of the clamp, 35 the opposed clamping-jaws removably mounted in said hinged members, the standards depending from the hinged members, and the foot-plates pivoted to the outer ends of said standards. 40

2. In a clamp for rope-climbing, the combination of the opposed forked members hinged together, the clamping-jaws mounted in said forks, the standards of the clamp depending 45 from the forks and having horizontal portions and the foot-plates pivoted to the outer ends of said horizontal portions.

In testimony whereof I sign this specification in the presence of two witnesses.

CHARLES E. KNOP.

Witnesses:

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