(No Model.)

C. A. SVENSSON.

LINEMAN'S WIRE GRIP.

No. 486,911. Patented Nov. 29, 1892.

Fig. 1.

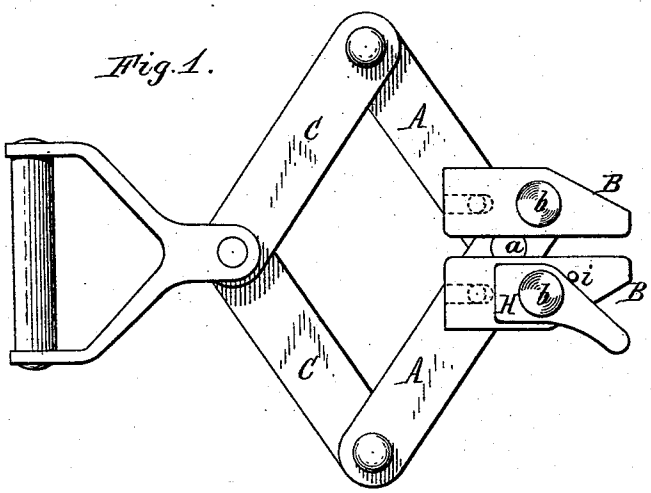


Fig. 2.

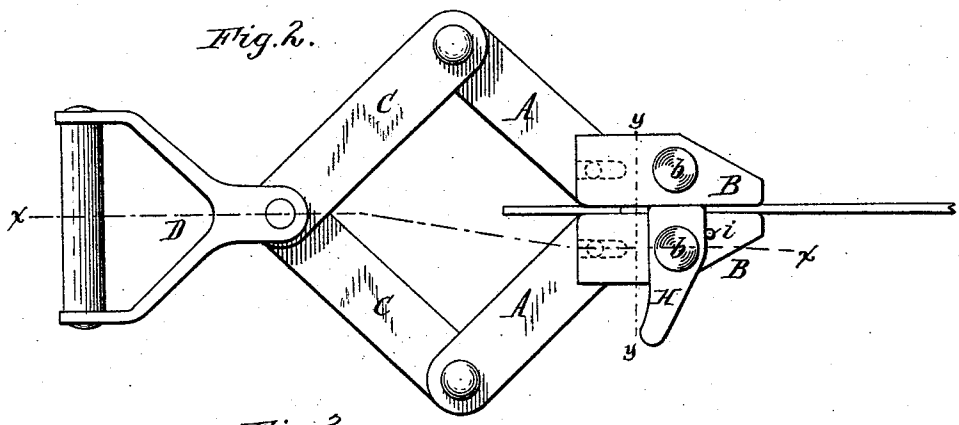


Fig. 3.

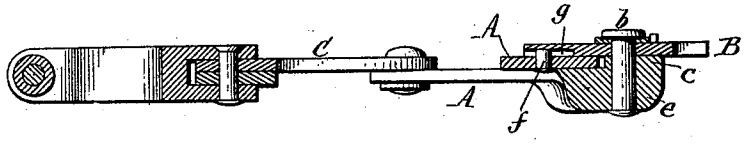


Fig. 4.

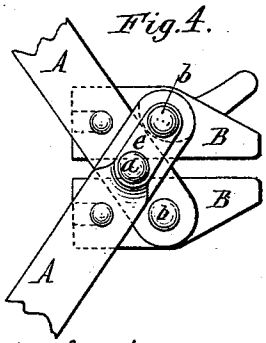


Fig. 5.

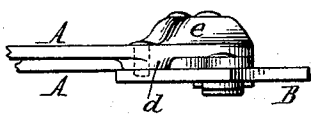
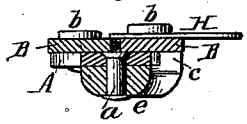


Fig. 6.



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UNITED STATES PATENT OFFICE.

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LINEMAN'S WIRE-GRIP.

SPECIFICATION forming part of Letters Patent No. 486,911, dated November 29, 1892.

Application filed February 8, 1892. Serial No. 420,650. (No model.)

To all whom it may concern:

Be it known that I, CLAES A. SVENSSON, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Linemen's Wire-Grips, of which the following is a specification.

This invention relates to the grippers used by linemen for stretching telephone and telegraph wires and which are commonly known as "come-alongs," the invention having more particular reference to grippers in which the jaws have a parallel movement toward and from each other.

The object of my invention is to provide a strong and powerful grip of this kind, whereby telephone or telegraph wires can be conveniently grasped at any desired point for stretching the same and in such a manner as not to mar or bend the wire.

In the accompanying drawings, Figure 1 is a top plan view of my improved grip, showing the jaws open. Fig. 2 is a similar view showing the jaws closed and a wire between the same. Fig. 3 is a longitudinal section of the grip in line *x x*, Fig. 2. Fig. 4 is a bottom plan view of the front portion of the grip. Fig. 5 is an inverted side elevation of the front portion of the grip. Fig. 6 is a cross-section thereof in line *y y*, Fig. 2.

Like letters of reference refer to like parts in the several figures.

A A represent two crossed bars or levers connected at their intersecting portions by a rivet *a*, forming a pivot on which the levers swing, and B B are the gripping-jaws, which are pivoted about centrally to the front ends of the crossed levers by studs or rivets *b*, passing through the jaws and the levers, as shown.

C C are the links, pivoted at their outer ends to the rear ends of the levers A A and forming with the latter a pair of lazy-tongs, and D is a draft-loop pivoted to the inner connected ends of the links C and to which the usual tension-strap is attached, which strap is not shown in the drawings. The lower lever A is provided at its front end on its upper side with a boss or raised portion *c*, upon which the adjacent jaw B rests and through which its pivot passes and whereby this jaw is raised to the same level with the other jaw B, as shown in Fig. 3.

d is a similar boss formed on the lower lever A in rear of its pivot, as shown in Fig. 5, and which forms a support for the adjacent rear portion of the jaw pivoted to the upper lever. The rear portion of the other jaw B is supported on the upper lever A. The front portion of the lower lever is preferably thickened, as shown at *e*, to increase its strength.

f f are studs or pins arranged on the levers A A, respectively, in rear of their pivots, and entering longitudinal grooves *g*, formed in the under sides of the jaws B B, as most clearly shown in Fig. 3. These pins and grooves are arranged in line with the pivots of the jaws, so as to cause the gripping-faces of the latter always to remain parallel with each other as the jaws are opened and closed. By arranging the gripping-jaws on top of or on the sides of the levers A A, as shown, the entrance to the jaws is not obstructed by the levers, but is left open from end to end of the jaws, so that a wire can be grasped at any desired distance from its end without bending it and without the necessity of first inserting the end of the wire between the jaws and then drawing it through the latter to the point at which it is desired to seize the wire, as is the case in some grips which have been heretofore employed. As it is frequently necessary to grasp a wire at a considerable distance from its end, the above-described arrangement of the jaws constitutes a valuable and important feature of my invention. The rear boss *d* of the lower lever A surrounds the adjacent pin *g* and thus serves to reinforce the latter as well as to form a support for the rear portion of the adjacent jaw.

H represents a retaining-plate pivoted to the outer side of one of the jaws B and designed to be swung across the space between the jaws, so as to hold the wire in place between the same preparatory to stretching it. This retaining-plate is preferably mounted upon the pivot of the jaw to which it is attached. Before inserting the wire between the jaws the plate is swung parallel with the jaws to clear the space between the same, as shown in Fig. 1, and after the wire has been inserted the plate is swung at right angles to

the jaws, as shown in Fig. 2, in which position it overlaps the wire and confines it in place. The swinging movement of the retaining-plate is limited in either direction by a pin or stop *i*, arranged on the adjacent jaw.

The draft-loop D is arranged in a plane parallel with the jaws B and its inner end is bifurcated and pivoted to the rear ends of the links C by a rivet passing through the latter and the bifurcated end of the loop, as shown in Fig. 3. By this arrangement of the draft-loop the wire extending backwardly from the jaws of the grip lies flat against the loop, in which position it is not liable to be bent or deflected by the loop in stretching it.

I claim as my invention—

1. In a wire-grip, the combination, with an upper lever, of a lower lever pivoted upon the upper lever out of plane thereof and provided on opposite sides of its pivot with bosses or raised portions, a solid gripping-jaw pivoted upon the upper lever and supported with its rear portion upon the rear boss of the lower lever, a similar jaw pivoted upon the front boss of the lower lever and resting with its rear portion upon the upper lever, pins or projections arranged on said levers and engaging in grooves or ways formed in the jaws behind their pivots, links pivoted at their front ends to the rear ends of the levers, and a draft-loop attached to the rear ends of said links, substantially as set forth.

2. The combination, with the crossed levers and the pivoted jaws, of means whereby the jaws are caused to move parallel with each other, a retaining-plate pivoted to one of the jaws and adapted to swing across the space between the jaws for confining the wire between the jaws, substantially as set forth.

3. The combination, with the crossed levers and the pivoted jaws, of means whereby the jaws are caused to move parallel with each other, a retaining-plate pivoted to one of the jaws and adapted to swing across the space between the jaws for confining the wire between the jaws, and a stop whereby the movement of the retaining-plate is limited, substantially as set forth.

Witness my hand this 3d day of February, 1892.

CLAES A. SVENSSON.

Witnesses:
JNO. J. BONNER,
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