

(No Model.)

A. W. LAUGHLIN.  
GRIP FOR STRETCHING WIRE.

No. 345,154.

Patented July 6, 1886.

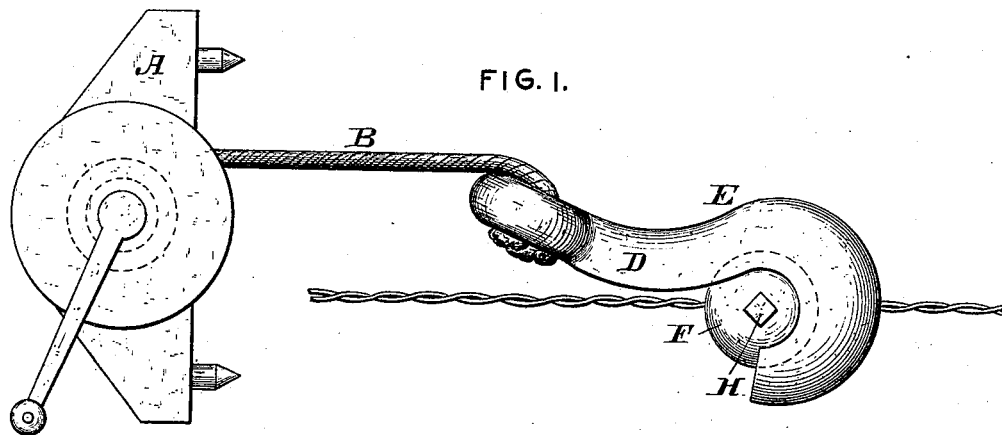


FIG. 2.

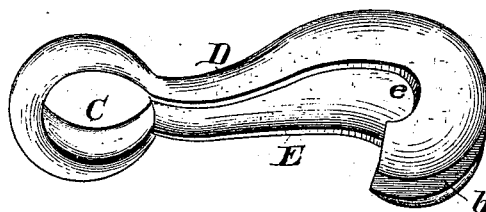


FIG. 3.

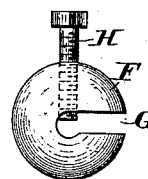


FIG. 4.

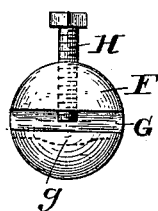


FIG. 5.

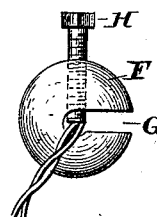
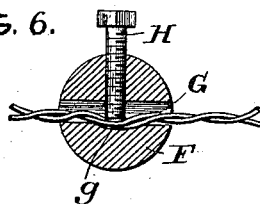


FIG. 6.



ATTEST.

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# UNITED STATES PATENT OFFICE.

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## GRIP FOR STRETCHING WIRE.

SPECIFICATION forming part of Letters Patent No. 345,154, dated July 6, 1886.

Application filed March 12, 1886. Serial No. 194,954. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXANDER W. LAUGHLIN, a citizen of the United States, residing at Brookville, in the county of Jefferson and State of Iowa, have invented certain new and useful Improvements in Grips for Stretching Wire; 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 letters and figures of reference marked thereon, which form a part of this specification.

In many of the devices used for the purpose of holding or clamping wire while it is being stretched with which I am acquainted an eccentric or ratchet-faced cam, in some manner or shape, is employed to hold or grip the wire. I have found that these cams or eccentrics are liable to loose their hold or grip on the wire, owing to their roughened faces becoming smooth and their pivots working loose from constant use. This is the occasion of severe injury, and often loss of life, to linemen employed in stringing and stretching telegraph and telephone wires on poles, as they are frequently precipitated to the earth by the slipping of the grip while the wire is being tightened. Another objection to the use of ratchet-faced or roughened cams is the fact that they will, if clamped upon the wire sufficiently tight to secure its resisting the strain put on it, cut into and weaken the wire.

Now my invention is intended to obviate these objectionable features in wire-clamps and to provide a simple, durable, and efficient device, whereby telegraph, fence, or other wire may be securely held while undergoing the operation of stretching, and which will not cut or otherwise damage or weaken the wire; and it consists of the parts and combinations of parts hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of my device, showing it in connection with a wire-stretcher; Fig. 2, a perspective view of the claw; Fig. 3, an end view of the clamping-ball; Fig. 4, a side view of the same; Fig. 5, an end view showing the wire

in position, and Fig. 6 a transverse section of the same.

Similar letter refer to similar parts throughout all the views.

A represents a wire-stretching machine preferably of the form shown and described in Letters Patent No. 325,095, granted to me August 25, 1885, and to which reference may be had for a further description thereof. The rope or wire B, secured to the drum of the stretcher, is passed through an eye, C, in the end of the arm D of the claw E, and there secured by forming a knot in its end or tying it thereto. This claw E is hollowed out in its enlarged end at *e*, so as to receive the clamping-ball F snugly therein. A slot, *b*, is formed in the enlarged end, which extends inwardly to near the bottom of the cavity *e*. The arm D of the claw is curved so as to remove it from the path of the wire being stretched. The ball F is provided with a slot, G, cut from its periphery to and slightly beyond its center. This slot extends clear across the ball and is of a size sufficient to receive the wire. The ball is concaved or hollowed out slightly at its center, so as to form a bed, *g*, for the wire directly under the end or point of the clamping-screw H, which works in a screw-threaded perforation in one side of the ball at its center. The end or point of the screw which is jammed on the wire is somewhat blunted to prevent its cutting the same.

In operation, the wire is placed within the slot G and pushed back until it lies directly over the concavity or bed *g*. The screw is then turned by a wrench or other suitable tool down onto the wire until it forces the same into the bed *g*, thus insuring its retention therein against great strain. The claw is then caught over the ball, as clearly shown in Fig. 1, and the drum turned to stretch or tighten the wire.

With my device, which I have thoroughly tested, it is almost impossible for the wire to slip through if proper care has been exercised in jamming the screw down on the wire and forcing the same into the cavity or bed in the ball, and the screw itself will retain whatever position it may be turned to, there being no pivot or other bearing to work loose.

I am aware that a cylindrical stud having a

transverse groove cut in it at one side to form a hook-shaped jaw and provided with a hole running at right angles to said jaw, in connection with a binding-screw to form a cable-coupling, has heretofore been employed, and I therefore lay no claim to such invention, as my improvement is expressly designed for use in connection with a grip, and is not capable, without alteration, of operating as a means of coupling branch wires to main conducting-cables running in opposite directions, as will fully appear from the above description.

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

A wire-grip consisting of the spherical ball F, having the horizontal slot G, concaved at *g*, a screw-threaded perforation, and blunt-pointed screw H, directly above the concave portion, in combination with the claw E, having eye C, and curved arm D, slotted at *b* and hollowed out at *e*, so as to receive the clamping-ball F snugly therein, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ALEXANDER W. LAUGHLIN.

Witnesses:

E. F. SIMMONS,  
H. L. JORDAN.