

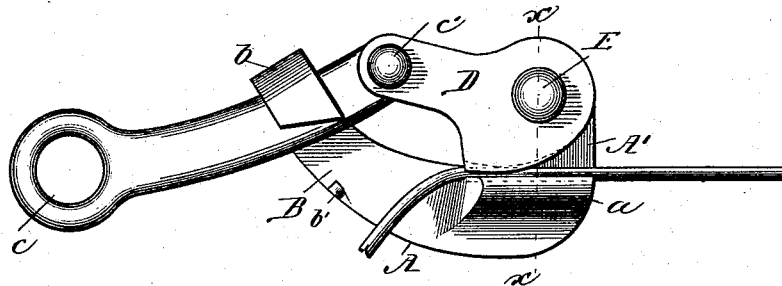
(No Model.)

W. HAVENS.  
WIRE STRETCHER OR CLAMP.

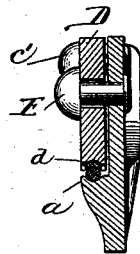
No. 384,255.

Patented June 12, 1888.

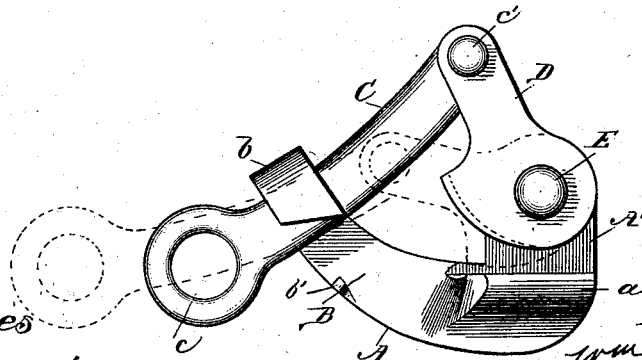
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses

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# UNITED STATES PATENT OFFICE.

WILLIAM HAVENS, OF CHICAGO, ILLINOIS.

## WIRE STRETCHER OR CLAMP.

SPECIFICATION forming part of Letters Patent No. 384,255, dated June 12, 1888.

Application filed March 5, 1888. Serial No. 266,193. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM HAVENS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Wire Stretchers or Clamps, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My present invention, while capable of use in a variety of other situations, is more particularly designed as a stretcher or clamp for telegraph-wires, barb wires, and the like. In the construction of this class of devices it has been heretofore proposed to form a stretcher or clamp of a stationary jaw having pivotally connected therewith an eccentric jaw provided with a steel-toothed lug or segment adapted to bite into the wire and compress the same against a shoulder formed upon the side of the stationary jaw, and in such construction the movable jaw has been forced to clamp the wire by means of a ring passing through a suitable opening in the end of the stationary jaw and through a corresponding opening formed in the end of the movable jaw. This construction, however, is defective, for the reason that the steel-toothed segment when cutting into the wire not only injures the same by breaking off the galvanized coating thereof, but is also apt to weaken the wire by forming indentations therein. Moreover, the employment of a ring passing through the outer ends of the stationary and movable jaws does not exert as direct and constant a strain upon the movable jaw as is desirable to securely hold the wire against all danger of slipping.

The object of my invention is to provide a clamp of improved construction, applicable more especially in stringing the wires of fences, telegraph-lines, &c., and designed to stoutly hold the wire between the jaws of the clamp by the stretching tension, the pull or stretching strain being directed approximately in or along the line of the wire itself.

To this end the invention consists of certain improvements in the construction of a wire-clamp, the nature of which will more fully appear from the description following, and be

thereafter pointed out by claim at the conclusion thereof.

In the drawings, Figure 1 is a view in side elevation, showing a wire-clamp made in accordance with my invention, the jaws of the clamp being closed upon the line wire. Fig. 2 is a cross-section view on line *x x*, Fig. 1. Fig. 3 is a view similar to Fig. 1, the jaws of the clamp being in open position.

A designates the stationary jaw, near the outer end of which is formed a shoulder or offset, *a*, which is preferably provided with a longitudinal groove, *a'*, adapted to receive the wire to be clamped, and this groove *a'* is, by preference, slightly roughened or milled, so as to better retain the wire, without, however, injuring the coating thereof or without danger of cutting into and weakening the wire. From this stationary jaw A, and preferably formed in single piece therewith, extends the fulcrum-arm B, the outer end of which is provided with a bend or offset, *b*, to form a fulcrum, against which will bear the lever-arm C, this lever-arm in the construction shown being held in a manner free to slide between the bend or offset *b* and the body of the fulcrum-arm B. The outer end of the lever-arm C is provided preferably with an eye, *c*, for the attachment thereto of a tackle block or rope, and the inner end of this lever-arm is pivotally connected, as at *c'*, to the outer end of the movable jaw D. This movable jaw D is pivotally sustained upon the bolt E, that passes through the jaw and through the upright standard A' of the stationary jaw A, and the eccentric or bearing-face of the movable jaw is preferably provided with a groove, *d*, adapted to partially encircle the periphery of the wire. This groove *d* is, by preference, milled or roughened in the same manner as the longitudinal groove of the offset *a* of the lower jaw, and it will be seen that when the wire is clamped between the jaws the longitudinal grooves *a'* and *d* will afford a firm bearing over a large part of its periphery, and thus by frictional contact more securely guard against danger of the slipping of the wire from out the jaws. The fulcrum-arm B is, by preference, provided with an offset, *b'*, to prevent the possibility of the lever-arm C slipping away from the fulcrum *b*, although such provision

is not necessary; or, if desired, the bend or offset *b*, constituting the fulcrum, may be extended somewhat farther over the lever-arm, so as to bear against the face of the fulcrum-arm B.

From the foregoing description it will be seen that when a wire is to be clamped the jaws can be opened to permit its insertion by moving the lever-arm to the position shown by full lines in Fig. 3, and when the wire has been placed between the stationary and movable jaws the lever-arm C will be retracted to the position shown by dotted lines in Fig. 3 and by full lines in Fig. 1, until the eccentrically-pivoted movable jaw firmly clamps the wire against the shoulder or offset *a* of the stationary jaw. When the parts are in this position, it is obvious that the strain of the rope or tackle affixed to the outer end of the lever-arm C will tend to tightly bind the wire between the jaws, and this action will be aided also by the tendency of the wire to pull through the jaws. By thus providing the movable jaw D with a lever-arm, C, engaging with its outer end and coacting with a suitable fulcrum, it is plain that strain upon the lever-arm C will, through the medium of the fulcrum-arm B, draw down the outer end of the movable jaw D

in the most direct and effective manner to hold the wire at the same time that the stretching strain is applied approximately along the line of the wire.

It will be readily understood that the precise details of construction above set out may be varied by the skilled mechanic without departing from the spirit of my invention.

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

A wire-clamp comprising a stationary jaw, A, provided near one end with a fulcrum-arm, B *b*, at the opposite end with an upright standard, and having an intermediate bearing-shoulder, *a*, a movable jaw, D, eccentrically pivoted to said standard, and a lever-arm, C, resting against the fulcrum *b* and pivoted to the movable jaw D, said stationary and movable jaws and lever-arm being relatively organized, substantially as shown, whereby the wire may be held and stretched approximately in the line thereof, substantially as described.

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Witnesses:

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