(No Model.)

G. S. DEAN.

WIRE STRETCHER.

No. 259,671. Patented June 20, 1882.

Fig. 1.

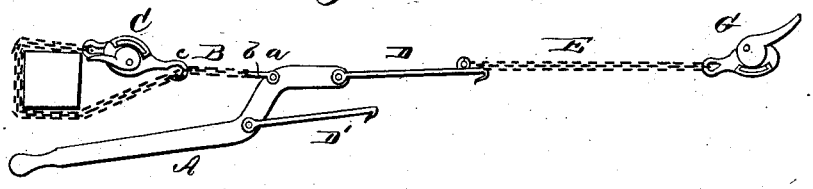


Fig. 2.

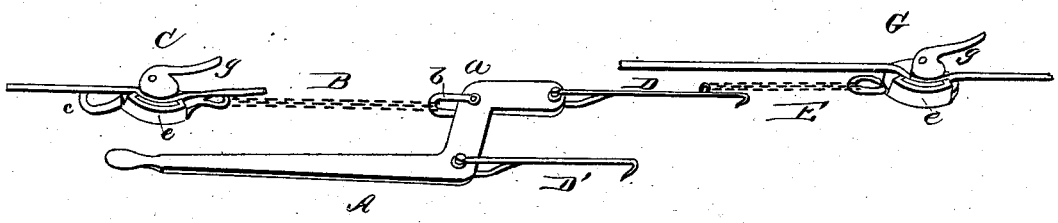
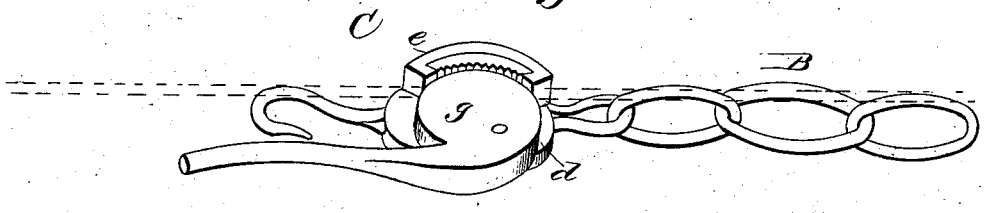


Fig. 3.



WITNESSES

W. C. McArthur.

W. R. Keyworth

By Attorney

INVENTOR

Geo. S. Dean.

Alexander

UNITED STATES PATENT OFFICE.

GEORGE S. DEAN, OF INDEPENDENCE, IOWA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO E. M. CRANDAL AND C. H. KIRKHAM, OF CHICAGO, ILL.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 259,671, dated June 20, 1882.

Application filed December 29, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. DEAN, of Independence, in the county of Buchanan and State of Iowa, have invented certain new and useful Improvements in Fence-Wire Tighteners; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a plan view. Fig. 2 is a similar view, showing the device as used for repairing; and Fig. 3, a detail perspective of the clamping device.

My invention relates to tighteners for the wires of wire fences, and it has especial relation to the wire-fence tightener for which Letters Patent numbered 250,790 were granted to me bearing date December 13, 1881.

My invention consists in the combination, with the clamps and chains to which they are connected, of an angular lever and pivoted hooks for taking up the slack during the tightening operation, as well as during the splicing of fence-wires.

The following description of my invention will enable others skilled in the art to fully understand it.

A designates a lever of any desired length, one end of which is bent at an obtuse angle, (lettered *a*,) and at this point a chain, B, is connected to the lever by a pivoted loop, *b*. This chain is adapted for being secured around a fence-post by means of the hook *c* of a clamping device, C, hereinafter explained.

Equidistant from the angle *a* of lever A, I pivot directly to this lever two hooks, D D′, and to the hook D one end of a chain, E, is attached by an eye, *h*, to the other end of which a clamping device, G, is secured by means of a loop formed on this device. Both clamping devices are constructed alike, with the single exception that on the device G the hook *c* shown on the device C is omitted. Each device consists of a strong plate or block, *d*, adapted to be attached to a chain, and having a concave jaw, *e*, of hardened metal formed on or suitably secured to it on one of its flat sides. This jaw is constructed with a serrated gripping-edge, which serves, in combination with a pivoted eccentric-jaw, *g*, having a lever-handle and a smooth gripping-edge, to firmly clamp and hold the fence-wire.

The gripping devices described in the schedule attached to my Letters Patent above referred to have serrated cam-levers and smooth-faced abutments or jaws, which do not operate to grip a wire with the same facility and efficiency as my new clamps, where the teeth are made on the abutments or jaws, and these are made concave, as described. The reason of this is that the wire receives a very short bite, owing to the smooth surface of the abutment being made flat, and with my patented clamps percussive force is necessary to effect a firm hold.

To use my tightener for tightening a fence-wire, the chain B is placed around a post, as shown in Fig. 1, and fastened by its hook *c*, the fence-wire is gripped by the clamp G, and the hook D′ engaged with one of the links of the chain E. The lever is then forcibly drawn backward, which takes up the slack of some of the fence-wire. The wire is then clamped and held by the device C and the slack which is taken up arrested and held by the hook D. The hook D′ is then attached to the chain E nearer the clamp G. By repeating this operation the fence-wire is tightened as much as may be required and then secured in any suitable manner.

For the purpose of tightening broken wires and holding them to be spliced, I have represented in Fig. 2 the tightener adjusted on the ends of wires. It will be seen that the ends of the wires are gripped by the two clamps C and G, the two chains and the hook D being drawn in a straight line, and the lever A standing off from the line by reason of having a portion of it angular, as described. The long arm of this lever A is grasped and swung toward the clamp G until the hook D′ will engage with one of the links of the chain E. The hook D is now free from tension. If the wires have not been drawn far enough toward each other to properly splice them, the lever A is forcibly moved toward the clamp C, and the hook D engaged with a link of the chain E, allowing hook D′ to be released from this

chain and to be again engaged with it nearer the clamp G. In this way the hooks may be made to leap from link to link of the chain E until the required lap or splice is made. It will be seen that the two hooks D D′ are rigid and so pivoted to the lever A that they will not drop down during the operation of the tightener.

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

The combination of the angular lever A, the post-chain, its hook and clamp, the two hooks D D′, pivoted directly to the lever A, on opposite sides of the angle *a*, the chain E, fastened permanently to the hook D, and the clamp G, fastened permanently to this chain, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

GEORGE S. DEAN.

Witnesses:
J. B. JONES,
M. R. ADAMS.