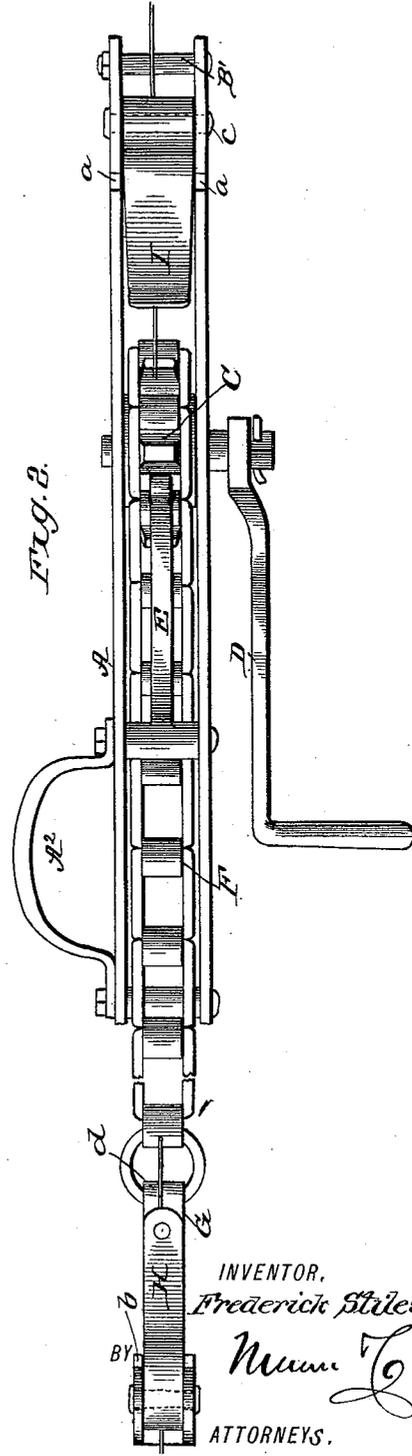
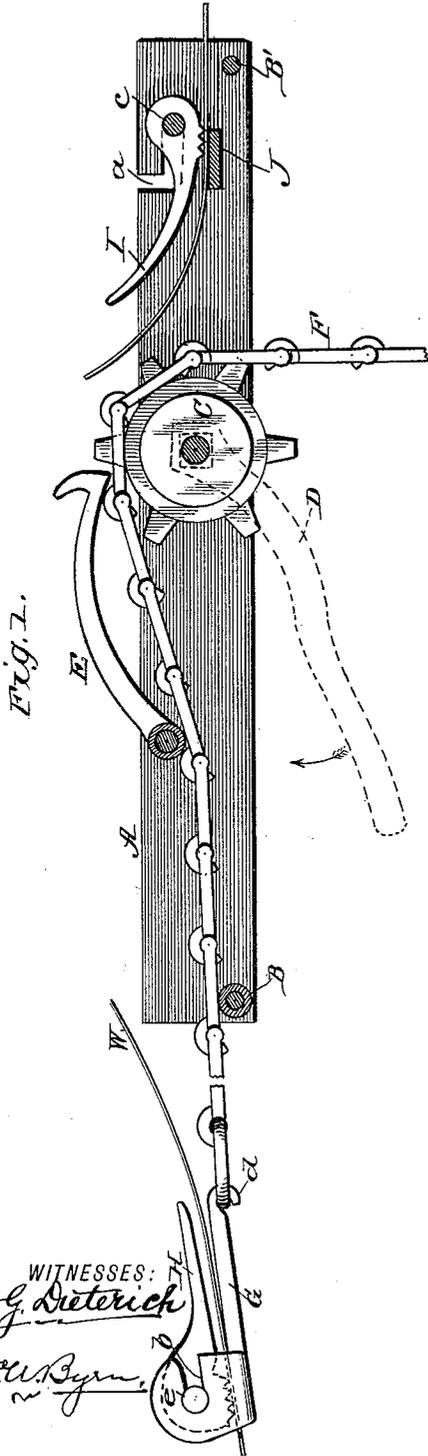


(No Model.)

F. STILES.  
WIRE STRETCHER.

No. 403,620.

Patented May 21, 1889.



WITNESSES:  
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ATTORNEYS.

# UNITED STATES PATENT OFFICE.

FREDERICK STILES, OF BURNET, TEXAS, ASSIGNOR OF TWO-THIRDS TO R. L. HARRELL AND H. A. BURNS, BOTH OF SAME PLACE.

## WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 403,620, dated May 21, 1889.

Application filed January 2, 1889. Serial No. 295,266. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK STILES, of Burnet, in the county of Burnet and State of Texas, have invented a new and useful Improvement in Wire-Stretchers, of which the following is a specification.

My invention is in the nature of an improved wire-stretching device for building and repairing wire fences, telegraph-lines, &c.; and it consists in the peculiar construction and arrangement of parts, which I will now proceed to describe with reference to the drawings, in which—

Figure 1 is a side view of the device with one of the frame-bars removed. Fig. 2 is a top or plan view.

A A are two side bars of strap-iron, which are fastened together by bolts B B', around one of which, B, there is arranged a sleeve or anti-friction roller. Between these two side bars there is journaled in suitable bearings therein a cog-wheel, C, which is rigidly connected to its axial shaft, and this latter has attached to it outside of the bars A a crank-handle, D, by which the cog-wheel is turned.

F is a chain which passes over the cog-wheel, and is drawn up thereby to tighten the wire. To connect this chain to the wire to be drawn up, a wire-holder or gripping device, G H, is employed. This consists of a plate, G, having slotted ears or lugs *b* and a hook, *d*, which latter enters into one of the links of the chain. In the slot of the ears *b* are seated the trunnions *e* of a serrated cam-lever, H, which, when turned down, grips the wire between its serrated cam and the plate G. As the chain is drawn up by the cog-wheel, the latter is held to its position, and the slackening of the wire is prevented by a pawl or detent, E, pivoted between the bars A, and having a tooth that engages with the teeth of the cog-wheel. On the other side of the cog-wheel there is a cross-plate, J, connecting the two bars A, and a serrated cam-lever, I, for gripping the other end of the wire to give a purchase or hold for the ma-

chine in winding up the chain. This serrated cam-lever has trunnions *c*, that are inserted in right-angular slots in the side bars, and when said lever is turned down its serrated cam grips the wire W' between it and the cross-plate J.

A<sup>2</sup> is a handle fastened to the frame-bars A, which handle is grasped to steady the device while it is being operated by the crank-handle D.

I am aware of the fact that it is not broadly new in a wire-stretcher to combine a toothed wheel in a frame with a crank-handle and a chain for drawing up the wire, and I therefore only claim in this connection the peculiar arrangement of the detent or pawl in relation to the toothed wheel and the chain.

Having thus described my invention, what I claim as new is—

1. The combination, in a wire-stretcher, of the side bars, A A, having a toothed wheel, C, journaled between them and provided with a crank, a set of cross bars or bolts connecting the two side bars, a pawl, E, hung upon one of the cross-bars and having its toothed end arranged to abut against the teeth of the wheel, and a chain, F, passing over the toothed wheel and underneath the pawl, substantially as shown and described.

2. The combination, with the frame-bars A, having right-angular slots *a*, of the gripping-cam-lever I, having trunnions *c*, fitting in said slots, and the cross-bar J, connecting the frame-bars and forming a bearing beneath the cam-lever to grip the wire against, as shown and described.

3. The combination of frame-bars A A, with connecting-bolts B B', cross-plate J, and slots *a*, the gripping cam-lever I, cog-wheel C, with attached crank, detent E, chain F, and wire-holder G H, attached to the chain, substantially as shown and described.

FREDERICK STILES.

Witnesses:

W. H. BOGGESS,  
GUS GROVE.