

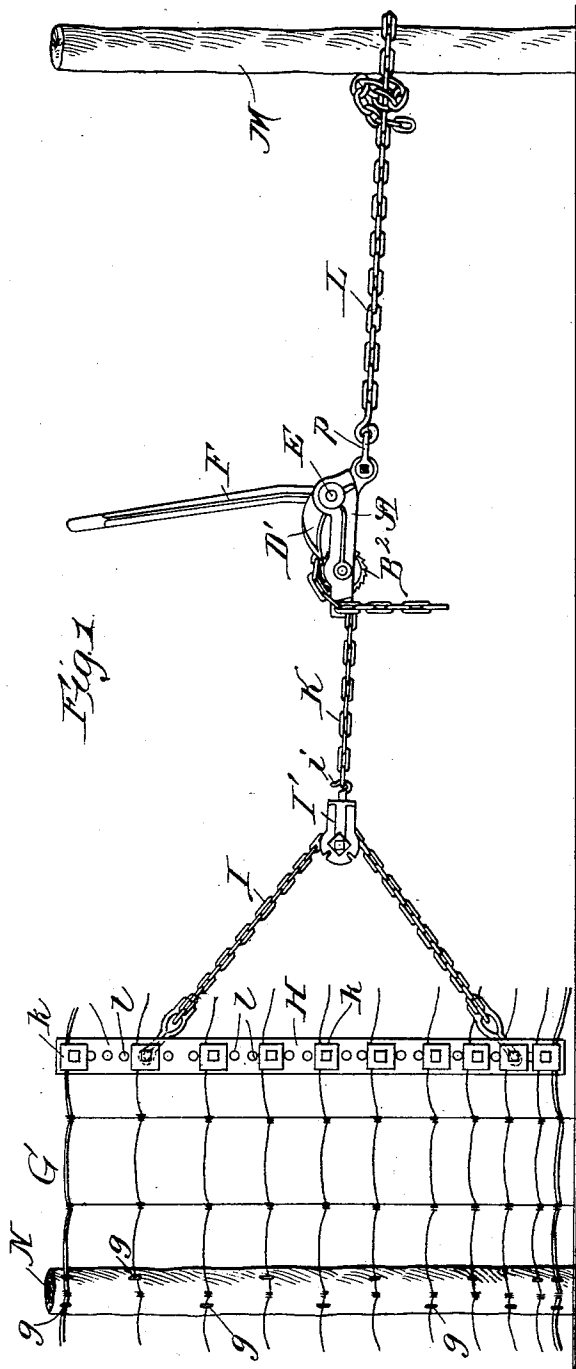
(No Model.)

2 Sheets—Sheet 1.

C. M. LAMB.
WIRE FENCE STRETCHER.

No. 541,240.

Patented June 18, 1895.



Witnesses:

*Edw. Gaylord,
Lute J. Mott*

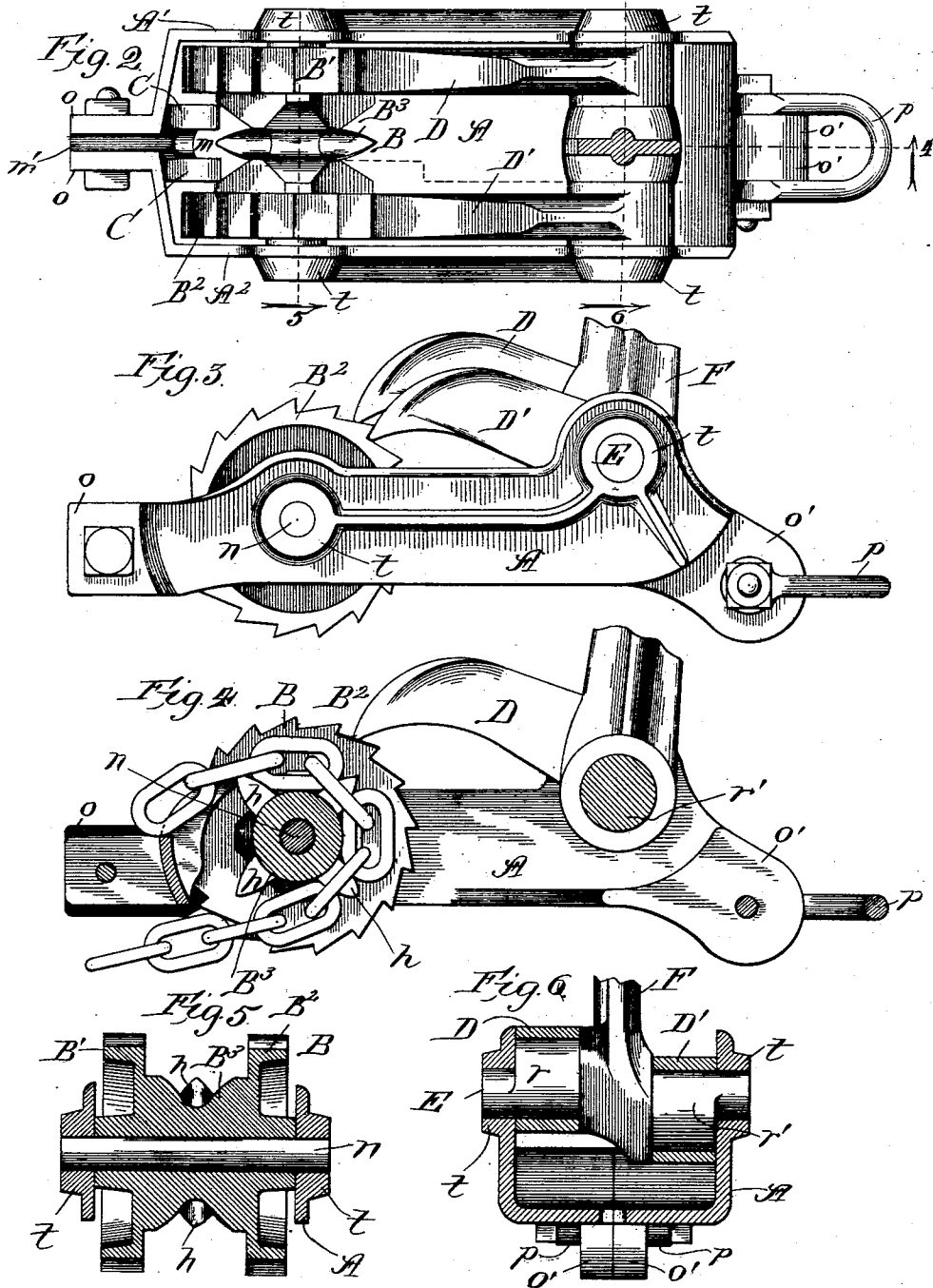
Inventor,

*Charles M. Lamb,
By Dyrenforth & Dyrenforth,
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E. C. Gaylord.
L. F. Allen

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UNITED STATES PATENT OFFICE.

CHARLES M. LAMB, OF ADRIAN, MICHIGAN, ASSIGNOR TO THE PAGE WOVEN WIRE FENCE COMPANY, OF SAME PLACE.

WIRE-FENCE STRETCHER.

SPECIFICATION forming part of Letters Patent No. 541,240, dated June 18, 1895.

Application filed April 16, 1895. Serial No. 545,929. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. LAMB, a citizen of the United States, residing at Adrian, in the county of Lenawee and State of Michigan, have invented a new and useful Improvement in Wire-Fence Stretchers, of which the following is a specification.

My invention relates to an improvement in the class of devices for stretching wire, and particularly for stretching wire-fence to tighten the same in putting it up.

The object of my invention is to provide a simple and durable construction of puller or stretcher, which may be readily applied to its work and serve to enable the application, with the exertion of comparatively little power, of great force to the object being pulled or stretched.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a view, diagrammatic in its nature, showing my improved wire-fence stretcher in operation; Fig. 2, a plan view of the stretcher with the handle in section; Fig. 3, a view of the same in side elevation with the handle shown broken; Fig. 4, a section taken at the line 4 on Fig. 2 and viewed in the direction of the arrow; Fig. 5, a section taken at the line 5 on Fig. 2 and viewed in the direction of the arrow, and Fig. 6 a section taken at the line 6 on Fig. 2 and viewed in the direction of the arrow.

A is the frame, preferably of the general rectangular shape illustrated, and which I prefer to form in two cast sections A' and A², each provided with an extension *o* at one end and with an extension *o'* at its opposite end, at which extensions the sections are bolted together. Along their outer sides, the sections should be provided with strengthening ribs, as shown, and with bosses *t* where bearings are provided in the frame for parts hereinafter described. In the frame, near one end, is immovably fastened a shaft *n* carrying a rotatable combined double ratchet-wheel and interposed sprocket-wheel device B, the ratchets B' and B² of which flank and are preferably cast integral with the sprocket-wheel B³.

Between the extensions *o* of the frame is fastened a stripper C, comprising a stem *m'* clamped between the extensions *o*, and a bi-

furcated head *m*, between the prongs of which the sprockets extend in the rotation of the device B.

E is a shaft containing the two eccentrics *r* and *r'* and journaled in the end of the frame adjacent to its extensions *o'*, which carry a clevis *p*. On the eccentrics *r* and *r'* are loosely supported the dogs D and D', to extend, respectively, into engagement with the ratchets B' and B²; and the relative positions of the eccentrics are such, that when the shaft, which is preferably actuated by oscillating it, is turned in one direction, it advances one dog against its ratchet to turn it, and retracts the other dog upon its ratchet to bring it behind a tooth preparatory to turning that ratchet by turning the shaft in the opposite direction. The shaft is worked through the medium of a handle F extending from it between the dogs.

To apply my improved stretcher operatively to wire-fence G (Fig. 1) to be stretched, I employ a clamp-bar H provided with a series of holes *l*, through which to bolt plates *k* to the bar, and apply the clamp-bar, in putting up the fence, to the wires of the latter by extending one wire between each plate *k* and the bar H, and clamping the wires by tightening the bolts which fasten the plates in place. To the bar H, on opposite sides of its center, I fasten the ends of a chain I, on which is a pulley-block I' provided with a hook *i* for connection with the pulley-block of one end of the chain K, passed at its opposite end about the sprockets *h* of the sprocket-wheel B³, shown as four in number and at a distance apart corresponding with the length of each link in the chain K. From the clevis *p*, the stretcher is connected by a chain L with a rigid support, such as the post M. To effect the stretching, the handle F is worked back and forth, each movement turning the device B to draw upon the chain K, the alternate links of which, penetrated by the sprockets, as they pass over the stripper C in the rotation of the sprocket-wheel, are stripped from the sprockets. By thus drawing upon the chain K, the chain I and clamp-bar are drawn to stretch the wires of the fence, which, when sufficiently taut, are fastened to a post N by staples *g*. On then loosening the chain L from its support M the stretcher and its connections may readily

be disconnected from the fence to be again applied in the manner already described in stretching another fence-section.

While the particular construction of my improved stretcher is the best known to me for its purpose, it may be variously modified, as to details, without departure from my invention. For example, I do not desire to limit my improvement to the use of the sprocket-wheel B³, since any suitable form of pulley, for winding upon it a flexible connection with wire to be stretched, may be used. Furthermore, I may employ only one dog and one ratchet; or if two of each be employed, they need not, necessarily, be on opposite sides of the sprocket-wheel.

For the sake of brevity I refer to my invention in the foregoing description and in the appended claims, as a "stretcher" and "wire-fence stretcher." I use it, however, for other pulling purposes, as well as for stretching. Hence I do not wish to be understood as limiting my invention to its mere stretching function, but intend to cover it for any pulling purpose to which it is applicable.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a wire-fence stretcher, the combination with a frame of a cog-wheel journaled therein, means connected with said wheel to rotate with it for engaging a flexible connecting medium between the stretcher and fence to be stretched, an eccentric journaled in the frame, and carrying a dog to engage said cog-wheel, and means for working the eccentric, substantially as described.

2. In a wire-fence stretcher, the combina-

tion with a frame of a cog-wheel journaled therein, a sprocket-wheel connected with the cog-wheel to rotate with it, an eccentric-shaft journaled in the frame, dogs on different eccentrics of said shaft to engage the cog-wheel and be actuated alternately back and forth with relation thereto by working said shaft, and means for operating the shaft, substantially as described.

3. In a wire-fence stretcher, the combination with a frame of a pair of cog-wheels journaled therein and carrying between them a sprocket-wheel, a stripper on the frame in advance of said sprocket-wheel, an eccentric-shaft journaled in the frame, a pair of dogs having its members on different eccentrics of said shaft, each to engage one of said cog-wheels and be actuated alternately back and forth with relation thereto by working said shaft, and an operating handle on the crank-shaft, substantially as described.

4. A wire-fence stretcher comprising, in combination, a rectangular frame A carrying at one end a clevis *p*, a combined double cog-wheel and interposed sprocket-wheel device B journaled in the frame near one end thereof, a stripper C on the frame adjacent to said sprocket-wheel, an eccentric-shaft E journaled in the frame near its opposite end, dogs D and D' respectively on the eccentrics *r* and *r'* of said shaft and an operating handle F on the shaft, substantially as described.

CHARLES M. LAMB.

In presence of—

R. R. ROBBINS,
A. M. STEPHENSON.