

W. A. MURRAY.  
Fence-Wire Stretcher.

No. 227,443.

Patented May 11, 1880.

Fig: 1.

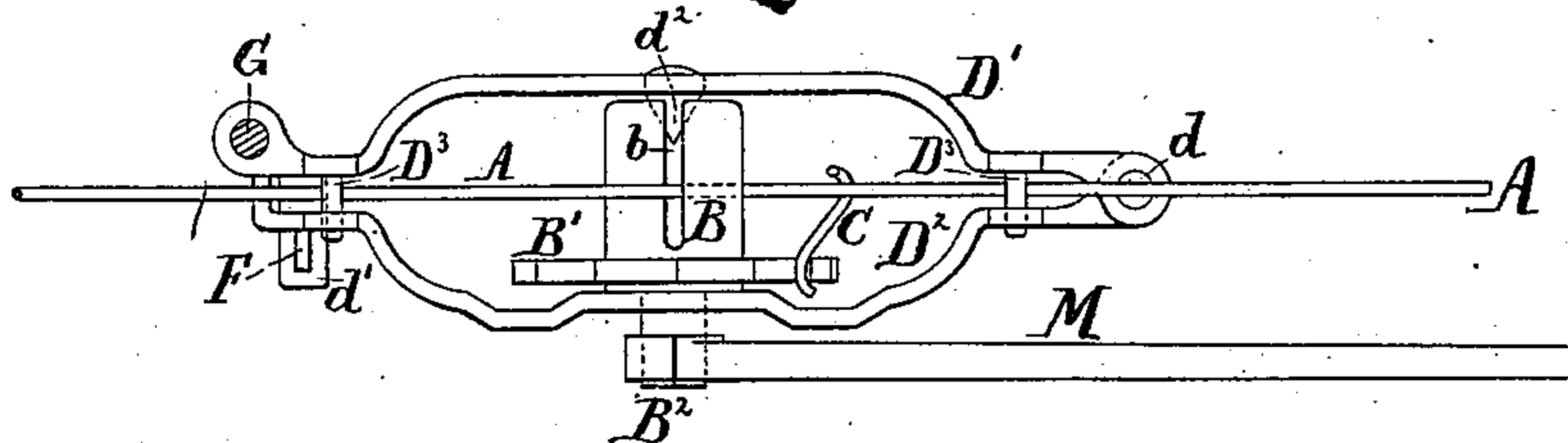


Fig: 2.

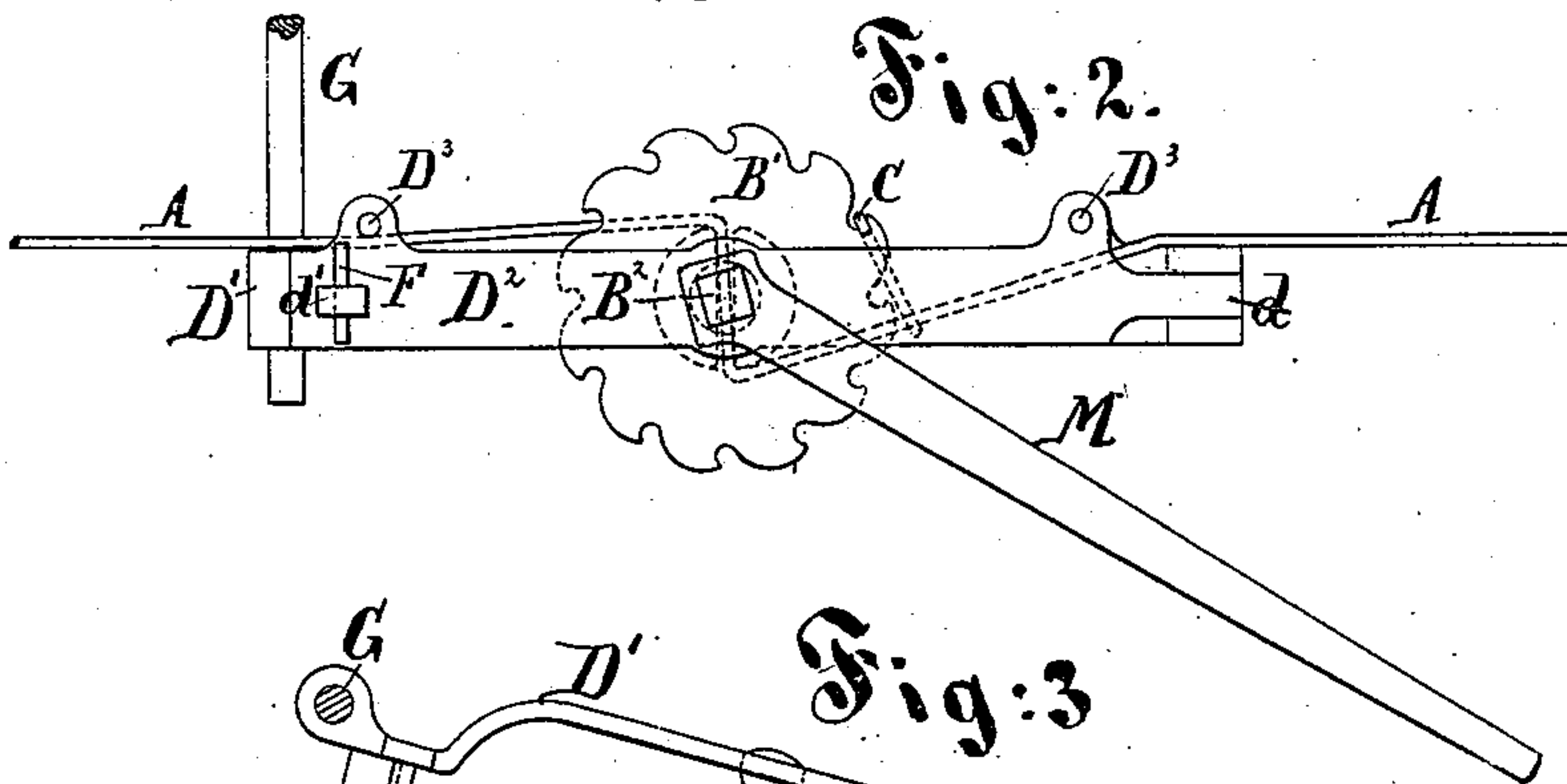


Fig: 3

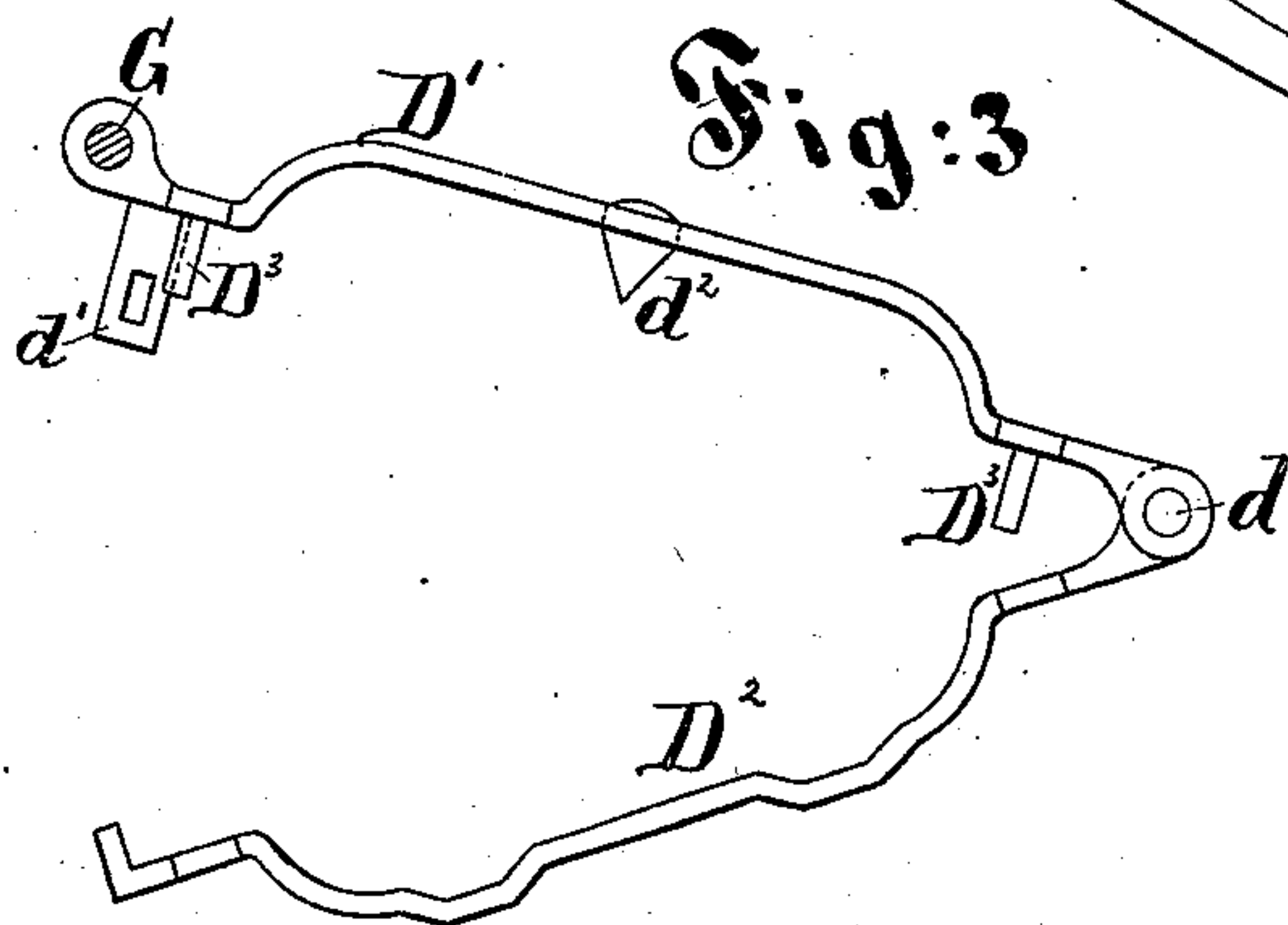


Fig: 4.

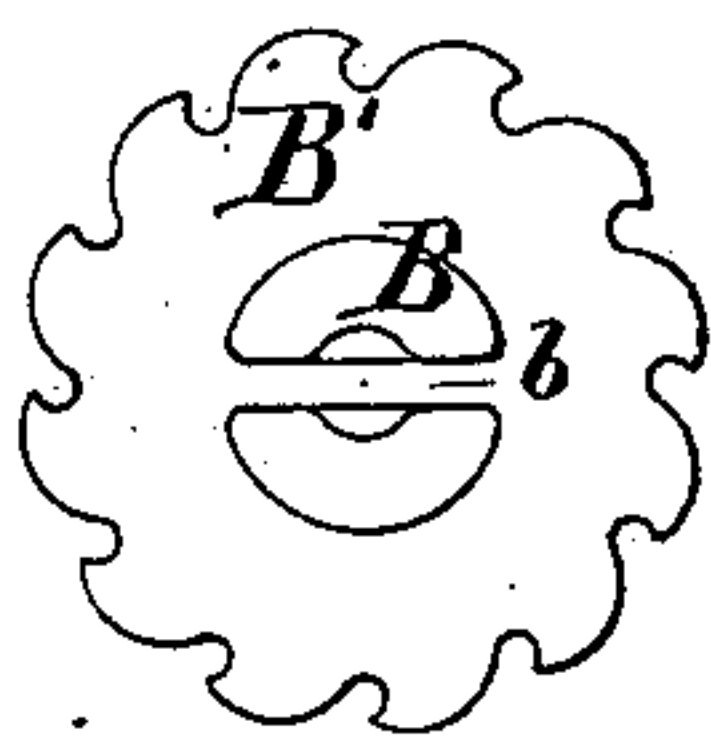
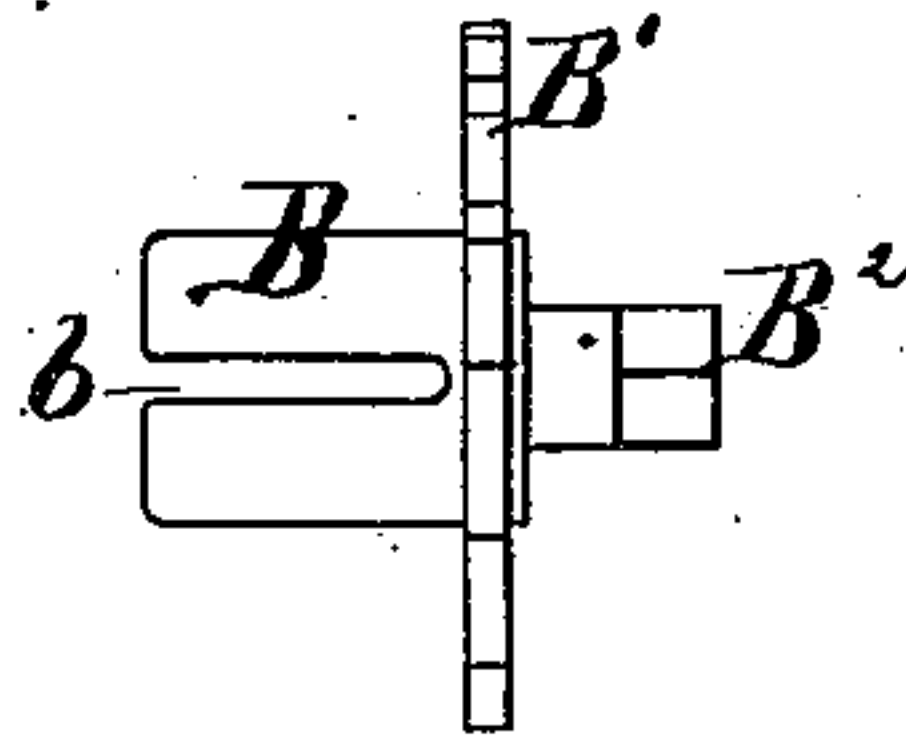


Fig: 5.



Witnesses:

A. H. Gentry.  
C. C. Stetson.

Inventor:

W. A. Murray  
by his attorney  
G. D. Stetson

# UNITED STATES PATENT OFFICE.

WILLIAM A. MURRAY, OF GLENORE, NEW ZEALAND.

## FENCE-WIRE STRETCHER.

SPECIFICATION forming part of Letters Patent No. 227,443, dated May 11, 1880.

Application filed August 13, 1879.

*To all whom it may concern:*

Be it known that I, WILLIAM A. MURRAY, of Glenore, Otago county, New Zealand, have invented certain new and useful Improvements relating to Fence-Wire Stretchers; and I do hereby declare that the following is a full and exact description thereof.

I provide simple and cheap devices adapted to be applied midway or at any other convenient point along the line of wire, and to tighten the wire in both directions therefrom, and to hold them tightened by simply turning the device so as to wind in the wire from both directions, and securing it by a small hook.

I provide a clamp or supporting-frame, which supports the winding device while it is being turned and secured, and which is adapted to be easily removed, leaving the winding device to remain in its position holding the wire. The frame may then be carried along and applied to operate a similar device on another part of the fence, and so on.

The following is a description of what I consider the best means of carrying out the invention.

The accompanying drawings form a part of this specification.

Figure 1 is a plan view, and Fig. 2 a side elevation, representing the machine complete in condition for use. Fig. 3 is a plan view of the hinged frames alone, represented as open. Fig. 4 is an end view of the windlass detached, and Fig. 5 is a side view of the same.

Similar letters of reference indicate like parts in all the figures.

A is a wire forming a part of a long extent of fence, supported at intervals by posts in the ordinary manner, and which requires setting up or tightening.

B is my turning device or windlass, formed with a notched wheel, B', a smaller neck having a squared end, B<sup>2</sup>, and a deep notch or split, b, large enough to receive the fence-wire, and rounded at each side, as indicated clearly in Fig. 4.

M is a lever or handle adapted to match on the squared head B<sup>2</sup>, and to allow the convenient application of the force of the hand by turning the device having the wire A received in the notch b until it is sufficiently strained or tightened.

C is a double hook adapted to connect the wire A with one of the teeth in the periphery of the wheel B' and prevent the device from unwinding when the force of the hand is relaxed.

The end of the device B opposite to the squared head B<sup>2</sup> is formed with a conical cavity adapted to receive a conical pin.

D' D<sup>2</sup> are two parts of a frame hinged together at d, and formed with a staple at d', which allows the parts to be secured together at that point by the application of a cross-key, F.

D<sup>3</sup> D<sup>3</sup> are projections or tenons extending from the part D', or from lugs formed on one edge thereof, but engaging in corresponding cavities in corresponding lugs formed on the part D<sup>2</sup>. These serve to hold the frame stiffly in position, and also, by engaging over the wire, as plainly shown in Fig. 2, serve to hold the frame in a horizontal position and prevent it from being revolved in the act of tightening the wire.

G is a rod, (represented as cylindrical,) which is inserted in a socket in the part D', and may serve as a handle, to be grasped by the left hand to steady the frame and its connections when subjected to the considerable strain due to the turning of the lever M.

The windlass is supported at two points in the frame. One principal point is the bearing of the neck B<sup>2</sup> in the frame D<sup>2</sup>. The other is the bearing effected by the conical projection d<sup>2</sup>, which extends inward from the frame D', and bears in the conical hole, before described, in the windlass.

It is easy to open the frames D' D<sup>2</sup> by removing the key F, and the handle M having been previously removed, there is nothing to hinder the easy separation of both frames D' D<sup>2</sup> from the windlass B B' B<sup>2</sup>, leaving the latter held firmly in position on the wire by the hook C. The whole may be made light.

The frames D' D<sup>2</sup> may be held by any point; but it may be ordinarily most convenient to hold them by the upright bar G. The latter may be tubular or otherwise formed, and may fit loosely, or may be formed in one with the frame D', as preferred.

The frames D' D<sup>2</sup> will usually be held in horizontal position when in use. They will



ordinarily be supported by resting upon the wire A by the two tenons D<sup>3</sup>. These tenons may be said to perform a double function—first, of insuring that the frames come together in the right positions and steadying them against any looseness or shackling; and, second, that of resting upon the wire A and aiding to support the frames D' D<sup>2</sup> and their connections against gravity, and also against any turning motion when force is applied.

Many modifications may be made in the details.

The lever M may have a handle extending at right angles therefrom, constituting it a crank.

The end of the neck B<sup>2</sup> may be round, except a small key-seat or indentation at one point, the lever M being correspondingly formed to engage with it, and to allow it to be strongly turned.

All the parts may be of malleable cast-iron or any other suitable material.

What I claim as my invention is—

1. The frames D' D<sup>2</sup>, hinge d, and fastening F, in combination with a windlass supported

and turning therein, and adapted to serve in tightening a wire, A, as specified.

2. In combination with the hinged frames D' D<sup>2</sup> and windlass B, operating as shown, the tapering projection d<sup>2</sup> on the interior of the frame D', matching within and supporting the forked end of the windlass, as herein specified.

3. The tenons or cross-supports D<sup>3</sup>, in combination with the frames D' D<sup>2</sup> and their connections, and serving therewith and with the fence-wire A, as herein specified.

4. The upright or handle G on one of the frames D' D<sup>2</sup>, in combination with the windlass B B' B<sup>2</sup>, the hook or fastening C, and turning-lever M, as herein specified.

5. The double hook C, in combination with the wire A, windlass B, and supporting-frame D' D<sup>2</sup>, as herein specified.

In testimony whereof I have hereunto set my name in presence of two subscribing witnesses.

WM. ARCHD. MURRAY.

Witnesses:

D. MCINTYRE,  
S. CARROLL.