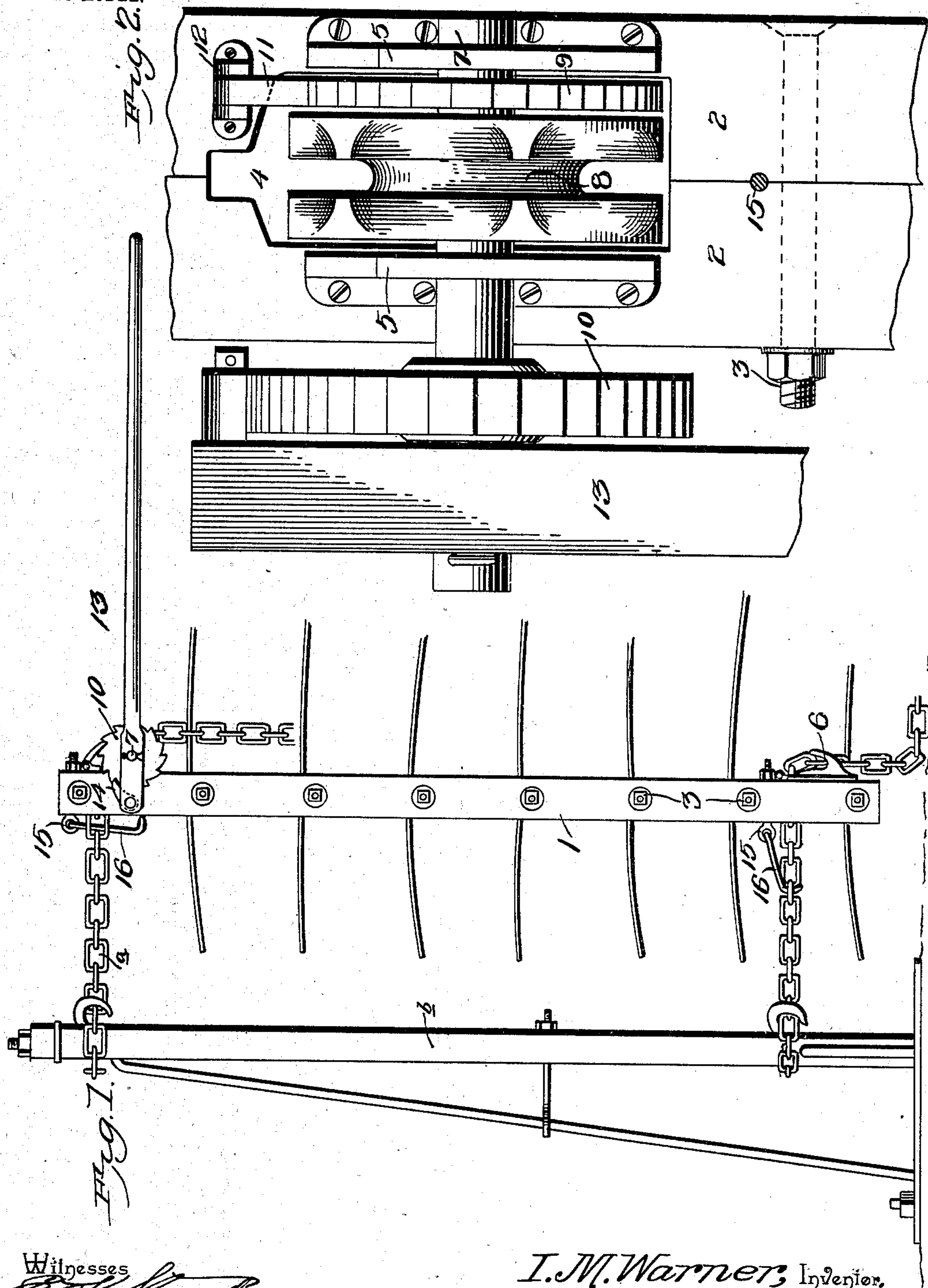


No. 723,221.

PATENTED MAR. 17, 1903.

I. M. WARNER.
WIRE FENCE STRETCHER.
APPLICATION FILED FEB. 27, 1902.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

ISAAC M. WARNER, OF UNION CITY, MICHIGAN, ASSIGNOR TO FRANK C. BOISE, OF UNION CITY, MICHIGAN.

WIRE-FENCE STRETCHER.

SPECIFICATION forming part of Letters Patent No. 723,221, dated March 17, 1903.

Application filed February 27, 1902. Serial No. 95,986. (No model.)

To all whom it may concern:

Be it known that I, ISAAC M. WARNER, a citizen of the United States, residing at Union City, in the county of Branch and State of Michigan, have invented a new and useful Wire-Fence Stretcher, of which the following is a specification.

My invention is an improved wire-fence stretcher; and it consists in the peculiar construction and combination of devices hereinafter fully set forth and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a wire-fence stretcher embodying my improvements, showing the same in operative position. Fig. 2 is a detail elevation showing a portion of the front side of the stretcher-bar, a pair of bearing-brackets thereon, the chain-wheel having its shaft engaged by said bearing-brackets, the operating-lever, the ratchet-wheels, and the pawls which coact therewith.

The stretcher-bar 1 comprises a pair of section-bars 2, which are secured together by bolts 3. The section-bars 2 are adapted by the said bolts to be clamped on opposite sides of the runner-wires or wire-fence fabric. Openings 4 are formed in the stretcher-bar, partly in reach of the section-bars 2 in the opposing sides of the latter, the said openings 4 being near the upper and lower ends of the stretcher-bar and being of suitable size. Each of the section-bars 2 is provided on one side of each opening 4 with a bearing-bracket 5. Hence the stretcher-bar is provided with two pairs of the said bearing-brackets and the same are disposed on the front side of the stretcher-bar. The said bearing-brackets have bearing-slots 6, adapted to receive the shaft 7, on which the chain-wheel 8 is secured, and the said slots 6 are open at their upper sides, so that the said shaft may be readily mounted in and unshipped from either pair of the bearing-brackets at will. The chain-wheel 8 is so disposed on the shaft 7 that when the latter is mounted in one pair of the bearing-brackets the said chain-wheel will be opposite one of the openings 4. The stretcher-chains *a*, which are here shown as attached to an end post *b*, are passed through the openings 4 and may be successively engaged by

the chain-wheel, as will be understood. In Fig. 1 of the drawings the upper chain is engaged by the chain-wheel.

A pair of ratchet-wheels 9 10 are keyed or otherwise secured on the shaft 7. The ratchet-wheel 9 is near one side of the chain-wheel 8, so that it may be engaged by a detent-pawl 11, which is pivoted to a bearing 12, that is here shown as secured to the front side of the stretcher-bar. It will be understood that two of these detent-pawls 11 will be provided for the stretcher-bar, so that the ratchet-wheel 9 may be engaged by one of said detent-pawls when the shaft 7 is mounted in either pair of the bearing-brackets 5. The ratchet-wheel 10 is secured to the shaft 7 near one end thereof, which I will call the "inner" end. An operating-lever 13 is pivotally mounted on the shaft 7 on the outer side of the wheel 10, so that said lever is adapted to oscillate on said shaft, and the latter is adapted to rotate in said lever. The inner end of the lever projects somewhat beyond the rear side of the ratchet-wheel 10, and a gravity-pawl 14 is pivotally connected to the extended inner end of the lever and engages the ratchet-wheel 10. It will be understood that by engaging one of the stretcher-chains with the periphery of the chain-wheel 8, which is notched to fit the links of said chain, and by oscillating the lever 13 the pawl 14 and ratchet-wheel 10 will serve to rotate the shaft 7, and hence the chain-wheel, by a step-by-step movement, thereby drawing inwardly on the stretcher-chain, and hence stretching the fence fabric. The detent-pawl 11, in coaction with the ratchet-wheel 9, prevents retrograde rotation of the shaft 7 and chain-wheel, and hence permits of the oscillatory motion of the lever 13 and maintains the tension on the stretcher-chain and the fence fabric.

An eyebolt 15 is secured to the stretcher-bar near the upper and lower ends thereof, and to the eye of each eyebolt is connected a hook 16. The said hooks, as will be understood from an inspection of Fig. 1 of the drawings, serve to engage the stretcher-chains to lock the stretcher-bar thereto when the stretcher-chains are under tension, and hence enable the stretcher-wheel and its connec-

tions to be operated successively in connection with the stretcher-chains in stretching the fence.

Having thus described my invention, I claim—

1. In combination with a stretcher-chain secured to a fixed point, a stretcher-bar having a plurality of bearings, a shaft adapted to be journaled in said bearings and shifted from one set to another, a chain-wheel and ratchet-wheels 9, 10, secured on said shaft, a detent-pawl connected to and carried by the stretcher-bar and adapted to engage the ratchet-wheel 9, a lever mounted for oscillation on the shaft, a pawl carried by the lever and adapted to engage the ratchet-wheel, whereby the stretcher-bar may be moved longitudinally on the chain by engaging the latter with the chain-wheel and operating the lever, and means to lock the stretcher-bar to the chain, when the latter is under tension, to relieve the chain-wheel and its connections of the stress of the chain, and hence permit the shaft to be shifted from one set of bearings to another without relaxing the tension

on the stretcher-chains and the fence fabric, substantially as described.

2. In combination with a stretcher-bar having a plurality of bearings, a revoluble stretcher element having a shaft or axle adapted to be detachably mounted in either set of the bearings, a plurality of stretcher connections secured to a fixed point and adapted to be engaged successively by the said revoluble stretcher element and to be placed under longitudinal tension thereby, to move the stretcher-bar longitudinally on said stretcher connections and means, independent of the revoluble stretcher element to connect the stretcher-bar to the respective stretcher connections, each independently of the other, substantially as described.

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

ISAAC M. WARNER.

Witnesses:

H. T. CARPENTER,
CHAS. H. LOWELL.