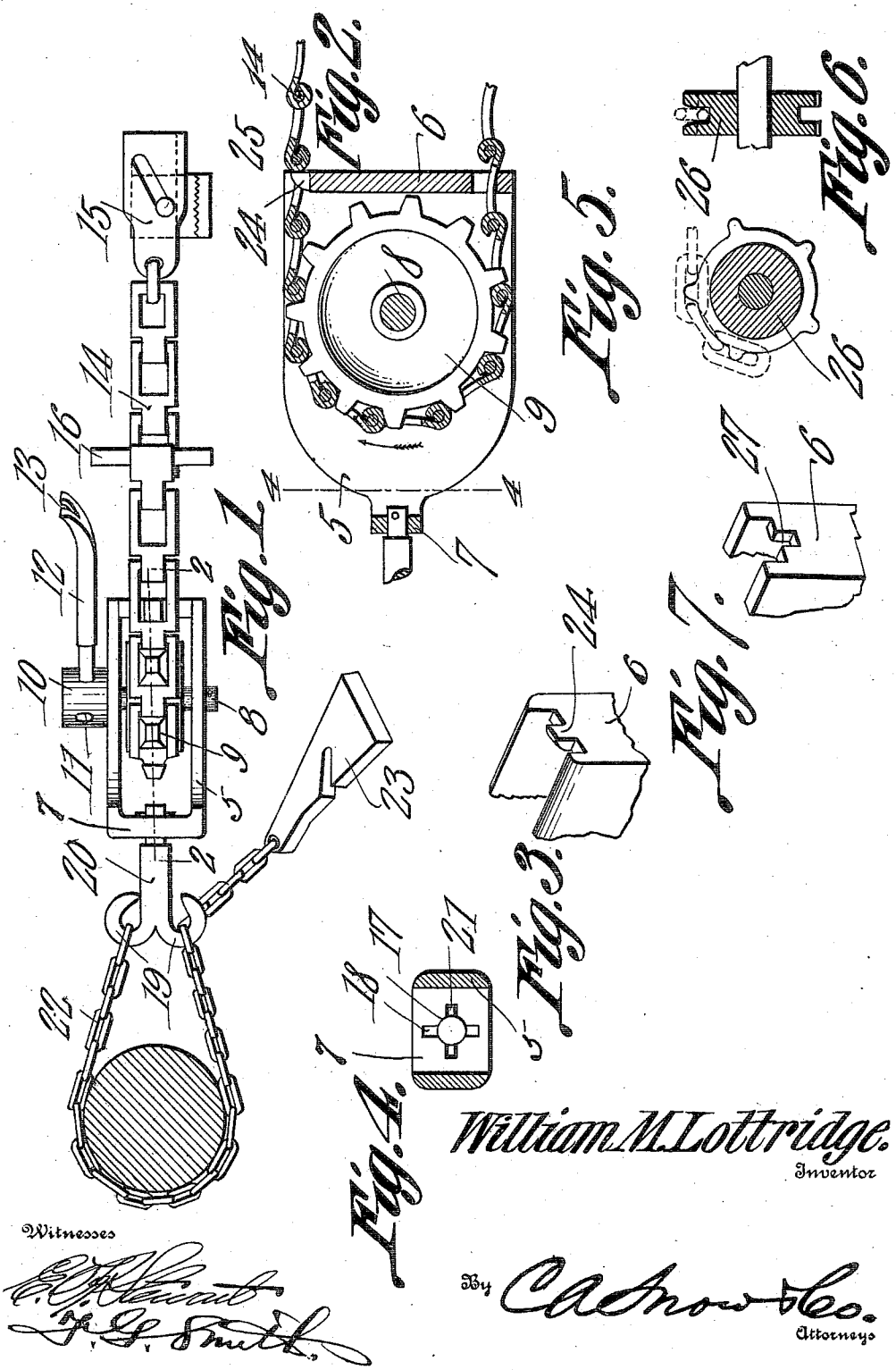
W. McL. LOTTRIDGE.

WIRE STRETCHER.

APPLICATION FILED MAR. 28, 1910.

985,816. Patented Mar. 7, 1911.



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WIRE-STRETCHER.

985,816. Specification of Letters Patent. Patented Mar. 7, 1911.

Application filed March 28, 1910. Serial No. 552,015.

To all whom it may concern:

Be it known that I, WILLIAM M. LOTTRIDGE, a citizen of the United States, residing at Huntsville, in the county of Schuyler and State of Illinois, have invented a new and useful Wire-Stretcher, of which the following is a specification.

It is the object of the present invention to provide an improved construction of fence wire stretcher, and the invention aims primarily to provide a compact, readily operable and inexpensive device of this class.

The invention also aims to obviate the employment of a pawl and ratchet for holding the stretching mechanism against movement so as to slack the wire being stretched.

With the above and other objects in view, the invention consists in the construction and arrangement of parts shown in the accompanying drawings and in certain novel features which will presently be fully explained.

In the accompanying drawings,—Figure 1 is a top plan view of a wire stretcher constructed in accordance with the present invention. Fig. 2 is a vertical sectional view through the body of the stretcher. Fig. 3 is a perspective view of one corner of the casing or body of the stretcher. Fig. 4 is a sectional view taken in a plane at right angles to the plane in Fig. 2. Fig. 5 is a sectional view illustrating a further modified form of sprocket. Fig. 6 is a view similar to Fig. 5, taken in a plane at right angles thereto, and Fig. 7 is a perspective view in detail illustrating a slightly modified construction of the body of the stretcher.

In the drawings, the wire stretcher is illustrated as embodying a casing in which the stretching mechanism is mounted and this casing includes cheek pieces 5, a connecting wall or web 6, and a narrow connecting portion, indicated by the numeral 7. A shaft 8 is journaled in the cheek pieces 5 and upon this shaft is fixed a sprocket gear, indicated by the numeral 9. One end of the said shaft 8, beyond the corresponding or adjacent cheek pieces is enlarged, as indicated by the numeral 10 and is formed with a number of radial openings or sockets 11 into which may be fitted a hand bar 12 which may be turned for the purpose of rotating the shaft and imparting like movement to the gear thereon. It will be observed from inspection of Fig. 1 of the drawings that the bar 12 is provided at one end with a kerf 13 and that consequently this bar may be detached from the shaft 8 and may be employed, itself, as a wire stretcher or a wire twister and may also be used in extracting staples.

A sprocket chain, indicated by the numeral 14 is trained about the gear 9 and one stretch of the said chain passes over the upper end of the wall 6 of the casing or body of the stretcher, whereas the other stretch or run of the chain passes through a slot in the said wall near its lower end. To the end of the lower stretch of the chain there is attached a wire clamp 15 which, as it is of the ordinary construction, need not be specifically described, it being understood, furthermore, that any desired form of clamp may be employed equally as well as the one here shown. To the end of the upper stretch of the chain, there is attached a cross bar or ring which is indicated by the numeral 16 and which is of greater length than the width of the space between the cheek pieces 5, it being understood that this bar, coming into engagement with the edge of the said cheek pieces, will hold the chain against being completely drawn through from between the said cheek pieces, the clamp 15 incidentally serving the same purpose.

The inner face of the connecting portion 7 is formed with an opening, indicated by the numeral 17, and radiating from the opening, with notches 18. A two-billed hook 19 has a shank 20 which is fitted through the opening 17, rotatably, and has engaged through it a transverse pin 21, the ends of which are adapted to seat in the notches 18 whereby the hook may be held in several positions with respect to the casing and without danger of the said casing overturning. To one bill of the hook 19 is connected one end of a chain, which is indicated by the numeral 22, and which is passed about one of the fence posts to which the wire being stretched is to be attached, and this chain is adapted to have any one of its links engaged in the other hook 19 so as to adjust the chain about the post. It is preferable that the wire gripping member 23 be connected to the last mentioned end of the chain 22 and this member, while it is here shown as in the nature of a block formed with a kerf, may assume any other desired form or structure, such for example as a dupli-

cate of the clamp 15, and the function of this block will presently be specifically described.

From the foregoing description of the invention, it will be readily understood that by rotating the sprocket gear 9 in the direction indicated by the arrow in Fig. 2 of the drawings, the lower stretch of the chain will be pulled upon, resulting in a pull being exerted upon a wire gripped by the wire gripping member 15. Heretofore it has been customary to hold such a gear as the gear 9, against backward rotation by a pawl and ratchet, but such means is undesirable, owing to the expense involved, and the fact that the casing in which it is mounted must at all times be in upright position to insure of the engagement of the pawl with the ratchet. To permit of the attainment of the desired results, without incurring the expense incident to the use of a pawl and ratchet, as above pointed out, the upper end of the wall 6 is formed with a tooth 24 and whereas that face of the tooth which opposes the gear 9 is convexed, as at 25, its other face is abrupt and it will be readily understood that inasmuch as the upper stretch of the sprocket chain passes over the said upper end of this wall 6, its links will ride successively over the said tooth so that should the hand bar 12 be released, the tension of the wire being stretched would not backwardly rotate the gear 9, inasmuch as the tooth would engage in the opening of one of the links. If it is desired to employ the device to pull together the severed ends of a fence wire so that the same may be spliced, one strand of the wire is engaged in the clamp 15 and the other strand in the kerf of the block 23, the device being then operated to draw the strands together.

If it is desired to employ an ordinary link chain instead of the sprocket chain shown in Figs. 1 and 2 of the drawings, a double sprocket 26, such as illustrated in Figs. 5 and 6 of the drawings, is employed and in such instance, the connecting wall 6 of the body of the device is notched, as at 27, instead of being formed with the upstanding tooth 24.

What is claimed is:

1. In a device of the class described, a casing having one wall formed with an upstanding tooth, a sprocket gear mounted in the casing, a sprocket chain trained over the gear and adapted to have its links ride over the said tooth, and a wire clamp carried at one end of the chain.

2. In a device of the class described, a casing having one wall formed with an upstanding tooth, a sprocket gear mounted in the casing, a sprocket chain trained over the gear and adapted to have its links ride over the said tooth, and a wire clamp carried at one end of the chain, said tooth having one side convexed and the opposite side abrupt.

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

WILLIAM McLELLAND LOTTRIDGE.

Witnesses:

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