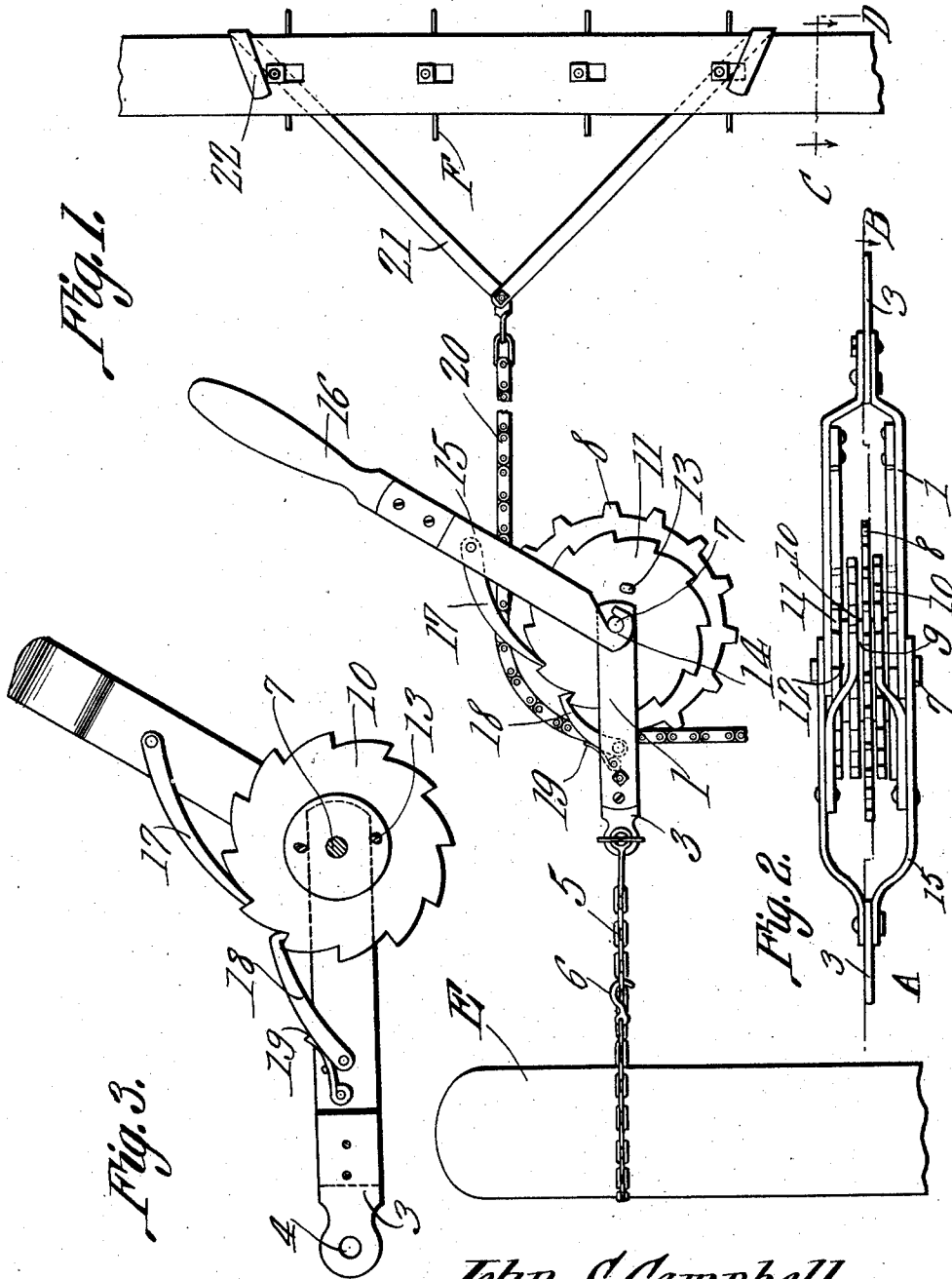


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 WIRE STRETCHER.  
 APPLICATION FILED AUG. 10, 1910.

1,003,333.

Patented Sept. 12, 1911.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN S. CAMPBELL, OF POCAHONTAS, ARKANSAS.

## WIRE-STRETCHER.

1,003,333.

Specification of Letters Patent. Patented Sept. 12, 1911.

Application filed August 10, 1910. Serial No. 576,455.

To all whom it may concern:

Be it known that I, JOHN S. CAMPBELL, a citizen of the United States, residing at Pocahontas, in the county of Randolph and State of Arkansas, have invented a new and useful Wire-Stretcher, of which the following is a specification.

This invention relates to fence stretchers of that type adapted for pulling wire fabric fences until the same are taut.

One of the objects of the invention is to provide a simple, durable and compact structure of this character which can be readily attached to a fence fabric and readily manipulated, the various parts of the stretcher being assembled in such a manner that they may be readily taken apart for the purpose of storing or for conveying them in a small bundle.

With the foregoing and other objects in view the invention consists in certain novel details of construction and combinations of parts as hereinafter more fully described and pointed out in the claim.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings: Figure 1 is a side elevation of the stretcher, the same being shown connected to a fence fabric and to an anchoring element. Fig. 2 is a plan view of the stretcher with the flexible part and the clamp removed. Fig. 3 is a section on the line A—B Fig. 2.

Referring to the figures by characters of reference 1 designates a yoke having an ear 2 extending from the crown portion thereof, said ear being secured to a plate 3 having an eye 4 therein. The eye is adapted to engage one end portion of an anchoring chain 5 having a hook 6 at its free end and whereby said chain may be readily attached to a stump, post or other anchoring element shown in general at E in Fig. 1.

A shaft 7 is mounted in the end portions of the yoke 1 and mounted on this shaft is a central disk 8 constituting a sprocket wheel. This disk is spaced by means of gaskets or washers 9 from ratchet wheels 10 located adjacent each side of the sprocket wheel and additional ratchet wheels 11 are interposed between the ratchet wheels 10 and the sides of the yoke, these wheels 10 and 11 being spaced by washers or gaskets 12. All of the disks or wheels may be of sheet metal if preferred, can be cast, and the corresponding teeth of the various ratchet wheels are

disposed in alinement. All of the wheels and gaskets are connected together in any suitable manner so as to rotate together, this connection being effected either by means of rivets 13 extending transversely through them or by means of keys, not shown, which may be utilized for securing them to the shaft 7.

The projecting terminals of the shaft 7 are detachably engaged by the hooked ends 14 of a yoke or fork 15 formed at one end of an operating lever 16. Pawls 17 are pivotally mounted upon the inner faces of the sides of fork 15 and the free end portions of these pawls are bent or off-set inwardly so that the terminals of the pawls will rest upon the ratchet wheels 10. The wheels 11 are normally engaged by pawls 18 which are pivotally connected to the yoke 1 and are provided with springs 19 for holding them in their normal positions. These pawls serve to prevent the various wheels from rotating in one direction.

A chain 20 is adapted to engage the sprocket wheel 8 and arms 21 are pivotally connected to one of the end links of the chain and have terminal hooks 22 adapted to detachably engage a clamp.

In using the stretcher the fence fabric, which has been indicated at F is placed in the clamp and chain 5 is placed in engagement with an anchoring element E and the hooks 22 of arms 21 are placed in engagement with the upper and lower portions of the clamp. Chain 20 is then inserted through the yoke 1 so as to engage the upper portion of the sprocket wheel 8. The fork 15 of the lever can then be placed into engagement with the projecting ends of the shaft 7 and the pawls 17 will therefore engage the ratchet wheels 10. By swinging the lever toward the anchoring element E, the pawl 17 will rotate the several wheels and the dogs 1 will engage the teeth of the ratchet wheels 11 as they are brought successively thereunder, these dogs serving to hold the wheels against rotation in the other direction. As the wheels are thus rotated by the lever, the chain 20 will be drawn longitudinally and the fence fabric stretched. The dogs will hold the parts till the fence fabric has been secured to its post and, if desired, the lever 16 can be entirely removed from the shaft 7 while the fabric is thus being held.

During the movement of the lever toward

the anchoring element E the pawls 17 will ultimately move onto the dogs 18 and be elevated by said dogs so as to move out of engagement with the ratchet wheels, thus stopping the further rotation of said wheels until after the lever has been brought back to its initial position and until it is again swung toward the anchoring element. This movement of the pawls onto the dogs also serves to positively force the dogs into engagement with the ratchet wheels if, for any reason, the springs 19 should not operate properly.

It will be seen that the entire device can be readily manufactured inasmuch as the wheels thereof are formed of heavy sheet metal and can therefore be cheaply made. The device has few parts and cannot therefore readily get out of order.

Various changes can of course be made in the construction and arrangement of the parts without departing from the spirit or sacrificing any of the advantages of the invention as defined in the appended claim.

What is claimed is:—

A wire stretcher including a sprocket, ratchet disks spaced apart at the sides of

the sprocket and revoluble therewith, an operating lever mounted for oscillation about the axis of rotation of the sprocket and disks, a structure in which said sprocket and disks are supported, dogs pivotally connected to said structure, yielding means for holding the dogs normally in engagement with certain of the ratchet disks, pawls pivotally connected to the lever and adapted to engage the other ratchet disks, said pawls being offset laterally and movable onto the dogs to force the dogs into engagement with their ratchet disks and to disengage the pawls from their ratchet disks simultaneously upon the completion of the movement of the lever in one direction, and separate means connected to the disk carrying structure and to the sprocket, respectively, for engaging a fixed structure and the wire to be stretched.

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

JOHN S. CAMPBELL.

Witnesses:

L. R. MARTIN,  
M. M. McHANEY.