

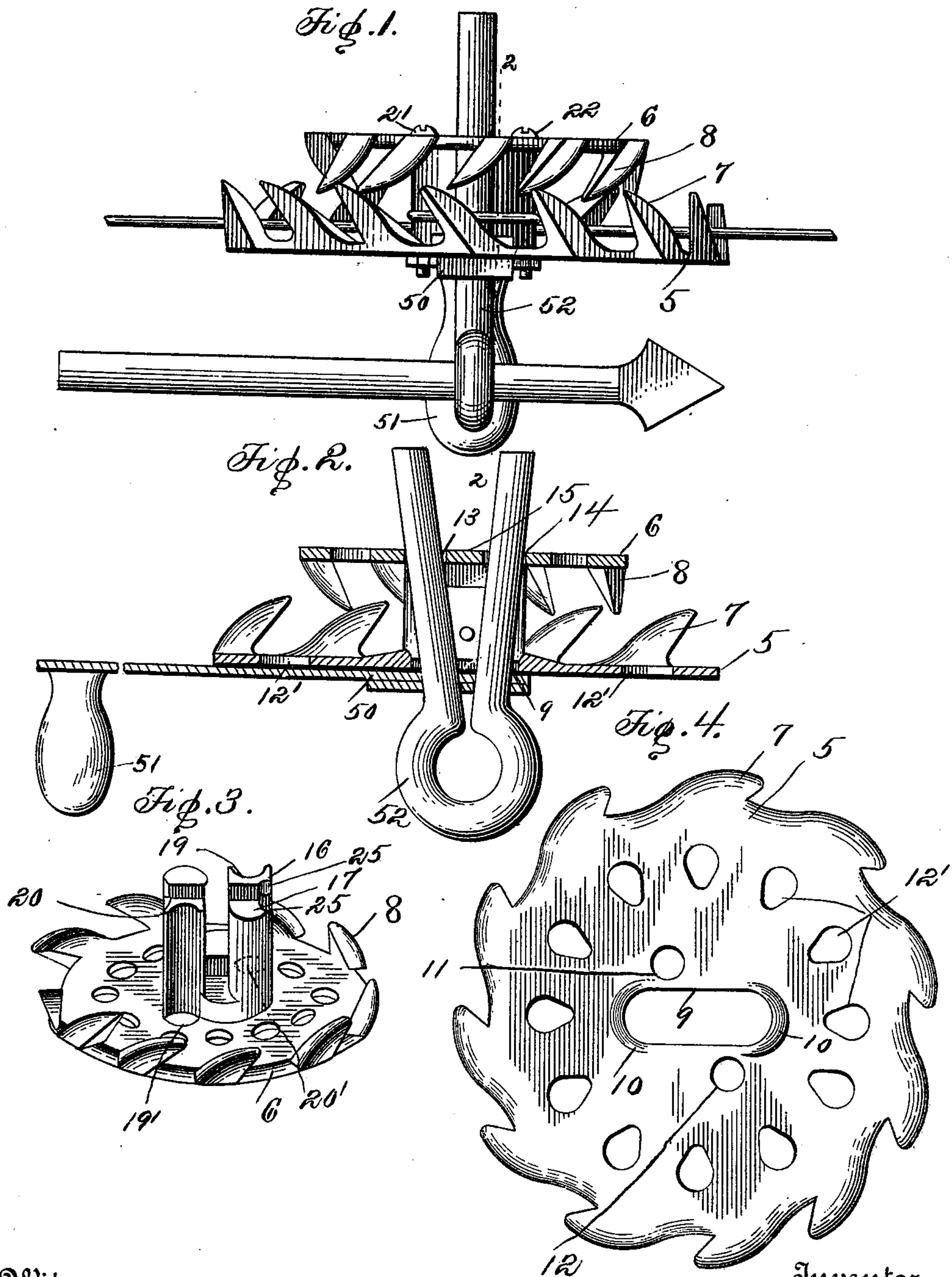
No. 671,955.

Patented Apr. 16, 1901.

M. W. GUNN.
WIRE STRETCHER.

(Application filed June 13, 1900.)

(No Model.)



Witnesses
E. A. Ryan.
H. E. Chandler.

Inventor
M. W. Gunn.
by *[Signature]*
Attorneys

UNITED STATES PATENT OFFICE.

MOSES W. GUNN, OF LASALLE, ILLINOIS.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 671,955, dated April 16, 1901.

Application filed June 13, 1900. Serial No. 20,210. (No model.)

To all whom it may concern:

Be it known that I, MOSES W. GUNN, a citizen of the United States, residing at Lasalle, in the county of Lasalle, State of Illinois, have
5 invented certain new and useful Improvements in Wire-Stretchers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-
10 pertains to make and use the same.

This invention relates to wire-stretchers in general, and more particularly to the class of mid-wire take-ups, the object of the invention being to provide a device of this nature
15 which will be simple and cheap of construction and which may be readily operated to securely engage the wire and hold it in a taut condition.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a side elevation showing the stretcher as applied to a wire to tighten it and illustrating the operation of the de-
25 vice. Fig. 2 is a central vertical section of Fig. 1 and showing the manner of application of the stretcher to the winding-tool. Fig. 3 is a perspective view showing one element of the stretcher. Fig. 4 is a plan view show-
30 ing a second element of the stretcher.

Referring now to the drawings, the construction of the present invention comprises two disks 5 and 6, which are similar in general outline and each of which has a series of
35 teeth 7 and 8, respectively. The teeth of each disk project from one face thereof and at an angle thereto. The disk 5 is of a diameter greater than the disk 6, and at the central part thereof there is formed a radial slot 9, which extends at both sides of the center of the disk and has rounded ends, the end por-
40 tions of the slots or the material at the ends of the slot being reinforced or thickened, as shown at 10, for a purpose that will be presently explained. Upon opposite sides of the
45 slot 9 and adjacent opposite ends thereof are formed circular perforations 11 and 12, the body of the disk being reduced in weight by forming or casting perforations 12' therein.

The disk 6, which coöperates with the disk 5, 50 has openings 13 and 14, formed at opposite sides of its center and separated at its center by a web or rib 15, these openings corresponding to the slot 9, so as to aline therewith when the disks are assembled in their operative po-
55 sitions. At opposite sides of the openings 13 and 14 are formed bifurcated hub-sections 16 and 17, these sections being separated by an interspace equal to the width of the slot 9, and in the outer faces of the diametrically 60 opposite legs of the bifurcated sections are formed grooves 19 and 20, which lead to perforations 19' and 20' in the disk 6, these perforations 19' and 20' being positioned to aline with the perforations 11 and 12 to receive 65 clamping-bolts 21 and 22, which act to hold the disks firmly connected. To prevent rotatable displacement of one disk with respect to the other, the ends of the legs of the bifurcated hub-sections are recessed, as shown at 70
25, to receive the extremities of the thickened portions 10. When the disks are thus assembled, the extremities of the fingers of the disk 6 lie within the inclosure of the extremi-
75 ties of the fingers of the disk 5.

In the stretching operation the two disks are separated by disengaging the clamping screws or bolts therefrom, after which the disk 6 is adjusted to receive the wire to be tightened between the legs of its bifurcated 80 members, after which the disk 5 is clamped thereagainst by means of the clamping-bolts. When the plates have been firmly connected in this manner, the winding-tool is engaged with the disks. The winding-tool consists of 85
a crank portion 50, having a handle 51 at one end, while through the opposite end there are passed the legs of a staple 52, forming two fingers for grasping the wire, these two fin-
90 gers being engaged with the openings through the disks in such manner that the wire when engaged with the tightener will pass between the fingers. By means of this tool the tightener is rotated to the proper extent to give the proper degree of tension to the wire, the 95
teeth 7 and 8 engaging the wire to prevent return rotation of the winder.

It will of course be understood that in prac-

tice the specific form of the tool employed for rotating the tightener may be varied and that various changes may be made in the materials and proportions of the tightener without departing from the spirit of the invention.

With this form of ratchet after the slack has been wound upon the hub in the form of a coil the teeth 8 may be engaged with the wire, and the disk 5 may be then removed.

10 A short piece of wire may then be passed between the hub-sections through the loop and tied in this position. The hub may then be drawn from the loop.

Should it be desired to tighten the wire further at any time, the two disks are applied to the wire, so as to receive the loop in the same manner as when the loop was originally wound, the tie is taken off, the wire is wound then to make a larger coil, and a new tie is

20 put in place, a disk-tooth being caught over the wire to prevent return rotation of the implement during the application of the tie.

In operating a series of ratchets on a woven-wire fence one ratchet is engaged with each

25 wire of the fence and each ratchet is operated, the whole number of ratchets being successively turned each a few teeth, so that the fence is given an even tension.

It will of course be understood that, if desired, the ratchets may be permitted to remain upon the fence for operation from time to time to keep the wires at the proper tensions.

Under some conditions of tightening a wire the large disk may be used in connection with the crank, as when the ratchet is not to be permanent, the ratchet-disk being disconnected from the wire after the loop is made and tied.

40 With the arrangement of the teeth of one disk within the inclosure of the teeth of the other disk one set of teeth acts to force the wire into engagement with the other set of teeth and to prevent accidental disengagement.

It will of course be understood that the im-

plement described, however, may be used for any purpose to which it is applicable.

What is claimed is—

1. A wire-stretcher comprising two separable disks, one of the disks being provided with a bifurcated hub and means for clamping the second disk against the free end of the hub, each of the disks having laterally-extending fingers of which one series extends

55 into the inclosure of the other series.

2. A wire-stretcher comprising two separable disks of different diameters, each of the disks having laterally-extending fingers, a bifurcated hub upon one of the disks and extending on the same side of the disk with the fingers thereof, and means for clamping the second disk against the free end of the hub and with the extremities of the fingers of one disk within the inclosure of the fingers of the

65 other disk.

3. A wire-stretcher comprising two separable disks, each of which has inclined fingers extending at one side thereof, a hub upon one of the disks, said hub being bifurcated to form two legs and each leg being in turn bifurcated, openings in the disks leading to the interspace between the legs of the hub, and means for clamping the second disk against the free end of the hub of the first disk.

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4. A wire-stretcher comprising two separable disks, each of which has a series of fingers extending at one side thereof, a bifurcated hub upon one of the disks, means for clamping one disk against the free end of the

80 hub of the other disk and openings in the disks leading to the interspace between the legs of the bifurcated hub, the fingers of one disk lying with their extremities within the inclosure of the fingers of the other disk.

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In testimony whereof I hereunto set my hand, in the presence of two witnesses, this 24th day of April, 1900.

MOSES W. GUNN.

Witnesses:

PETER E. COLEMAN,
JAMES V. COUGHLIN.