

D. J. WINN.
WIRE STRETCHER FOR FENCES, &c.
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1,064,413.

Patented June 10, 1913.

Fig. 1.

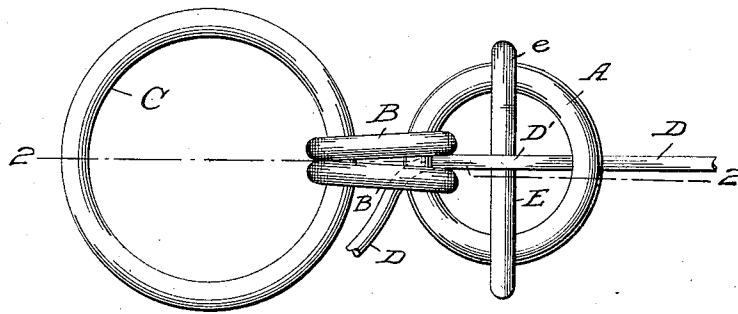


Fig. 2.

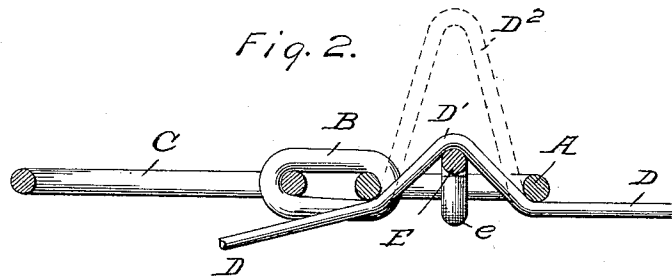


Fig. 3.

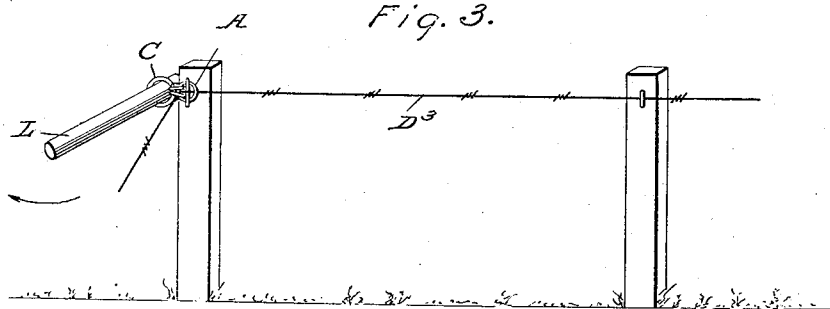
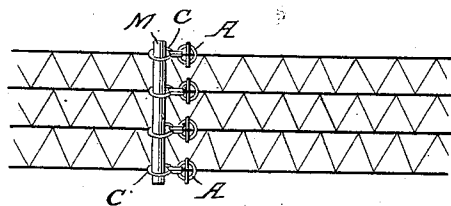


Fig. 4.



WITNESSES

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WIRE-STRETCHER FOR FENCES, &c.

1,064,413.

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To all whom it may concern:

Be it known that I, DAVID JAMES WINN, a citizen of the United States, residing at Sumter, in the county of Sumter and State of South Carolina, have invented certain new and useful Improvements in Wire-Stretchers for Fences, &c., of which the following is a specification.

The object of my invention is to provide an improved wire stretcher for stretching wires, both barbed and plain, in putting up wire fences which shall be very simple and inexpensive and yet strong and durable, which will not allow the wire to slip and which may be conveniently operated by an ordinary hand spike or straight lever, and to these ends my invention consists in the novel construction and arrangement of wire stretcher hereinafter shown and described with reference to the drawing, in which:

Figure 1 is a side view of my stretcher, showing it gripped upon the wire. Fig. 2 is a longitudinal section of the same on line 2—2 of Fig. 1. Fig. 3 shows its application by means of a lever to a strand of barbed wire which is being fastened to the posts, and Fig. 4 is a small detail view, showing a plurality of my stretchers as applied in putting up netted or ready made fences having a series of longitudinal strands.

In the drawing, Figs. 1 and 2, A represents a stout metal ring of about one and a half inches internal diameter and preferably of circular form, but may be oval, if desired. C is a second stout metal ring of about two and a half inches internal diameter. The rings C and A are just plain, smooth and strong metal rings of uniform cross section throughout their entire circumferences. These two rings lie in the same plane and are permanently coupled together by two closed links B B, but only one may be used, if desired. On the smaller ring A there is permanently hinged a stout grip bar E which at one end *e* is bent around the cross section of the ring so as to form an eye or loop which incloses the ring on one side and forms an articulation of the bar with the ring while at the other end it is free. This grip bar is of a little greater length than the diameter of the ring, and extends straight across the tops of both sides of the ring and as the ring A is of uniform cross section the articulating loop *e* may slip around the ring to any desired point for the purpose hereafter described. D is a strand

of wire which is to be put under tension or stretched in putting up the fence. To connect it to my stretcher it is only necessary to bend it into a small loop, as seen at D² in dotted lines in Fig. 2, and then project the grip bar through this loop and then tighten the wire. To do this the loop must be long enough and be projected far enough through the ring, to let the grip bar E swing under the bend of the loop, after which the tension will bring down the loop on the bar as at D' with a bend short enough to cause the wire to be firmly gripped at three places, *i. e.*, on top of the bar and underneath the two opposite sides of the ring. To put the proper stretching tension on the wire any ordinary lever which will pass through the ring C may be employed, such, for instance, as a hand spike or a pick handle,; or, if desired, a block and tackle may be hitched in the ring C. Ordinarily, however, the plain lever will be employed and this will be applied as in Fig. 3, *i. e.*, with the lever L passed a little way through the ring C with its end bearing against the fence post as a fulcrum. As shown in this view, it is applied to a barbed wire D³. When the short end of the lever gets its bearing against the post and the outer and long end of the lever is swung around a powerful tension is put upon the strand of wire and it is held to this tension while it is being connected by staples to the post in the usual way. The grip of this wire stretcher is a very secure one and the wire cannot possibly get away from the same, which is a very important result, because frequently in cam grips, and others of that type, after the wire is stretched the grip will sometimes loosen, owing to the wear of the centers and binding surfaces, and if this happens the man who is nailing the staples into the post is in great danger, for if the barbed wire springs back on him while adjusting the staple the barbs are liable to inflict very serious and even dangerous wounds. With my stretcher it will be seen that it is absolutely impossible for the wire ever to get out of the grip. To disconnect my stretcher from the wire it is only necessary to again bend the wire to a little longer loop so as to allow the grip bar to be swung from under the same and then re-adjust the stretcher to a new position along the wire.

I have stated that the ring A is preferably circular; this is important in some re-

spects, for then, as all diameters of the ring are the same, the grip bar E can change its position on the ring by slipping its loop circumferentially around on the uniform cross section of the ring, so that wear is never concentrated in one point, but is distributed around the ring. The loose duplicated links B B also have a special function and value. First, they prevent the concentration of the stretching strain on one point of the ring, and, secondly, as the wire lies between the links, as in Fig. 1, when the strain is on, the two links, one on each side of the wire, hold the wire at right angles to the gripping bar E. Furthermore, these loose links are important in preventing the breaking of the device, for they turn as the lever is swung around the post and thus prevent any breaking which would occur if the two rings were rigidly connected.

The object in making the ring A smaller than C is not only to let a large lever be entered into C, but the small ring makes a short crimp in the wire as it passes under the ring and over the straight grip bar on top of the ring, so that it permits the wire to be gripped without being bent back on itself, but extends on to the next post, the short bend in the small ring forming a sufficient lock for the tension in stretching the wire, and also avoiding all possibility of the wire slipping out. It will be seen also from Fig. 2 that the hinged grip bar has its eye or loop *e* formed wholly on one side of the longitudinal axis of the grip bar which throws the grip bar above the plane of the ring at both its ends and which causes the fence wire to have a higher and more abrupt crimp which holds it against the tension from slipping out lengthwise.

I am aware that in rope buckles a hinged tongue has been arranged to form a bend in the rope and the buckle has been connected to an eye by a ball and socket joint and I make no claim to any such construction, my invention being distinctive in the hinged grip bar bent to form an eye offsetting from its longitudinal axis and inclosing a ring of uniform transverse section so as to slip around on the same, also the plurality of the connecting links, and further the rings of different sizes.

My invention may be applied to wire of any type or form and may also be used in putting up ready made fences which have a plurality of longitudinal wires connected by cross wires or netting. Such a form of fence is shown in Fig. 4, and in this case one of my stretchers is applied to each longitudinal wire and a straight bar M is put

through all the rings C of the series of stretchers, which bar in such case would be connected through a sling with a block and tackle. To connect my stretchers all that is necessary is to bend the ready made fence transversely so as to form a series of loops in the longitudinal strands to permit the application of my stretchers in the manner hereinbefore described.

I claim:

1. A wire stretcher comprising two plain rings, a loose link connection inclosing the sides of and coupling the two rings together, one of the rings being made circular and of smooth, uniform transverse section throughout its circumference, a diametrical grip bar having one end bent to one side of its longitudinal axis around one side of the circular ring to inclose it in an eye and form a hinged articulation adapted to shift around the circumference of the ring and the other end of the hinged grip bar being free and extending across the other side of the circular ring.

2. A wire stretcher comprising two plain rings, a plurality of loose links inclosing the sides of and coupling the two rings together, one of the rings being made circular and of smooth, uniform transverse section throughout its circumference, a diametrical grip bar having one end bent around one side of the circular ring to inclose it in an eye and form a hinged articulation adapted to shift around the circumference of the ring and the other end of the hinged grip bar being free and extending across the other side of the circular ring.

3. A wire stretcher comprising two plain rings of different sizes, two links separately connecting the two rings independently of each other adapted to distribute the strain and hold the wire in alinement, and a diametrical grip bar having one end bent around one side of the smaller ring and the other end free and extending across the other side of said ring.

4. A wire stretcher comprising two plain rings, two links separately connecting the two rings independently of each other adapted to distribute the strain and hold the wire in alinement, and a diametrical grip bar having one end bent around one side of one of the rings and its free end extending across the other side.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID JAMES WINN.

Witnesses:

R. S. MOISE,

JAS. C. BRYAN.