

(No Model.)

M. J. DOHERTY.
COMBINED VISE AND WINCH.

No. 502,177.

Patented July 25, 1893.

FIG. 1.

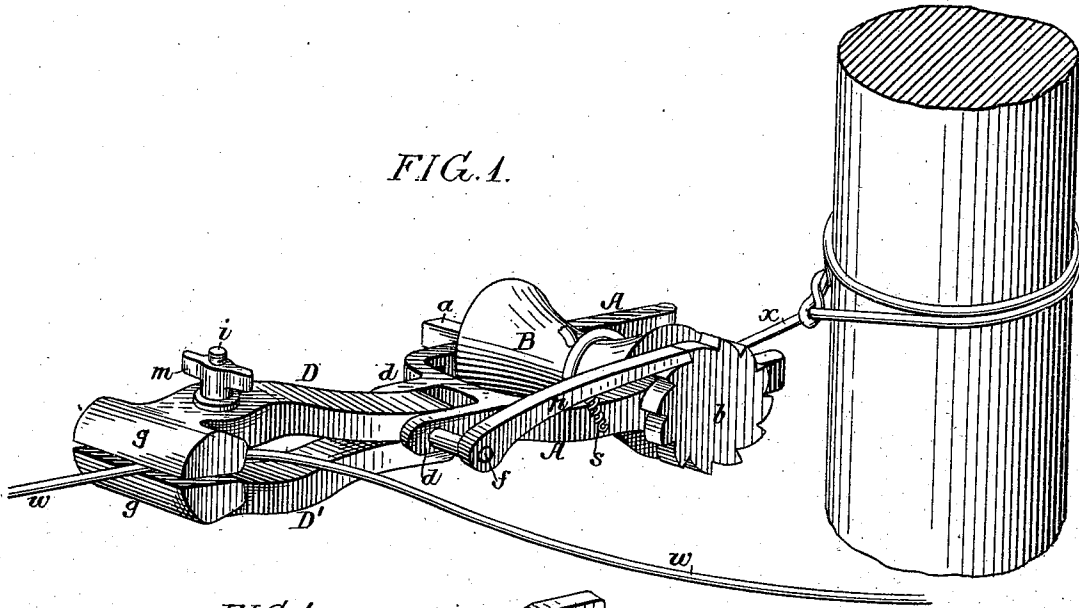


FIG. 4.

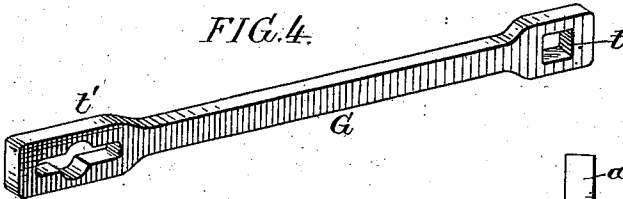


FIG. 2.

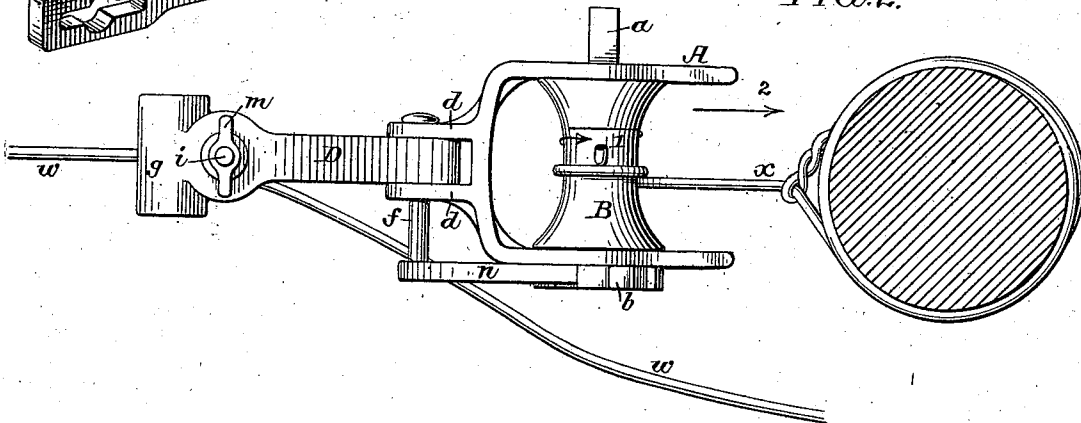
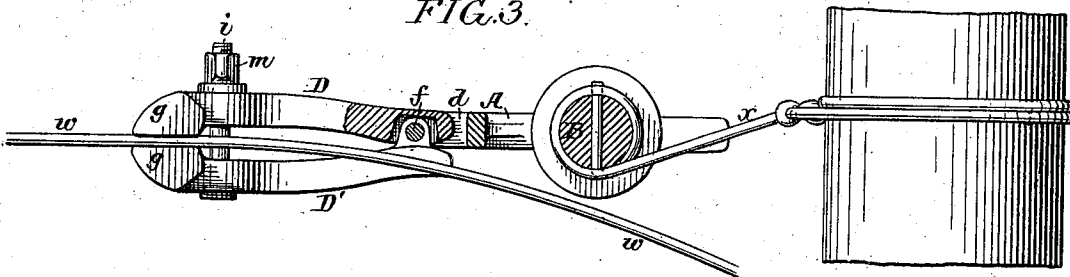


FIG. 3.



Witnesses:
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UNITED STATES PATENT OFFICE

MARTIN J. DOHERTY, OF PHILADELPHIA, PENNSYLVANIA.

COMBINED VISE AND WINCH.

SPECIFICATION forming part of Letters Patent No. 502,177, dated July 25, 1893.

Application filed May 21, 1892. Serial No. 433,841. (No model.)

To all whom it may concern:

Be it known that I, MARTIN J. DOHERTY, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented an Improved Combined Vise and Winch, of which the following is a specification.

The object of my invention is to provide a convenient and effective form of combined vise and winch for use by linemen employed in stringing electric wires upon poles or other supports, and this object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1, is a perspective view illustrating my combined vise and winch, and one manner in which it may be used. Fig. 2, is a plan view of the same with the pole in section. Fig. 3, is a side view, partly in section; and Fig. 4, is a perspective view of a duplex operating handle employed in connection with the device.

A represents a frame or yoke in the opposite sides of which are formed bearings for the spindle of the drum B of the winch, one end of this spindle being squared as at *a* for the reception of a suitable operating handle, and the other end of the spindle being provided with a ratchet wheel *b*.

Projecting from the end of the frame A are ears *d* through which passes a transverse pin *f* and to the latter are pivoted the two legs D D' of the vise, each of these legs being provided at its outer end with a clamping jaw *g*, and the legs being drawn together by means of a bolt *i* and winged nut *m* so as to tighten the jaws of the vise upon the wire which is to be stretched. The outer end of the pin *f* carries a pawl *n* which is held in engagement with the teeth of the ratchet wheel *b* by means of a spring *s*, or the pin may be rigid and the pawl may have sufficient elasticity to cause it to properly engage with the teeth of the ratchet wheel.

To the drum B of the winch is secured one end of a wire *x* and in stringing wires the other end of said wire *x* may be secured to the pole or other object to which the wire *w* is to be connected after it has been properly stretched.

In using the device the wire *w* is first firmly clamped between the jaws of the vise and the winch is then turned so as to wind up the

wire *x* upon the drum B in the direction of the arrow 1, Fig. 2, which has the effect of drawing the winch and vise in the direction of the arrow 2, thereby stretching the wire *w* to the desired extent, after which that portion of the wire which projects beyond the vise can be properly secured to the insulator on the cross arm or other support preparatory to the detaching of the vise and winch and their use in connection with the next pole or support.

In connection with the device which I have described I use a duplex handle G, such as shown in Fig. 4, this handle having at one end a square opening *t* for adaptation to the square end of the spindle of the winch drum, and at the other end an elongated opening *t'* adapted to fit the winged nut *m* of the vise so that the handle can be used either for tightening or loosening the vise or for turning the winch.

The vise is so constructed as to be capable of pulling up all different gages of wire to any advisable degree of tension, and the improved vise and winch is available for use in making repairs to wires which are in use without the necessity of employing the usual cut outs, the implement providing for the passage of the current around the point at which the repairs are being made. The device can also be used for tightening up guy wires or suspension wires for aerial cables and can be used in many cases in place of the usual "block and fall" in telegraph, telephone or electric light line work.

Having thus described my invention, I claim and desire to secure by Letters Patent—

The combination with the winch frame, provided with ears *d*, *d'*, of a pivot pin passing through said ears, the drum having a ratchet wheel, the vise carried by said pivot pin, and a pawl on one end of said pin adapted to the ratchet wheel of the winch, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MARTIN J. DOHERTY.

Witnesses:

WILLIAM D. CONNER,
HARRY SMITH.