

(No Model.)

J. McISAAC.
LINEMAN'S VISE.

No. 464,034.

Patented Dec. 1, 1891.

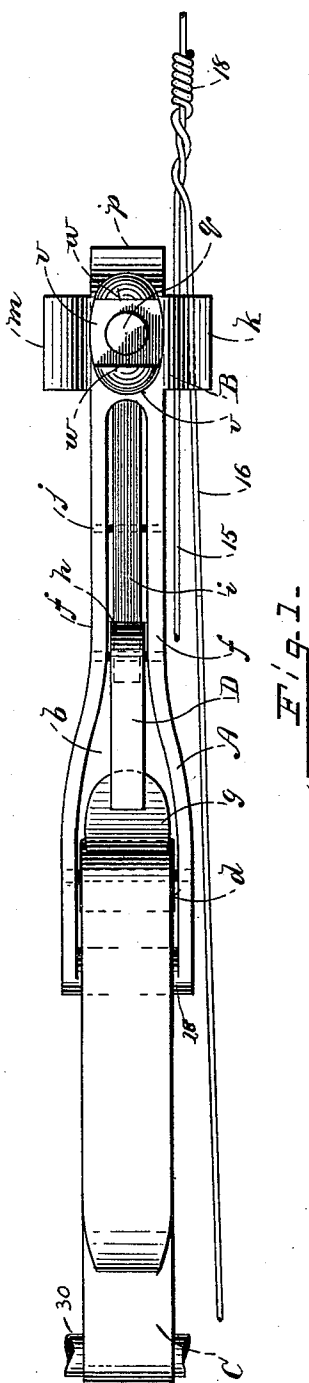


Fig. 1.

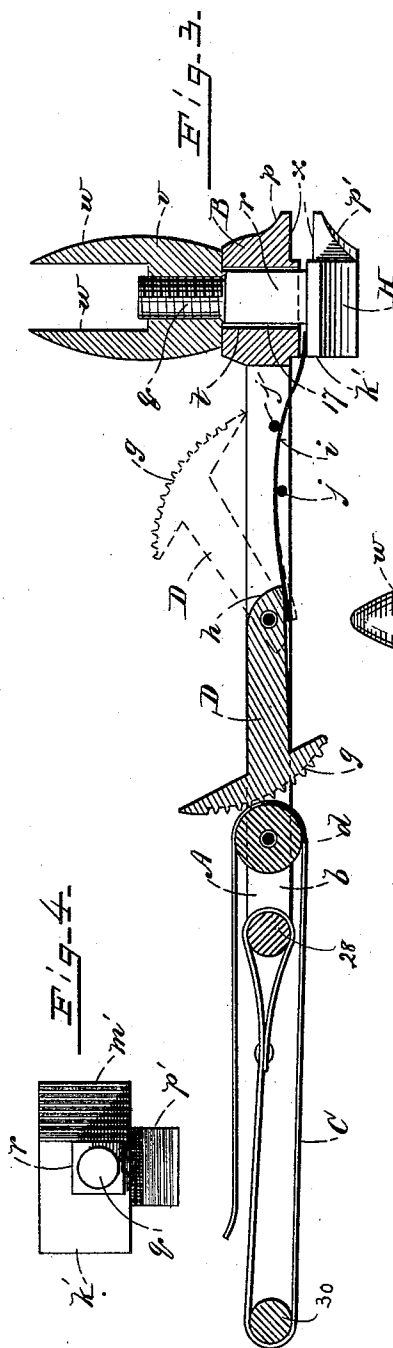


Fig. 2.

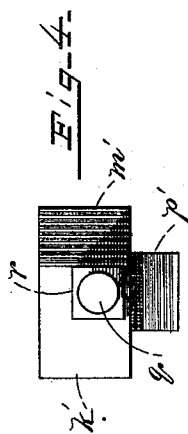


Fig. 3.

WITNESSES:
Wm. D. Duffer
Oliver H. Scanlon

INVENTOR:
John Mc Isaac
BY *C. A. Shaw* ATT'Y.

UNITED STATES PATENT OFFICE.

JOHN MCISAAC, OF MALDEN, MASSACHUSETTS.

LINEMAN'S VISE.

SPECIFICATION forming part of Letters Patent No. 464,034, dated December 1, 1891.

Application filed July 6, 1891. Serial No. 398,507. (No model.)

To all whom it may concern:

Be it known that I, JOHN MCISAAC, of Malden, in the county of Middlesex, State of Massachusetts, have invented certain new and useful Improvements in Linemen's Vises, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of my improved lineman's vise, the tension-strap being broken off. Fig. 2 is an end elevation of the same; Fig. 3, a vertical longitudinal section, and Fig. 4 an inside plan view, of the lower jaw.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawings.

My invention relates, especially, to vises which are particularly adapted for use in stretching and repairing electrical conducting-wires; and it consists in certain novel features hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the body of the vise, which consists of a metallic frame having a central longitudinally-arranged opening *b* and a head B at one end, which forms one jaw of the vise.

Journalled horizontally in the opening *b*, near the end opposite the jaw B, there is a friction-roll *d*, and at the end of the body, adjacent said roll, there is a bar 28. A strap C has one end secured to the bar 28.

A clamp D is pivoted between the sides *f* of the body A and has a segmental serrated head *g*, which engages the roll *d*. The opposite end of the clamp D is cam-shaped at *h*. A flat spring *i* is disposed between two transverse pins *j j'* in said body, one end thereof bearing against the cam end *h* of the clamp D, the purpose of said spring being to retain

said shoe in position when in engagement with the roll *d* or when thrown upward, as shown by dotted lines in Fig. 3.

The jaw B has two laterally-projecting lips *k m* and a longitudinally-projecting lip *p* arranged centrally between the lips *k* and *m*. The lower jaw H has similarly-arranged lips *k' m' p'*, and projecting centrally from said jaw there is a screw-bolt *q*, having a square shank *r*, which is fitted to slide in a suitable rectangular opening *t* in the jaw B. A nut *v* is turned onto the threaded portion of said bolt. Said nut is provided with elongated ears *w* to receive a lever whereby it may be set up tightly on the bolt. The opposite end of the spring *i* is disposed between the jaws and tends to throw the jaw H outward, as shown in Fig. 3. The inner faces of the jaw-lips *m m'* and *p p'* are serrated, as shown in Fig. 4, while the faces of the jaws *k k'* are smooth, said smooth jaws being particularly adapted for use with soft-copper and similar wires. The inner faces of the lips *p p'* are recessed or cut at *x* into planes parallel with the corresponding faces of the companion lips *k m*, a space thus being left between said lips *p p'* when the companion lips are in engagement.

In the use of my improvement the strap C is passed around a pin 30 on the wire pole or supporting frame. The broken end 15 of the wire is disposed between the lips *k k'* of the clamp-jaws B H and the nut *v* is turned onto the bolt *q*, clamping said wire securely between said lips. The strap C is then passed around the roll *d* and drawn, stretching the wire 15 tautly. The clamp D serves to retain the take-up by clamping the strap against the roll *d* in the usual manner. The opposite end 16 of the wire is then passed between the lips *k k'*, the outer ends of said lips being separated sufficiently to receive said wire after the wire 15 is clamped therein on account of the slight play permitted the bolt-shank *r* by the size of the bolt-opening *t*, as shown at 17. The end of the wire 16 is then wound at 18 onto the wire 15, as shown in Fig. 1, forming one-half of the connection. The strap being detached from the holder-pin, the nut *v* is turned off sufficiently to permit the clamp to

be removed from the wires, the spring *i* separating the jaws as soon as released by the nut. The connection 18 is then passed between the lips *p p'*, which, being separated farther than the companion lip described, readily receives said joint, as shown in Fig. 2, without the necessity of turning the nut any considerable distance on the bolt, thus effecting much saving of time. The clamp is now used to prevent the wire rotating while the end 15 is wound onto the wire 16, forming the second half of the connection at 19, as shown in Fig. 2.

Having thus explained my invention, what I claim is—

1. In a lineman's vise, a body provided with a roll for the tension-strap and a clamping-jaw formed integral with said body, said jaw being provided with laterally and longitudinally projecting lips, in combination with a movable jaw provided with similarly-arranged lips and adapted to slide in said body-jaw and a nut for securing said jaws together, substantially as described.

2. In a lineman's vise, a fixed and a movable jaw having laterally-projecting lips and longitudinally-projecting lips having their inner faces cut away to form an opening when the

lateral lips are in contact, substantially as and for the purpose set forth.

3. In a lineman's vise, a fixed and movable jaw provided at opposite sides with laterally-projecting lips, respectively smooth and serrated, and with longitudinally-projecting recessed lips, substantially as and for the purpose set forth.

4. In a lineman's vise, the body A, provided with the integral jaw B, having the lateral lip *k* and longitudinal lip *p*, in combination with the jaw H, having the shank *r* fitted to slide in the body-jaw and the smooth lip *k'* and serrated lip *p'* registering with the body-lips, and mechanism for adjusting the movable jaw, substantially as described.

5. In a lineman's vise, a body provided with a fixed and movable jaw having laterally-projecting lips, in combination with adjusting mechanism for said movable jaw, an attaching-strap, a friction-roll therefor, a pivoted clamp engaging said roll, and a spring tensioning said clamp and spreading said jaws, substantially as described.

JOHN McISAAC.

Witnesses:

K. DURFEE,

O. M. SHAW.