Mar. 27, 1923. 1,449,945

M. JACOBSEN

WIRE GRIP

Filed Aug. 23, 1921

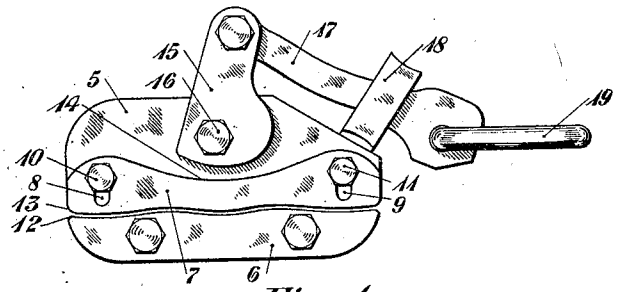


Fig. 1

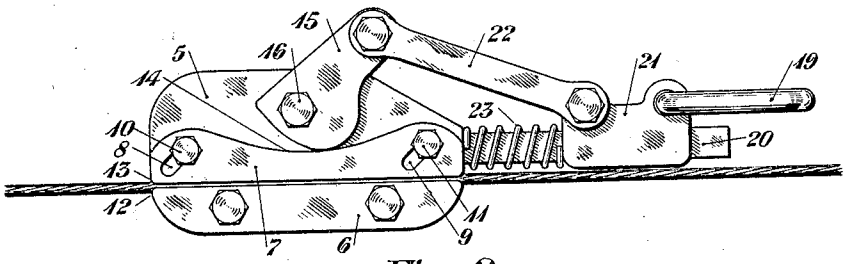


Fig. 2

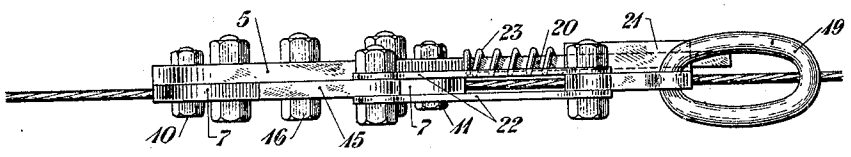


Fig. 3

INVENTOR
Morris Jacobsen
BY
ATTORNEY

Patented Mar. 27, 1923. 1,449,945

UNITED STATES PATENT OFFICE.

MORRIS JACOBSEN, OF WEST HAVEN, CONNECTICUT, ASSIGNOR TO AMERICAN TELEPHONE AND TELEGRAPH COMPANY, A CORPORATION OF NEW YORK.

WIRE GRIP.

Application filed August 23, 1921. Serial No. 494,621.

To all whom it may concern:

Be it known that I, MORRIS JACOBSEN, residing at 381 Third Avenue, West Haven, in the county of New Haven and State of Connecticut, have invented certain Improvements in Wire Grips, of which the following is a specification.

This invention relates to gripping devices for pulling or stringing wires or the like, and is more particularly adapted for use by linemen in connection with electrical line construction.

An object of the invention consists in providing a device of this character with means whereby increased and effective pulling force may be automatically translated into an increased pressure of the jaws of said device upon a wire or the like. Another object consists in providing the improved device with effective gripping surfaces which exert an even pressure and prevent the cutting or bending of the wire. These objects as well as other objects of the invention will be clear from the following detailed description.

In the accompanying drawing, in which one embodiment of this invention is shown, Figure 1 is a front elevation of the improved device; Fig. 2 is a front elevation showing another form of the invention, and Fig. 3 is a plan view of the arrangement of Fig. 2.

Similar characters of reference indicate corresponding parts throughout the several figures of the drawings.

Referring to construction shown, 5 represents any suitable support or base-plate to which is affixed a jaw 6 which extends longitudinally of said base-plate. A jaw 7 is oppositely positioned on the base-plate with respect to the jaw 6, and is provided with slots 8 and 9 whereby it is movable on studs 10 and 11 fixed to the base-plate 5. The jaws 6 and 7 are provided with coacting gripping surfaces 12 and 13 which are adapted to engage the wire to be operated upon. The opposing faces of said jaws may be provided with round or V-shaped grooves extending throughout their length, and said opposing faces may be waved, as indicated in Fig. 1, or straight, as shown in Fig. 2. The opposing faces of said jaws always remain parallel to each other and exert an even pressure upon the wire or strand throughout the length of the jaws, and thus avoid cutting or bending of said wire and also afford an effective gripping surface. The movable jaw 7 is provided with a cam or bearing-surface 14 against which an eccentric surface of a toggle member 15 bears. The toggle member 15 is pivoted at one end to a stud 16 fixed to the base-plate 5 and at the opposite end is pivotally associated with a second toggle member 17 which reciprocates within a guide 18 secured to the back face of base-plate 5. Positioned in an aperture provided on one end of the toggle member 17 is a draft-loop 19 to which may be attached a rope for the purpose of applying pulling force to the device.

In the form shown in Figs. 2 and 3, a bar 20 is formed integral with the supporting-plate 5 and extends longitudinally therefrom. A member 21 of substantially rectangular form is mounted and adapted to reciprocate on said bar. Lugs are formed on the upper surface at either end of the member 21, and an aperture is provided in each lug. Links 22, 22 pivotally connect one end of the toggle member 15 with the lug at one end of the member 21, and the draft-loop 19 is positioned in the aperture of the lug at the opposite end of said member. A spring 23 is provided on the bar 20, the ends of said spring resting against the surfaces of the base-plate 5 and the member 21 and normally maintaining the jaws 6 and 7 in closed position.

In the operation of the device the draft-loop is pushed inwardly toward the supporting plate, thereby actuating the toggle members to release the movable jaw so that it may be raised to permit of the wire being inserted between the jaws 6 and 7. When the wire is in place an outward pull is exerted on said draft-loop by means of the rope attached thereto. The pressure of the jaws on the wire is augmented when tension is exerted on the draft-loop, owing to the increased pressure of the eccentric-shaped toggle member upon the movable jaw, and this pressure continues while tension is exerted on the loop, thus affording a very effective gripping arrangement.

From the foregoing it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in size, shape, proportion and minor details of construc-

tion may be resorted to without departing from the spirit or sacrificing any advantages of the invention.

What is claimed is:

1. A gripping device comprising a supporting-plate having a bar extending longitudinally thereof, a gripping jaw affixed to said supporting-plate, a movable jaw coacting with the first mentioned jaw, a bearing surface in said movable jaw, toggle means for engaging said bearing surface, means reciprocating on said bar for actuating said toggle means whereby said movable jaw engages the first mentioned jaw in gripping and releasing positions, and means associated with said bar for normally exerting tension on said reciprocating means.

2. A gripping device comprising a supporting plate having a bar extending therefrom, a gripping jaw affixed to said supporting plate, a movable jaw coacting with the first mentioned jaw, said movable jaw having an eccentric bearing surface, toggle means pivotally associated with said supporting plate for engaging the eccentric bearing surface, reciprocating means slidably mounted on said bar for actuating said toggle means whereby said movable jaw engages the first mentioned jaw in gripping position, and a spring encircling said bar for exerting tension on said reciprocating means.

In testimony whereof, I have signed my name to this specification this 18th day of August, 1921.

MORRIS JACOBSEN.