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[54] **LINEMAN'S TOOL-HOLDING FIXTURE**

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[51] **Int. Cl.** **A47f 13/06**

[58] **Field of Search** ..... 403/77; 294/19 R, 20, 22, 294/23, 53.5; 81/3 R, 53.1; 403/76, 90, 115, 137

[56] **References Cited**

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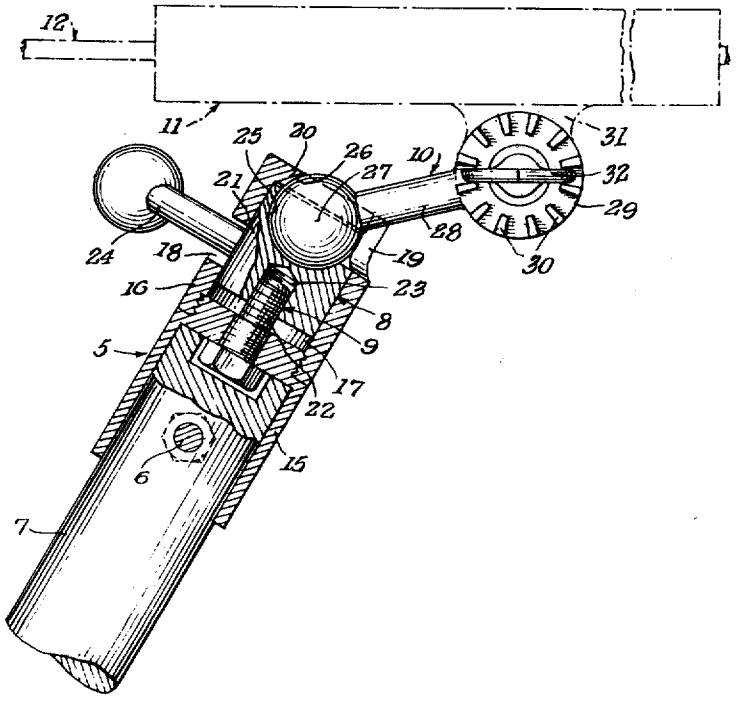
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[57] **ABSTRACT**

A lineman's tool-holding fixture for carrying out operations on a wire or cable from a position on a power pole. A characteristic feature of the fixture is the provision on the end of an elongated pole or handle of a universally adjustable head member that enables the lineman to effect an efficiently aligned operative relationship between the tool and the wire or cable so that such operations may be accomplished with minimum discomfort or danger to the lineman.

2 Claims, 3 Drawing Figures



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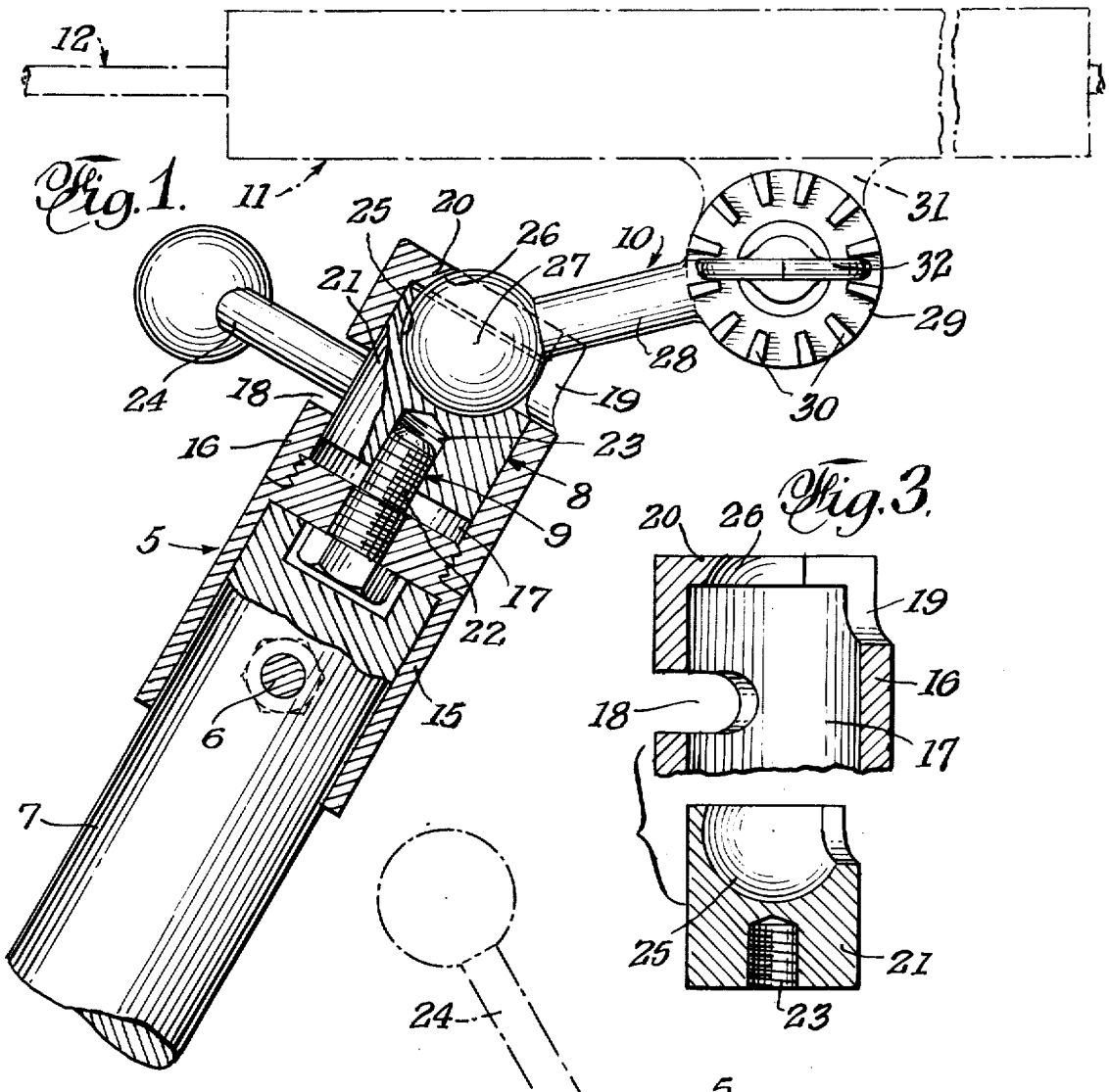


Fig. 1.

Fig. 3.

Fig. 2.

LINEMAN'S TOOL-HOLDING FIXTURE

BACKGROUND OF THE INVENTION

1. Field of the Invention

Servicing, and/or repairing of power lines, as well as telephone line wires or cables.

2. Description of the Prior Art

A professional search in the related art turned up the following related art: Ser. Nos. 3,572,852; 3,059,955; 2,720,410; 1,744,356; 835,160.

It is believed that none of the above patents touch on applicant's approach to the safe and efficient servicing, repairing etc. of power wires or cables from a position on one of the power poles between which such wires or cables span.

The Thurston U.S. Pat. No. 3,059,955 suggests the lineman's position when carrying out certain cutting, brushing, scraping, and ratcheting operations, among others on overhead wires. The Smith U.S. Pat. No. 2,720,410 at **20,31** shows the conventional type of connections between parts in which inter-locking radially arranged lugs provide for angular adjustment on fixed increments, between a handle and a tool. It is this fixed increment adjustment that the present invention seeks to improve on.

In any case, the above art is deemed to have no teachings of applicants' approach to providing for a safe, convenient, and accurately adjustable means for providing a desired angular relationship between an elongated handle and the tool that is affixed to the end thereof, whereby a lineman, from his precarious position atop a power pole, can carry out operations on a wire or cable safely and expeditiously under conditions where the tool is to be applied to the wire or cable in differently spaced relations to the lineman's position.

SUMMARY OF THE INVENTION

A fixture of the character referred to that has means for a fixed connection to a tool for performing cutting, brushing, scraping and other operations on an overhead wire or cable spanning between two power line poles from a position on one of said poles, such fixed connection of the tool being selected on a fixed-increment basis at the time the tool is so affixed. The linesman may find that such a pre-selected position of the tool may not provide for a proper operational relationship between the tool and the cable. In such case, the tool, which is provided with universally adjustable means that is conveniently operated with one hand (the other hand holding onto the handle on which the fixture is affixed), enables changing the position of presentation of the tool to the cable so the tool may carry out its operation with maximum efficiency and safety of the lineman. Such change from the pre-selected position may be varied in minute variable increments as conditions dictate.

An object of the present invention is to provide a tool-holding fixture of the character referred to which provides not only for accurate presentation of the tool to the cable, it does so in the manner that insures the safety of a lineman carrying out the operation from a position on a power line pole.

Another object of the invention is to combine, in a fixture as herein referred to, a fixed-increment angular connection between the fixture and the tool, and universally adjustable means for re-adjusting the angular relationship between the tool and the fixture, whereby

the position of presentation of the tool to the cable is corrected.

This invention also has for its objects to provide such means that are positive in operation, convenient in use, easily installed in a working position and easily disconnected therefrom, economical of manufacture, relatively simple, and of general superiority and serviceability.

The invention also comprises novel details of construction and novel combinations and arrangements of parts, which will more fully appear in the course of the following description, which is based on the accompanying drawing. However, said drawing merely shows, and the following specification merely describes, one embodiment of the present invention, which is given by way of illustration or example only.

In the drawings, like reference characters designate similar parts in the several views.

BRIEF DESCRIPTION OF THE DRAWING

FIG. **1** is a longitudinal sectional view, partly in elevation, of a fixture according to the invention and shown mounting a tool for operating on a wire or cable, said fixture being shown in the end of an elongated handle.

FIG. **2** is a plan view as seen from the tool-mounting end of the fixture, the elements of the fixture being in a different position.

FIG. **3** is a longitudinal sectional view of two elements of said fixture in separated position.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The present fixture comprises, generally, a body **5** that is affixed, as by a bolt or bolts **6,** to an end of an elongated handle **7,** here shown as a rod or pole, a connector member **8** housed in said body, means **9** for adjusting the operative position of member **8,** and a head member **10** universally adjustably fitted to the connector member **8** and retained in operative position by the body **5.**

The tool **11** that is shown in FIG. **1** as a rectangular form having operative engagement with a wire or cable **12** is intended to represent a wire cutter, brush or scraper, a ratchet device, or any of the tools commonly used by linemen to perform a variety of operations or function on a wire or cable from a position on a power line pole.

Tool-holding fixtures that are in common use, incorporate an extension that has similar ends that provide for fixed-increment adjustment-one end to the body of the fixture that is affixed to the handle, and the other end to the tool. Since fixed-increment adjustability at both ends of such a member does not afford the ability to effect an exact angular relationship between the handle and the tool **11,** the accuracy of the work required of the lineman is deleteriously affected. From the hereafter detailed fixture, it will be seen how a lineman, while holding the handle **7** in one hand, has the other free for making adjustments of varying increments between the handle and the tool to effect an angular relationship between said handle and said tool such that the lineman can position the tool **11** in proper aligned or angled relationship, as the case may be, between the handle and the tool.

In greater detail, the body **5** is shown as comprising a part **15** fastened to the end of the handle **7** as by a bolt or bolts **6,** and a housing part **16** that is shown as

threadedly connected to the part **15** and defining a cylindrical chamber **17**. An arcuate slot **18** is formed in the cylindrical wall of part **16** and diametrally opposite thereto a notch **19** is formed in said wall. An end wall **20** is provided at the end of the part **16**.

The connector member **8** comprises a cylindrical part **21** that slidingly and rotationally is fitted in the chamber **17**, said member **8**, by means of a threaded stud **22** extending from the body part **15**, is engaged with a screw seat **23** in the lower portions of part **21**. A laterally extending handle **24** extends from part **21** through the arcuate slot **18** in housing part **16**. Rotative movement of handle **24**, due to the threaded adjusting means **9**, will cause projection or retraction of member **8** according to the direction of said rotative movement of handle **24**.

The connector member **8** is provided with a hemispherical seat or socket **25** and the end wall **20** of the housing part **16** is formed to have a partly circular and complementary extension **26** that combines with the socket **25** to retain the universally adjustable head member **10** in locked position at a chosen angle of adjustment relative to the axial extent of the handle **7**.

The head member **10**, at one end thereof, is provided with a ball **27** of a size to fit the socket **25** and to be retained in said socket by the circular extension **26** thereof when the connector member **8** is projected, as above described, thereby tightly clamping ball **27** to the fixture **5**. A member **29** on the opposite end of arm **28**, which extends from the ball **27**, is provided with the usual fixed-incremental locking part **29** that is shown with the usual uniformly spaced, angularly arranged locking segments **30** designed to have interfitting engagement with similar teeth on a lug **31** on a tool **11**. Means, such as a wing screw **32**, is conventionally provided to lock the assembly of member **10** and tool **11**, at a selected included angle.

It will be understood from the foregoing that the member **28** may be secured to the tool **11** at an approximate and pre-determined included angle and that such a connection may be carried out by the lineman with both hands, either on the ground or from his position on the pole. Then, in order to insure the mentioned exact angular relationship desired between the handle and the tool, the ball and socket adjustment may efficiently carry out to bring the tool into operative contact with the cable and thereby effect a change of the angle between the handle **7** and the tool **11**, as desired. It is now a simple matter to clamp the ball and socket connection by the simple manipulation of the handle **24**.

It will be noted from the foregoing that the present fixture provides for a non-incremental and universal adjustment which, due to the ball and socket connection enabling the ball to be rotated in all directions in its socket so the angular relationship between the handle **7** and tool **11**, in all planes, may be effected. This is in contradistinction to the abovedescribed fixed incremental adjustments only and provides the accuracy of adjustment between the fixture and the tool, as herein described.

While the foregoing has illustrated and described what is not contemplated to be the best mode of carrying out the invention, the construction is, of course, subject to modification without departing from the spirit and scope of the invention.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent is:

1. A lineman's fixture for holding a tool in operative engagement for carrying out operations on an electrically conducting wire or cable spanning between power line poles, said fixture being affixed to the end of an elongated handle and comprising:

a body secured to an end of said handle and having a cylindrical cavity beyond the end thereof,

a connector member disposed within said cavity and threadedly connected to said body to move both longitudinally and rotationally, said member being provided with a laterally directed handle that extends through an opening in said body and which, when moved in a plane transverse to length of the handle, effects the mentioned movement of the connector member,

said connector member and the outer end of the body being formed to provided a substantially hemispherical seat, and

a head member provided at one end with a ball that is fitted in said seat, is adjustably rotational therein when the connector member is moved rotationally to separate the head and body portions of the hemispherical cavity, thereby permitting universal adjustability of the head member in relation to the body, and is clamped against such universal movement when the connector member is moved to cause the same to move in the opposite direction and thereby effect clamping of said ball in fixed adjusted position relative to the mentioned body,

said head member having an arm portion extending from said ball, with a tool-connecting end that has fixed-incremental adjustable engagement with a wire- or cable-engaging tool.

2. A lineman's fixture according to claim **1** in which the body thereof is provided with a notch that opens on the hemispherical seat, the arm portion of the head member extending through said notch to enable angular adjustment of the head member, as well as rotational adjustment of the head member.

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