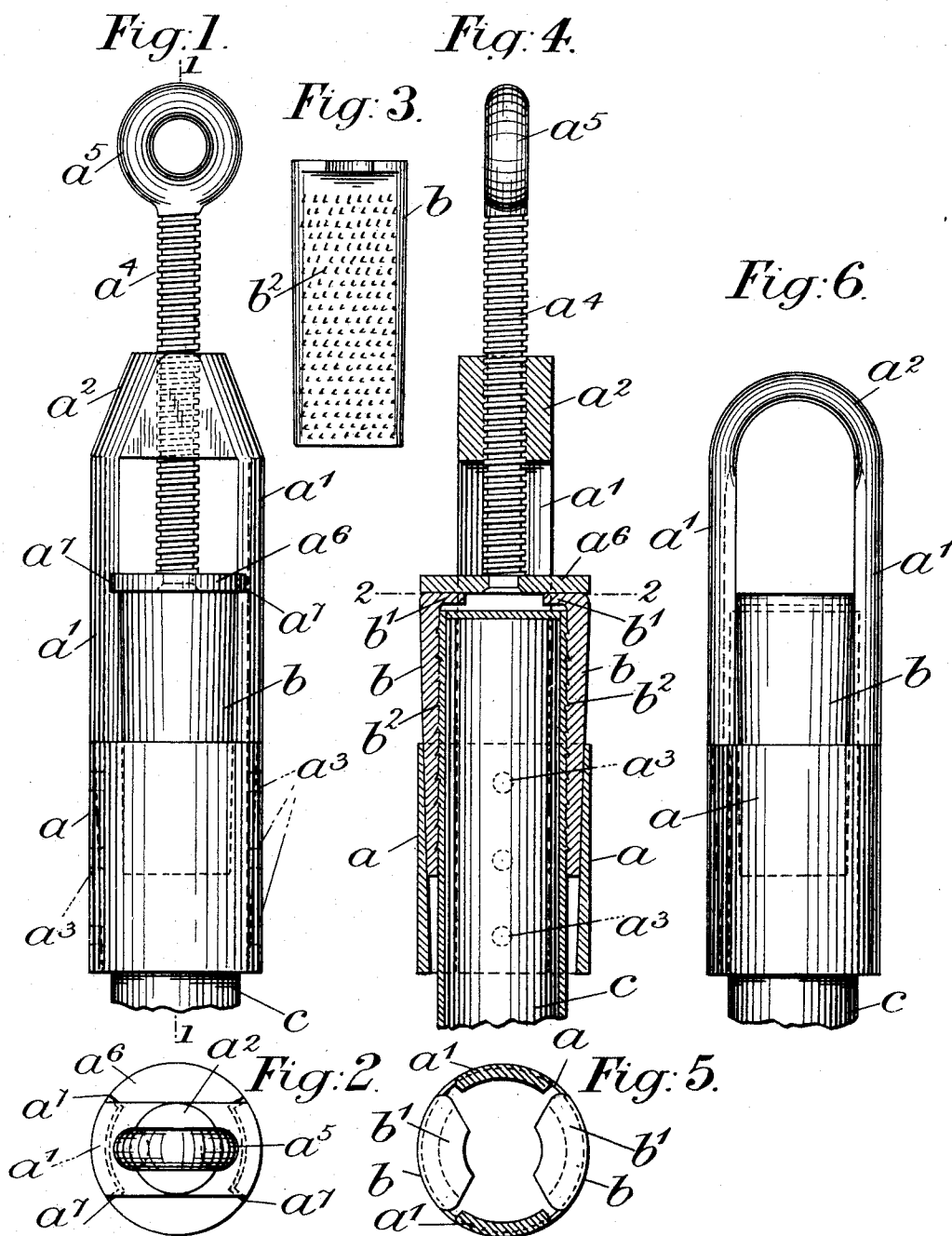


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CLIP FOR DRAWING CONDUCTORS THROUGH CONDUITS.

(Application filed Mar. 27, 1899.)

No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN GEORGE BRIEN, OF LONDON, ENGLAND.

CLIP FOR DRAWING CONDUCTORS THROUGH CONDUITS.

SPECIFICATION forming part of Letters Patent No. 633,067, dated September 12, 1899.

Application filed March 27, 1899. Serial No. 710,657. (No model.)

To all whom it may concern:

Be it known that I, JOHN GEORGE BRIEN, electrician, a subject of the Queen of Great Britain, residing at 72 Canton street, Burdett road, Poplar, London, in the county of Middlesex, England, have invented certain new and useful Improvements in Clips for Drawing Conductors Through Conduits, of which the following is a specification, reference being had to the accompanying drawings and to the letters marked thereon.

The invention relates to improvements in clips for facilitating the attachment of the hauling means to telephone or other electric conductors or cables when drawing the same into or through pipes or conduits.

The wires constituting a telephone or like cable are sometimes covered with an insulation of paper and the entire cable is inclosed in lead pipe. It is of the highest importance to maintain the insulation of the cable in a dry state, as moisture speedily renders it imperfect or useless, and for this purpose the ends of the lead pipe are sealed and an attachment is generally fixed to one end of the cable by means of screws screwing into holes formed in the lead pipe; but it will be obvious that by the strain of hauling the holes speedily become enlarged, thereby exposing the cable to the atmosphere and any moisture with which the cable may come into contact, while to remedy this defect the end of the cable within said attachment is commonly filled in solid with wax or the like.

Now the object of the present invention is to provide a simple device which will obtain a firm grip of the cable without injuring the same and without the necessity for drilling holes therein, so that the risk of admitting moisture to the interior of the cable will be avoided.

In the accompanying drawings, Figure 1 is an elevation of an instrument constructed according to the present invention and showing the same gripping the end of a cable. Fig. 2 is a plan thereof. Fig. 3 is an inside view of one of the wedges separately. Fig. 4 is a vertical section taken on the line 1 1 of Fig. 1. Fig. 5 is a horizontal section taken on the line 2 2 of Fig. 4; and Fig. 6 is a similar view to Fig. 1, representing a slight modification.

In the several figures like parts are indicated by similar letters of reference.

Referring to Figs. 1 to 5, *a* represents a sleeve which is exteriorly cylindrical, and *a'* represents a frame which is fixed with the sleeve *a* in any suitable manner, but in the drawings it is assumed to be fixed therewith by means of a scarfed and brazed joint aided by rivets *a³*. The two parts *a'* of the frame are at the upper part thereof united by means of a boss *a²*, which is threaded to form a nut, and in this nut works a screw *a⁴*, which at its upper end is provided with an eye *a⁵*, for the purpose hereinafter described, and at its lower end is connected with a plate or piston *a⁶*, in which it turns, said plate *a⁶* being at *a⁷* formed with notches to receive the two parts *a'* of the frame which act as guides thereto. The interior of the sleeve *a* is formed to a gradual taper either all around or at opposite points, as shown more particularly at Fig. 4, and in connection with this sleeve are employed two wedges *b*, or there might be only one or more than two, as will be readily understood, which are formed to the same arc as the sleeve *a* and at their upper ends are provided with segmental heads *b'*, while their inner faces are partially or entirely covered with teeth or serrations *b²*, designed to obtain a proper grip of the cable *c*.

In order to place the device in position, the screw *a⁴* is turned back, thereby raising the plate or piston *a⁶*. The sleeve *a* is then placed over the cable *c*. The wedges *b* are then placed loosely in position with their lower ends entering between the sleeve *a* and the cable *c*, and the screw *a⁴* is turned by means of an instrument inserted in the eye *a⁵*, thereby advancing the plate or piston *a⁶*, which will take an abutment upon the heads *b'* of the wedges *b* and draw the sleeve *a* over the outer faces of the wedges *b*, the inclined faces of these coacting parts serving to powerfully compress the roughened faces *b²* of the wedges *b* upon the cable *c*, and thereby obtain a firm grip thereof.

The eye *a⁵* in addition to the use hereinbefore pointed out also serves as a means by the aid of which the rope or other hauling medium may be attached to the device.

In the example given at Fig. 6 the device is substantially the same as that hereinbefore shown and described, with the exception that the screw *a⁴* and coacting nut and the eye *a⁵*

are dispensed with and the head a^2 of the frame a' forms the means of attaching the hauling device, and in this case the sleeve a is drawn or forced over the wedges b , and this operation is, if necessary, aided by a hammer or other tool.

It will be obvious that the form of the sleeve may be modified without departing from the spirit of the present invention.

By the means hereinbefore described a simple and inexpensive device is obtained which is adapted to be instantaneously applied to a cable, which will obtain a powerful grip thereof, and which at the same time will in no way injure the same, whereby the objectionable features common to existing means of attaching the hauling appliances are avoided.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, I declare that what I claim is—

1. A cable-clip comprising a segmental wedge or wedges interiorly serrated and exteriorly inclined adapted to grip or embrace the cable and a sleeve adapted to be drawn over the wedges said sleeve being provided with means for attaching thereto the hauling device substantially as herein shown and described.

2. A cable-clip comprising a segmental wedge or wedges interiorly serrated and exteriorly inclined adapted to grip or embrace the cable and provided with overhanging segmental heads and a sleeve adapted to be drawn over the wedges said sleeve being provided with means for attaching thereto the hauling device substantially as herein shown and described.

3. A cable-clip comprising a segmental

wedge or wedges interiorly serrated and exteriorly inclined adapted to grip or embrace the cable, a sleeve adapted to be drawn over the wedges, a frame carried by the sleeve, a piston or plate adapted to travel in said frame and take an abutment upon the wedges, means for forcing the top of the frame and the plate or piston apart and thereby drawing the sleeve over the wedges and means for attaching to the frame the hauling device substantially as herein shown and described.

4. A cable-clip comprising a segmental wedge or wedges interiorly serrated and exteriorly inclined adapted to grip or embrace the cable a sleeve adapted to be drawn over the wedges a frame carried by the sleeve and at its upper part formed with a nut, a piston or plate adapted to travel in said frame and take an abutment upon the wedges, a screw passing through the nut and fixed with the plate with capability of turning so that by turning the screw the sleeve will be drawn over the wedges, means for facilitating the turning of the screw and attaching to the instrument the hauling device substantially as herein shown and described.

5. A cable-clip comprising a segmental wedge or wedges interiorly serrated and exteriorly inclined adapted to grip or embrace the cable and a sleeve interiorly formed with coacting inclined surfaces adapted to be drawn over the wedges said sleeve being provided with means for attaching thereto the hauling device substantially as herein shown and described.

JOHN GEORGE BRIEN.

Witnesses:

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