

Feb. 25, 1930.

A. M. SEEGER
CABLE PULLING HEAD
Filed March 5, 1928

1,748,084

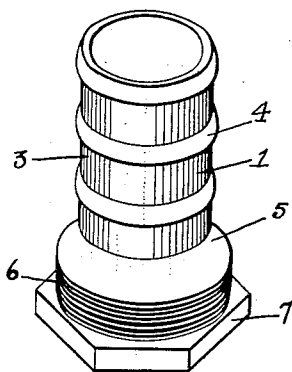


Fig-1

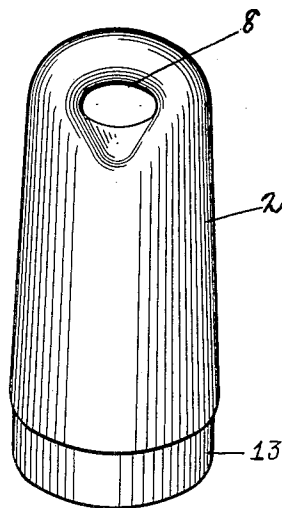


Fig-2

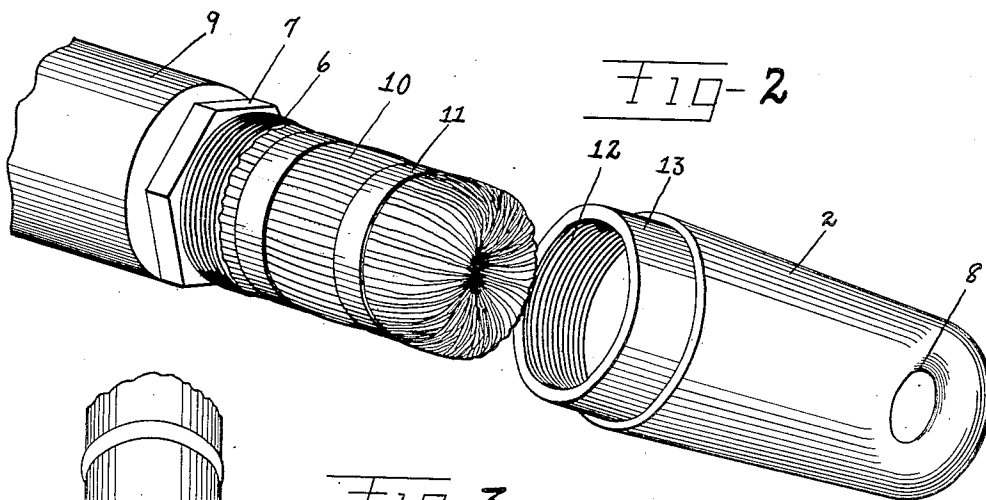


Fig-3

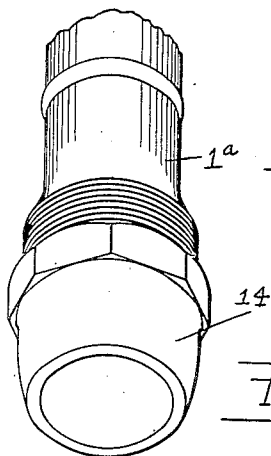


Fig-4

334

Inventor
Adolph M. Seeger
Owen & Owen

Attorneys

UNITED STATES PATENT OFFICE

ADOLPH M. SEEGER, OF TOLEDO, OHIO, ASSIGNOR TO THE SEEGER DEVICE COMPANY,
OF TOLEDO, OHIO, A CORPORATION OF OHIO

CABLE-PULLING HEAD

Application filed March 5, 1928. Serial No. 259,121.

This invention relates to cable-pulling devices, but more particularly to heads for the end of relatively large cables or wires to enable them to be drawn or pulled from one place to another, for example, through a conduit.

Heretofore, much difficulty has been occasioned in handling large cables of the type composed of a multiplicity of strands and protected by a sheath having an outer layer of hard rubber or other material. Cables of this character are used to a great extent in telephone work, and are not infrequently laid in conduits. To pull cables through the conduits, it has been the practice to sweat or otherwise securely attach a metal lug or external wire grip over the end of the cable to provide a place for attaching a rope, chain or other suitable pulling instrumentality.

This has been found decidedly objectionable, because of the difficulty in removing the lug after the cable has been drawn into proper place, and damages to the external sheath due to the heavy pull. Other important objections to this method will be apparent to those skilled in this art. It is a desideratum that a simple and efficient attachment for cables be produced which can be readily attached and detached, will not injure the cable, and will pull evenly on the conductors.

Objects of this invention are to overcome the above problem in a simple, inexpensive and practical manner; to provide a cable-pulling head which can be readily attached to or detached from the cable, and affords an adequate seal to protect the end of the cable; to provide a new and improved attachment for the end of a cable which may be securely fixed to the cable, but may be readily disengaged when not in use so that it may be used again. Other objects will hereinafter appear.

In one aspect, this invention consists in the provision of a simple, inexpensive, efficient and detachable cable-pulling head, which is constructed to fit over and securely retain the end of a multi-strand cable to permit the latter to be pulled from one place to another. When the destination is reached, the head may be quickly and conveniently detached, thereby reducing to a minimum the time re-

quired of cable gangs in laying cable. The head is so constructed that a liquid-tight joint may be provided between the head and cable so that liability of injury to the cable is practically eliminated. The head may be a casting necessitating but very slight additional work to produce the finished article, so that the cost of manufacture is very low.

The invention is shown by way of illustration in the accompanying drawings, in which:

Fig. 1 is an elevation of the sleeve of the cable-pulling head;

Fig. 2 is an elevation of the bonnet;

Fig. 3 is an elevation of the parts with a cable attached to the sleeve, showing the manner of assembly; and

Fig. 4 is an alternate form of sleeve with tapered extension.

The illustrated embodiment of the invention comprises a cable pulling head comprising a sleeve 1 and a bonnet or mandrel 2. The sleeve consists of a shank portion 3 having a plurality of annular ribs 4 and an enlarged end portion 5 having screw thread 6. A squared portion 7 on the end of the sleeve enables the same to be engaged by a wrench or other tool for operation. As shown, the bonnet 2 is tapered inwardly toward the outer end, which is provided with an eye 8 to receive a hook, rope, chain or other suitable instrumentality for pulling the head. It is to be understood that the inside of the bonnet is hollow to fit over the sleeve 1, and the shank 3 of the sleeve is considerably smaller than the inside diameter of the bonnet for a purpose hereinafter described.

The cable pulling head may be used in connection with a cable of the type having a sheath or covering of lead or other material 9 and composed of a multiplicity of individual strands 10, which are arranged parallel to each other. This type of cable is well known to those skilled in this art, and further description thereof is deemed unnecessary.

The cable is attached to the sleeve 1 in the following manner:—

First, by means of a knife or other suitable tool, the lead sheath 9 on the end portion of the cable is removed, making the cable small enough to be inserted through the sleeve 1.

By removing the sheath from the cable, the strands 10 are free, and enough of the sheath is removed to enable a substantial length of the strands 10 to extend beyond the end of the sleeve. These ends are then turned rearwardly, as shown in Fig. 2, upon the outside of the sleeve. Securely to retain the strands in place they are bound with tape 11. The sleeve is then ready to receive the bonnet 2, which may be forced over and in telescoping engagement with the sleeve, internal screw threads 12 on the end portion of the bonnet 2 being screwed upon the threads 6 of the sleeve.

It is apparent that the eye 8 may be engaged, and the pulling force exerted by the head is transmitted through the sleeve 1 to the strands 10 so that uniform pulling force is exerted on the cable. It is apparent that the connection between the head and cable may be readily made with a minimum of labor.

It is frequently desirable that the connection between the pulling head and cable be made liquid-tight, and for this purpose the inner end of the bonnet 2 is provided with an annular reduced portion 13 to provide a wiping ring. When the parts are assembled, tape may be wound around the wiping ring 13 and extended to the uncut or unbroken part of the cable so as to prevent the moisture from reaching the strands 10 or other part of the core of the cable. It is to be noted that the squared portion 7 is approximately the same diameter as the larger diameter of the bonnet 2 so as to prevent any hindrance or obstruction to the passage of the head and cable through a conduit.

In the form shown in Fig. 4 the sleeve 1^a is provided with an inwardly tapering extension 14, which is adapted to fit over the cable and form a protection therefor. This enables the cable to be moved in the opposite direction, and eliminates liability of the head engaging obstacles which would otherwise hinder its passage.

It is to be understood that numerous modifications may be made, and that the above description is given by way of illustration and not of limitation. Numerous changes may be made in details of construction, arrangement and assembly without departing from the spirit of the invention, especially as defined in the appended claims.

What I claim as new and desire to secure by Letters Patent is:

1. A pulling head for a multi-strand cable comprising a bonnet member having an engaging portion at one end, a sleeve-like member of less diameter than said bonnet for telescoping engagement therewith adapted to receive a cable with the strands thereof folded over the outside of said member, the opening in the bonnet member being such as to admit readily said sleeve-like member and cable

connected thereto, and means for detachably securing said members together thereby to hold the cable in place for pulling operation.

2. A cable pulling head comprising a bonnet member adapted to receive a pulling element at one end, a sleeve member for telescoping engagement inside of said bonnet member, a portion of said sleeve member being considerably smaller than the inside diameter of said bonnet member to permit a cable to be inserted through the sleeve member with the strands thereby folded back upon the outside thereof, the opening in the bonnet member being such as to admit readily said sleeve-like member and cable connected thereto, annular ribs on the outer surface of said sleeve member for preventing slipping of said cable, and means for detachably securing said members together in telescoping engagement.

3. A cable pulling head comprising a bonnet member adapted to receive a pulling element at one end, a sleeve member for telescoping engagement inside of said bonnet member, a portion of said sleeve member being considerably smaller than the inside diameter of said bonnet member to permit a cable to be inserted through the sleeve member with the strands thereof folded back upon the outside thereof, a reduced annular portion at the opposite end of said bonnet to enable the joint between the bonnet and sleeve members to be bound to provide a water-tight joint.

4. A cable pulling head comprising a bonnet, means on said bonnet to receive a pulling element at one end, a sleeve member for telescoping engagement inside of said bonnet member, the end portion of said sleeve being reduced to enable the end portion of cable to be turned back on the outside of the sleeve member and to lie within the bonnet member, one or more annular ribs on the outer surface of said sleeve member to prevent slipping of the cable, a reduced annular portion at the opposite end of said bonnet to permit binding of the joint between the bonnet and sleeve members, an inwardly tapering extension on said sleeve member positioned on the outside when said members are in telescoping engagement, and means for detachably securing said bonnet and sleeve members together.

In testimony whereof I have hereunto signed my name to this specification.

ADOLPH M. SEEGER.