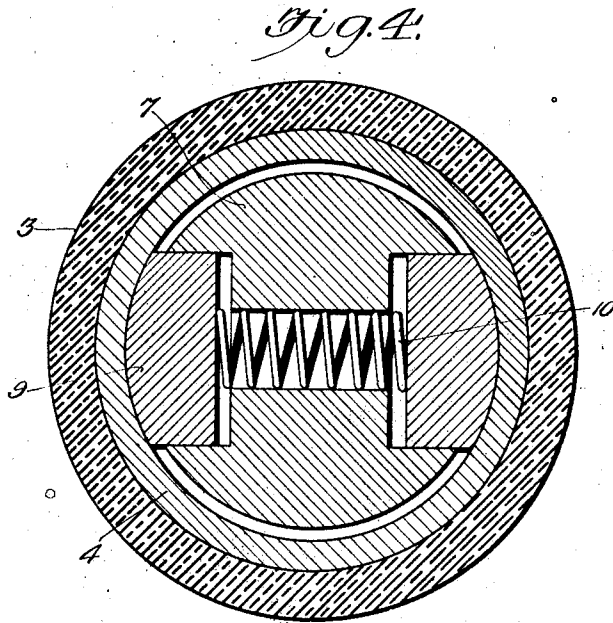
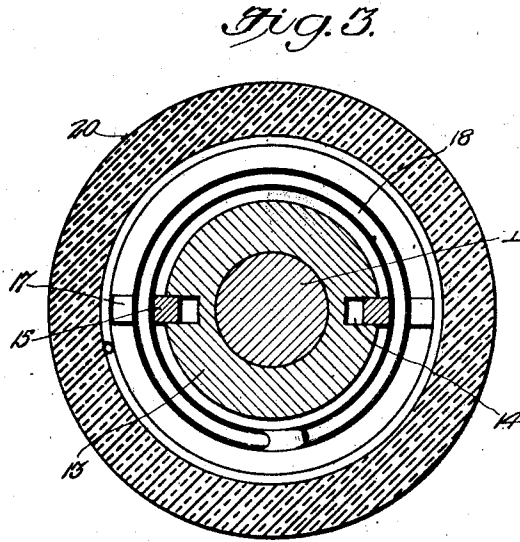
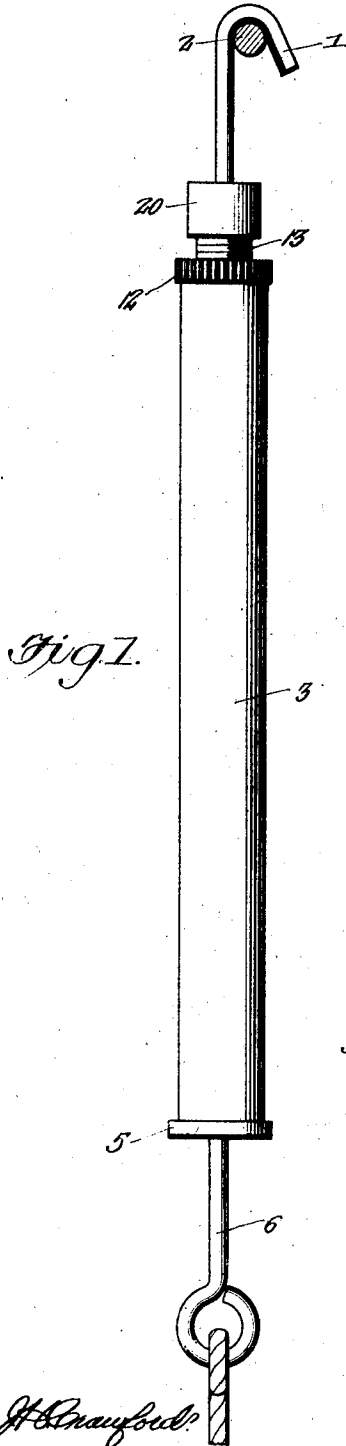


H. M. LAMB.
ELECTRIC CABLE TAP.
APPLICATION FILED AUG. 9, 1920.

1,378,801.

Patented May 17, 1921.
2 SHEETS—SHEET 1.



H. M. Lamb,
INVENTOR

BY Victor J. Evans
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WITNESS:
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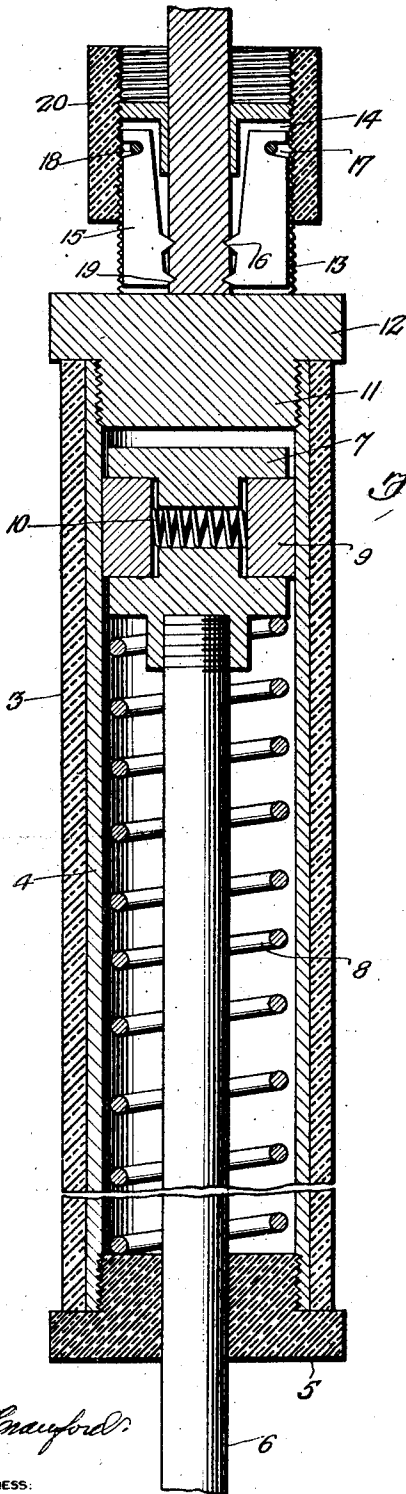


Fig. 2.

Fig. 5.

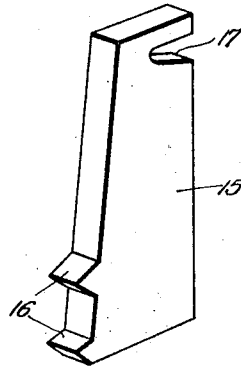
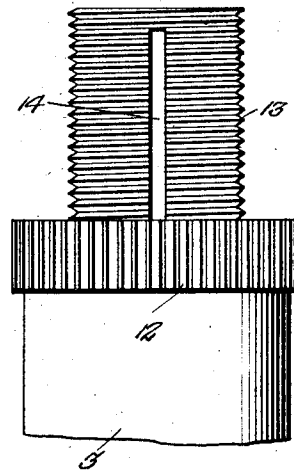


Fig. 6.



Fig. 7.



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UNITED STATES PATENT OFFICE.

HOMER M. LAMB, OF WEST FRANKFORT, ILLINOIS, ASSIGNOR OF ONE-THIRD TO LOUIS KLEIN AND ONE-THIRD TO GEORGE B. GREENBAUM, BOTH OF FRANKFORT, ILLINOIS.

ELECTRIC-CABLE TAP.

1,378,801.

Specification of Letters Patent.

Patented May 17, 1921.

Application filed August 9, 1920. Serial No. 402,418.

To all whom it may concern:

Be it known that I, HOMER M. LAMB, a citizen of the United States, residing at West Frankfort, in the county of Franklin and State of Illinois, have invented new and useful Improvements in Electric-Cable Taps, of which the following is a specification.

My present invention has reference to that class of electric cable tapping devices commonly known as "hot hooks."

The improvement is especially designed for use in connection with "gathering motors" in mines where reels are used, and has for its final primary object to produce a hot hook which is effectively insulated for protecting the operator, as well as yieldable to relieve the cable from sudden tensions which would otherwise inflict injury to or perhaps breakage of the cable, and which also prevents blowouts.

The foregoing, and other objects which will appear as the nature of the invention is better understood, may be accomplished by the construction, combination and operative arrangement of parts such as is disclosed by the drawings.

In the drawings:—

Figure 1 is a view illustrating the application of the improvement.

Fig. 2 is an enlarged elevation of the improvement.

Fig. 3 is an approximately central longitudinal central view therethrough.

Fig. 4 is a sectional view approximately on the line 4—4 of Fig. 3.

Fig. 5 is a sectional view on the line 5—5 of Fig. 3.

Fig. 6 is a perspective view of one of the gripping jaws.

Fig. 7 is a similar view of the hook.

As disclosed in Fig. 1 of the drawings the hook 1 is arranged over the trolley wire 2. The hook is connected to the cable of a "gathering motor" or to various other cable connections where reels are employed. Consequently the hook is subject to movement by the cable as the same winds or unwinds. This causes an arc in the connection which soon burns the hook or otherwise weakens the same so that it is easily broken. With the system now in general use a copper wire of a suitable length has both of its ends bent, so that one end hooks over the trolley

wire and the other end is connected with the cable. This wire is insulated with a tape. This construction requires considerable time, does not insure proper protection for the operator, is not yieldable with the strain of the cable and causes a material waste of copper inasmuch as the hook thereof soon burns away.

With my improvement the hook 1 is formed of a comparatively short length of copper wire and is replaceable on the remainder of the structure when unusable. Thus the hook may be considered an inexpensive element of the improvement.

The improvement includes a cylindrical outer casing 3 of insulating material which receives therein a tube 4 of copper or other electric conducting material. Both the tube and casing have open ends, and the ends of the tube are threaded. Screwed in the outer open end of the tube 4 is a plug 5 which is of insulating material. Passing centrally through the plug 5 and entering the tube 4 is a rod 6 to the outer end of which the cable is secured. The rod 6 has on its inner end a plunger head 7, and surrounding the rod 80 and exerting a tension between the head 7 and the plug 4, is a helical spring 8. The spring normally forces the rod and head toward one end of the tube.

The plunger head 7 has a lateral slot or opening therethrough in which are received brush members 9 that are forced away from each other and into contacting engagement with the tube 4 by a spring 10.

Screwed in the outer end of the tube 4 is a plug 11. This plug is formed with a milled head 12 that rests on the end of the tube 4 and casing 3. The plug has an extended threaded portion 13 on the outer face of the head 12. This extension is provided with opposed pockets 14 that communicate with the bore of the plug. In each of the pockets there is seated a jaw member 15. Each jaw has on its inner edge spaced lugs 16. The inner edges of the jaws are arranged at an angle with respect to the outer ends thereof, and the said jaws at their outer and reduced edges have each a depression or slot 17 therein. In these slots there is received a split spring ring member 18 which exerts a tension against the jaws sufficient to swing the lower portions thereof provided with the lugs 16 outward of the

plug, and out of engagement with notches 19 provided in the straight end or shank of the hook 1.

On the threaded extension 13 of the plug 11 there is screwed a sleeve 20. This sleeve contacts with the outer edges of the jaw to force the same inwardly and to bring the lugs thereof into the slots in the hook, and thus effectively lock the hook to the device.

With a construction as above described it will be seen that the hook may be easily positioned on or removed from the remainder of the construction, and when engaged by the jaws is effectively locked to the device. The spring influenced brushes at all times contact with the conductor tube 4. The tube is effectively insulated by the casing 3. The fluid from the trolley wire is conducted to the cable through the rod 6. The rod 6 being spring influenced permits of the cable tightened or slackened, and it is thought that the foregoing description when taken in connection with the drawings will fully set forth the construction and advantages of the improvement.

What I claim as new is:—

1. In a device for the purpose set forth, an insulated tube, a hook removably secured to one end thereof, and a spring influenced rod movable through the opposite end thereof.

2. In a device for the purpose set forth, a tube having an insulated outer face, a hook removably secured to one end of the tube, a spring influenced rod movable through the opposite end of the tube, a plunger head on the inner end of the rod.

3. In a device for the purpose set forth, a casing of insulating material, a tube therein, a hook removably secured at one end of the tube, a spring influenced rod in the rod and movable to the other end thereof, and spring influenced brushes carried by the rod and contacting with the tube.

4. In a device for the purpose set forth, a conductor tube, an insulated casing therefor, a hook of conductive material at one end of the tube, a rod of conductive material in the tube and movable through the other end thereof, a head on the rod, spring means influencing the latter in one direction,

and spring influenced brushes carried by the head and contacting with the tube.

5. In a device for the purpose set forth, a conductor tube, an insulating casing therefor, plugs closing the ends of the tube, a hook of conducting material received in one of the plugs, means for removably sustaining the hook thereon, a conductor rod movable through the tube, a head thereon, spring influenced brushes carried thereby, contacting with the tube, and spring means influencing the head and rod in one direction.

6. In a device for the purpose set forth, a tube of electric conducting material, a casing of insulated material surrounding the tube, plugs at both ends of the tube, spring influenced jaws carried by one of the plugs, a hook arranged between the jaws, means on the plug engaging the jaws for holding the latter in hooked engaging position, a rod of electric conducting material in the tube and slidable through the second plug, a plunger head thereon, spring influenced brushes carried thereby and contacting the tube, and spring means between the plunger head and the last mentioned plug for influencing the rod inwardly of the tube.

7. In a device for the purpose set forth, a tube of electric conducting material, an insulator casing surrounding the same, plugs at both ends of the tube, jaws carried by one of the plugs, lugs on the inner edges thereof a hook having a notched shank designed to be engaged by the lugs of the jaws, spring means for normally retaining the jaws out of hook engaging position, means removable on the plug and engaging with the jaws for moving the latter through hook engaging position, a rod of electric conducting material in the tube and movable through the second plug, a plunger head on the inner end of the rod, spring influenced brushes carried thereby and contacting with the tube, and spring means between the last mentioned plug and the plunger head for influencing the rod in a direction inwardly of the tube.

In testimony whereof I affix my signature.

HOMER M. LAMB.