I. J. H. TOFFEY.

WIRE FINDING AND COUPLING DEVICE.

APPLICATION FILED AUG. 25, 1913.

1,130,775. Patented Mar. 9, 1915.

Fig. 1

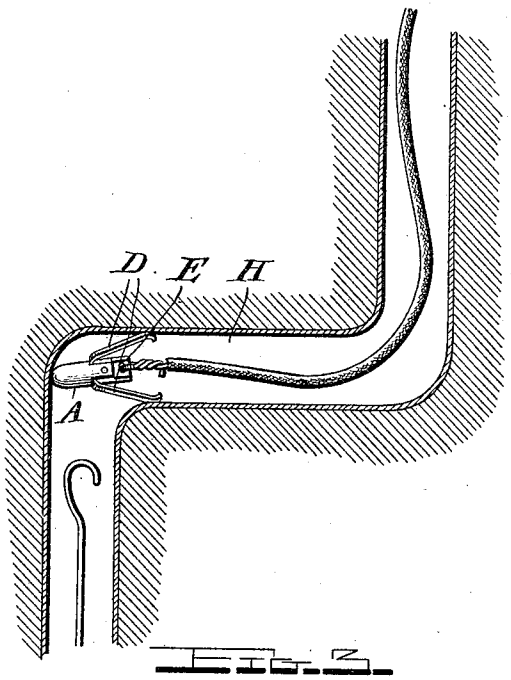


Fig. 2

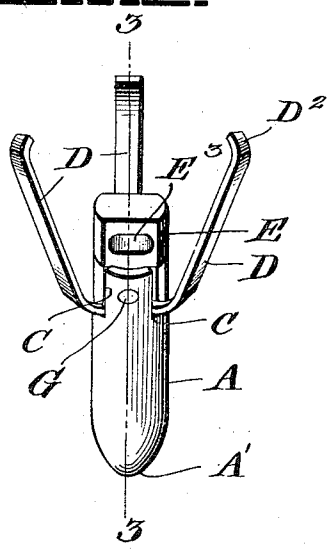


Fig. 3

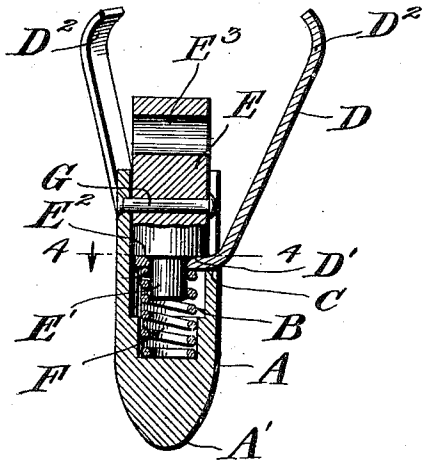


Fig. 4

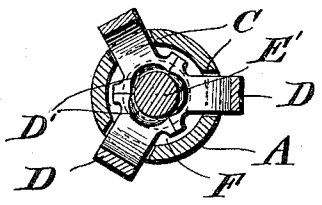
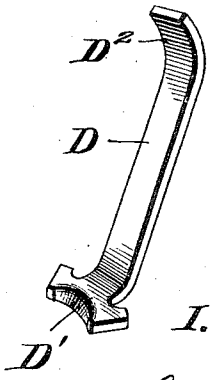


Fig. 5



Witnesses

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WIRE FINDING AND COUPLING DEVICE.

1,130,775. Specification of Letters Patent. **Patented Mar. 9, 1915.**

Application filed August 25, 1913. Serial No. 786,562.

To all whom it may concern:

Be it known that I, IRA J. H. TOFFEY, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Wire Finding and Coupling Devices, of which the following is a specification.

This invention is a novel construction of wire fisher or finder. In running electric conductors through the conduits it very frequently happens that a conductor wire can be passed a definite distance and then for one reason or another is stopped and it becomes necessary to start a fisher or finder from the opposite end of the conduit, make the engagement or connection after the end of the first conductor has been found and then pull the same through the conduit. Various forms of devices have been utilized for accomplishing this purpose but they are expensive and furthermore are somewhat difficult to operate, that is it is very often difficult to make the proper connection or coupling.

The object of my invention is to provide an exceedingly cheap and simple device which can be attached to the end of the conductor wire and which will serves as a lead for carrying the wire through the conduit and if for any reason its progress should be checked the fishing and connecting operation can be accomplished by means of an ordinary wire hooked or bent at the end, my improved appliance being provided with means for readily engaging with the said hooked end of the fishing wire.

With these various objects in view, my invention consists of the novel features of construction, and combination hereinafter fully described, and pointed out in the claims.

In the drawings forming a part of this specification: Figure 1 is a view showing the practical application of my invention. Fig. 2 is a detail perspective view of the device itself. Fig. 3 is a vertical sectional view on the line 3—3 of Fig. 2. Fig. 4 is a horizontal sectional view on the line 4—4 of Fig. 3. Fig. 5 is a detail perspective view of one of the wings.

In carrying out my invention I employ a metallic body portion A shaped after the style of a projectile, that is having a rounded or pointed lower end A′ so that it will pass freely through the conduit without obstruction. The upper portion of this projectile body A is hollowed or recessed as shown at B and a plurality of slots or openings C are provided for the purpose of receiving the spring actuated wings or arms D, each wing or arm having a head portion D′ which is inserted in the hole or recess portion of the projectile body, the shape of the head depending upon the number of arms as it will be understood that these heads contact one with the other as shown in Fig. 4. For the purpose of securing these arms or wings in their proper positions and also providing means for connecting the conductor wire I employ a plug E which is reduced at its lower end as shown at E′ thereby providing a shoulder E^2, which bears upon the head of the arm or wing D, the reduced end entering a coiled spring F which is located at the bottom of the hole or recess B. This spring presses upwardly against the heads at the lower ends of the wings or arms D and normally tends to throw said arms or wings outwardly as most clearly shown in Figs. 1 and 3 but at the same time permits them to yield to a certain extent in order to pass freely through the conduit, that is they will yield to curves and other obstructions.

The plug E is secured by means of a pin G and at its upper end has an opening E^3 through which the end of the conductor wire H is passed and fastened. The conductor wire with my improved device attached to the end thereof is dropped into the conduit from the upper end and fed through the conduit as far as possible and if it should become obstructed it is obvious that the wings or arms are spread as most clearly shown in Fig. 1. An ordinary fishing wire is then inserted from the opposite end of the conduit and when its hooked end is brought into contact with my leading device it is obvious that it will be a very easy matter to make the coupling or connection with any one of the diverging spring arms or wings as there is ample space for the hooked end of the fishing or finding wire to pass beyond the forward end of the leading device and as it is drawn back coupling engagement will be made with one of the spring arms or wings thereby making such connection as will enable the conductor wire to be drawn through the entire conduit.

The free ends of the arms or wings D are slightly curved as shown at D^2 in order to pass more freely through the conduit. It

will thus be seen that I provide an exceedingly cheap, simple and efficient device capable of carrying out all of the objects hereinbefore referred to.

What I claim is:—

1. A device of the kind described comprising a hollow body slotted upon the sides, a plug adapted to fit therein, wings having an enlarged inner end portion resting within said body and engaged by said plug, said wings projecting through said slots, and a spring arranged in said hollow body and adapted to bear upon the inner end portions of said wings.

2. A device of the kind described comprising a hollow body open at one end and longitudinally slotted adjacent its open end, wings having enlarged head portions adapted to fit within said hollow body, said wings being adapted to work in said slots, a plug fitting within said hollow body and closing the entrance thereto and bearing upon the enlarged inner end portion of the wings, said plug having a reduced inner end portion extending inwardly between said wings, and a coil spring bearing at one end upon the wings and at the other end upon the closed end of the hollow body and receiving the reduced portion of said plug.

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Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."