

J. M. JONES.  
 DEVICE FOR LAYING UNDERGROUND WIRES.  
 APPLICATION FILED SEPT. 21, 1910.

983,373.

Patented Feb. 7, 1911.

Fig. 1

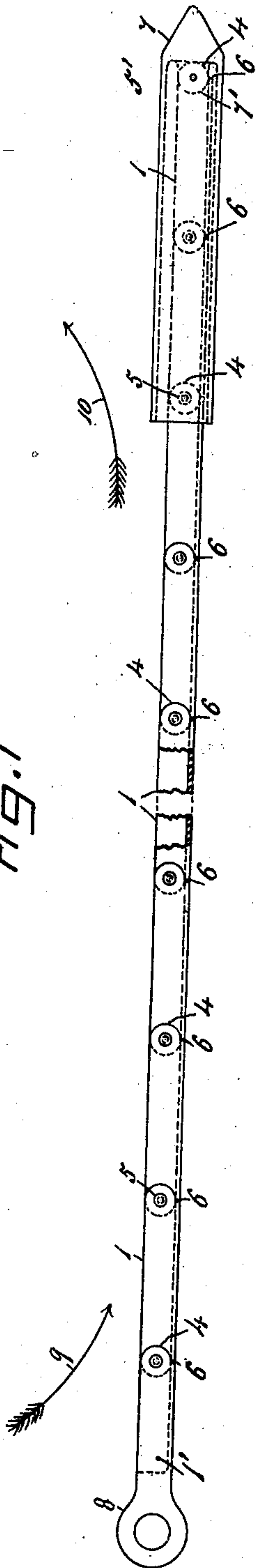


Fig. 2

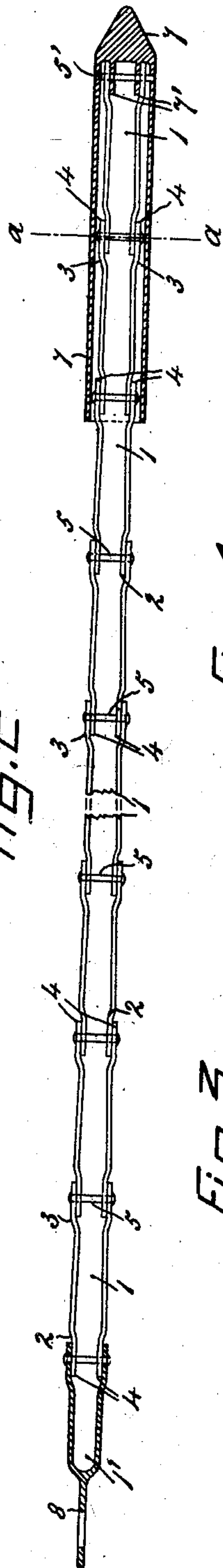


Fig. 4

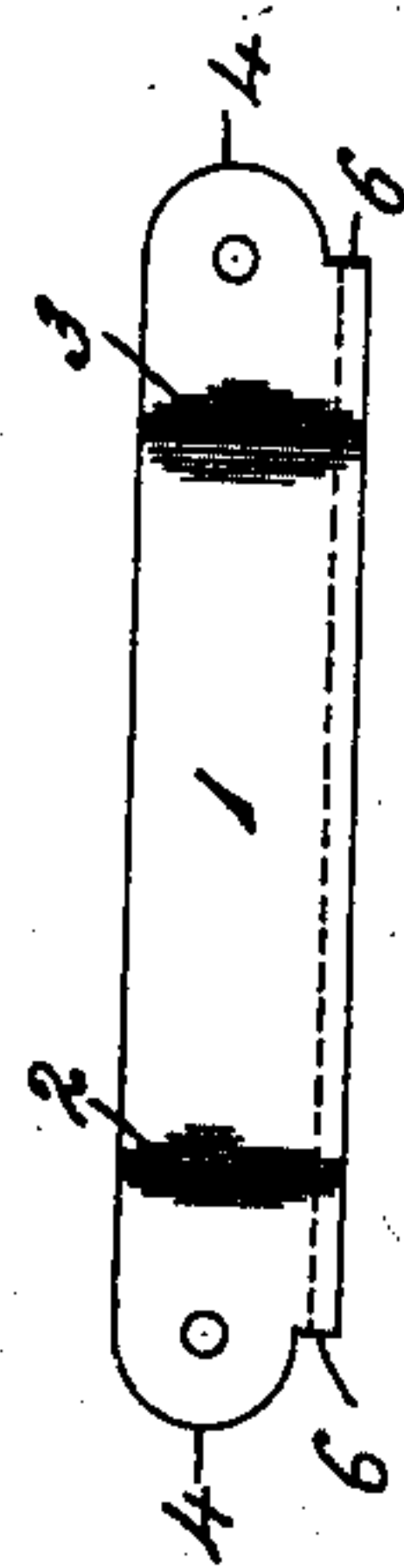
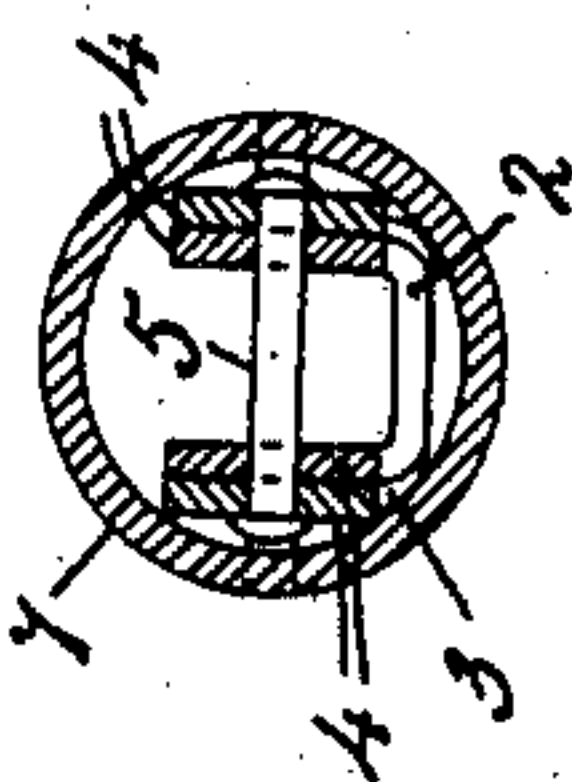


Fig. 3



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# UNITED STATES PATENT OFFICE.

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DEVICE FOR LAYING UNDERGROUND WIRES.

983,373.

Specification of Letters Patent.

Patented Feb. 7, 1911.

Application filed September 21, 1910. Serial No. 583,091.

*To all whom it may concern:*

Be it known that I, JAMES MELVIN JONES, a citizen of the Dominion of Canada, residing at 44 Henry street, Buffalo, in the county of Erie and State of New York, have invented a new and useful Improved Device for Laying Underground Wires, of which the following is a specification.

This invention relates to devices for laying underground wires, and more particularly to such devices which are employed for threading telephone and like wires through pipes or conduits laid beneath the pavement or road surface.

Usually telephone and like wires are laid by firstly threading a long rod or length of coupled rods through a street inspection-box attaching the wire at the outer end thereof and then withdrawing said rod, or length of rods, through the next inspection-box and so on until the entire length of wire is laid.

The object of my invention is to dispense with the use of rods which frequently get damaged or broken, as well as to save time by doing away with the coupling and uncoupling operations.

A further object of my invention is to facilitate the laying of underground wires.

I accomplish the foregoing objects by employing a length of metal chain the links of which are adapted, when laid in a straight line, to abut firmly end to end and thereby form a more or less rigid member which may be easily threaded through an underground pipe or conduit, means being fitted in connection with the leading links to insure absolute rigidity thereof, and at the tail link for the attachment thereto of the wire to be laid.

In the drawings, Figure 1, is a broken side view of the improved device. Fig. 2, is a plan of the same with parts broken away or in section for the sake of clearness. Fig. 3, is a section to an enlarged scale, on the line, *a-a*, in Fig. 2. Fig. 4, is a side view to an enlarged scale of one of the link elements detached.

Like reference numerals designate the same parts in the several illustrations.

1, 1, are links which are preferably made of channel cross-section as clearly shown by Fig. 3, and the side members thereof at one end 2, are slightly compressed while at the other end 3, they are expanded, and both are furnished with longitudinally projecting lugs or ears, 4, 4. These lugs, 4, 4, at the

compressed end of each link, 1, are adapted to fit between those at the expanded end of the next succeeding link as will be clearly seen on examination of Fig. 2, of the drawings, and they are hinged thereto by pins or rivets 5.

By forming the links, 1, 1, as shown, it will be readily seen that when a length of chain so constructed is laid horizontal, with the side members projecting upwardly, said links, 1, 1, will abut endwise against the adjoining link or links at the points or shoulders, 6, 6, and thereby form a more or less rigid and continuous member.

7, is a ferrule or cap piece having a closed-in conically shaped end for fixture over the leading two or three links by means of lugs 7', and a pin 5', to insure that said links remain horizontal and rigid, and to prevent any tendency to turn-up when meeting an obstruction.

8, is an eye-piece connected to or forming part of the tail link 1' and to which the wire to be laid is attached.

Obviously the chain may be made of any desired length or other appropriate cross-section and be fitted with detachable connecting pins 5, 5, whereby lengthening or shortening thereof can be easily and expeditiously effected.

The improved device is very light and can be wound on, or unwound from, a portable winch; and it will be easily understood that it is adapted to be bent into a conduit in the direction of the arrow, 9, while being paid-off from the winding drum; or turned up in the direction of the arrow, 10, when being withdrawn from said conduit at a point ahead of that at which it enters therein. Furthermore the adaptability of my improved device to follow bends or curves in a pipe or conduit will be self evident without further explanation or illustration.

I claim,—

1. The combination, in a device for laying underground wires, of a chain consisting of a series of hingedly connected links, the ends of each succeeding pair of links when laid in a straight line being adapted to abut firmly together, means for retaining the leading links absolutely rigid, and means for connecting the wire to be laid to the tail link, substantially as set forth.

2. In a device for laying underground wires the combination of a series of channel shaped links forming a chain and connected



together in sequence by hinge pins, a ferrule for fixture over the leading links provided with a conically shaped closed-in outer end, and an eye piece forming part of the tail  
5 link, substantially as described.

3. The combination, in a device for laying underground wires and consisting of a series of hingedly connected channel-shaped links the ends whereof are adapted to abut when  
10 arranged in a straight-line, of a ferrule provided with a conically shaped closed-in end

and longitudinally disposed internally situated lugs and means whereby said ferrule is fixed to and over the leading links, substantially as shown, for the purpose specified. 15

Signed at Hamilton, Ontario, Canada,  
the 15th day of September, 1910.

JAMES MELVIN JONES.

Witnesses:

ALFRED T. BRATTON,  
WM. BRUCE.