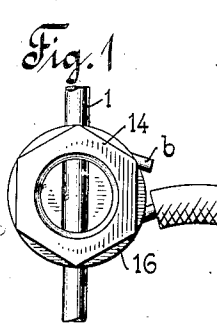
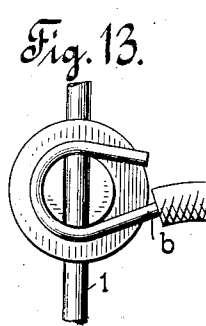
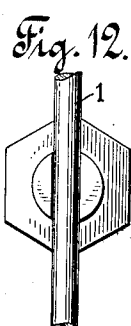
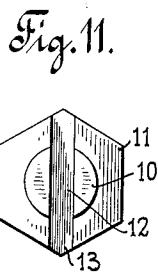
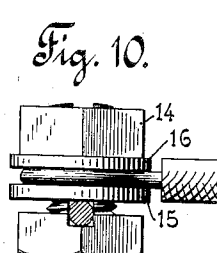
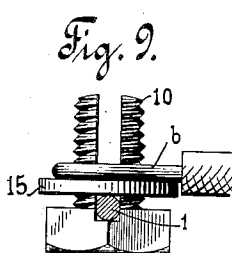
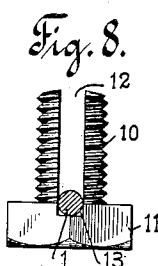
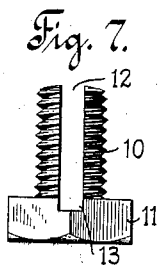
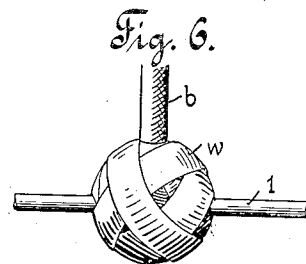
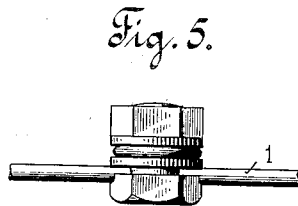
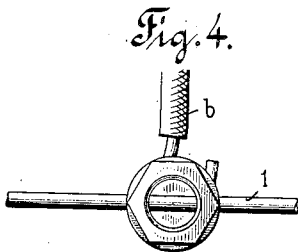
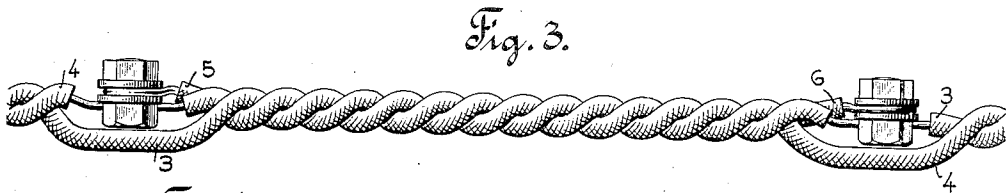
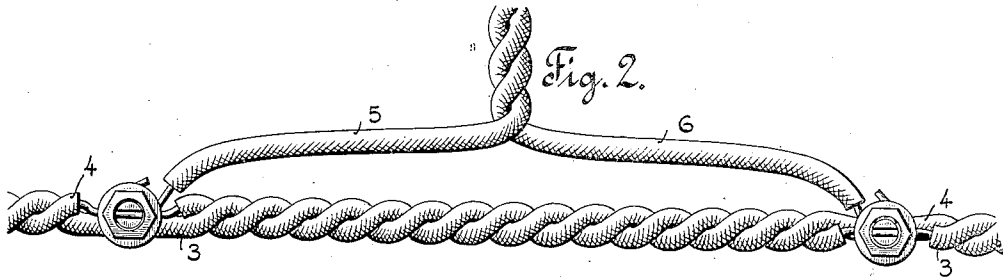


No. 822,492.

PATENTED JUNE 5, 1906.

M. C. TURNER.  
BRIDGING CONNECTOR FOR TELEPHONE LINES.  
APPLICATION FILED DEC. 22, 1904.



Witnesses  
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Inventor  
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# UNITED STATES PATENT OFFICE.

MAURICE C. TURNER, OF NEW YORK, N. Y., ASSIGNOR TO NEW YORK TELEPHONE COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

## BRIDGING-CONNECTOR FOR TELEPHONE-LINES.

No. 822,492.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed December 22, 1904. Serial No. 237,940.

*To all whom it may concern:*

Be it known that I, MAURICE C. TURNER, a citizen of the United States, residing in the borough of Brooklyn, county of Kings, city of New York, and State of New York, have made certain new and useful Improvements in Bridging-Connectors for Telephone-Lines, of which the following is a specification.

My invention relates to connecting devices for use in bridging metallic circuits, as in a party-line metallic telephone-circuit.

The object of my improvement is to provide a severable connection which can be covered with weatherproof insulating-tape easily applied by the lineman on the pole or support and easily disconnected for the purpose of testing. In testing for trouble on such a metallic telephone-circuit it is necessary to disconnect at the pole one bridging connection after another to locate the source of trouble, and it is necessary to have as perfect an electrical and mechanical connection as human ingenuity can devise.

My improvement consists of a hexagonal nut terminating a screw integral therewith, the screw being slotted on its longitudinal axis to a point somewhat below its junction with the head or nut. The slot is wide enough to receive the main line-wire, which is sunk into the groove in the head of the nut. A metal washer is then passed over the screw, the bridging-connector is passed around the screw, a second washer is placed over this turn surrounding the screw, and a screw-nut is threaded onto the screw to clamp all in position. The connector is made of a practically inoxidizable metal, and both the nuts are provided with means for engaging with an operating-tool—that is, the nuts are hexagonal to receive the jaws of a wrench or the lineman's pliers, or they may be slotted or apertured to receive a screw-driver. The connector is made as small and compact as possible, so as not to form a lodging-place for snow and ice and to permit of easily wrapping with insulating weatherproof tape.

The accompanying drawings illustrate my invention.

Figure 1 is a plan view of my improved connector uniting two sections of conductor. Fig. 2 shows the connector applied to an insulated metallic circuit with a bridging con-

nection to a substation. Fig. 3 is a side or elevation view of Fig. 2. Fig. 4 is a top plan view of the connector uniting a bare wire and an insulated bridge-wire. Fig. 5 is a side elevation of Fig. 4. Fig. 6 shows the bridging-connector, as in Fig. 5, with an insulating-wrapping inclosing it. Figs. 7 to 13 are detail views of the connector in side elevation and plan.

In Figs. 2 and 3, 3 and 4 indicate a twisted main metallic circuit of insulated wires, with a bridging connection of twisted insulated wires 5 6 connected to the wires 3 4, respectively, by means of my improved bridging connection.

Referring to Figs. 7 to 13, 10 is a brass screw with a hexagonal head 11 made integral therewith. 12 is a slot in the screw 10, symmetrically arranged on the line of its major axis. The slot 12 extends into the head 11, as shown at 13, to an extent equal to one-half the diameter of the wire or conductor to be placed within the slot 12. There are two washers 15 and 16 and a hexagonal nut 14 to hold the conductors in position and to clamp all the parts together. In practice I prefer to introduce the main line-wire into the slot 12 without severing its continuity and to hook the bridging-wire around the screw 10. I place a washer, like 15, over the conductor 1, Fig. 9, then hook the bared end of the insulated conductor *b* around the screw 10, apply the washer 16 over the hooked end of the conductor *b*, and then apply the nut 14 to the screw 10 to clamp the parts, consisting of the screw 10, conductor 1, washer 15, and conductor *b*, together. If now trouble occurs in any branch conductor, like *b*, it is necessary to go to one terminal of the line and disconnect one bridging branch after another successively until the grounded or troubled branch is found. This work is done on the pole by the lineman, who unscrews the nut 14 and unhooks the branch conductor *b* on each side of the loop. When the bridging branch on which the trouble is located is disconnected, the circuit is freed from trouble, and the lineman then follows the branch until the trouble is found and repaired.

This compact and readily-removable connector is preferably covered with an insulating-tape, like *w*, Fig. 6, to protect it from the

weather. While the branch is disconnected the connector is supported by the main line wire or wires.

What I claim, and desire to secure by Letters Patent, is—

1. In a connecting device, the combination with an axially-slotted bolt having a nut-like head, of a nut working upon the bolt, the proportions of the parts being such that the outer angles or points of the head and nut lie approximately in the surface of the same sphere, substantially as set forth.

2. In a connecting device, the combination

with a bolt having at one end a head approximately equal in diameter to the length of the bolt and also having an axial slot extending from the threaded end nearly to the threaded end, of two washers encircling the bolt for holding an interposed conductor, and a nut, of approximately the same size as the head, working upon the free end of the bolt.

MAURICE C. TURNER.

Witnesses:

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