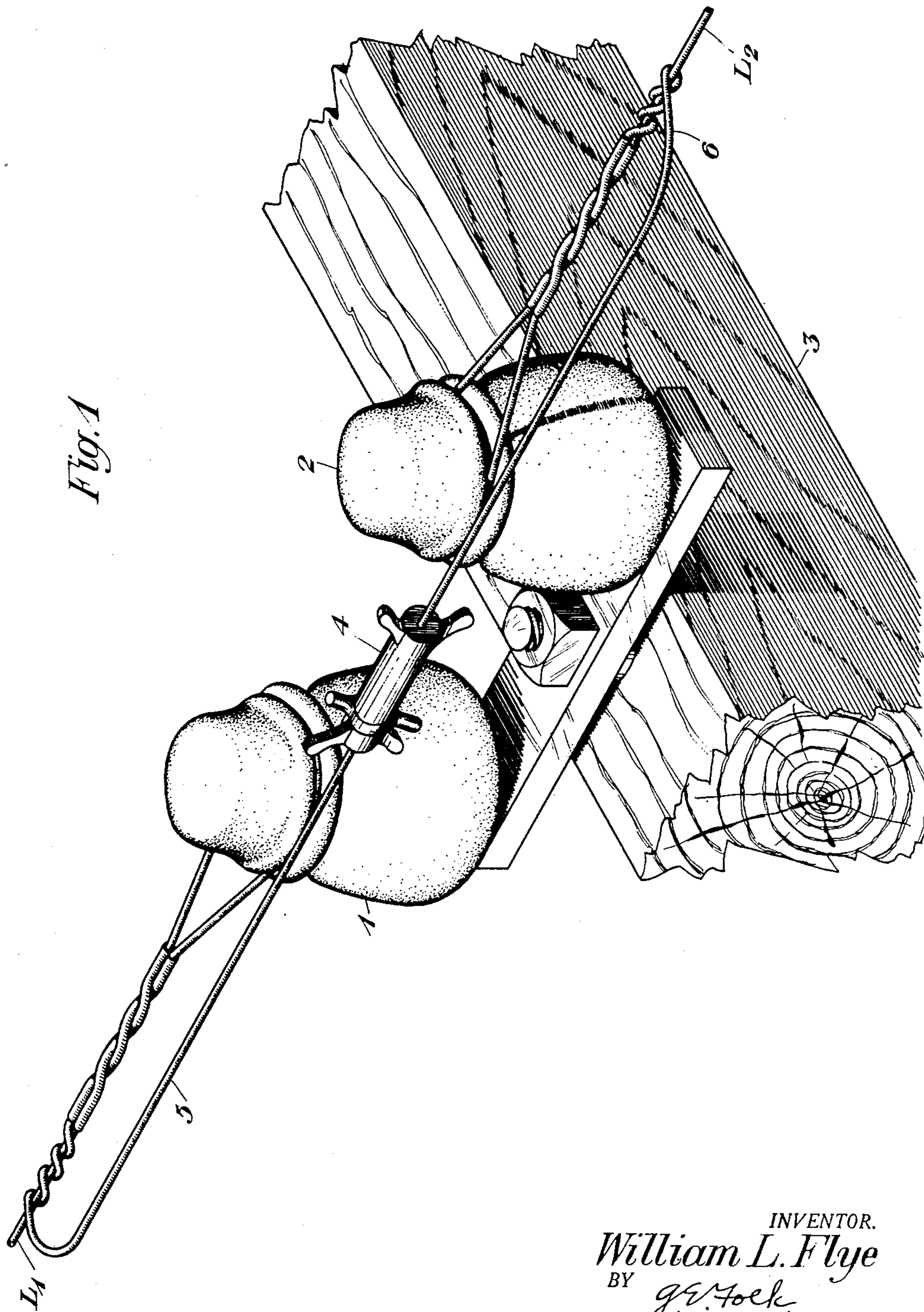


W. L. FLYE.
TEST CONNECTOR.
APPLICATION FILED OCT. 2, 1917.

1,301,827.

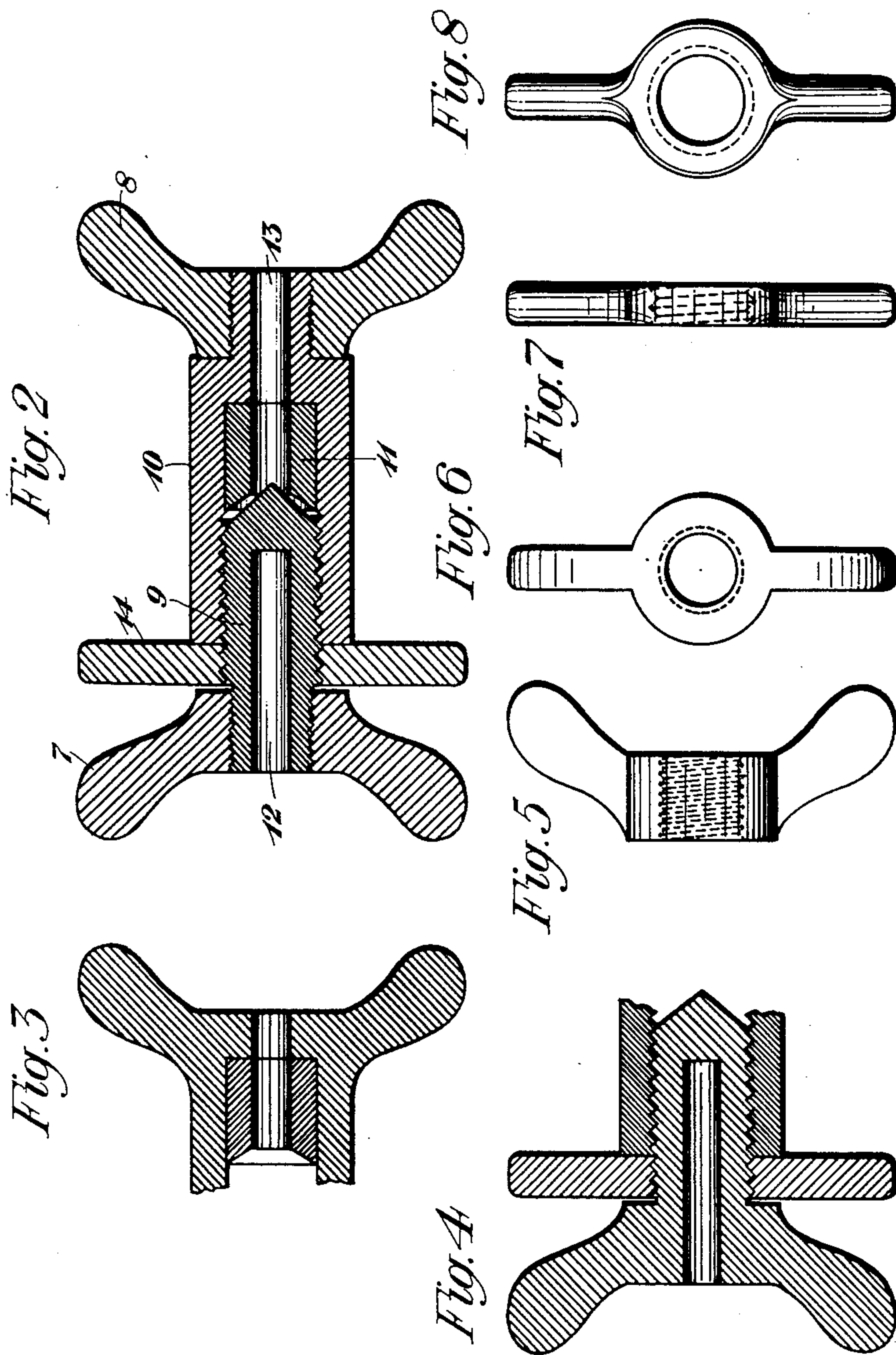
Patented Apr. 29, 1919.
2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.



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WILLIAM L. FLYE, OF GLEN RIDGE, NEW JERSEY, ASSIGNOR TO AMERICAN TELEPHONE AND TELEGRAPH COMPANY, A CORPORATION OF NEW YORK.

TEST-CONNECTOR.

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Specification of Letters Patent.

Patented Apr. 29, 1919.

Application filed October 2, 1917. Serial No. 194,383.

To all whom it may concern:

Be it known that I, WILLIAM L. FLYE, residing at Glen Ridge, in the county of Essex and State of New Jersey, have invented certain Improvements in Test-Connectors, of which the following is a specification.

This invention relates to apparatus for connecting and disconnecting wire lines and more particularly for lines used for telephony or telegraphy.

It is one of the objects of the invention to provide a means for connecting and disconnecting lines which are coupled together on telephone and telegraph poles and which it is found desirable at times to have disconnected for testing purposes. Another object of the invention is to provide a connecting means for two sections of a line, which will protect the points of contact of the line from the deteriorating effects of rust, dirt, or other ravages of the elements of nature. A further object is to provide a connector which will hold the points of contact tightly together and prevent the connection from working loose. Other and further objects of the invention will be clear from the detailed description to be given later.

At convenient intervals in a telephone or telegraph line it is customary to arrange poles known as test poles. At such poles the transmission line is fitted with a joint or connecting device which readily allows the line to be parted. By this means the lineman may connect proper testing apparatus to either section of the transmission line in order to locate trouble. It has been found in practice that at these test poles, where the transmission line is fitted with a connecting or coupling joint, the connection often becomes imperfect or faulty and the transmission over the line becomes seriously impaired. This is due to the fact that the points of contact become contaminated with dirt or rust caused by exposure to the weather, and in other instances because the connecting apparatus works loose. For the purpose of doing away with the above described imperfections, the connecting apparatus comprising this invention has been provided.

The invention may now be more fully understood with reference to the accompanying drawing in the figures of which is shown the apparatus comprising the ar-

rangements of the invention. In Figure 1 is shown a perspective view of the test connector associated with the actual apparatus of a transmission line. Fig. 2 is a sectional view of the test connector. Figs. 3 and 4 are sectional views of alternative types of the wing nuts. Figs. 5 and 6 are side and end views respectively of the wing nuts. Figs. 7 and 8 are end and side views respectively of the lock nut.

In Fig. 1 two sections L_1 and L_2 of a transmission line are shown terminating at the insulators 1 and 2, which are attached to the test pole by the cross arm 3. The sections L_1 and L_2 of the line are joined by means of the auxiliary conductors 5 and 6, which are coupled together by means of the test connector 4.

The test connector is shown in detail in Fig. 2 and comprises two wing nuts 7 and 8, the wing nut 7 being fitted with a protruding contact member 9, which is threaded externally and adapted to coact with an internally threaded sleeve member 10 upon which the wing nut 8 is fitted. The contact member 9 is permanently fastened to the wing nut 7 and the sleeve member 10 is permanently fastened to the wing nut 8. If it is found to be desirable in the manufacture of the test connector, the wing nut 7 and the contact member 9 may be made integral, as illustrated in Fig. 4, and the wing nut 8 and the sleeve member 10 may also be one unit, as illustrated in Fig. 3. In the contact member 9 is an opening 12 extending from the extremity of the wing nut 7 almost to the end of the contact member. Into this opening is inserted and permanently fastened the terminal of the conductor associated with one section of the transmission line. In the sleeve member 10 is an opening 13 which extends entirely through said member. Through this opening is inserted the conductor leading to the other section of the transmission line. This conductor is not permanently fastened to the sleeve member 10 but remains free and to its extremity is permanently fastened a contact cap 11, which fits inside of the sleeve member 10 and is adapted to engage the point of the contact member 9. At that portion of the contact member 9 between the wing nut 7 and the sleeve member 10 is fitted a lock nut 14 which serves to prevent the apparatus from working loose. By holding the

wing nut 7 and operating the wing nut 8 it may be seen that sufficient pressure may be applied on the point of the contact member 9 and the contact cap 11 to insure a good and firm connection. It may also be seen that these points of contact are enveloped by the sleeve member 10, which forms a covering adequate to protect them from dirt, rust, or the like.

10 It will be obvious that the general principles herein disclosed may be embodied in many other organizations widely different from those disclosed without departing from the spirit of the invention as defined
15 in the following claims.

What is claimed is.

1. A device for connecting sections of a line comprising a contact member, one end of which is externally threaded and the
20 other end of which forms a wing nut, a sleeve member threaded internally at one end and having a wing nut at its other end, said sleeve member being adapted to coact with said contact member, a second contact

member fitting inside of said sleeve member, 25 each contact member being permanently fastened to a section of the line connected.

2. A device for connecting sections of a line comprising an externally threaded contact member at one end of which is an open- 30 ing into which one section of said line may be inserted and permanently fastened, an internally threaded sleeve member adapted to coact with said contact member, and a second contact member fitting inside of said 35 sleeve member, said sleeve member having an opening extending therethrough whereby a section of said line may be inserted and fastened to said second contact member.

In testimony whereof, I have signed my 40 name to this specification in the presence of two subscribing witnesses, this 29th day of September 1917.

WILLIAM L. FLYE.

Witnesses:

RALPH W. WOLF,
FRED'K S. ROBINSON.