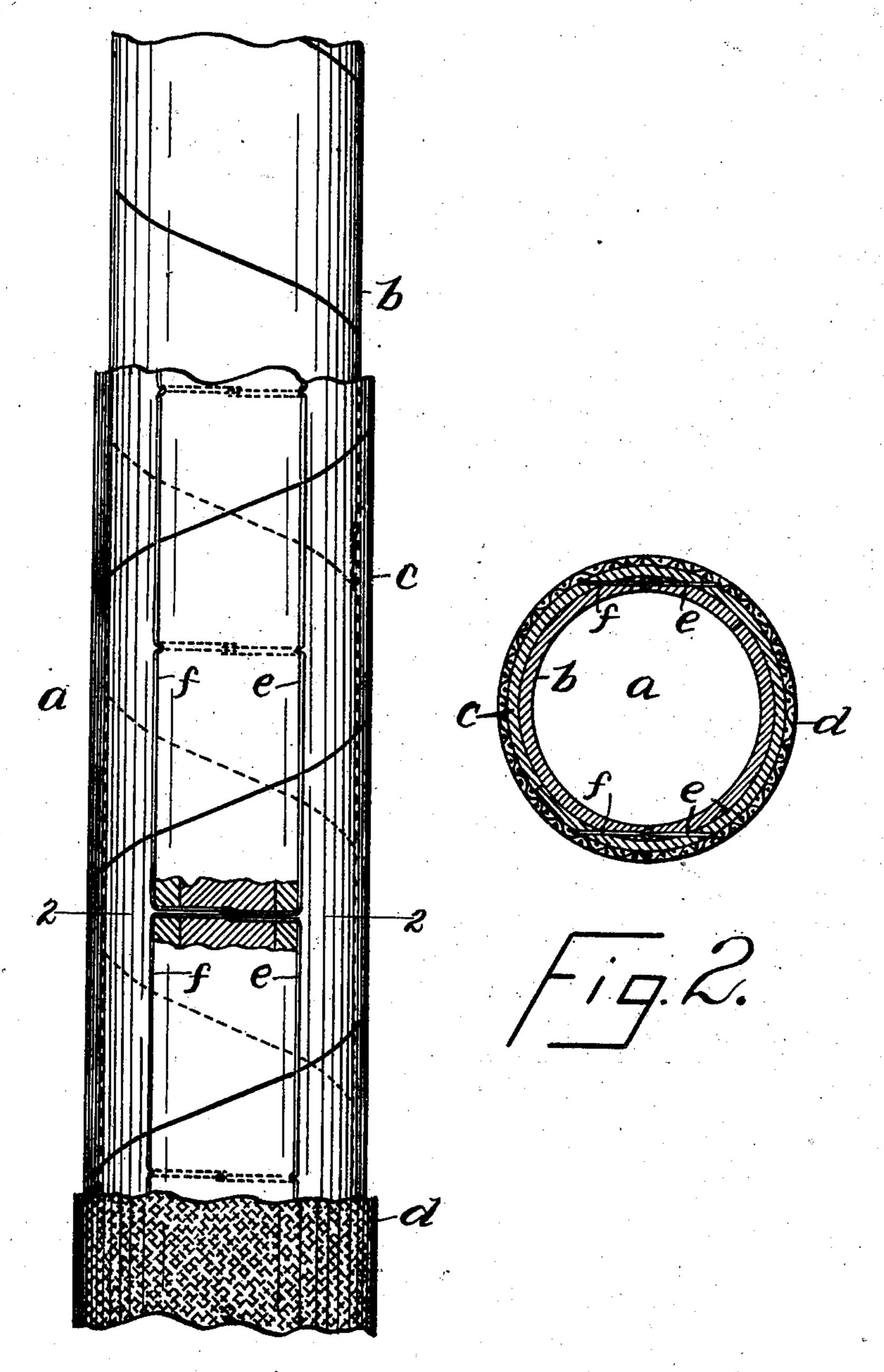
## E. R. RAMSEY.

CONDUIT.

APPLICATION FILED OUT. 29, 1908.

963,471.

Patented July 5, 1910.



Milmesses: M.M. Hhippee

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Byhis Attorney Chris Lassen

## UNITED STATES PATENT OFFICE.

EDIA R. RAMSEY, OF PENN YAN, NEW YORK.

## CONDUIT.

963,471.

Specification of Letters Patent. Patented July 5, 1910. Application filed October 29, 1908. Serial No. 460,001.

To all whom it may concern:

Be it known that I, Edia R. Ramsey, a citizen of the United States of America, and residing at Penn Yan, in the county of 5 Yates and State of New York, have invented certain new and useful Improvements in Conduits, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and 10 use the same.

This invention relates to conduits, preferably of the flexible type, and the object thereof is to provide such a conduit which is positively smooth upon its inner surface, 15 whereby electrical conductors and the like may be passed therethrough without obstruction; a further object being to provide such a conduit which consists of an inner and outer layer of suitable material, spirally 20 wound, and which are connected with each other so as to prevent the withdrawal of the inner layer common to such conduits as at present constructed, and a still further object being to provide a conduit which is 25 well adapted to the purpose for which it is intended and which is comparatively inexpensive.

My invention is fully described in the following specification, of which the accom-30 panying drawings form a part, in which the separate parts are designated by the same reference characters in each of the

views, and in which:—

Figure 1 is a view of a portion of conduit 5 constructed according to my invention and showing the different elements; and Fig. 2 is a section taken on the line 2—2 of Fig. 1.

In the drawings forming a part of this application, I have shown a section a of con-0 duit intended for electrical or other conductors and which comprises an inner element b, preferably composed of fiber spirally wound, a superimposed element c, likewise composed of fiber spirally but oppo-5 sitely wound and an outer, covering element d of fabric woven thereon.

At e is shown a needle thread passed through the two elements b and c, by means of a suitable machine, in such manner as not to entirely perforate the former as clearly shown in Fig. 2, whereby an absolutely smooth inner surface is maintained in the finished product, and the thread e is engaged by the usual shuttle thread f of the said machine whereby a locking stitch between the said elements is produced, these !

stitches being at suitable distances from each other and serving to prevent withdrawal of the elements from each other. After the elements b and c have been thus locked to- 60 gether, the covering element d is woven thereon and the conduit then saturated with suitable waterproofing or insulating compounds, according to the use to which the conduit is intended, and the elements are 65 still further united thereby but in such manner as to permit of a certain degree of flexibility.

It will be seen that, because of the oppositely wound elements b and c and the 70 stitches holding the same, not more of the same may be unwound than the distance between stitches, even without the covering element, although I generally prefer to use the latter, and it will be evident that any 75 suitable material, other than fiber, may be employed in forming my conduit and other means for locking the elements together may be employed, my invention consisting in rendering the elements impossible of sepa- 80 ration.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A conduit, comprising two strips of 85 material wound one upon the other and a thread passed entirely through one and partially through the other of said strips and locking them together.

2. A conduit, comprising two strips of 90 material wound one upon the other and a thread passed twice through one of said strips and partially through the other there-

of and locking them together.

3. A conduit, comprising two strips of 95 material wound one upon the other and a thread passed through said strips beyond the inner diameter of said conduit and preserving a smooth interior therein.

4. A conduit, comprising two strips wound 100 spirally upon each other and a locking stitch for said strips passing therethrough but not through the wall of said conduit.

In testimony that I claim the foregoing as my invention I have signed my name in 105 presence of the subscribing witnesses this 26th day of October 1908.

## EDIA R. RAMSEY.

Witnesses: CLINTON B. STRUBLE, Nora L. Ryan.