

No. 751,743.

PATENTED FEB. 9, 1904.

J. M. MAHONEY.
INSULATOR.

APPLICATION FILED DEC. 1, 1902.

NO MODEL.

Fig. 1.

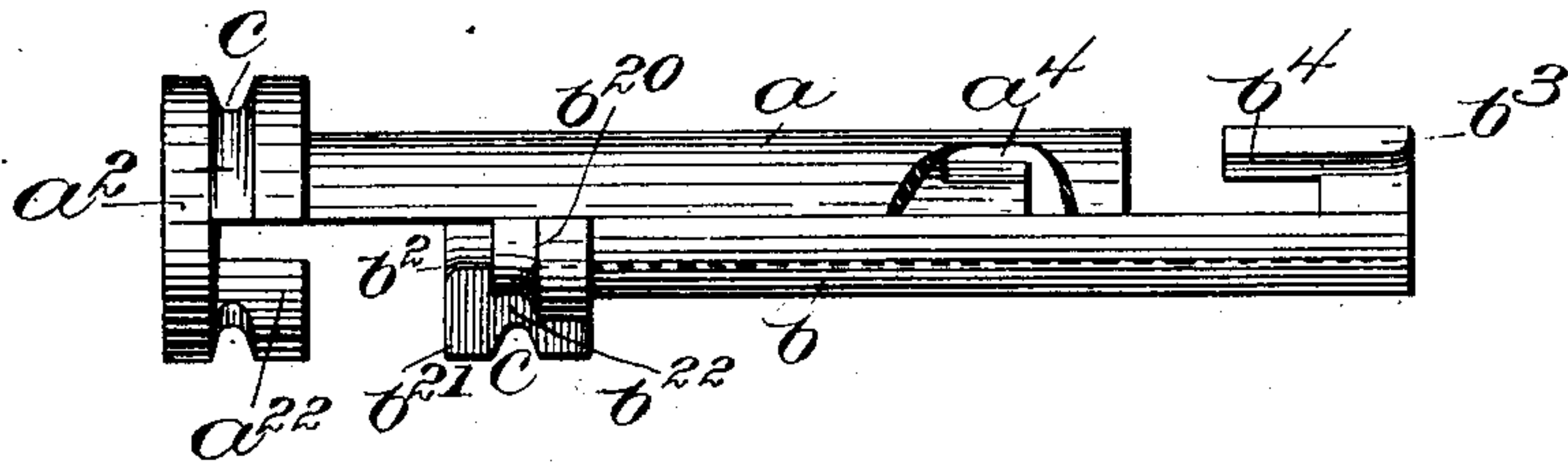


Fig. 3.

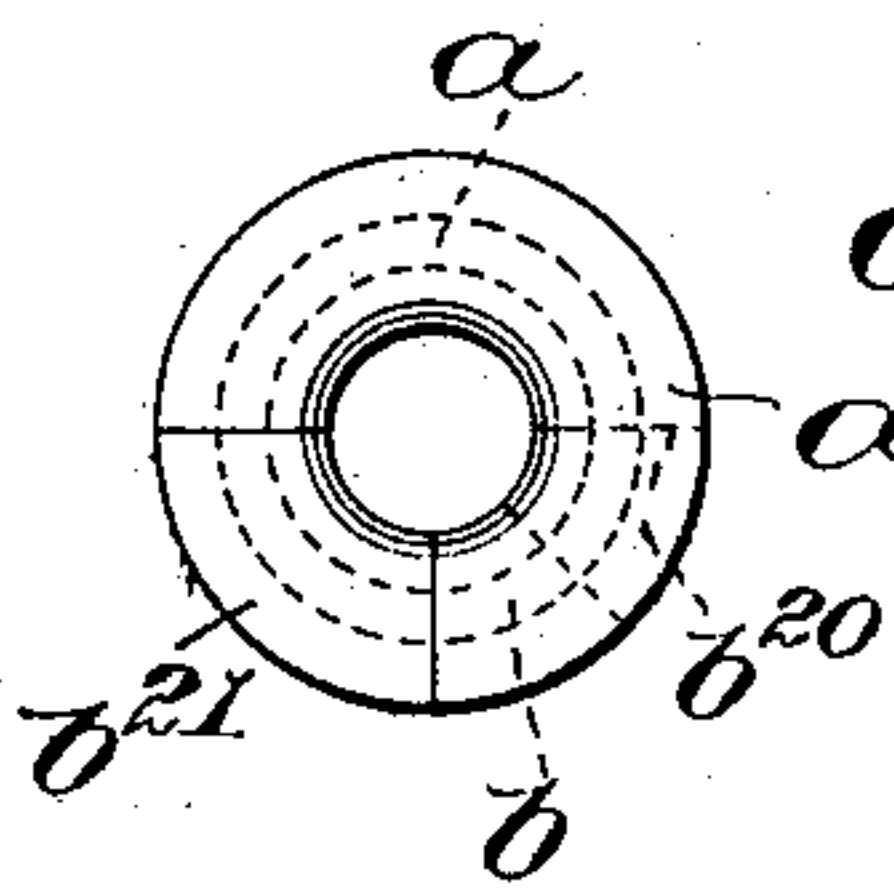


Fig. 2.

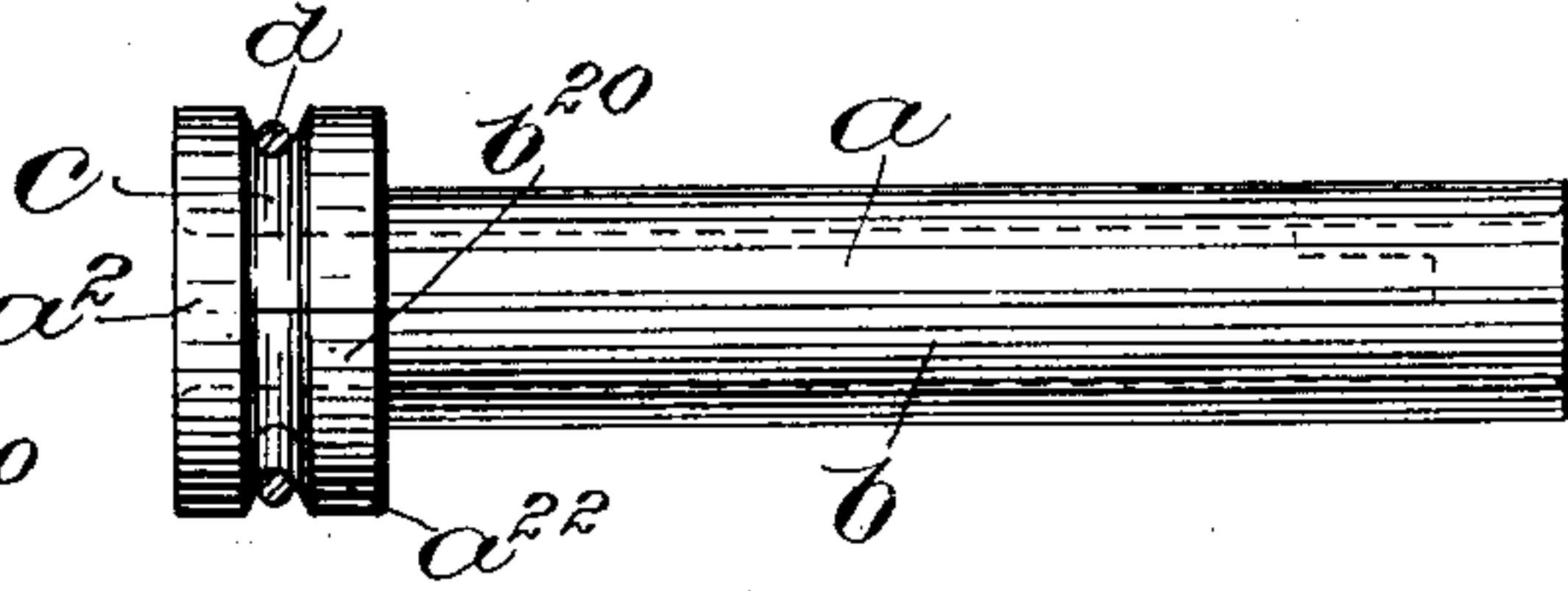


Fig. 4.

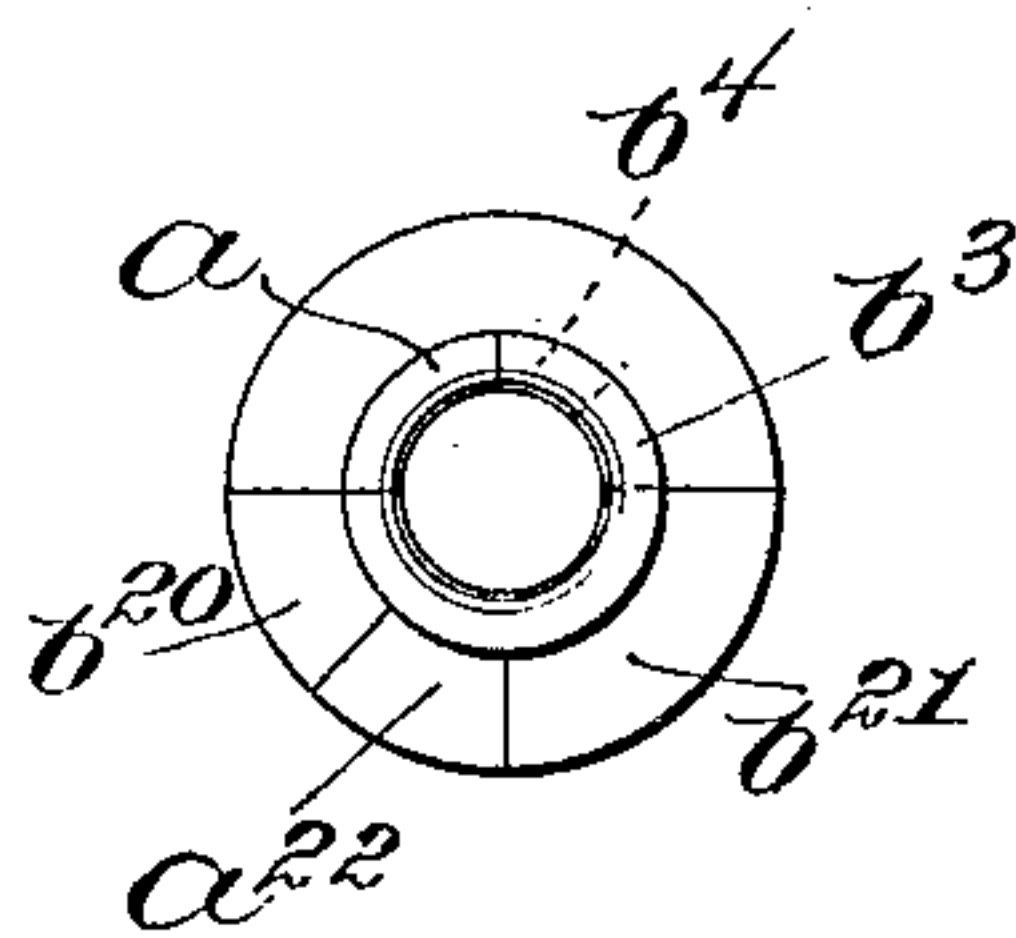


Fig. 6.

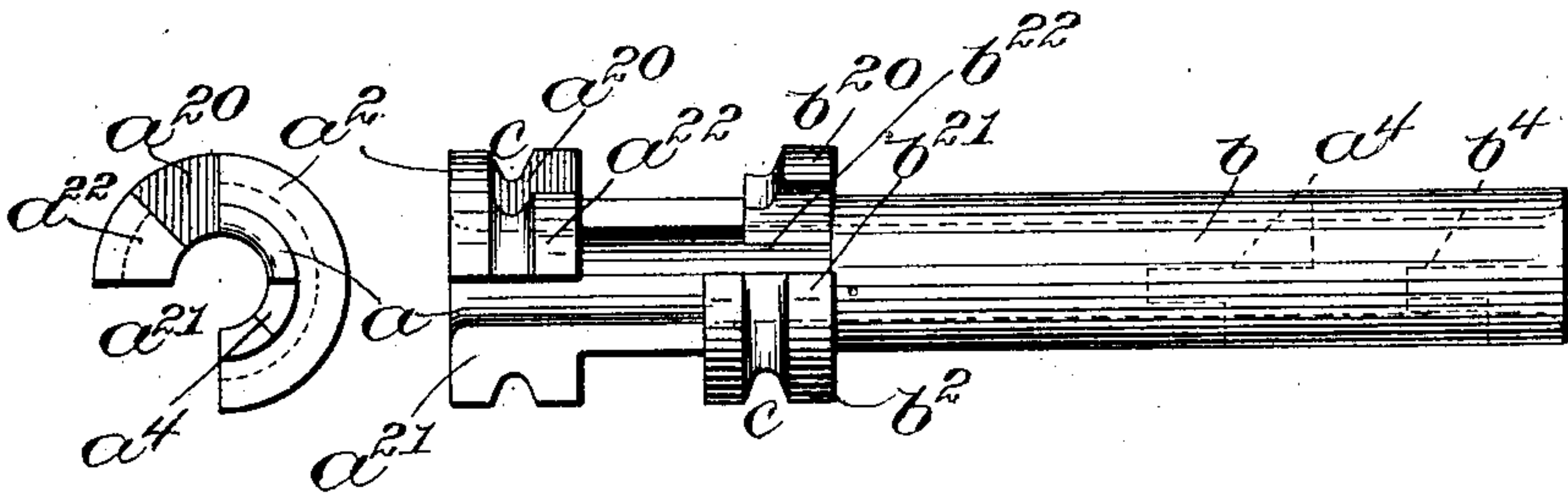
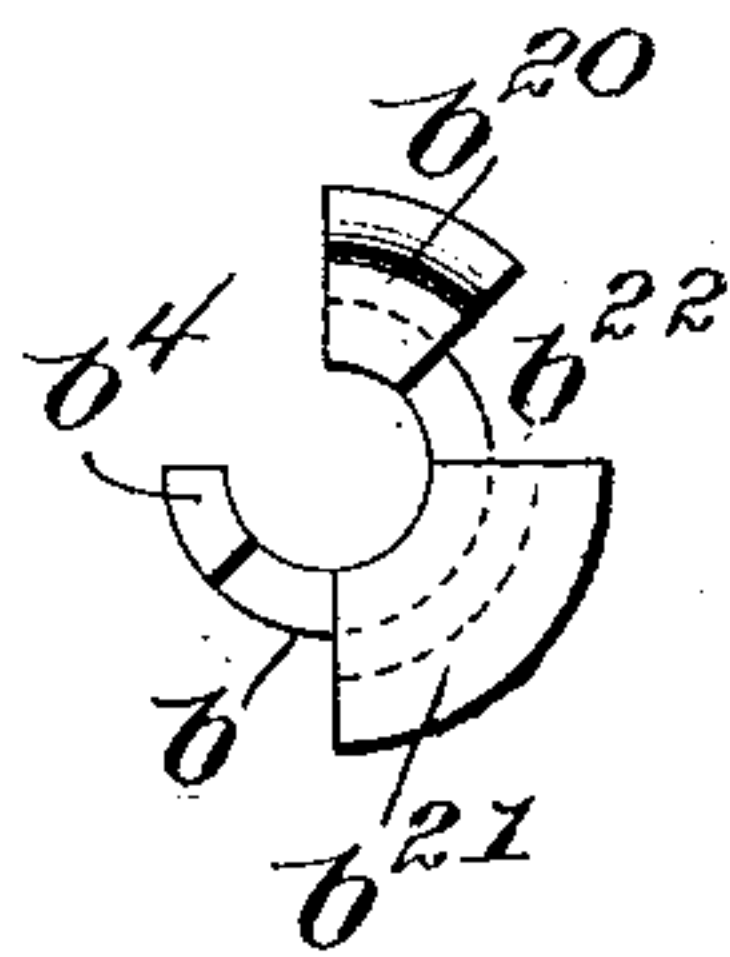


Fig. 5.

Fig. 7.



Witnesses:

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UNITED STATES PATENT OFFICE.

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INSULATOR.

SPECIFICATION forming part of Letters Patent No. 751,743, dated February 9, 1904.

Application filed December 1, 1902. Serial No. 133,442. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH M. MAHONEY, of Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Insulators, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

The present invention relates to an insulator, and is embodied in an insulating-sleeve of the kind commonly used with electric wires where they are passed through walls or partitions, the insulating-sleeves being commonly made of porcelain or similar insulating material.

It is the object of the present invention to obtain an insulating-sleeve of this kind which can be readily applied to the wire after the wire has been strung or threaded through the openings in the partitions, a further object of the invention being to obtain an insulator which is also practical for use as what is known as a "crossover-insulator"—that is to say, an insulating-sleeve which is placed upon the wire where it crosses another wire, so as to prevent the two from coming into contact with each other.

It frequently happens in wiring a building that a sufficient number of insulating-sleeves to provide for all the openings in the walls or partitions through which the wires are strung are not previously placed upon the wire, and sometimes it is found that one of the openings is left uninsulated, thus rendering it necessary to pull out all the wire beyond the uninsulated opening in order that another insulator may be placed upon the said wire. In accordance with the present invention the insulator is made in two sections, so that after a wire is strung the insulator can be applied, the two sections being put on separately, and the insulator as a whole then pushed along the wire into the opening. In order to hold the two sections together, they are provided with interlocking portions, which are so arranged as to prevent the lateral displacement of one section with relation to the other, and the insulator as a whole is provided with a flange of greater diameter than that of the body of the insulator, the said flange being provided with

a channel to receive a fastening device, such as a wire or spring, which prevents the longitudinal displacement of one section relative to the other. This means for preventing the longitudinal displacement, combined with the interlocking portions, which prevent the lateral displacement of one part relative to the other at either end, renders it practical to use this form of insulator as a crossover-insulator, since the opening of the wall through which the wire passes does not necessarily contribute in holding the two parts together.

The flange above described, which provides a seat for the fastening device, is not detrimental when the insulator is used as a crossover-insulator and is substantially essential when the insulator is used where a wire passes through a partition, as it is necessary in this case to prevent the longitudinal displacement of the insulating-sleeve.

Figure 1 is a side elevation, partly in section, of an insulator embodying the invention, the two parts being shown in their proper lateral relation to each other, but displaced longitudinally. Fig. 2 is a side elevation indicating the insulating-sleeve assembled. Fig. 3 is an end elevation looking toward the left of Fig. 2. Fig. 4 is an end elevation looking toward the right of Fig. 2. Fig. 5 is a view similar to Fig. 1, but showing the sleeve turned quarter around from the position shown in Fig. 1. Fig. 6 is an end view of one section of the insulator looking toward the right of Fig. 5. Fig. 7 is an end view of the other section looking toward the left of Fig. 5.

Referring to Fig. 1, the insulating-sleeve embodying the invention comprises two parts *a* and *b*, each of which has a semitubular body portion, part of which is enlarged, as shown at *a*² and *b*², to form when the two parts are assembled a flange at one end of the main tubular portion of the insulating-sleeve. The said flange portion is provided with an annular channel *c*, formed partly in the flange portion *a*² of the member *a* and partly in the flange portion *b*² of the member *b*, the said channel being intended to contain a fastening device *d*, Fig. 2, which may conveniently consist of a wire or spring extended around the two parts and fastened together at the ends, the said wire

thus serving to prevent both longitudinal and lateral displacement of the said parts. The fastening device d , however, alone would obviously not effectually prevent the lateral displacement of the parts if the insulating-sleeve were simply strung upon the wire without extra support, as in the case of the use of the insulator as a crossover-insulator instead of an insulator for a wire passing through a hole in a wall or partition. For this reason the two members a and b of the insulator are provided with interlocking portions so shaped as to prevent lateral displacement when the two parts are properly assembled, so that the fastening device d is mainly depended upon to prevent an independent movement of one of the parts relative to the other part in a longitudinal direction.

As herein shown, the member b is provided with an interlocking tongue portion b^3 at the outer end, which projects laterally beyond the axis of the body portion b , the said interlocking portion b^3 having a longitudinally-projecting member b^4 , which enters a corresponding recess a^4 in the member a . The said members, as stated, are each semitubular, and the walls of the recesses described are formed radially to the axis of the tube, so that the two parts can only be assembled by moving one part longitudinally relative to the other from the position shown in Fig. 1 to the position shown in Fig. 2, while they will interlock, or, in other words, be prevented from lateral displacement after they have been assembled as described. Similarly the flange portion b^2 of the member b is formed with two projections b^{20} and b^{21} , the former of which enters a corresponding recess a^{20} in the member a , (see Fig. 5,) while the latter, b^{21} , enters a recess a^{21} in the member a , the recess a^{20} not being cut wholly through, since a portion of the member a must be left to support the part a^{22} , which enters the space b^{22} between the member b^{20} and the member b^{21} . The interlocking of these portions effec-

tually prevents any displacement of one of the parts relative to the other, except by a longitudinal movement of the said parts, and such longitudinal movement is prevented by the fastening device d , which is secured in the channel c , formed in the flange $a^2 b^2$, a part of which flange is formed in each member.

I claim—

1. An insulating-sleeve having two semitubular members provided with interlocking portions to prevent lateral displacement of one member relative to the other, a portion of larger periphery at one end of each member, and an annular channel formed partly in one member and partly in the other, as set forth.

2. An insulating-sleeve having two semitubular members each formed with an enlargement at one end to form when the members are assembled, a flange; and a locking projection formed on each member and projecting beyond the axis of the tube and substantially parallel to said axis to enter a corresponding recess in the other member, as set forth.

3. An insulating-tube comprising the semitubular members a and b , the member a being provided with the longitudinal recesses a^{20} and a^{21} at one end, and the longitudinal recess a^4 at the other end, and the projection a^{22} between the recesses a^{20} and a^{21} , the member b being provided with the longitudinal projections b^{20} and b^{21} to enter respectively the recesses a^{20} and a^{21} and the projection b^4 to enter the recess a^4 and the recess b^{22} to receive the projection a^{22} , and each member having formed therein a part of the annular channel c which surrounds both members.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH M. MAHONEY.

Witnesses:

HENRY J. LIVERMORE,
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