No. 751,459. PATENTED FEB. 9, 1904.

C. C. CHESNEY.

LINE INSULATOR.

APPLICATION FILED JAN. 14, 1903.

NO MODEL.

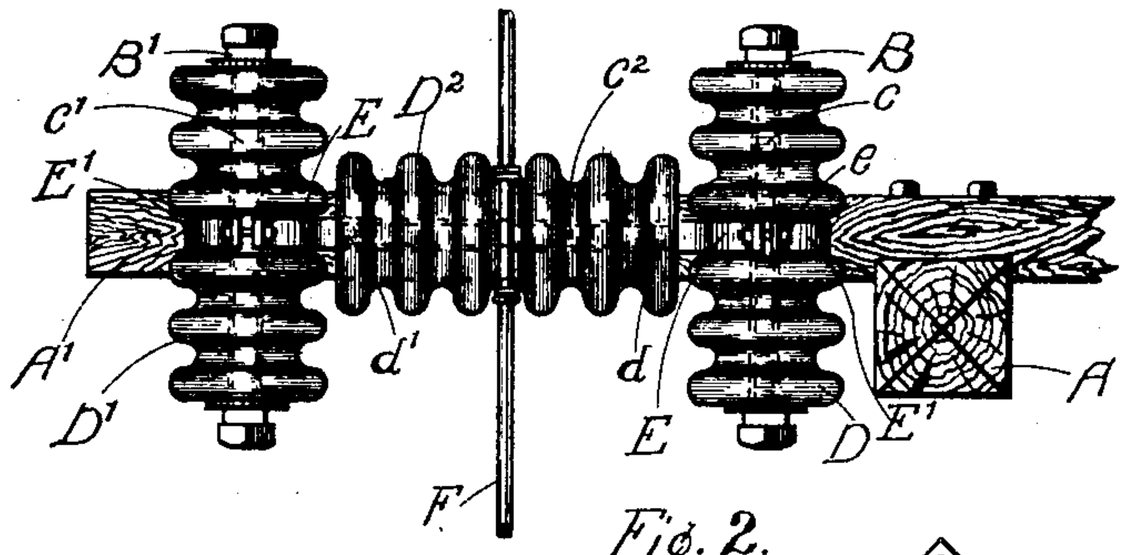


Fig. 2.

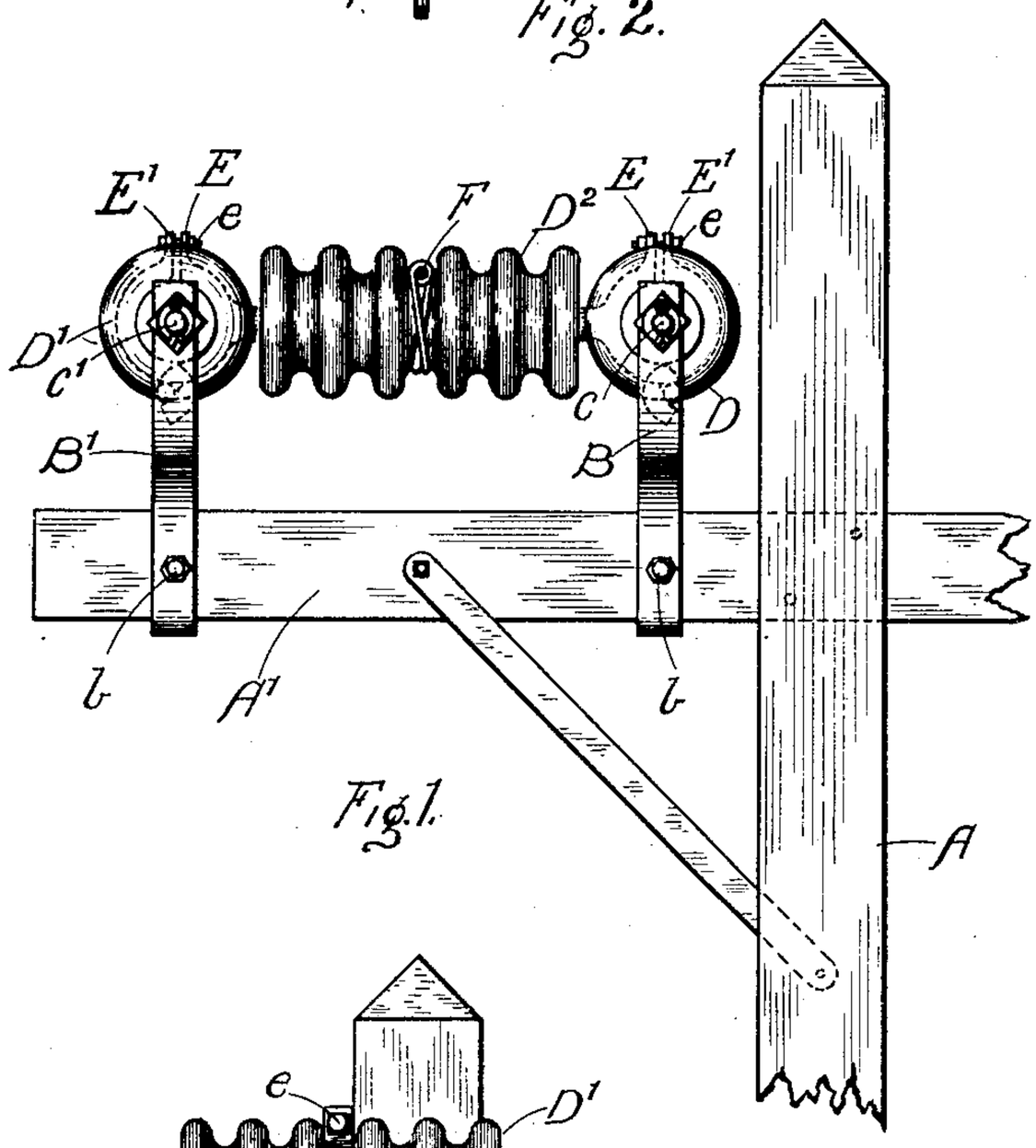


Fig. 1.

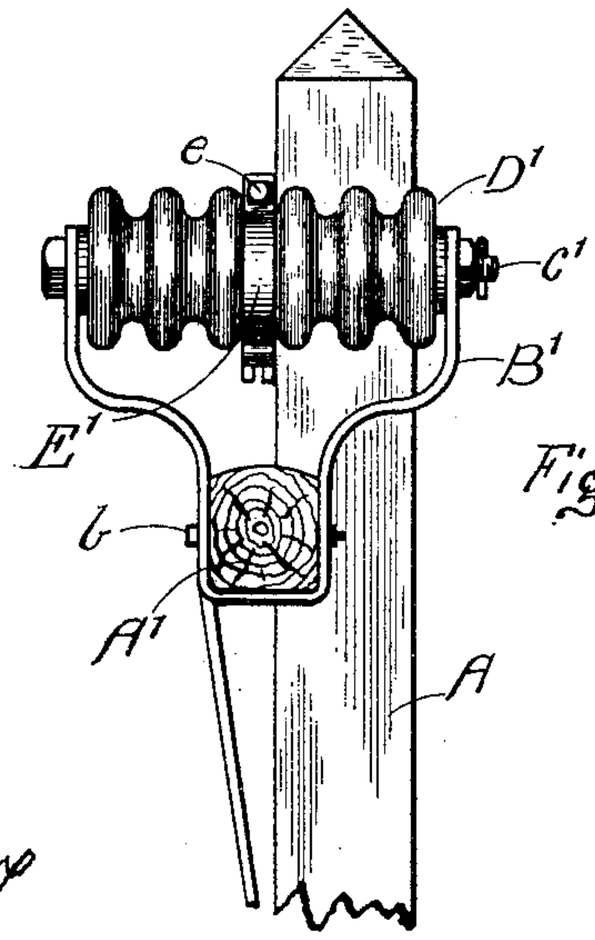


Fig. 3.

WITNESSES:

Mabel Goudchaux

[illegible]

INVENTOR.

Cummings C. Chesney.

BY Middleton Bartlett & Brownell

ATTORNEYS.

No. 751,459. Patented February 9, 1904.

# UNITED STATES PATENT OFFICE.

CUMMINGS C. CHESNEY, OF PITTSFIELD, MASSACHUSETTS.

## LINE-INSULATOR.

SPECIFICATION forming part of Letters Patent No. 751,459, dated February 9, 1904.

Application filed January 14, 1903. Serial No. 138,999. (No model.)

*To all whom it may concern:*

Be it known that I, CUMMINGS C. CHESNEY, of Pittsfield, county of Berkshire, and State of Massachusetts, have invented certain new and useful Improvements in Line-Insulators, of which the following is a specification.

My invention relates to line-insulators; and, generally speaking, the object thereof is to provide an improved character of insulator especially adapted for extremely high potentials. To this end I have provided an insulator having the general shape of a letter **H**. The line-wire is secured to the center of the connecting-arm of the **H**, while the insulator as a whole is supported from the ends by the two parallel legs of the **H**. Moreover, my improved insulator is composed of several insulators or sets thereof set at an angle to each other to form the **H** shape and preferably mounted on rods the two parallel ends of which are supported by suitable means, while the cross-rod is clamped at each end about the two parallel insulators or sets thereof. The central insulator, to which the line-wire is connected, is so mounted on a rod or shaft as to be free to rotate, so that the wire may yield slightly to longitudinal movement. By these means there is provided a very long leakage-surface from the line-wire to every point of support, and at the same time the insulators are not of such length as to be liable to breakage. Moreover, if either of the individual insulators should break or prove defective such insulator may be readily renewed without disturbing the other insulators. In short, the insulator while provided with a maximum length of leakage-surface is compact and stanch and readily reparable. The loose mounting of the central insulator is also an important feature of my invention, since it equalizes to a considerable extent the tension on the line-wire, while relieving the insulator from strain.

Referring to the drawings, Figure 1 is a side elevation of an embodiment of my invention. Fig. 2 is a plan view thereof, and Fig. 3 is an end elevation of the same.

A illustrates an ordinary pole from which is supported the cross-arm A′. To this cross-arm are secured by bolts *b* two pairs, B and B′, of arms. These arms support rods *c* and *c*′, (shown in dotted lines in Fig. 2,) and upon these rods are mounted two parallel insulators D and D′. The ends of the arms B and B′ engage the rods at the ends of the insulators.

Loosely mounted on a rod $c^2$, which rod is screwed, as indicated at *d* and *d*′, to the clamp members E E, is an insulator $D^2$, which thus lies between and at right angles to the parallel insulators D and D′. The clamp members E E are secured to clamp members E′ E′ by bolts *e*, as shown, said clamps surrounding the central portions of insulators D and D′. The line-wire F is secured by any suitable means to the center of insulator $D^2$.

It will be seen that my invention comprises several features of advantage—the general **H** shape, the loose mounting of the wire-carrying insulator, as well as other features of construction and arrangement, as described and claimed. I do not, of course, limit myself to the employment of these various features in one structure nor to the mere details described and illustrated.

Having thus fully described my invention, what I claim, and desire to protect by Letters Patent, is—

1. An **H**-shaped insulating-support composed of a plurality of insulators set at an angle to each other.

2. An **H**-shaped insulating-support composed of a plurality of insulators set at an angle to each other and means for securing the several insulators together to form a unitary structure.

3. The combination of an insulator comprising two parallel legs and a connecting-leg supported from the middle portions of said parallel legs, a line-wire secured to the connecting-leg, and arms supporting the insulator from the ends of its parallel legs.

4. The combination of supporting-arms, rods carried between said arms, insulators mounted on said rods, and an insulator lying between and supported from the middle portions of the aforesaid insulators.

5. In combination, two tubular-shaped insulators, a rod supported between the middle

portions of said insulators, and a third tubular-shaped insulator loosely mounted on said rod.

6. In combination, two rods, two tubular-shaped insulators mounted thereon, a third rod supported on the middle portions of said insulators and a third tubular-shaped insulator loosely mounted on said rod.

7. An insulating-support composed of three individual insulators lying in the same horizontal plane, one of said insulators lying between and supported from the middle portions of the others.

8. The combination of three insulators lying in the same horizontal plane, arms supporting two of said insulators from the ends thereof, and means for supporting the other insulator from the middle portions of the said two insulators.

9. The combination of three rods lying in the same horizontal plane, insulators mounted on each rod, arms engaging and supporting two of said rods, and clamps engaging the middle portions of two of the insulators and supporting the third rod therefrom.

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

CUMMINGS C. CHESNEY.

Witnesses:

H. W. SMITH,

WM. CURRIE.