

No. 869,404.

PATENTED OCT. 23, 1907.

A. ANDERSON.  
STRAIN INSULATOR.  
APPLICATION FILED JULY 5, 1906.

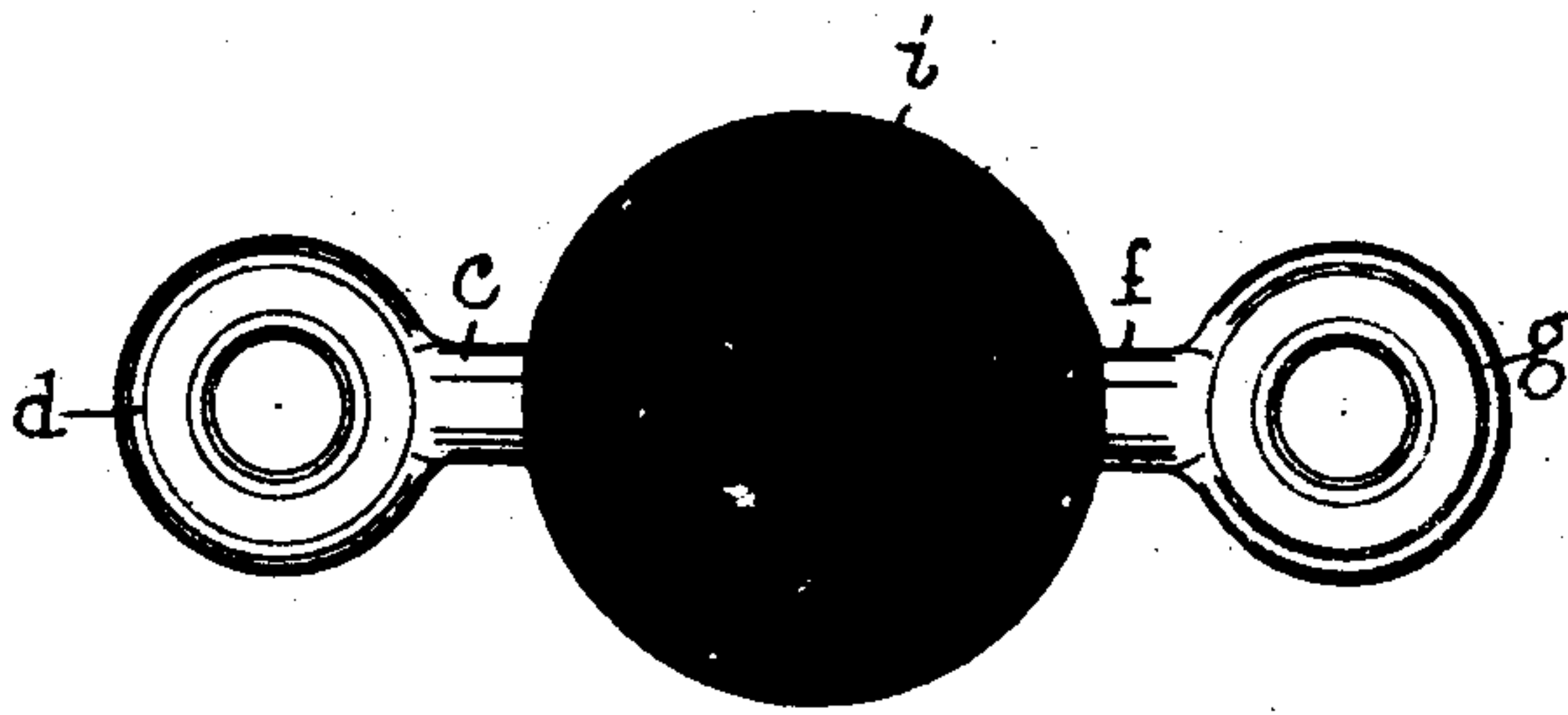


Fig. 1.

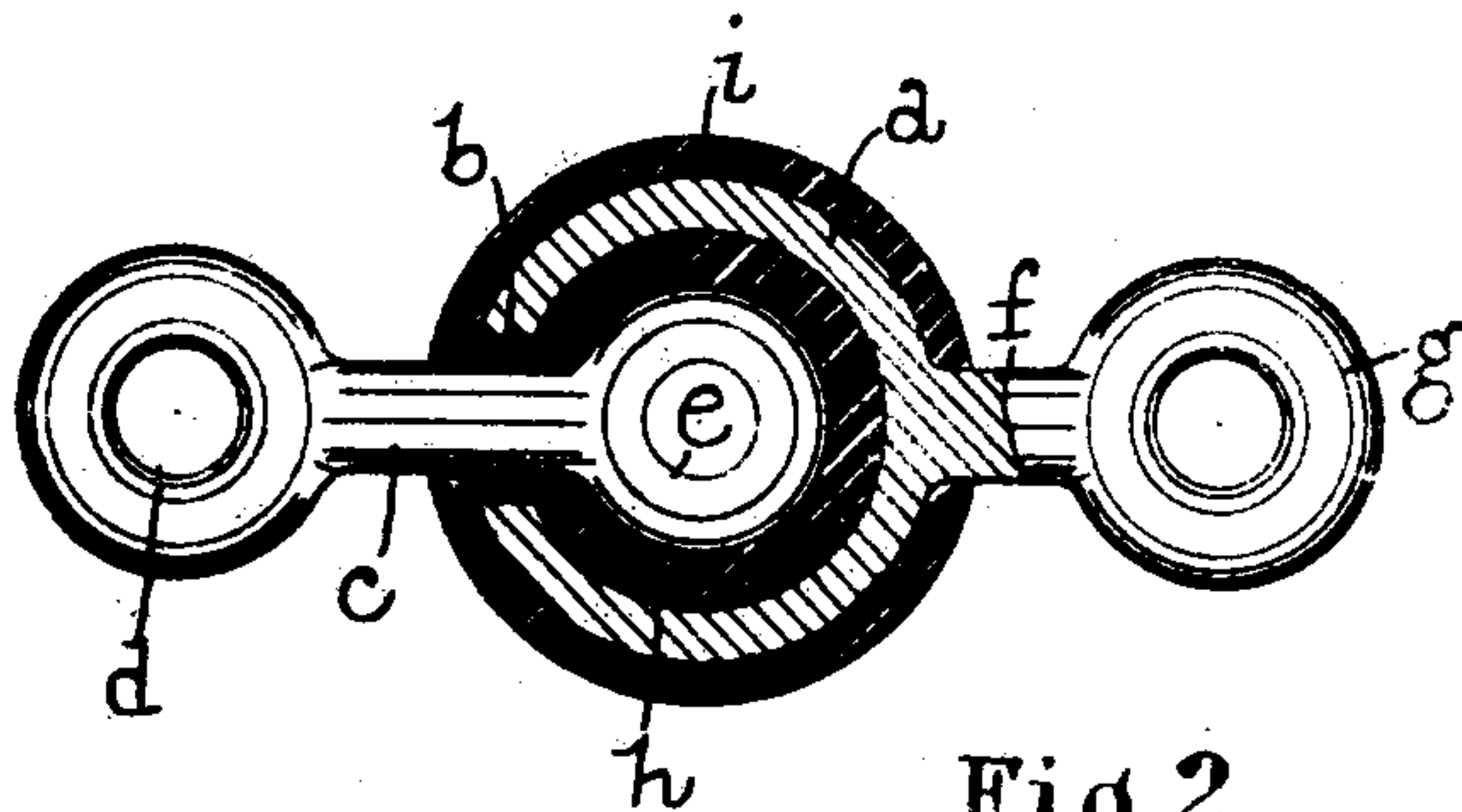


Fig. 2.

*Witnesses.*  
C. H. Gamett  
J. Murphy

*Inventor*  
Albert Anderson  
by Jas. H. Churchill  
att'y.

# UNITED STATES PATENT OFFICE.

ALBERT ANDERSON, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO ALBERT AND J. M. ANDERSON MANUFACTURING COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

## STRAIN-INSULATOR.

No. 869,404.

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed July 5, 1906. Serial No. 324,783.

To all whom it may concern:

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

The invention relates to an electric insulator of that class known as strain insulators, such as commonly employed in the overhead electric railway systems, and is an improvement upon the strain insulator shown and described in another application, Serial No. 303,756 filed by me March 2, 1906.

The present invention has for its object to provide a strain insulator which is capable of withstanding a severe or great strain and can be produced at a minimum cost, thereby enabling it to be extensively used. These and other features of this invention will be pointed out in the claims at the end of this specification.

Figure 1 is an elevation of a strain insulator embodying this invention, and Fig. 2, a longitudinal section with parts in elevation of the insulator shown in Fig. 1.

The strain insulator herein shown as embodying this invention comprises a metallic shell *a* spherical in shape and provided with an opening *b* for the passage of the shank *c* of a member shown as an eye bolt which is provided at one end with an eye *d* and at its other end with a head *e*, which latter is preferably provided with a curved surface adjacent to the inner curved surface of the shell which surrounds the opening *b*. The metallic shell *a* has attached to or forming part of it a shank *f* having as shown an eye *g*, which shank is located substantially opposite to the opening *b*.

The shell *a* is electrically separated from the eye bolt by insulating material *h* of any suitable material, and said shell is also enveloped by a covering *i* of insulating material.

In practice, the shell *a* is made in the form of a cyl-

inder closed at one end and open at the other, the closed end having attached to it the shank *f*. The insulating material *h* in plastic form or other condition capable of being molded is placed within the cylindrical shell, and the head *e* of the eye bolt or member is then centered within the shell, which is compressed in suitable dies or molds to substantially close the open end of the cylinder, that is to contract the same so as to form the opening *b*, at the same time imparting to the shell a substantially spherical form which is of substantially the same curvature on its inner surface as the curve of the head *e*, thereby increasing the ability of the insulator to withstand severe strains. The insulating material for the cover *i* is subsequently applied. By attaching the shank *f* to the shell *a*, these parts may be cast in one piece and the cost materially reduced thereby, thus enabling substantially inexpensive strain insulators to be made which are capable of withstanding a severe or great strain.

### Claims.

1. In an insulator of the class described, in combination, a metallic shell having a shank attached to it and provided with a substantially diametrically opposite opening and with a substantially spherical curved inner surface adjacent to said opening, a metallic member extended through said opening and having within the said shell a head, and insulating material within the shell separating said head from said shell, substantially as described.

2. In an insulator of the class described, in combination, a substantially spherical metallic shell having a shank integral with it and provided with an opening substantially opposite said shank, a metallic member extended through said opening and having within said shell a head provided with a curved surface adjacent to said opening, and insulating material enveloping said shell and the portion of the metallic member within the same, substantially as described.

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

ALBERT ANDERSON.

Witnesses:

JAS. H. CHURCHILL,  
J. MURPHY.