May 7, 1929. A. L. HAGERMAN 1,712,432

ELECTRICAL INSULATOR ASSEMBLY

Filed Aug. 11, 1923

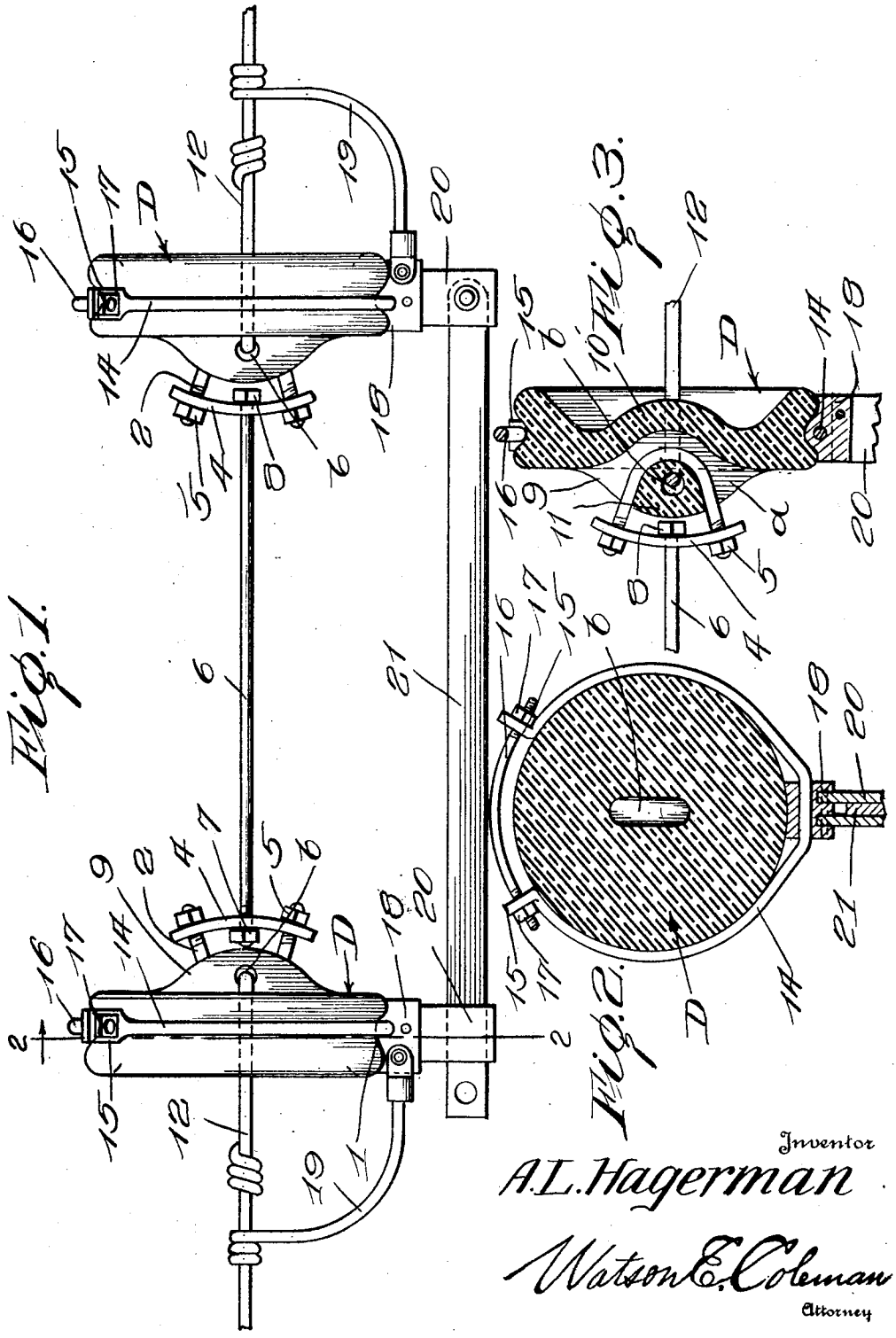


Fig. 1.

Fig. 3.

Fig. 2.

Inventor
A. L. Hagerman
Watson E. Coleman
Attorney

Patented May 7, 1929. 1,712,432

UNITED STATES PATENT OFFICE.

ALVA LLOYD HAGERMAN, OF LAFAYETTE, COLORADO.

ELECTRICAL INSULATOR ASSEMBLY.

Application filed August 11, 1923. Serial No. 656,730.

This invention relates to electrical insulator assemblies, and has for an object the provision of means for connecting a pair of disc insulators whereby the assembly may be used to support an electrical device such as a high-voltage disconnecting switch.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved electrical switch whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:—

Figure 1 is a view in elevation illustrating a high tensioned disconnecting switch constructed in accordance with an embodiment of my invention;

Figure 2 is a sectional view taken substantially on the line 2—2 of Figure 1, certain of the parts being in fragment; and

Figure 3 is a detailed sectional view taken on a line at right angles to the line of section of Figure 2.

As disclosed in the accompanying drawings, my improved switch comprises disc strain insulators D each of which being provided in its periphery with an annular groove or channel 1.

The opposed faces of the discs D are provided at their central portions with the outstanding flanges or webs 9 and the adjacent portion of each of the discs D is provided with a depression 10. Disposed through the flange or web 9 and the disc D is an opening *a* whereby a cross bar or member 11 is provided. A substantially U-shaped bolt 2 is disposed through the opening *a* with its extremities outwardly disposed and intermediate portions in close contact with the bar 11. The extremities of the bolt 2 are disposed through the end portions of a plate 4, herein disclosed as arcuate in form with its out-bow disposed in a direction away from the associated disc D. Threaded upon the extremities of the bolt 2 are the holding members 5. A connecting rod 6 is operatively engaged with the central portions of the plates 4 whereby the discs D are maintained in desired assembled relation. As herein disclosed, one end portion of the rod 6 is provided with a head 7 for contact with the inner face of one of the plates 4 while the opposite end portion of the rod has operatively engaged therewith a nut 8 for contact with the inner face of the plate 4 associated with the second disc D. A terminal loop 12 comprised in the high tensioned line is engaged with each of the discs D and disposed through the opening *b* disposed through the flange 9 or more particularly the bar 11 whereby the assembled discs are readily and conveniently cut in on said line.

Disposed circumferentially around each of the discs D and seating within the annular groove thereof is a split ring 14 the extremities of which being provided with the outstanding ears 15 through which are directed the end portions of a tie bolt 16. Threaded upon the extremities of said bolt 16 and engaging the outer faces of the ears 15 are the holding nuts 17 whereby the split ring 14 is effectively maintained in applied position upon a disc D.

The ring 14 is threaded through a block 18 which has close contact at a desired point with the periphery of the disc D, said block being a conductor of electricity and an electrical connection with the main line through the jumper wire 19. Each of the blocks 18 has depending therefrom and in electrical connection therewith a pair of contact plates 20. Extending between and pivotally connected with the plates 20 of one of the blocks 18 is an end portion of the switch blade 21, said blade being of such length as to be engaged between the contacts 20 of the second block 18.

In practice, the distance betwen the discs D is variable according to voltage specifications and the size of the switch in its entirety is varied according to voltage and volt carrying capacity or in accordance with the size of the discs D.

From the foregoing description it is thought to be obvious that an electrical switch constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the pre-

cise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:—

An electric insulating device comprising a pair of strain disc insulators, cross bars comprised in the opposed faces of said insulators, a substantially V-shaped bolt engaged with each of the cross bars and having its free ends outwardly disposed, a plate mounted upon and connecting the extremities of each bolt, said plate being spaced from the opposed face of the associated insulator, and a rod having its extremities disposed through the plates carried by both insulators, said rod having a head contacting with the inner face of one of the plates, and a member carried by the rod for contact with the inner face of the second member.

In testimony whereof I hereunto affix my signature.

ALVA LLOYD HAGERMAN.