W. C. JOHNSON & S. E. PHILLIPS.

Insulator for Telegraph Wires.

No. 201,615. Patented March 26, 1878.

Fig. 1

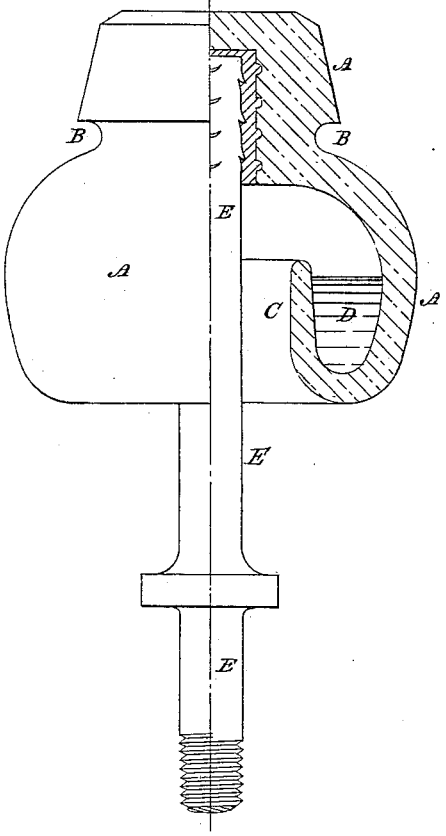


Fig. 3

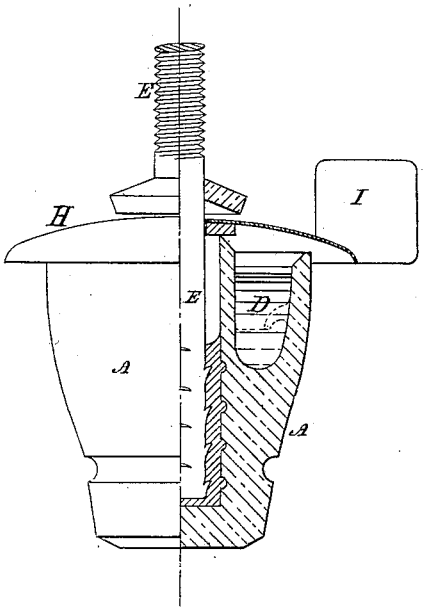


Fig. 4

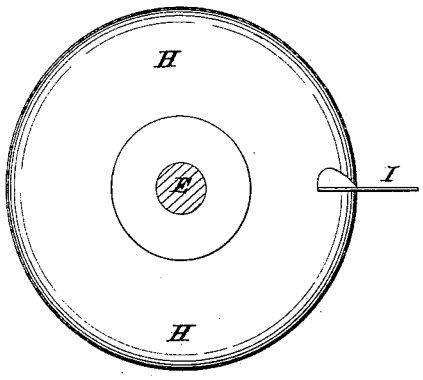
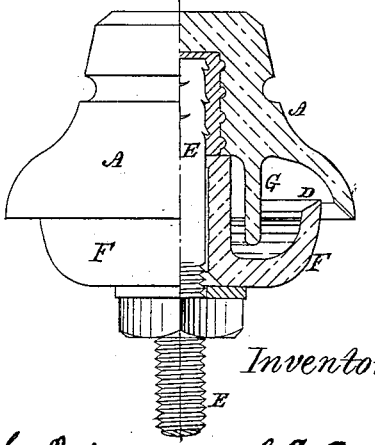


Fig. 2



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UNITED STATES PATENT OFFICE.

WALTER C. JOHNSON AND SAMUEL E. PHILLIPS, OF CHARLTON, ENGLAND.

IMPROVEMENT IN INSULATORS FOR TELEGRAPH-WIRES.

Specification forming part of Letters Patent No. **201,615**, dated March 26, 1878; application filed August 22, 1877.

To all whom it may concern:

Be it known that we, WALTER CLAUDE JOHNSON and SAMUEL EDMUND PHILLIPS, of Charlton, Kent, England, have invented Improvements in Insulators for Telegraph-Wires, of which the following is a specification:

The object of this invention is constructing telegraph-wire insulators that they may contain a quantity of insulating hydrocarbon fluid, such as paraffine-oil, which will not support a film of moisture or dust on the surface, whereby we produce a better and more uniform insulation, especially during foggy and rainy weather.

We are aware that insulators have hitherto been made with inside cups or receptacles, containing paraffine-wax or other similar solid matter, and we make no claim thereto, our invention being limited to employment of the oil, or equivalent insulating fluid. By the use of the fluid instead of a solid, we secure a more perfect and permanent insulation, and avoid the danger of the insulation being destroyed, which is liable to occur in the event of the solid cracking or shrinking, or of dust setting on its surface and forming an absorbent for the moisture of the atmosphere.

The insulators, of porcelain, glass, or other suitable material, may have the fluid-receivers within themselves, the insulator acting as a cover, to shield the liquid from dust and dirt; or a separate receiver may be arranged under or within the insulator; or a metallic or other cover may be arranged above the fluid-receiver, which cover may be stationary or be caused to rotate by the action of the wind, whereby any web or filament may become broken.

The invention is clearly represented in the annexed drawings.

Figure 1—A is an insulator, of porcelain, of ordinary form exteriorly, the wire being fastened around or to the groove B, as is usual. This insulator is hollow, and has an internal lip, C, turned up, by which a receiver or reservoir is formed for containing hydrocarbon or other insulating fluid D. E is the stem or bolt by which the insulator is secured to the post, building, or other structure.

Fig. 2 shows a half-sectional view of an insulator, A, as a cover to a separate fluid-receiver, F, which is thus protected from dust and dirt. The insulator has a ring, G, dipping in the fluid for the perfect insulation of same.

Fig. 3 represents a half-sectional view of an insulator, by which a wire can be suspended in the usual manner. This insulator has its upper part recessed, to form a receiver or reservoir for the insulating-fluid D, and a cover, H, is fitted above, upon which, in some cases, we affix vanes or fan-blades I, as in Figs. 3 and 4, so that the wind may revolve it from time to time, and thus break any web or filament which might otherwise connect the insulator to the cover, and so to earth.

We claim as our invention—

1. In an insulator for telegraph-wires, a non-conducting fluid contained in a suitable cup or receptacle, and cutting off the surface connection between the wire and the exterior of the insulator, substantially as shown.

2. A telegraph-insulator having paraffine-oil or similar non-conducting fluid mounted therein, substantially as and for the purpose described.

3. A telegraph-insulator having a rotating cap, provided with a vane, substantially as shown, for the purpose of causing the wind to move the cap and break the continuity of any surface film of moisture which may form upon the insulator.

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