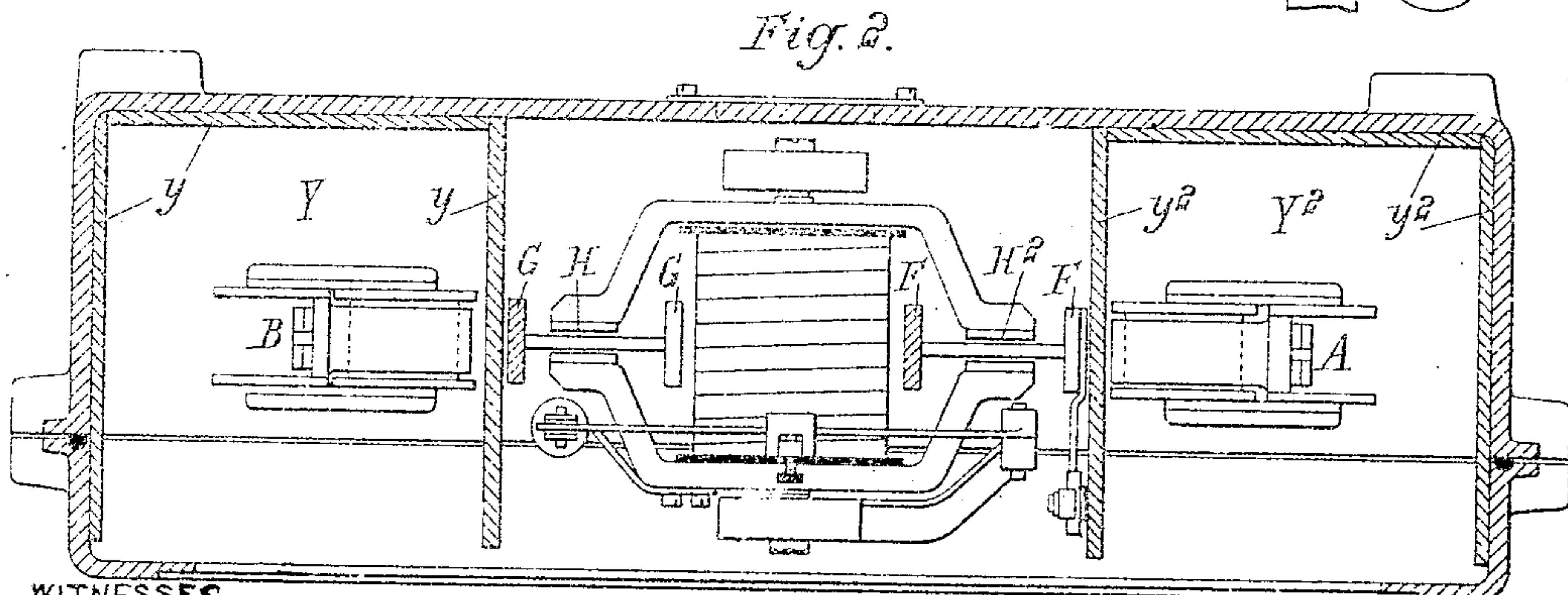
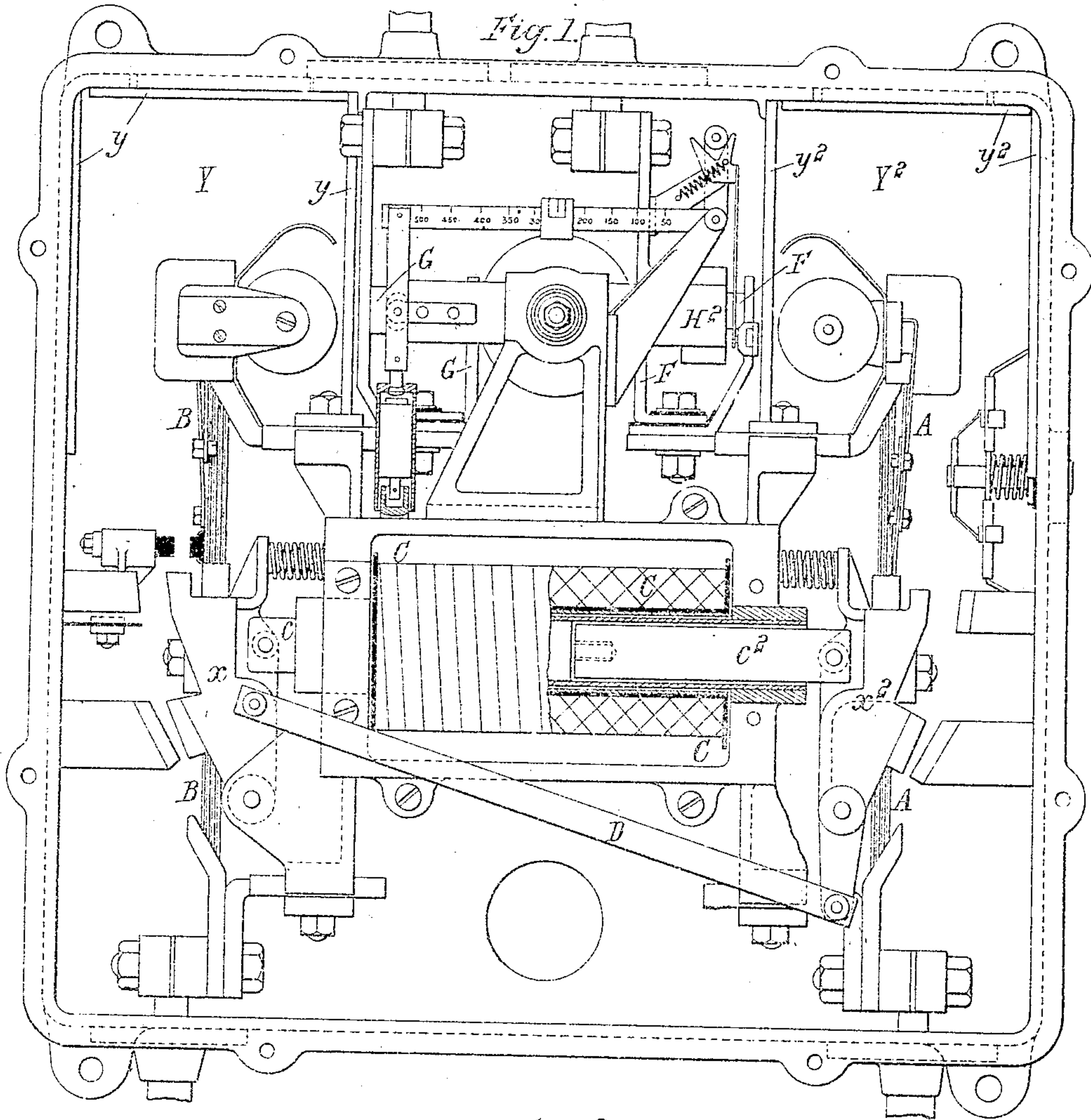


W. H. SCOTT.
DOUBLE POLE ELECTRIC CIRCUIT BREAKER.
APPLICATION FILED JULY 24, 1908.

903,791.

Patented Nov. 10, 1908.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM HARDING SCOTT, OF NORWICH, ENGLAND.

DOUBLE-POLE ELECTRIC-CIRCUIT BREAKER.

No. 903,791.

Specification of Letters Patent.

Patented Nov. 10, 1908.

Application filed July 24, 1908. Serial No. 445,276.

To all whom it may concern:

Be it known that I, WILLIAM HARDING SCOTT, a subject of the King of Great Britain and Ireland, of Gothic Works, Norwich, in the county of Norfolk, England, electrical engineer, have invented new and useful Double-Pole Electric-Circuit Breakers, of which the following is a specification.

This invention relates to relay double pole electric circuit breakers in which the main circuit is made by means of an electro-magnetically operated switch, the circuit being broken by the opening of the relay circuit.

According to this invention the main circuits of different polarity are arranged as far as possible from each other, especially at the places where the circuit is broken, each of the single-pole relay switches which make up the double-pole circuit breaker being, as far as the circuit-breaking part is concerned, in distinct compartments, thus preventing any danger of flashing between the two mains of opposite polarity. The blow-outs also are above the contacts in the compartments (which are preferably lined with asbestos, or the like), so that the hot air, caused by the momentary arc clears away, and does not get back to the contacts.

The accompanying drawings represent an arrangement in accordance with my invention.

Figure 1 is an elevation and Fig. 2 is a plan.

I arrange the two switches A and B at opposite ends of an electro-magnet C. The switch contacts themselves I prefer to arrange as described in the specification of British Letters Patent No. 23,751, A. D. 1905, granted to me, the actual circuit being broken principally at the top contact, which is provided with a magnetic blow-out with sparking contacts as shown. I prefer the electro-magnet C to be an iron-clad solenoid with plungers c c^2 to which the switch frames a a^2 are hinged, which plungers are attracted towards each other in the middle of the solenoid, although this electro-magnetic arrangement may be of any other suitable description. I prefer to

connect the two frames a a^2 by links D to make the switches work simultaneously. This arrangement enables the two switches (which of course have full voltage between them) to be arranged at a maximum distance apart, and also enables the breaking portions of the switch to be arranged in separate compartments Y Y^2 which prevents the possibility of flashing between the two mains of opposite polarity. The said two compartments I prefer to line with asbestos, or other bad-conducting, and flame-resisting, material, as shown at y y^2 .

The iron-clad solenoid C, or its equivalent, is wound with fine wire in shunt to the mains, or it may be across a separate circuit as may be most convenient.

The overload operating device is shown in the drawings above the iron-clad solenoid C, and it consists of a device for producing a movable magnetic field at H, H^2 in which the main current, passing through fixed conductors F and G can flow, as described in the specification of my concurrent application for patent (Serial Number 407,830), the arrangement of the circuit breaker itself being shown as being in accordance with that application.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:

Double-pole electric circuit breakers in which the switches operating the main currents are at opposite ends of an electro-magnetic system, the sparking points of the switches being arranged in separate compartments, as hereinbefore explained, so that flashing over from one pole to another is prevented.

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

WILLIAM HARDING SCOTT.

Witnesses:

JAMES H. STUBINGS,
RICHARD HOLMES.