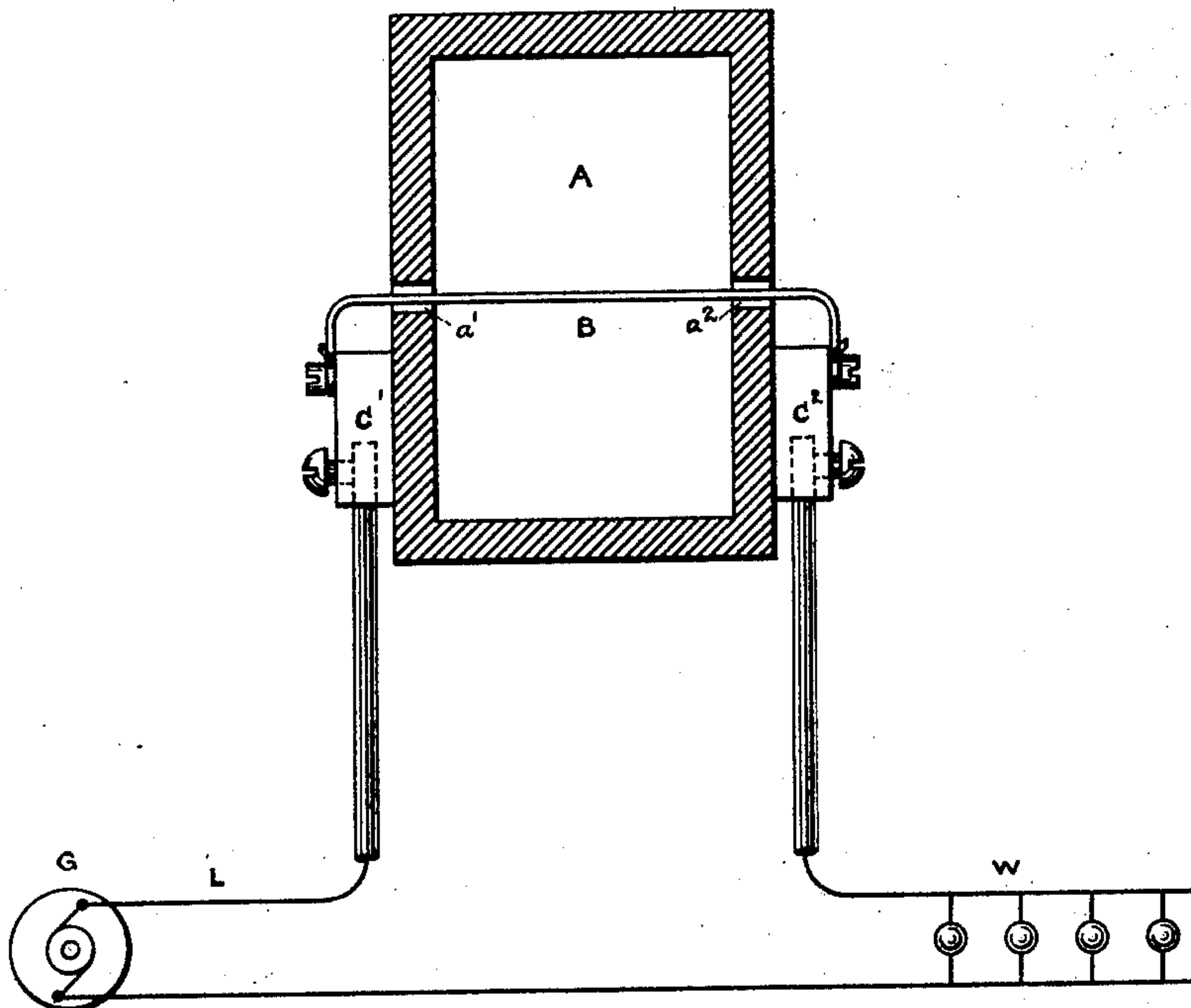


(No Model.)

A. WURTS.
ELECTRIC SAFETY FUSE BOX.

No. 434,169.

Patented Aug. 12, 1890.



Witnesses
James W. Smith
Henry Flatland Allright

Inventor
Alexander Wurts
By *his* Attorney
Charles A. Tappan

UNITED STATES PATENT OFFICE.

ALEXANDER WURTS, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO THE
WESTINGHOUSE ELECTRIC COMPANY, OF SAME PLACE.

ELECTRIC SAFETY-FUSE BOX.

SPECIFICATION forming part of Letters Patent No. 434,169, dated August 12, 1890.

Application filed May 12, 1890. Serial No. 351,524. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER WURTS, a citizen of the United States, residing in Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a certain new and useful Improvement in Safety-Fuse for Electric Circuits, (Case No. 404,) of which the following is a specification.

The invention relates to the construction of devices for protecting electric circuits from currents of abnormal strength.

The purpose of the invention is to provide efficient means for interrupting the connections of an electric circuit upon the passage of currents of abnormal strength. It is customary to employ safety-strips of fusible material—such as lead or an alloy—for interrupting the connections of an electric circuit when the flow of current therethrough becomes so great as to endanger the apparatus connected in the circuit. When, however, such fuses or safety-strips melt, the current from a dynamo-electric generator is liable to maintain an arc across the space between the terminals, the vapor of metal serving to afford a path for the current.

The purpose of the present invention is to provide means for interrupting such an arc; and it consists in providing means for throwing the fused metal of the safety-strip out from the path of the arc. This is accomplished by passing the fuse through vents or openings in the walls of an inclosing-chamber containing a small amount of air or gas. The chamber may consist of a small box, which is preferably of non-conducting material—such, for instance, as wood or porcelain. The openings or vents may be in opposite sides or ends of the box, and they are large enough to permit the fuse to pass freely through. The heat developed at the instant the fuse melts within this chamber causes a sudden rush of expanded air through the vents, and this forces the vapor and melted metal out from the openings, thus entirely interrupting the arc which tends to be formed.

The invention will be further described in connection with the accompanying drawing, which shows the device in vertical section.

These vents are of such size as to readily admit a fuse B, of any well-known construction, and to permit the air within the chamber to rush out when suddenly expanded by the heat caused by the melting of the fuse and the formation of an arc across the space between the ends. The ends of the fuse may extend a sufficient distance on each side of the box to be clamped in suitable binding posts or clips C' C². These are provided with means for attaching electrical conductors, so that the fuse may be connected in the electric circuit which it is desired to protect.

In the drawing, a generator is represented at G, and a work-circuit at W. The line L, leading from the generator to the work-circuit has its connections completed through the fuse B.

I claim as my invention—

1. The combination, with an inclosing box or chamber having vents in its walls, of a safety-fuse extending through the said vents, substantially as described.

2. The combination, with a safety-fuse, of an inclosing box or chamber therefor, having a hollow space for containing air, and vents in its walls through which the ends of the fuse extend, substantially as described.

3. The combination, with an inclosing box or chamber A, having vents a' a^2 , of the fuse B, extending loosely through the vents, and the binding posts or clips C' C², receiving the respective ends of the fuse, substantially as described.

In testimony whereof I have hereunto subscribed my name this 29th day of April, A. D. 1890.

ALEXANDER WURTS.

Witnesses:

FRANCIS PETTIT MANN,
JAMES W. SMITH.