(No Model.)

O. F. JÖNSSON.

AUTOMATIC SAFETY CIRCUIT CONTROLLER.

No. 338,752. Patented Mar. 30, 1886.

Fig. 2.

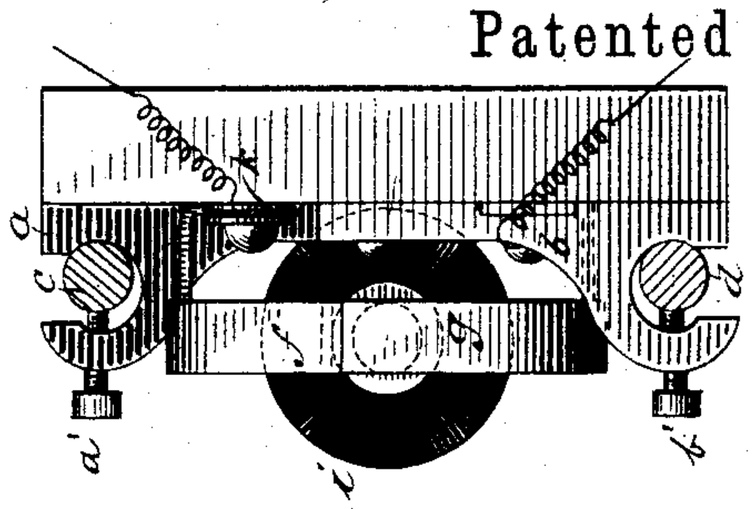
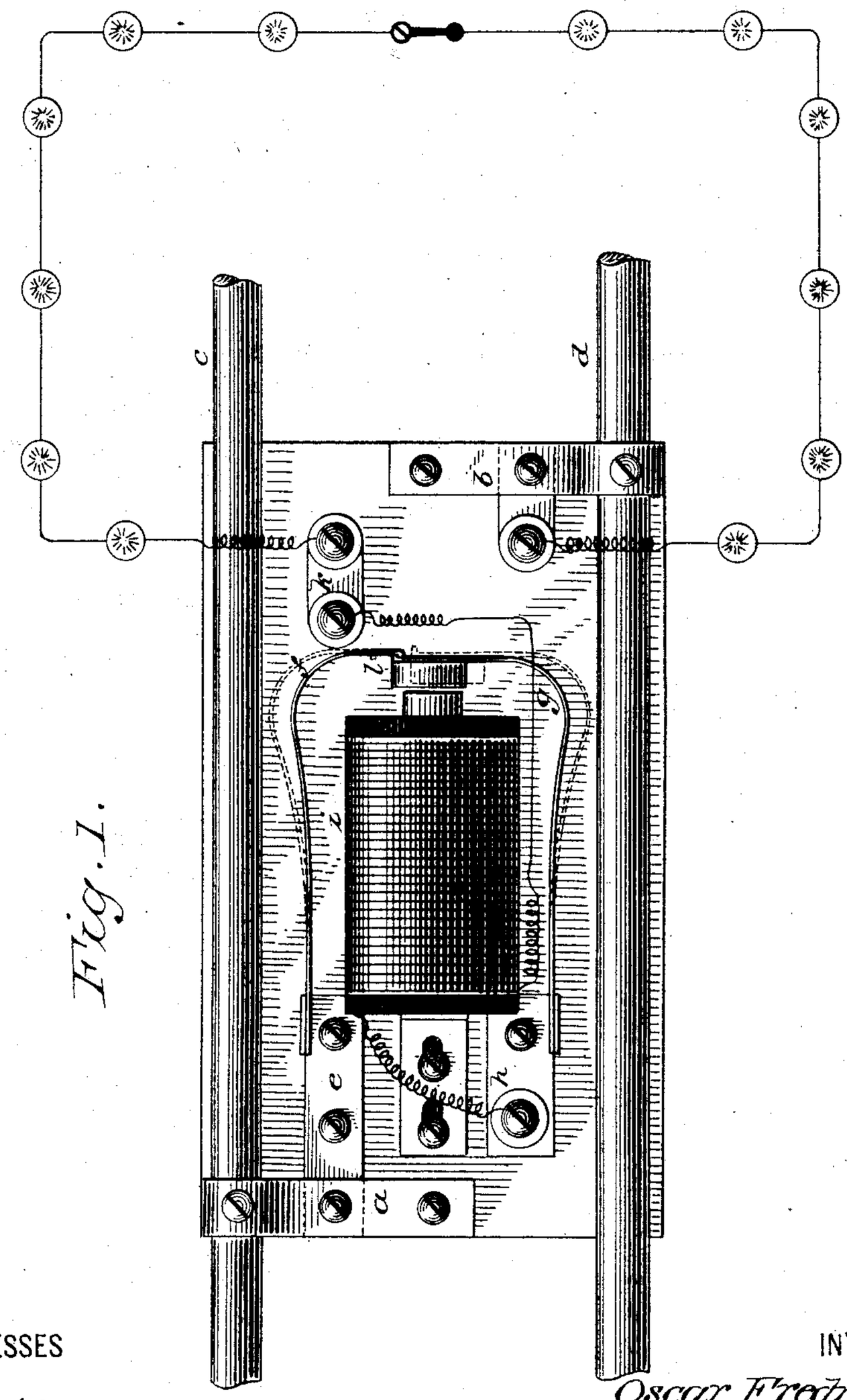


Fig. 1.



WITNESSES

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OSCAR FREDRIK JÖNSSON, OF STOCKHOLM, SWEDEN.

AUTOMATIC SAFETY CIRCUIT-CONTROLLER.

SPECIFICATION forming part of Letters Patent No. 338,752, dated March 30, 1886.

Application filed February 10, 1885. Serial No. 155,518. (No model.)

To all whom it may concern:

Be it known that I, OSCAR FREDRIK JÖNSSON, a subject of the King of Sweden, residing at Stockholm, Sweden, have invented certain new and useful Improvements in Automatic Safety Apparatus or Circuit-Openers for Electric Lamps, of which the following is a specification.

The object of this invention is to provide an improved safety apparatus to be placed in a derived circuit in which are incandescent lamps, in order to protect this circuit from destruction in the event of short-circuiting.

In the drawings hereunto annexed, Figure 1 is a side view, and Fig. 2 an end view, of the apparatus.

The base-board A, which is made of insulating material, is supported on the parallel wires or rods *c* and *d* of the main circuit by means of metallic brackets *a b*, which are provided with seats for the wires and with set-screws *a' b'*, for securely holding the wires in their seats. I preferably employ one bracket at each end of the board on diagonally-opposite sides, as illustrated in the drawings.

The current passes from the attachment *a* through the metallic plate *e* to the spring *f*. On the end of the spring *f* is a hook, which engages with another similar hook on the spring *g*. Through this spring the current passes to the metallic rail *h*, the electro-magnet *i*, and the metallic plate *k*. From *k* a circuit-wire is led to one or more incandescent lamps, whence it passes to and is connected with the bracket or attachment-clip *b* on the main wire *d*. On the spring *g* an iron block, *l*, is attached, serving as an armature to the electro-magnet *i;* but it is kept remote therefrom by the elasticity of the spring *g*. The electro-magnet is adjustable, and may be moved nearer to or farther from its armature, to regulate the safety apparatus and set it to be operated by a larger or smaller current, as may be required, due consideration being had to the maximum current which the derived circuit can pass without danger to the circuit or the lamps. If this maximum is exceeded, owing to short-circuiting or other cause, the electro-magnet *i* by its attraction moves its armature *l*, whereby the springs *f* and *g* become detached from one another, (see the dotted lines in Fig. 1,) thus breaking the branch circuit and obviating the destruction of the lamps. The springs may readily be reconnected.

I claim as my invention—

The combination, substantially as set forth, of the main-circuit wires and the automatic safety apparatus supported on the main wires, said apparatus consisting of the combination of the base-board, the brackets by which the base-board is connected to the main wires, the branch circuit, the electro-magnet included in the branch circuit, the interlocking spring-arms, also included in the branch circuit, and the armature carried by one of the arms.

OSCAR FREDRIK JÖNSSON.

Witnesses:

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ERNST SVANQVIST.