(No Model.)

# W. EHRHARDT.

## MAGAZINE FUSE BLOCK.

No. 595,244. Patented Dec. 7, 1897.

Fig. 2.

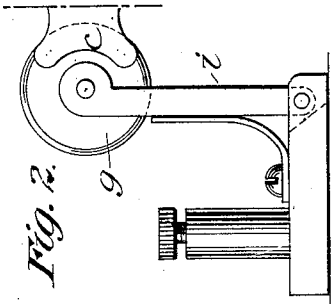


Fig. 1.

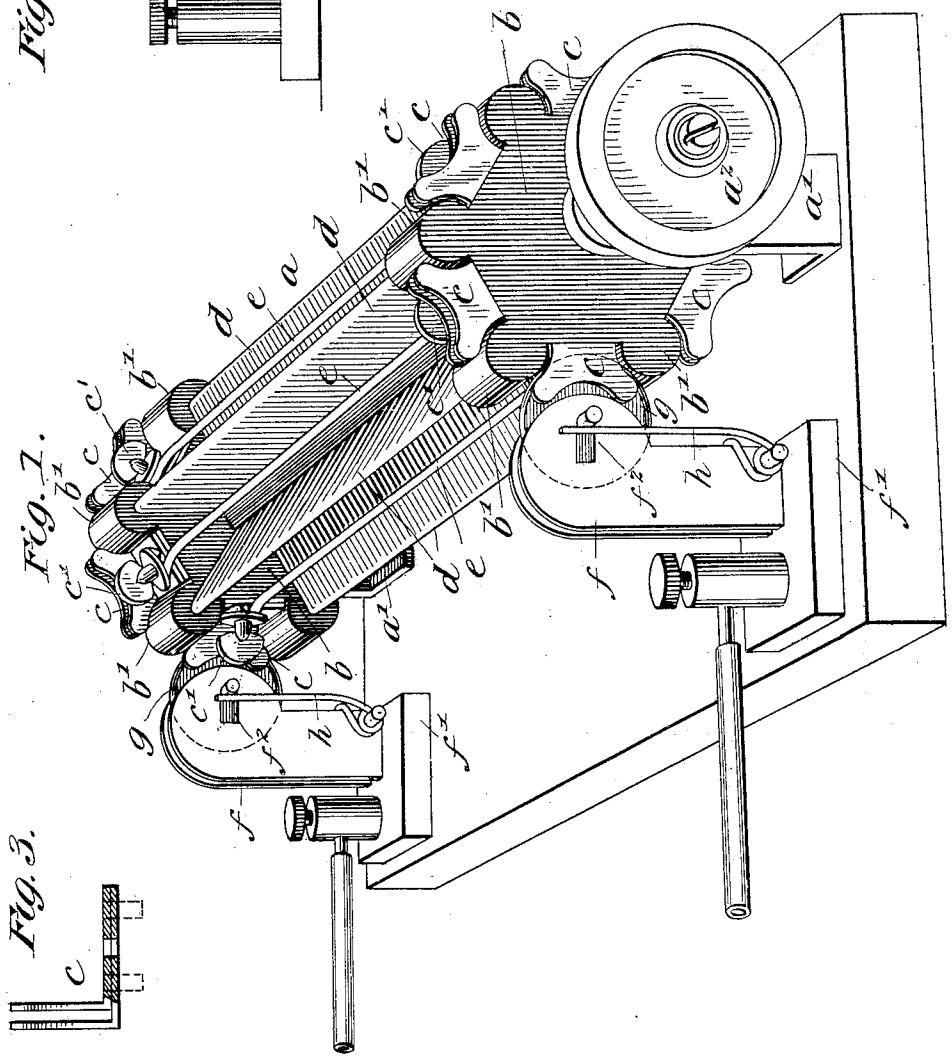


Fig. 3.



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# UNITED STATES PATENT OFFICE.

WILLIAM EHRHARDT, OF UNION HILL, NEW JERSEY, ASSIGNOR TO HIMSELF, AND WILLIAM B. THOM AND GEORGE A. CONNOR, OF NEW YORK, N. Y.

## MAGAZINE FUSE-BLOCK.

SPECIFICATION forming part of Letters Patent No. 595,244, dated December 7, 1897.

Application filed August 10, 1897. Serial No. 647,715. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM EHRHARDT, a citizen of the United States, residing at Union Hill, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Magazine Fuse-Blocks, of which the following is a full, clear, and exact description.

This invention is an improvement in magazine fuse-blocks, the object being to provide a construction wherein the destruction of a fusible strip by the electric current will not damage the adjacent strips or the fuse-block itself and in which by simple mechanism perfect contacts are always maintained and the shift from a destroyed fuse to a perfect one may be made quickly and with facility.

This invention is an improvement upon that described in my Patent No. 568,971, dated October 6, 1896.

The invention consists of the details of construction, which will be described hereinafter with reference to the accompanying drawings, in which—

Figure 1 is a perspective view of the improved fuse-block. Fig. 2 is a modification of a portion thereof, and Fig. 3 is a detail.

Referring to the drawings by letter, *a* is a central cylinder or shaft mounted to turn in suitable supports *a'*, beyond one of which it extends and carries a hand-wheel or cross-head $a^2$, by which it may be rotated. At each end of the shaft and adjacent to the bearings a star-shaped end piece *b*, of insulating material, is fixed, the arms or projections of which pieces are in corresponding radial planes, and these projections terminate in rounded or cylindrical portions *b'*, between each of which there is a depressed seat for a contact-clip *c*. Between the end pieces radial partitions or wings *d* extend, the longitudinal V-shaped spaces between them constituting the compartments for the respective fusible strips *e*. The fusible strips *e* are secured at each end to the contact-clips *c* by means of suitable binding-posts *c'*. The contact-clips consist of two parallel plates standing at right angles to the shaft.

The contact devices for maintaining connection with the clips *c* each consist of a pair of spring-plates *f*, attached to a conducting-base *f'*, to which the main wire is connected, and a rotatable disk *g*, clamped between the plates *f*. This disk is provided with a short shaft which projects through slots $f^2$ in the plates *f* and against which the ends of a spring *h* bear. The outer edge of the disk enters the spaces between the clips *c*, while the inner edge or portion is clamped between the spring-plates *f*. If the device is a single-pole cut-out, as shown in the drawings, only two of the devices *f g*, &c., will be used; but if it is a double-pole cut-out another pair of said devices will be arranged upon the opposite side in the same manner, as shown and as will be fully understood.

The cut-out is shown in normal operative position in Fig. 1, wherein it will be seen that the circuit leads from one of the base-plates *f'* through the plates *f*, disk *g*, clips *c*, fusible strip *e*, and through the clips, disk, and plates at the opposite end of the block. When the fuse is destroyed by an excessive current, the hand-wheel *a'* is turned in either direction. This causes the cylindrical projections *b'* to pass under the edge of the disk *g*, forcing the latter to move backward bodily while at the same time allowing it to roll over the surface of the projection and drop quickly between the plates of the next succeeding clip *c*. This operation is repeated as often as necessary until the fusible strips are exhausted, when the block may be reloaded with strips. The cylindrical projections *b'* between the clips *c* effectually prevent the jumping of the current from one clip to another while at the same time affording a comparatively easy movement for the block when shifting from one position to the next. The arrangement of the yielding rotating disk between the spring-plates *f* provides for good contact at all times and also facilitates the shifting of the block.

A modified form of this device is shown in Fig. 2, wherein the arm *i* takes the place of the plates *f*, the arm being pivoted at its base and having a motion toward and away from the clips *c*, which carry the disk *g* with it. The form shown in Fig. 1, however, is preferred.

Having thus described my invention, I claim—

1. In a magazine fuse-block the combination of a rotary cylinder or shaft provided with star-shaped end pieces, the arms of which terminate in rounded formations of insulating material, contact-clips to which the fusible strips are connected located between the said rounded projections and spring-mounted rotating disks adapted to make connection with said contacts and to roll over said rounded projections when the block is shifted.

2. In a magazine fuse-block, the combination of a plurality of pairs of contact-clips *c* arranged between the arms of a star-shaped carrier and a rolling, spring-mounted, contact-disk adapted to roll out of contact with one pair of clips and into contact with the next and over the intervening arm of the carrier, substantially as described.

3. The combination of a disk *g*, the two spring-plates *f* between which it is clamped, said plates being provided with slots in which the shaft of the disk is located, a spring *h* bearing against the shaft of the disk and a rotating body carrying a plurality of contact-clips separated by projections of insulating material, said clips being adapted to be brought successively into contact with the disk, substantially as described.

In testimony whereof I subscribe my signature in presence of two witnesses.

WILLIAM EHRHARDT.

Witnesses:
HARRY BAILEY,
FRANK S. OBER.