P. A. BLAKE.

Fire-Alarms.

No. 150,744. Patented May 12, 1874.

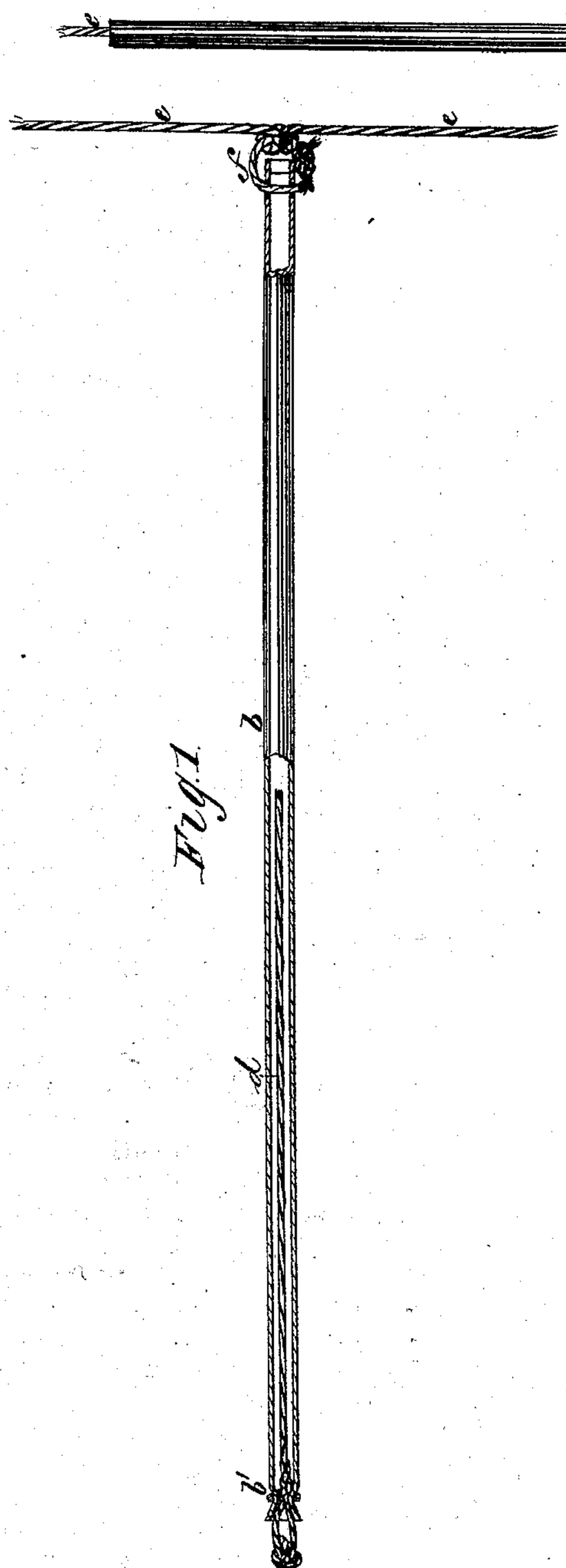

Fig. 1.

Fig. 2.

Witnesses.

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UNITED STATES PATENT OFFICE.

PERCY ALBERT BLAKE, OF HIGHBURY, ENGLAND.

IMPROVEMENT IN FIRE-ALARMS.

Specification forming part of Letters Patent No. **150,744**, dated May 12, 1874; application filed November 5, 1873.

To all whom it may concern:

Be it known that I, PERCY ALBERT BLAKE, of Highbury, in the county of Middlesex, England, have invented a new and Improved Automatic Means for Indicating the Presence of Fire in Buildings; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming a part of this specification.

My invention is an improvement in self-acting fire-alarms, in which adjustable fuses are arranged to traverse the various rooms or parts of a building, and connect with an explosive cartridge or alarm-bell, which will be exploded or rung to indicate the existence of a fire in any portion of the building. My invention relates specifically to so connecting a series of branch fuses with a main fuse that, while any one of the former may ignite the latter the latter cannot ignite the former. Hence, when a fire breaks out the contiguous branch fuses will ignite the main fuse, which, while giving the alarm, will not ignite any other branch fuse.

The annexed drawings illustrate the details of connection between the branch and the main fuses.

Figure 1 shows the method of conveying the fuse through the wall of a room, and the method of connecting the fuses from the several rooms to one main fuse leading to the alarm, the connection being such that though any one of the branch fuses, if ignited, will fire the main fuse, the latter will not ignite the fuses in the other rooms. When one single line of fuse only is employed running through all the rooms of a house, the same connection is employed between the fuses in the different rooms with the same object. When a plain cord of gun-cotton is used as the fuse in the room, it is necessary to attach it to a length of the cased fuse containing gun-cotton, in order to carry it through the wall, as the ordinary gun-cotton is liable to be extinguished in passing through a small passage.

a is the plain cord of gun-cotton hung round the room, and *b* is a paper case passed through an aperture in the wall, and containing a strand, *a*, of gun-cotton prepared with chlorate of potash, as before mentioned. The cord *a* extends only partly through tube *b*, the inner extremity *b'* of which is constricted by a ligature. To insure the passage of the flame past this ligature the cord *d* is doubled one or more times at this point. The other end of the tube *b*, which is open, is attached to the main fuse *e*, which is a cord of ordinary gun-cotton, by a piece, *f*, of the prepared gun-cotton, which passes across the end of tube *b*, through two apertures pierced therein. Thus it will be seen that there is no connection between the piece *f* and the cord *d* within the tube, which stops short some inches from the end of the tube, so that, although the piece *f*, and consequently the main fuse *e*, will be fired by the fuse *a d*, yet should the main fuse *e* be ignited by the fuse of some other room, the flame will be unable to pass inward through tube and ignite *d*, owing to the inner end of said tube being choked.

Fig. 2 shows the connection between a cased branch fuse and a cased main fuse. This is the same as before described. In this case, however, only the prepared gun-cotton is used. The connecting-link *f* is threaded through holes pierced in the tube *b*, as before, and also through the tube of the main fuse, as shown.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the branch tube *b*, cord *d*, and ligature *b'*, or equivalent choking device, with the link *f* and main fuse, substantially as shown and described, to operate as specified.

The above specification of my invention signed by me this 19th day of August, 1873.

PERCY ALBERT BLAKE.

Witnesses:
WM. H. SWINNOCK,
HENRY W. DEWEY.