

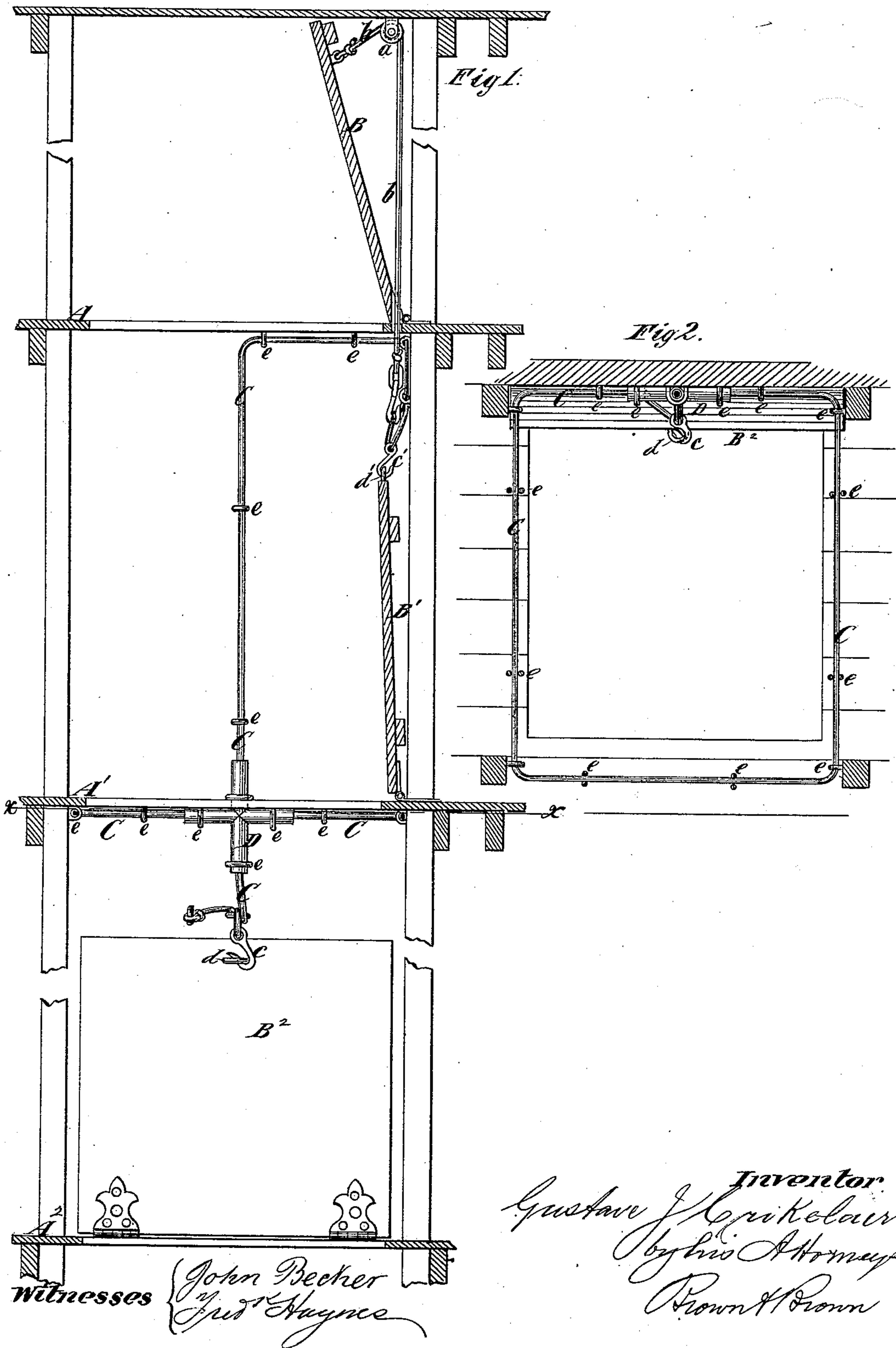
(No Model.)

G. J. CRIKELAIR.

Hatchway Fire Attachment.

No. 234,969.

Patented Nov. 30, 1880.



UNITED STATES PATENT OFFICE.

GUSTAVE J. CRIKELAIR, OF NEW YORK, N. Y., ASSIGNOR TO ROBERT A. CHESEBROUGH, OF SAME PLACE.

HATCHWAY FIRE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 234,969, dated November 30, 1880.

Application filed March 22, 1880. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVE J. CRIKELAIR, of the city of New York, in the county and State of New York, have invented certain new and useful Improvements in Fire Attachments for Hatchways, of which the following is a specification.

The object of my invention is to provide for the automatic closing of the hatchways of a building on the occurrence of fire, in a more certain and reliable manner than has heretofore been accomplished.

In hatchway attachments heretofore devised or used for this purpose the hatch-covers, which are so constructed or organized as to close automatically when free, are held open until the occurrence of fire by means of cords or ropes, which, whenever they are severed by fire at any point near to or remote from the hatch-covers, permit the latter to fall. In such a construction and arrangement guides or pulleys must be provided for the cord or rope to run over, and the latter, if severed and so permitted to get loose at any considerable distance from the hatchway, is apt to catch and prevent the closing of the hatch-covers, and even if this does not occur the cord or rope, being drawn rapidly over such guides or pulleys, may drop sparks and kindle the fire in new places.

My invention consists in the combination of a hatch-cover so constructed and arranged within a building that when free or released from a securing device which would otherwise hold it open it will fall by its own weight, and a fuse permanently fastened to the walls or floors of the building, so as to prevent its running or working lengthwise, and either constituting such securing device or so connected therewith that the burning of the fuse between the hatch-cover and the first point of attachment of the fuse to the wall or floor will release the said cover and permit it to fall. If the fuse is ignited at any distance from the hatch-cover, the fire will run quickly through it until it reaches the point of attachment nearest the device for securing said cover in an open position, and the long line of fuse is not detached from the wall, but remains attached thereto after the fire has passed through it.

My invention also consists in certain devices employed to connect the fuse at its intersecting points.

In the accompanying drawings, Figure 1 represents a vertical section of a hatchway through three floors of a building having my invention applied thereto, and Fig. 2 represents a horizontal section upon the dotted line xx , Fig. 1.

Similar letters of reference designate corresponding parts in both the figures.

A A' A² designate three floors of a building, and B B' B² designate hatch-covers, hinged at one edge for closing the hatchway at the several floors.

These hatch-covers are so constructed that when opened some device is necessary for supporting or suspending them in such position, and when released from such supporting or suspending devices they will automatically fall to close the hatchway.

C designates a fuse extending in proximity to the hatchway. This fuse is here represented as extending entirely around the hatchway at the floor A', thence upward and partially around the hatchway at the floor A, and, if desirable, the fuse might be extended to other parts of the building, so that a fire in a remote part of the building will ignite the fuse and act to close the hatch-covers. Where the fuse is joined I employ metallic angle-pieces or sockets filled with combustible material, and into which the ends of the fuse are inserted.

D (see Fig. 1) designates a cross for connecting the two ends of the fuse which passes around the hatchway at the floor A' and the fuse which extends downward and upward therefrom. The piece of fuse which extends downward from said cross has attached to it a hook or catch, c , which may engage with a staple, d , in the hatch-cover B², for holding it open. The piece of fuse which extends upward from said cross D passes partly or entirely around the hatchway at the floor A, and is connected to the hatch-cover B' by a hook, c' , and staple d' .

The hatch-cover B is, in this instance, not held in an open position by a fuse, but by a cord or other flexible connection, b , which is attached to the hatch-cover B, and thence passes over a pulley, a , downward, and is attached to the fuse C near the hook c' , so that the burning of

the said fuse at that point will simultaneously release both the hatch-covers B and B'.

5 The fuse C which I employ is preferably a tube-fuse having a combustible core, and it is permanently secured to the walls or floors of a building at short intervals by any suitable devices—such, for instance, as staples *e*, which are advantageous because of the rapidity and ease with which the fuse can be put up with-
10 out any alteration whatever in the building.

It will be observed that the fuse is connected directly to the hatch-covers B' and B², while the cover B is held open by the cord or rope *b*, attached to the fuse.

15 The fuse which I employ will carry fire very quickly, and only a few seconds will be required for the fire to pass from the point of ignition of the fuse to the hatch-cover.

By my invention the fuse is not drawn
20 through the building when a hatch-cover falls, and fire scattered by the fuse to ignite in new places, and any sparks that may result from the burning of the combustible core are extinguished in rear of the fire in the fuse.

25 What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of a hatch-cover so constructed and arranged within a building that when free or released from a securing device which would otherwise hold it open it will
30 fall by its own weight, and a fuse permanently attached to the walls or floors of the building, and either constituting such securing device or so connected therewith that the ignition of the fuse at any point in the building will carry
35 the fire to a point between the hatch-cover and the first point of attachment of the fuse to the wall or floor, and so release the said cover and leave it free to fall, substantially as and for the purpose herein specified.

2. The combination, in a building, with a
40 fuse connected permanently to the walls or floors thereof, of an angle piece or socket, also connected permanently to the walls or floors, into which the ends of the fuse are inserted
45 and secured, and which is filled with combustible material, substantially as specified.

GUSTAVE J. CRIKELAIR.

Witnesses:

HENRY T. BROWN,
FREDK. HAYNES.