

(No Model.)

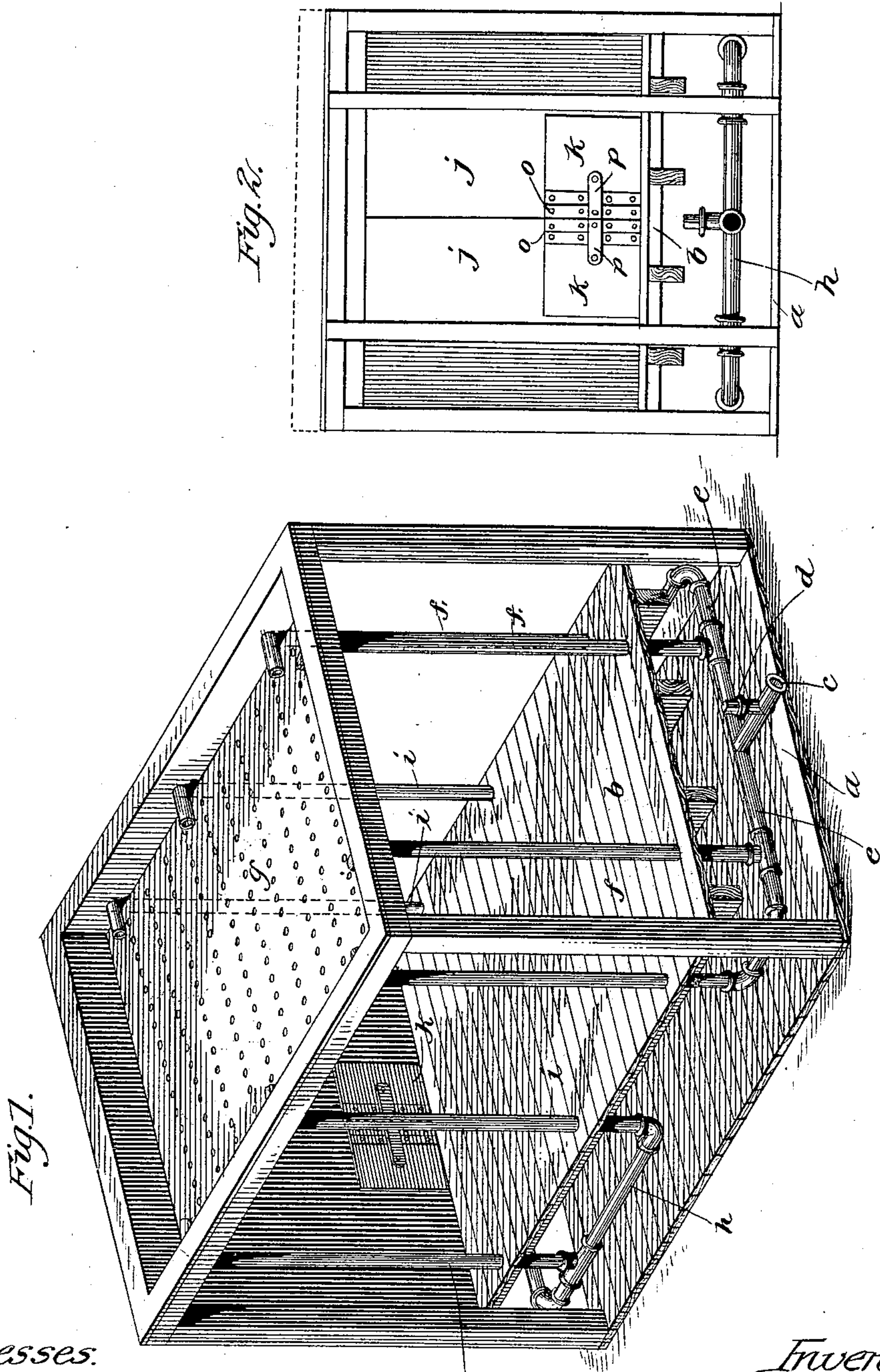
2 Sheets—Sheet 1.

W. HARGREAVES.

DEVICE FOR EXTINGUISHING FIRES IN THEATERS OR OTHER BUILDINGS.

No. 386,199.

Patented July 17, 1888.



Witnesses:

Albert W. Beckman.  
Henry Tibbels.

Inventor:

William Hargreaves M.D.

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2 Sheets—Sheet 2.

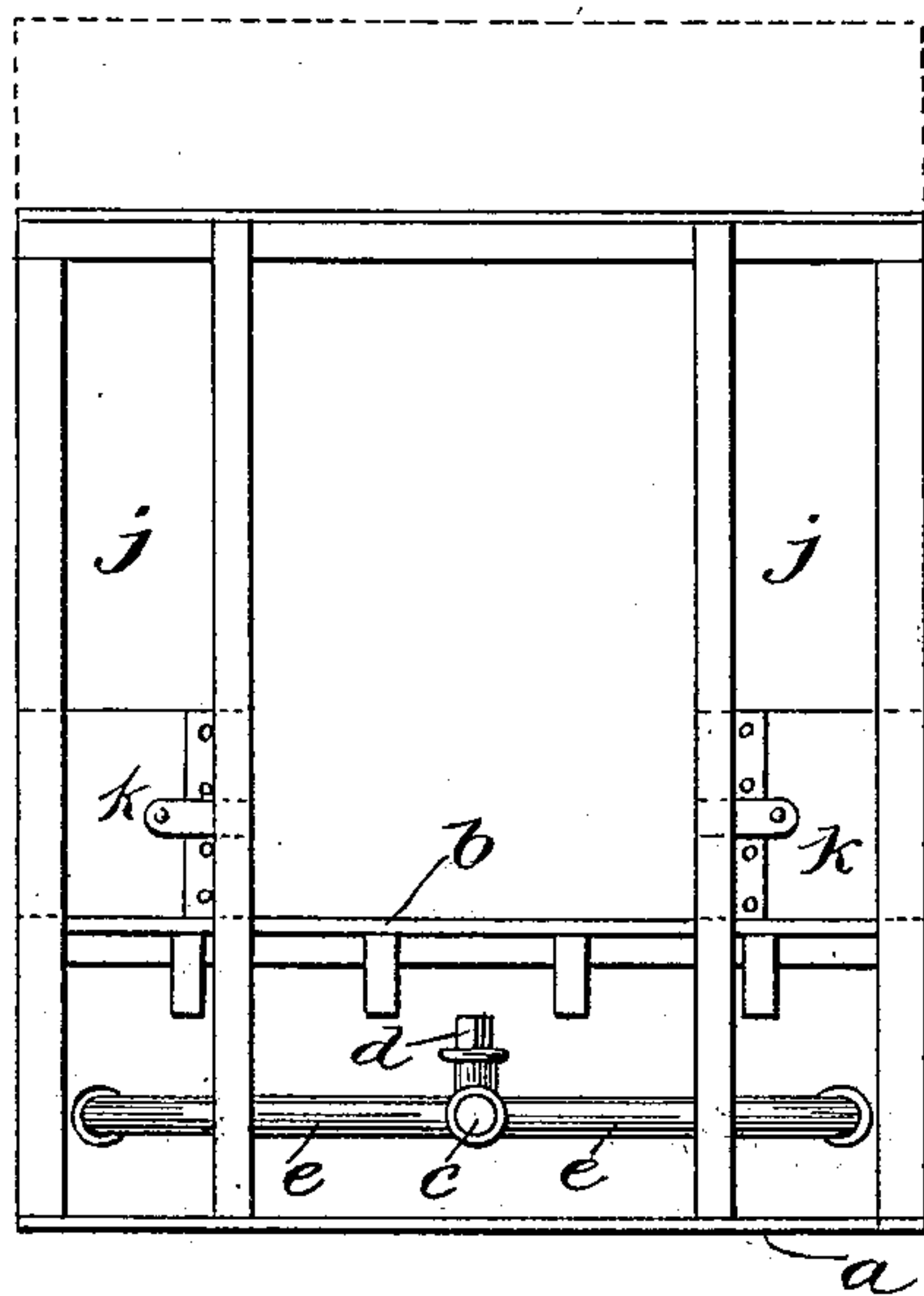
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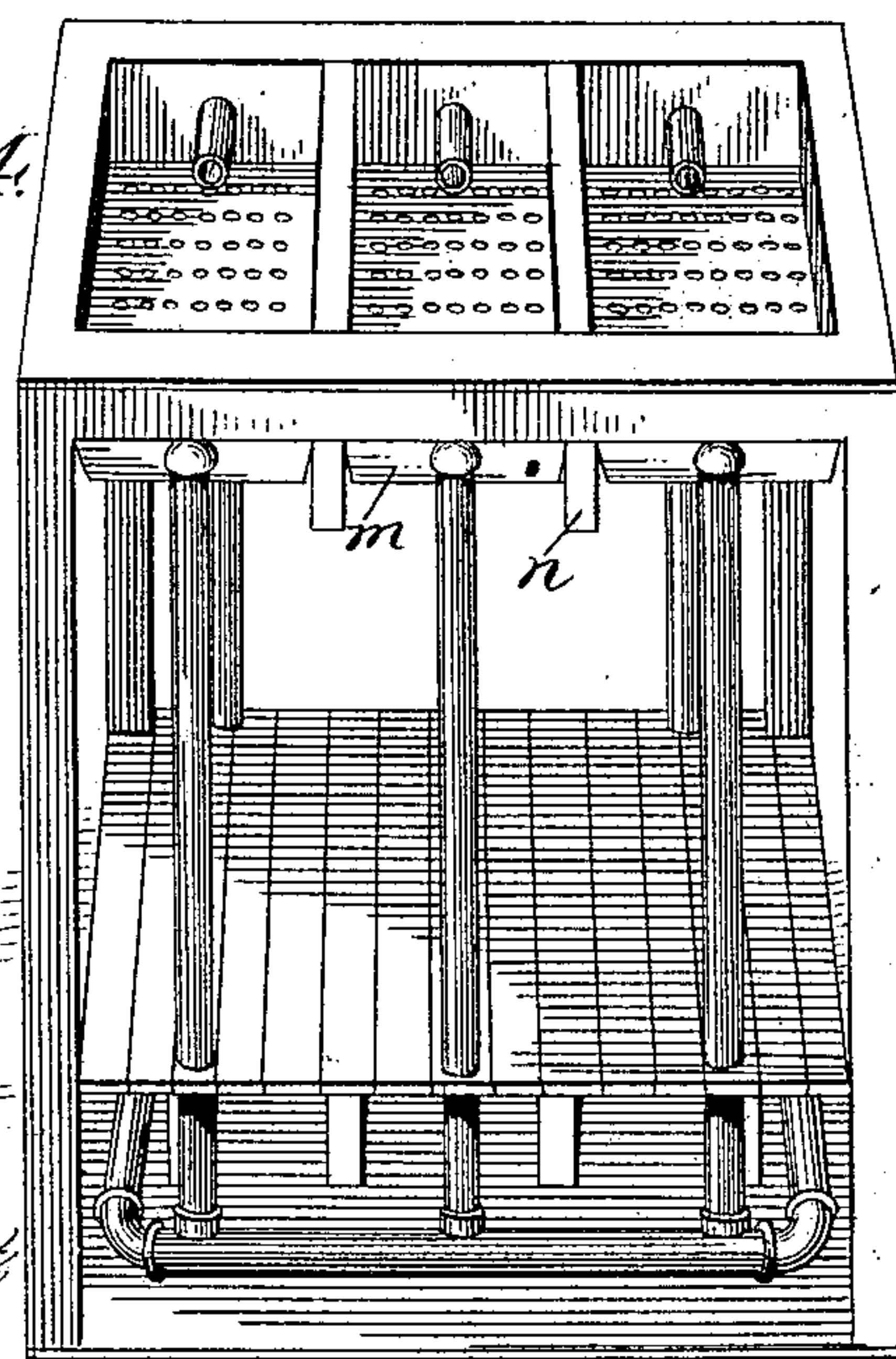
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*Fig. 3.*



*Fig. 4.*



*Witnesses:*

*Albert W. Beckman*  
*Henry Tibbels.*

*Inventor:*

*William Hargreaves M.D.*



# UNITED STATES PATENT OFFICE.

WILLIAM HARGREAVES, OF PHILADELPHIA, PENNSYLVANIA.

DEVICE FOR EXTINGUISHING FIRES IN THEATERS AND OTHER BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 386,199, dated July 17, 1888.

Application filed November 18, 1887. Serial No. 255,536. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM HARGREAVES, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and Improved Device for Extinguishing Fires in Theaters, Factories, and other Buildings, which invention is fully set forth in the following specification.

My invention relates to improvements in devices for extinguishing and preventing the spread of fires in theaters and other buildings, and facilitating the egress of persons from the building in the event of fire; and it consists in certain novel features hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of a theater-stage having my improvements applied thereto. Fig. 2 is an end view of the same, the fire-proof doors being shown as closed. Fig. 3 is a similar view showing the doors opened, and Fig. 4 is a perspective view showing my improvements applied to a room in a factory or similar place.

Referring to the drawings by letter, *a* designates the floor of the auditorium, extending under the stage *b*.

*c* designates a supply-pipe connected to the street main or other source of water supply, having the valve *d* and the branches *e*, which extend under the stage and communicate with the vertical pipes *f*. The said vertical pipes *f* extend upward through the stage to near the top of the building, where they communicate with a tank, *g*, arranged over the stage. The vertical pipes *f* are arranged at the sides of the stage near the walls of the building, so as to be out of the way of the scenery, &c., and occupy as little room as possible. The tank or reservoir *g* has a perforated bottom, *h*, for the purpose of allowing the water to pass directly through to the stage, as will be readily understood. Pipes *h i*, similar to the pipes *e f*, extend upward to the tank *g*, near the front part of the stage, and receive water from a suitable source of supply. In the front part of the stage I provide the sliding fire-proof doors *j*, which carry the self-closing safety-

doors *k*. These fire-proof doors are intended to be closed in case of fire, and thus separate the proscenium from the stage, while the self-closing doors permit persons on the stage to pass onto the proscenium and away from the fire.

The safety doors are hinged to the sliding doors by means of the hinges *o*, so as to swing outward, and are held normally closed by the leaf-springs *p*, secured to the outer sides of the sliding doors and of the safety-doors. When the sliding doors are closed, the stage will be entirely cut off from the proscenium and auditorium. Persons passing through the safety-doors will push the same outward, the springs automatically closing the doors after the persons have passed through.

From the foregoing description it will be seen that I have provided a very simple and efficient device, by which fire can be extinguished almost instantaneously and its spreading prevented, while at the same time the persons on the stage will be permitted to escape therefrom. When a fire breaks out, the water is turned on, and passes through the several pipes to the tank or reservoir, through the perforated bottom of which it passes directly onto the flames. At the same time the fire-proof doors are closed, thus preventing the fire spreading into the auditorium. The dotted lines in Figs. 2 and 3 indicate the fire-proof front above the proscenium.

In Fig. 4 I have shown the device arranged for use in factories. In this form the pipes are run up through or near the walls, and communicate with the series of tanks or reservoirs *m*, arranged between the floors and ceilings and supported by the girders *n*.

Having thus described my invention, I claim—

The combination of the sliding doors, the safety-doors hinged thereto, and the springs secured to the outer faces of the sliding doors and the safety-doors, as set forth.

WILLIAM HARGREAVES.

Witnesses:

LUCIUS M. B. H. TIBBETTS,  
ALBERT W. BECKMAN.