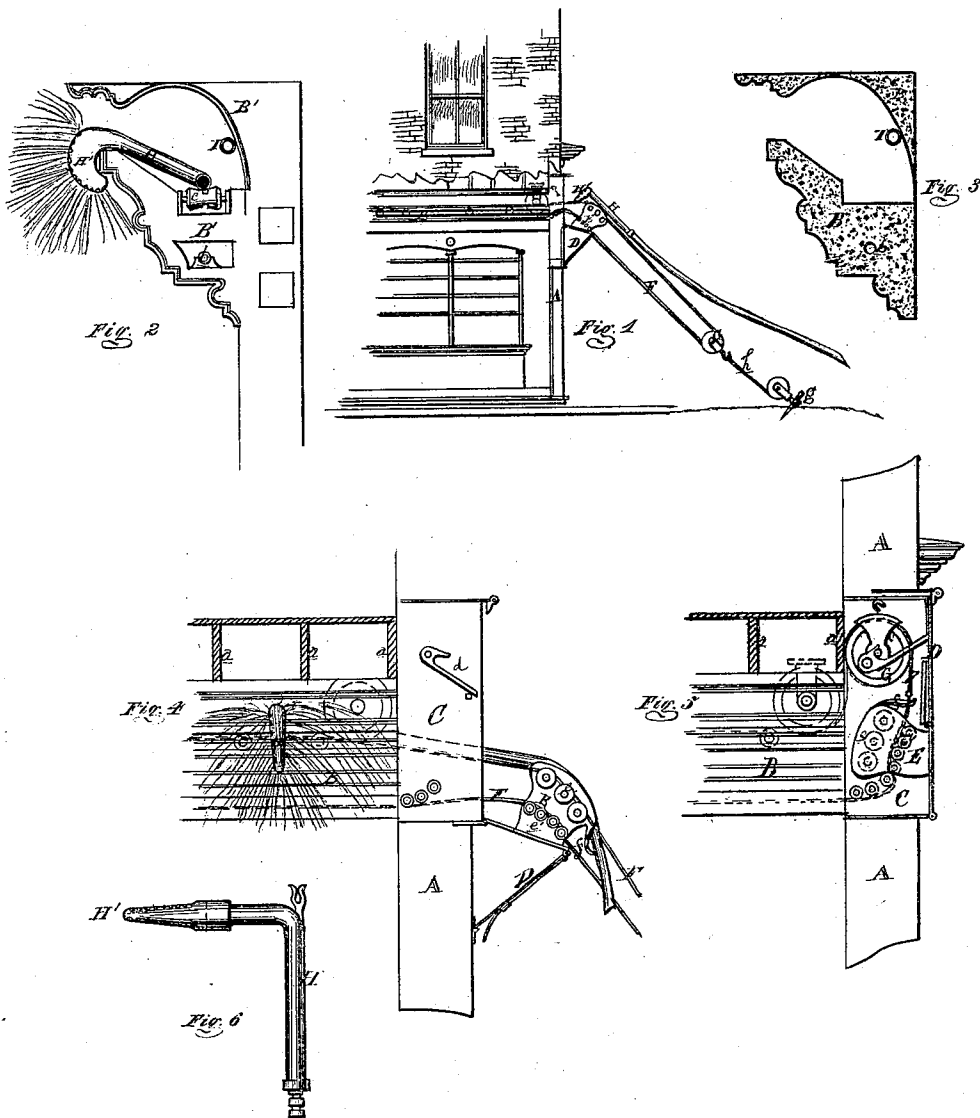


L. HERMAN.  
FIRE EXTINGUISHER.

No. 105,203.

Patented July 12, 1870.



ATTEST

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# United States Patent Office.

LUDWIG HERMAN, OF DETROIT, MICHIGAN.

Letters Patent No. 105,203, dated July 12, 1870.

## IMPROVEMENT IN FIRE-EXTINGUISHERS.

The Schedule referred to in these Letters Patent and making part of the same.

### To whom it may concern:

Be it known that I, LUDWIG HERMAN, of Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in an Apparatus for Extinguishing Fires in Buildings; and I do hereby declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and the letters of reference marked thereon, and being a part of this specification, in which—

Figure 1 is an elevation of a store-room fitted with my improvement, showing it ready for work;

Figure 2 is a side elevation of one of the cornice-brackets, being a cross-section of the cornice;

Figure 3 is a cross-section of the fire-proof cornice;

Figure 4 is an elevation of the device as when at work;

Figure 5 shows the device closed in the end wall; and

Figure 6 is a plan of the nozzle.

Like letters indicate like parts in each figure.

The nature of this invention relates to a mechanism to be applied to stores and other buildings, to be used in connection with the hose of a fire-engine, in such a manner that, should a fire take place therein, a spray of water will be thrown into the room in which it is placed, and that the spraying-nozzle may be caused to travel the entire length of the room, and thereby extinguish the flames without the necessity of any person entering the building.

It consists in the peculiar construction and arrangement in the end wall of the building, near one of the upper corners of the room, of a traveler attached to an endless wire rope, carrying a spraying-nozzle, said rope extending along the top of a fire-proof cornice, returning through a pipe laid in its lower part to the front. In the "bight" of the rope, at the front, is a pulley-block, provided with a crank or pawl, by means of which the pulley may be rotated, the block to be secured to a stake or ring in the pavement when the device is to be brought into use. When not in use, it is inclosed in a recess in the wall, closed by a suitable door; also, in the construction of a fire-proof cornice, as more fully hereinafter set forth.

In the drawing—

A represents the end or front wall of a building, and *a* the transverse joists on which the second floor is laid.

B is a fire-proof cornice, constructed of sheet-iron, in lengths of the proper curvature, inserted in the cast-iron brackets B', secured to the walls of the room.

A pipe, *b*, is laid in the lower part of the cornice, for the purpose hereinafter set forth. The interior of the cornice is then filled with any suitable non-conducting material.

At various intervals in the length of the cornice, a bracket is provided with a carrying-roller, *c*, journaled in it, as shown in fig. 2.

O is an opening in the wall A, in front of the cornice, closed by the metallic door D, which is in two sections, the lower hinged to the wall, and the upper to the lower section.

When closed, the door is held shut by a spring latch, *d*, which may be operated by a wire extending down the front wall in any convenient manner, so that the door will fall outward when released from the latch.

On the inner side of the lower section of the door is secured a guide-frame, E, in which are journaled two sets of guide-rollers, *e e'*, a curved guide, *f*, leading to the former.

F is a continuous or endless wire rope, extending along the cornice, and returning to the front through the tube *b*, where the under section passes over the rollers *e'*, and the upper section over the rollers *e* in the guide-frame E. The rope should be of such length that it may reach nearly to the ground toward the middle of the street in front of the building, being rove around a pulley in the block G, which, when brought into use, is connected with a stake or ring, *g*, permanently fixed in the pavement by a rope, *h*, provided with any suitable means of taking up the slack of the wire rope.

This tightening device and connecting-rope may be carried on the fire-engines, if desired, as the whole device is to be operated by the firemen.

H is a hollow traveler, secured to the wire rope, and provided, at the rear end, with a suitable coupling, by means of which the engine-hose may be connected therewith. The front part of the traveler is turned to a right angle with the body thereof, and terminates in a spray-nozzle, H', which rests on and projects beyond the ledge of the cornice.

When not in use, the block G is stowed in the upper part of the recess O, lying in a pair of arms hinged therein, in such a manner that, when the door D is opened, their outer ends will drop from the position shown in fig. 5 to that shown in fig. 4, when the block will drop to the ground ready to be attached to the stake or ring; when, if a fire is discovered under way in the store, the wire rope is stretched taut, as hereinbefore mentioned; the hose of the engine is then coupled to the traveler, and the pulley rotated in the block G by a crank provided for that purpose; when the traveler will enter the store, passing along the guide-rollers *c* on the cornice. At this time the engine should force water through the hose, which is discharged through the spray-nozzle toward the opposite side of the room, and, as the traveler is caused to advance to the rear end of the room, the flames will be extinguished as it progresses.

As an ordinary wooden cornice would, in many instances, be destroyed before the firemen could reach the building, I construct the cornice as described to resist destruction until water can be thrown on the fire.

If desired, a small perforated water-pipe, I, shown in section in figs. 2 and 3, connected with the service-pipe of the building, may be arranged to keep the cornice wet from the time the fire is discovered by opening a cock placed in the front wall of the building.

As shown in figs. 1 and 4, the lower section of the door forms a prop to the upper by resting on ledge in the front wall, and it may, by providing it with suitable springs, be made to take the position shown in these figures as soon as opened.

An apparatus of the construction described should be fitted to one or more of the floors above the lower story, and all or either may be operated from the rear end of the building, if there be sufficient space for the purpose; or, if preferred, the device may be so arranged as to be operated from either end.

It will be seen that the return-tube may be dispensed with by having the wire rope extend through

the rear wall, and the hose drawn through the building from the end opposite that which it enters.

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

1. The endless wire rope F, block G, hollow traveler H, provided with nozzle H', the guide-frame E, and door D, in connection with the recess C and cornice B, arranged and operating substantially as and for the purposes herein set forth.

2. A fire-proof cornice, B, constructed in sections of sheet or cast metal, supported in brackets B', and filled with non-conducting material, said cornice being provided with carrying-rollers c and return-tube b, as and for the purpose herein specified.

3. In connection with a cornice constructed substantially as described, the water-pipe I, as and for the purpose set forth.

LUDWIG HERMAN.

Witnesses:

FREDERICK EBERTS,  
SAMUEL J. SPRAY.