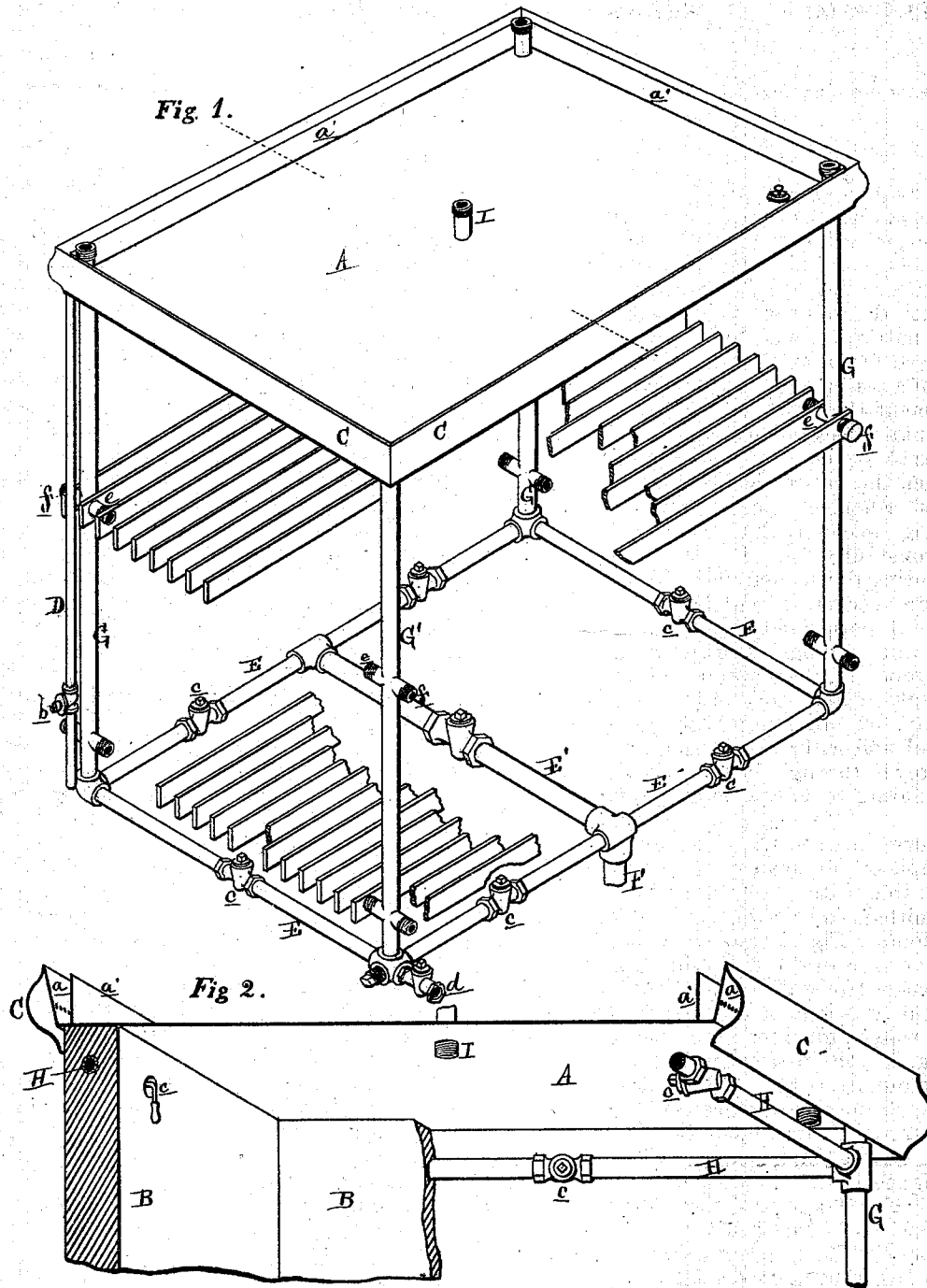


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Means for Extinguishing Fires in Buildings.

No. 146,717.

Patented Jan. 20, 1874.



ATTEST

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JOHN C. SCHWEIZER, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN MEANS FOR EXTINGUISHING FIRES IN BUILDINGS.

Specification forming part of Letters Patent No. **146,717**, dated January 20, 1874; application filed November 24, 1873.

To all whom it may concern:

Be it known that I, JOHN C. SCHWEIZER, of Chicago, in the county of Cook and State of Illinois, have invented an Improved Roof and Fire-Extinguishing Pipes for Buildings, of which the following is a specification:

The nature of this invention relates to an improved fire-proof roof for buildings, in the form of a water-tight metal tank, and the arrangement therewith of certain vertical and horizontal pipes connected to the municipal or special system of water-supply, by means of which the entire roof-surface may be submerged whenever necessary to protect the building; secondly, the outer walls may be kept constantly wet by a thin stream of water pouring down their faces; thirdly, in case of a fire occurring within the building, by means of perforated pipes laid between the floors and ceilings, and supplied from the stand-pipes at the corners of the buildings, such fire in any story may be extinguished; fourthly, by providing hose-connections on the roof and within the structure, water may be thrown through hose-pipes at an adjoining building, or to any point within the building.

Figure 1 is a perspective view of the tank-roof, and of the system of water-pipes connected therewith, the walls of the building being omitted, and portions of the floor-joists of two floors. Fig. 2 is a cross-sectional perspective view of the roof, showing the upper portions of two walls of the building.

In the drawing, A represents a flat sheet-metal water-tight roof, supported by the walls B, Fig. 2. The roof has a flange, *a*, turned up all around its edges, and inside it a second flange, *a'*, the two flanges forming the eaves or gutters, outside which is a cornice or molding, C, whose lower edge stands out about one-eighth of an inch from the face of the walls. The flange *a* is perforated with a row of holes about mid-height, so that whenever the water in the gutter rises above these holes it will flow through them and down the faces of the walls. D is a waste-pipe leading from the gutter to the ground and sewer, and is provided with a stop-cock, *b*, which may be

shut, to compel the gutter to overflow, as and for the purpose above described. E are four distributing-mains, connected at their corners, and by a larger cross-main, E', inside the four walls of the building under the lower floor, the same being supplied with water from a street-main at F. From each corner of the mains E rises a stand-pipe, G, to and through the roof, terminating in a hose-coupling. One of these stand-pipes, G', terminates at the plane of the roof. Under the roof the stand-pipes communicate with each other through horizontal distributing-pipes, H, which, together with the lower horizontal mains E E', are provided with stop-cocks *c*, by means of which water may be delivered under pressure at any one or more of the stand-pipes upon the roof, or without pressure through all the pipes. At the lower end of the stand-pipe G' is a stop-cock, *d*, which is kept open except during the time when it is desired to flood the roof, the said stand-pipes serving to conduct the water off the roof; to flood the roof the cock D should be closed. At the planes of the joists of the several floors the stand-pipes are tapped with couplings *e*, with which to connect perforated pipes extending across the building, for the purpose of spraying water-jets between the floors and ceilings to extinguish fire occurring therein. The spray-pipes should be provided with stop-valves at each end, so that no water need thus be used unless required.

In the center of the roof are one or more pipes, I, extending through it, with hose-couplings at each end. The upper end may be connected by a hose with one of the stand-pipes, and, by means of hose within the building, water may be delivered at any point within the upper story.

The stand-pipes are provided with external couplings, *f*, at the several floors, which project through the outer walls to receive lines of hose from fire-engines, which can be used to force water to the desired points. These couplings, when not in use, can be covered with screw-caps.

It will be seen that by this system the building can be thoroughly protected from fires in

adjacent buildings which might endanger it, and also provided with efficient means for extinguishing internal fires.

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

1. The tank-roof A, provided with the perforated flange *a*, inner flange *a'*, and waste-pipe D, in combination with a series of stand-pipes, G G', and cornice C, substantially as and for the purpose set forth.

2. The combination, with the tank-roof A, constructed as described, of the distributing-mains E E', stand-pipes G G', and distributing-pipes H, severally provided with the cocks *c d e*, as and for the purpose set forth.

JOHN C. SCHWEIZER.

Witnesses:

WM. H. LOTZ,
H. BISCHOFF.