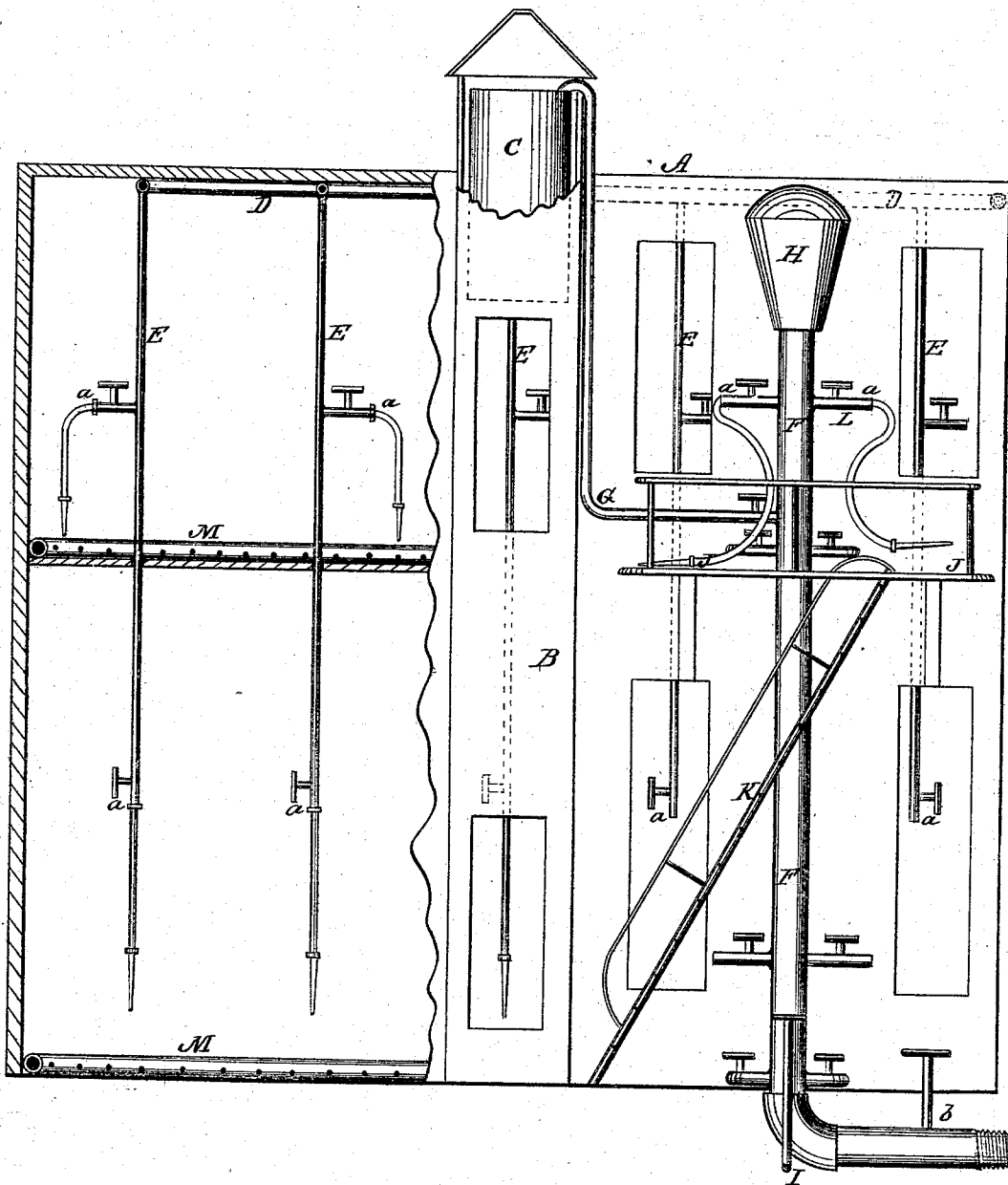


W. E. WOOD & E. LEONARD.
 FIRE-EXTINGUISHING AND ESCAPE APPARATUS.
 No. 172,234. Patented Jan. 11, 1876.



WITNESSES:
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WILLIAM E. WOOD AND EDWARD LEONARD, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN FIRE EXTINGUISHING AND ESCAPE APPARATUS.

Specification forming part of Letters Patent No. **172,234**, dated January 11, 1876; application filed June 4, 1875.

To all whom it may concern:

Be it known that we, WILLIAM E. WOOD and EDWARD LEONARD, of Baltimore city, State of Maryland, have invented a new and Improved Fire Extinguishing and Escape Apparatus for Buildings; and we 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, in which the figure is a vertical front elevation, partly in section.

The object of this invention is to provide a means for the immediate suppression and extinguishment of fires, and a safe and expeditious means of escape from factories and other large buildings containing many operatives.

The invention consists in a stand-pipe upon the outside of the building with hose pipes and connections at the windows of each story, in combination with balconies upon the outside of said windows, connected with the earth by means of outside ladders, as hereinafter more fully described.

The invention also consists in a stand-pipe, connected with either the tank upon the house or the street-main, which said pipe stands by the side of the building upon the outside, and is provided at every story with hose pipes and nozzles, which are designed to play through the windows in the event of the rapid increase of fire inside, and the consequent filling of the building with smoke. In combination with the stand-pipes are balconies at every story, which are reached by flights of steps or ladders, upon which balconies the men stand that are working the streams through the windows, and by means of which a rapid exit may be made in case of danger. In combination with the said stand-pipe, also, a perforated pipe runs around the floor of each story, for the purpose of flooding the floor to prevent the communication of the fire from one story to another.

In the drawing, A represents a factory-building, having a tower, B, which contains stairs, that constitute the usual means of exit. In the top of the said tower, or upon any other convenient place upon the house-top, we locate a tank or reservoir, C, which is kept constantly filled with water. Communicating

with the said tank through a stop-cock are the large supply-pipes D, which are fixed to the ceiling of the upper story, and from which run pendent pipes E through all the stories and floors of the building. Said pipes are about one inch in diameter, and are located about fifteen or twenty feet apart. Each one of said pipes is provided with a separate valve and a hose-pipe, *a*, carrying a nozzle, which said hose is of a length sufficient to reach any point between the vertical pipes. By means of this arrangement each operative has at his or her command the means for extinguishing a fire in its incipency, the convenience and facility of using said pipes rendering unnecessary the discharge of a large body of water to accomplish the same effect, which would have the effect to damage more property than the actual burning, and for which damage there is no remedy by insurance. F is a large stand-pipe upon the outside of the building, which receives its water either from the tank C through the pipe G, or from the street-mains, or a force-pump, through a valve, *b*. The said pipe has an air-chamber, H, at the top, and an outlet-cock, I, at the bottom, through which the water in the stand-pipe may be let off in cold weather, to prevent freezing. J are balconies, which surround the stand-pipes, and extend, preferably, across two windows. Said balconies are at convenient places upon each story, and are reached by stationary ladders or steps K. Attached to the portion of the stand-pipe in the balconies are hose-connections with pipes and nozzles L, which are to be worked by the men upon the balconies to direct streams through the windows whenever it is impossible to work upon the inside, by reason of the smoke. M are perforated tubes running around the floor of each story, and connecting, through stop-cocks, with the stand-pipe. These pipes serve to flood the floors, and prevent the fire in one story from being communicated to the next.

We are aware of the fact that the several features of our invention, when taken singly, are common expedients for protection from fire; but as heretofore employed there has been no co-operation or combination of functions, and no efficiency in operation. By the arrangement of the series of vertical pipes run-

ning through the entire building, all possibility of the headway of a fire is prevented during the working hours of the factory, and by combining with the stand-pipe upon the outside of the building a balcony, and means for ascending and descending the same, the nozzles of the said pipes may be brought into operation when the building is full of smoke, and under circumstances under which the different features taken singly would be of no avail.

The system as thus described is one in which practical experiment is the test of its efficiency, and one which fully meets the requirements of the age, by affording both an efficient and quickly available means for extinguishing fires, and also a ready means of escape.

Having thus described our invention, what we claim as new is—

The stand-pipe upon the outside of a building provided with hose connections, pipes, and nozzles at each story, in combination with the balconies at the windows of each story, and the steps or ladders for ascending or escaping from the same, substantially as and for the purpose described.

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Witnesses:

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