

A. PERLMAN.

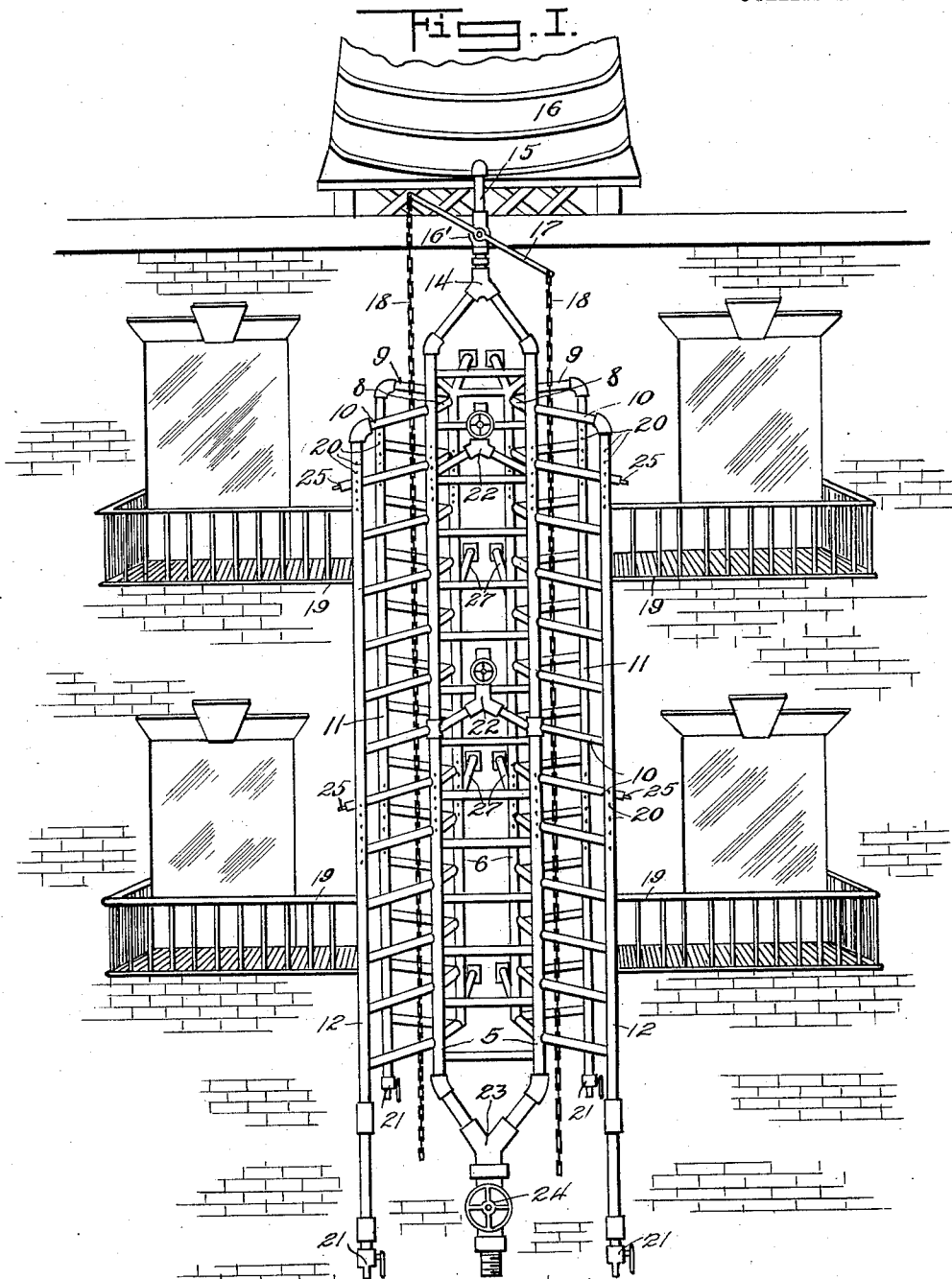
FIRE ESCAPE.

APPLICATION FILED APR. 25, 1911.

1,016,437.

Patented Feb. 6, 1912.

2 SHEETS—SHEET 1.



WITNESSES

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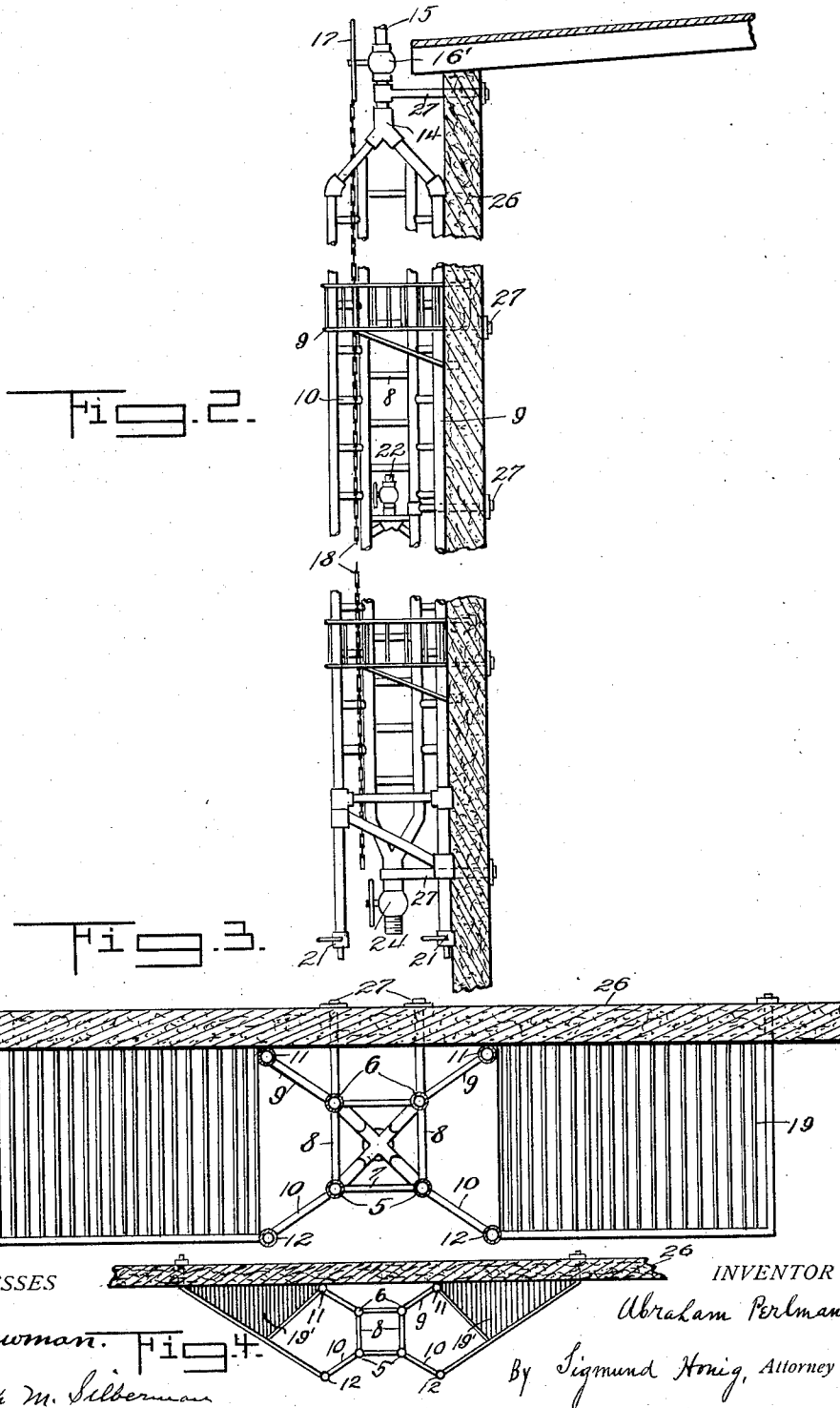
By *Sigmund Horig*, Attorney

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UNITED STATES PATENT OFFICE.

ABRAHAM PERLMAN, OF NEW YORK, N. Y., ASSIGNOR TO A. PERLMAN IRON WORKS,
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FIRE-ESCAPE.

1,016,437.

Specification of Letters Patent.

Patented Feb. 6, 1912.

Application filed April 25, 1911. Serial No. 623,268.

To all whom it may concern:

Be it known that I, ABRAHAM PERLMAN, a subject of the Czar of Russia, resident of the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification.

This invention relates to certain new and useful improvements in fire escapes, and relates more particularly to that type of fire escapes which are in the form of a ladder permanently attached to the wall of a building and to which access may be had from windows of the building.

The invention has for its object to provide a fire escape of this type arranged in such manner as to provide a plurality of ladders so that a greater number of persons may be accommodated at one time, and to provide means for preventing the heating of the ladders, and also to provide for a shower of water over the ladders to protect the descending occupants thereof.

The invention, briefly described, comprises two series of ladders so arranged with respect to balconies disposed at the windows of the wall to which the ladder is attached that each ladder of each series is readily accessible from the balconies, the ladders being constructed of pipes, the said pipes being connected to a suitable water supply, and certain of the pipes being provided at intervals with perforations so that the water may escape from the pipes and serve to protect the occupants of the ladders. Provision is made at desirable points for the connection of a hose, and provision is also made at the bottom of the ladder for hose connection with a street hydrant.

A practical embodiment of the invention is illustrated in the accompanying drawings and will be hereinafter specifically described, without however thereby intending to limit the invention to the specific construction shown and described, as various alterations and changes may be made therein as may be required or desired to adapt the same to the building to which it is to be applied.

In describing the invention in detail, reference will be had to the above referred to accompanying drawings, and in such de-

tailed description, like numerals of reference will be employed to designate like parts throughout the several views of the drawings, in which:

Figure 1 is a view in perspective of a fire escape constructed in accordance with my invention, showing the same attached to a building, and connected with a suitable water supply. Fig. 2 is a sectional side elevation of the same partly broken away. Fig. 3 is a horizontal sectional view, the wall of the building being broken away, and, Fig. 4 is a like view on a smaller scale, showing a modified form of balcony arrangement in connection with the fire escape.

In accordance with my invention, I provide a substantially rectangular skeleton column formed of two parallel vertical outer pipes 5 and two parallel vertical inner pipes 6. The pipes 5, 5, are connected by cross braces 7 at spaced intervals throughout the length of the pipes 5, 5, which braces 7 may also be made of pipe. The pipes 5, 5, are also connected to the pipes 6, 6, by pipes 8, 8, which constitute the rounds for one ladder of each series.

The disposition of the vertical pipes is such that seven ladders are provided, three of these ladders being accessible at one side of the structure and three at the opposite side. The seventh ladder of the series is accessible from the front of the structure and the ladders 10—10 are also accessible from the front ladder, that is, side ladders 10—10 may be readily ascended from either side thereof. Each ladder 10 is formed by outer stand pipes 12 in connection with hollow rounds connecting them to the pipes 5, 5. The ladders 9, 9, and 10, 10 are each at an obtuse angle to the main ladders 8, 8.

The pipes 5, 5, are joined at their upper ends to a Y-coupling 14, to which is connected a pipe 15 which communicates with a water supply 16, in this instance shown as being in the form of a tank located on the top of the building. In the pipe 15 is a valve 16, to the stem of which is connected a lever 17, to the ends of which lever are attached chains 18 extending downwardly through the ladder, preferably to a point at least as far as the lower balcony of the building to which the fire escape is attached.

The balconies leading from the windows to the two series of ladders are indicated by the numeral 19.

The vertical pipes 5, 5, 6, 6, 11, 11, and 12, 12, are provided, preferably at points about mid-way the height of the windows with perforations 20, through which the water in said pipes may escape and be sprayed over the occupants of the ladders. The pipes 5, 5, and 6, 6, are also preferably provided at their lower ends with cocks or faucets 21 to allow of the escape of water from the pipes, and thus prevent the water from becoming heated therein should the flames strike the ladders at any point. Provision is also made at a suitable point or points as by connections 22 for the attachment of a hose to the ladders at each floor of the building. The pipes 5, 5, at their lower ends are connected to a Y-coupling 23 having attached thereto a connection 24 from which connection may be made by hose to a street hydrant.

Opposite each floor of the building one or more rounds of the ladders 10, 10 are extended beyond the vertical pipes 12 and provided with a nozzle 25 so as to spray water over the balconies 19.

The fire escape as above described is suitably attached to the wall 26 of the building by brackets 27 or in any other suitable or desirable manner.

In the embodiment of the invention as herein shown, I have illustrated the water supply as being derived from a tank 16 located on top of the building. It will be quite evident however, that the pipe 15 may be connected to any other form of water supply, and where the height of the building is not great, the pipe 15 may be connected direct to a water supply pipe of the building, so that the use of a tank for maintaining the supply of water will be obviated.

In the slightly modified form of construction shown in Fig. 4, it is to be observed that so far as the construction and arrangement of ladders is concerned, the construction is the same, and consequently the same reference numerals have been applied to the different parts. The balconies 19' however are substantially triangular in plan instead of rectangular as shown in Figs. 1 and 3 of the drawings.

In case of fire within the building to which the fire escape is attached, the ladders of the fire escape are reached by means of the balconies leading to the windows at each side of the fire escape. By pulling one of the chains 18 downward, the water from the water supply is admitted to the supply pipes of the ladders and to the rounds thereof so as to keep the same cool, and is sprayed through the small openings 20 and nozzles 25 over the persons on the balconies or descending the ladders, the water escaping

through the faucets 21 in case these are left open or partially so, thus maintaining the circulation of the water. When the fireman arrives he makes connection of his hose with connection 24, and ascending the ladder, attaches the hose to connection 22 which is opposite that floor on which the fire is located and may then readily enter that floor of the building by way of the balcony 19. The fire escape is not extended to the street, but terminates some distance above the side walk so that an ordinary ladder may be provided to reach the side walk.

I desire to call particular attention to the disposition of the side ladders with respect to the main ladder, and also to the fact that the uprights or sides 5, 5, together with the hollow connecting rounds 7, 7, constitute an additional ladder which may be used by the fireman in ascending to the seat of the fire, thus not interfering in any way with persons who are descending any of the ladders of the series. I also desire to call attention to the fact that persons descending the ladders may do so without interfering with each other, and it will also be noted that one person may safely guard another in descending the ladder by reason of the angular disposition of the ladders with respect to one another. For instance, a man in descending, may place one foot on the rounds of ladder 9 and the other foot on the rounds of ladder 10, whereas a woman may descend on ladder 8, the man in this instance acting as a shield to the woman from any flames which may be discharged from the windows in proximity to the fire escape. I also desire to call attention to the fact that the rounds of the main ladder 8 are so disposed with respect to the rounds of the side ladders 9 and 10 that they are midway between the rounds of side ladders 9 and 10 and thus enable persons of tender age or feeble persons who can not descend an ordinary ladder by reason of the long distance from one round to the other, which usually is 12 inches, to descend the fire escape above described, by placing one foot on a round of main ladder 8 and the other foot on the round of either of the side ladders 9 or 10 and thus shortening the distance between the rounds used by the person descending to half the distance between the rounds of the side ladders.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a fire escape, a series of ladders formed of pipes disposed to provide two main ladders, a front ladder, and two side ladders for each main ladder, the side ladders being disposed at an obtuse angle to the main ladders, one side ladder of each main ladder being accessible from either the main ladder or the front ladder.

2. In a fire escape, a series of ladders com-

prising two main ladders and two side ladders for each main ladder, the side ladders for each main ladder being disposed at an obtuse angle to the main ladders, the rounds
5 of the front ladder being interspaced relatively to the planes of the rounds of the side ladders.

Signed at the city of New York in the county of New York and State of New York this 22nd day of April A. D. 1911.

ABRAHAM PERLMAN.

Witnesses:

ISIDORE M. SILBERMAN,
MOE S SILBERMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."