

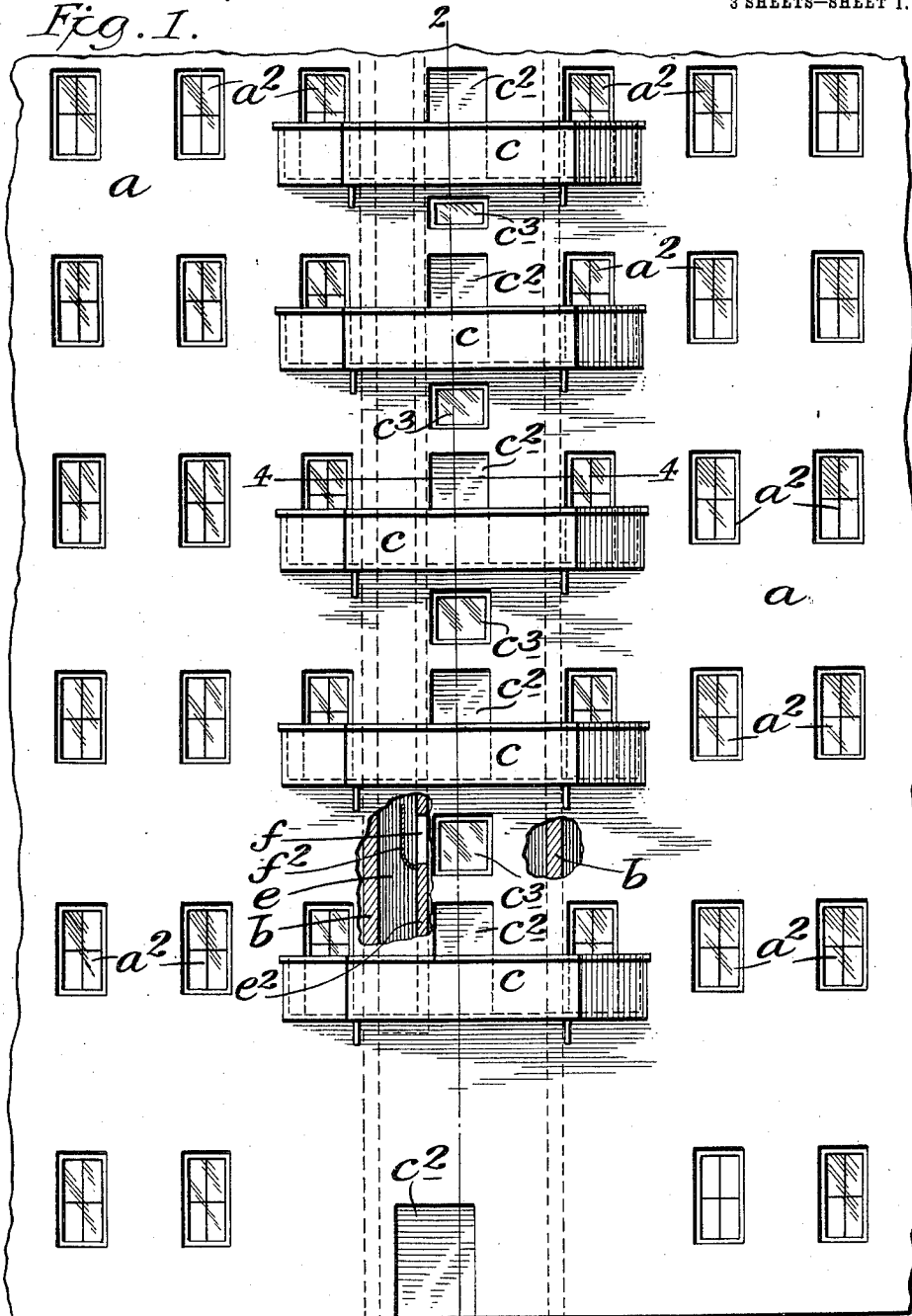
J. R. TAFT & C. F. PEMBER.
FIRE ESCAPE APPARATUS.
APPLICATION FILED JUNE 7, 1911.

1,019,284.

Patented Mar. 5, 1912.

3 SHEETS—SHEET 1.

Fig. 1.



WITNESSES

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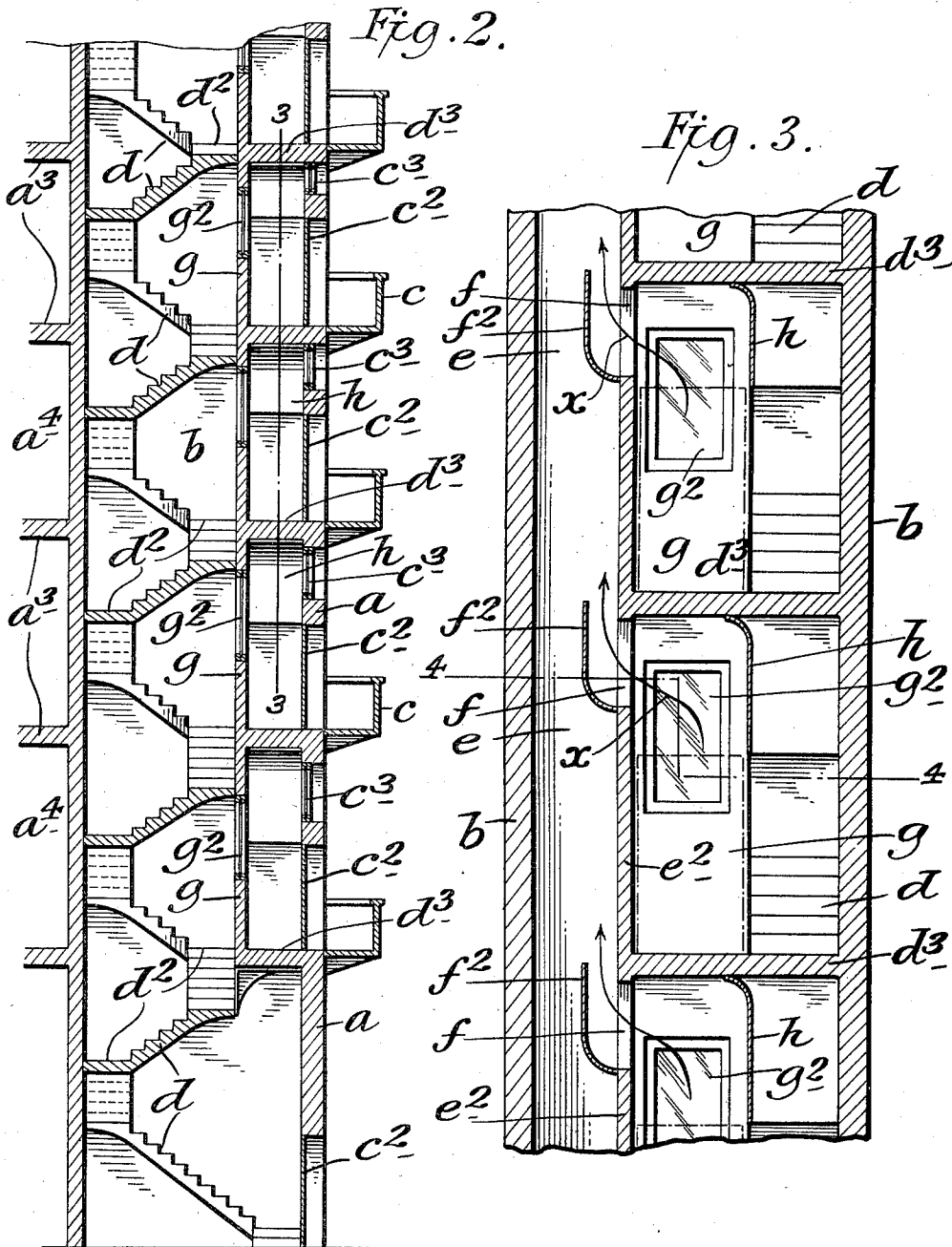
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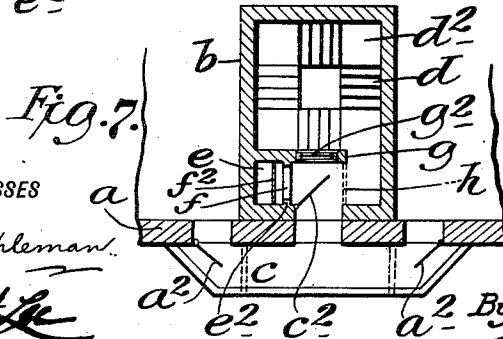
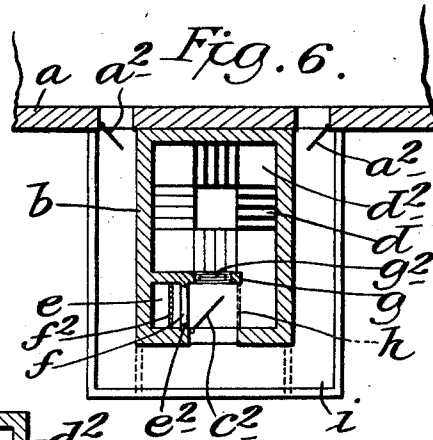
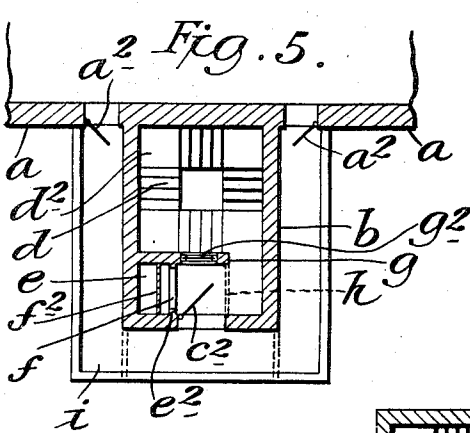
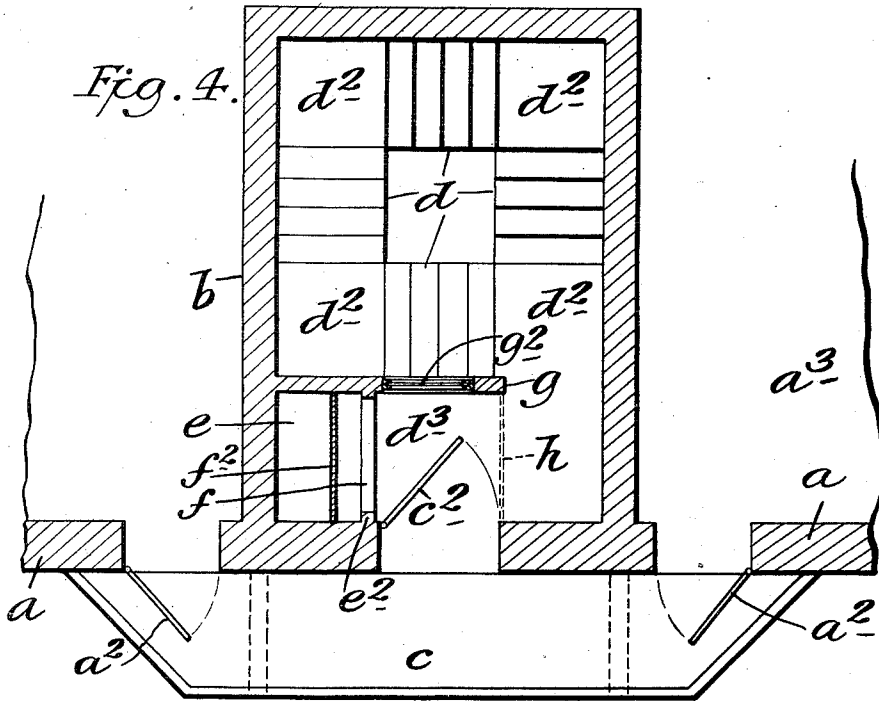
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UNITED STATES PATENT OFFICE.

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FIRE-ESCAPE APPARATUS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, JESSE R. TAFT and CLIFFORD F. PEMBER, respectively a citizen of the United States and subject of the King of Great Britain, and residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Fire-Escape Apparatus, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to fire-escape apparatus and the object thereof is to provide an improved apparatus of this class which may be applied to or employed in connection with buildings already constructed or applied to buildings in the process of construction; a further object being to provide an apparatus of the class specified by means of which any number of people may quickly, easily and safely escape from a burning building without danger of injury; and with these and other objects in view, the invention consists in a fire-escape apparatus for use in connection with buildings and constructed and operating as hereinafter described and claimed.

Our invention comprises a fireproof and preferably smoke proof stairway well which may be built inside of a building adjacent to a wall thereof or which may be constructed outside of said building adjacent to a wall thereof, and which may form a part of the said wall or be constructed independently thereof, said stairway well being also provided at each floor of the building with an ingress doorway or opening and means for reaching the same from the windows of the building and at the bottom thereof with an egress doorway or opening.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of our improvement are designated by suitable reference characters in each of the views, and in which:—

Figure 1 is a front view of one wall of a building provided with our improved fire-escape apparatus, part of the construction being broken away, and the stairway well being placed inside of the building, and forming part of said wall; Fig. 2 a vertical section on the line 2—2 of Fig. 1; Fig. 3 a partial section on the line 3—3 of Fig. 2; Fig. 4 a transverse section on the lines 4—4

of Figs. 1 and 3; Fig. 5 a view similar to Fig. 4, but on a reduced scale and showing the stairway well placed outside of the building; Fig. 6 a view similar to Fig. 5, but showing the stairway well formed independent of the wall of the building, and; Fig. 7 a view similar to Fig. 4 and showing the stairway well formed independent of the wall of the building.

In the drawings forming a part of this specification, we have shown at *a* one wall of a building, said wall being provided with transverse rows of windows *a*² which are also arranged in vertical rows, and the rows *a*² of windows represent corresponding floors *a*³ as shown in Fig. 2 and corresponding intermediate floor spaces or compartments *a*⁴.

In the practice of our invention as shown in Figs. 1, 2, 3 and 4 we construct within the building and back of one of the vertical rows of windows forming a part of the wall *a* of the building or integrally therewith, a stairway well *b* which extends from above the top to the bottom of the building, and the wall *a* of the building is provided on the outer side thereof with the usual fire-escape galleries *c*, said galleries being long enough to inclose three horizontally arranged windows, in the form of construction shown. The stairway well incloses one of the vertically arranged rows of windows, and in the practice of our invention we substitute for these, doors *c*² and place thereover windows *c*³ and two vertically arranged rows of windows *a*² are, in the form of construction shown, closely adjacent to the sides of the stairway well, but this construction is immaterial and the fire-escape galleries *c* may be of any desired length and may include in their length any number of the horizontally arranged windows or rows of windows *a*². The stairway within the stairway well is of what is known as the winding type and consists of separate flights *d* at the top and bottom of each of which are landings *d*², and within each of the doors *c*² is a floor *d*³ and these floors are on the same level with corresponding landings *d*² at the right hand side of the doors, in the construction shown, and which are extended forwardly to permit of the passage from the floors *d*³ to said landings. On the left hand side of the doors *c*² is a vertical smoke flue *e* and back of the doors *c*² and at a predetermined point above the floors *d*³ are smoke passageways *f* which

communicate with the flue e , and the flue wall e^2 in which the passageways f are formed is provided with shields f^2 which extend upwardly, as clearly shown in Figs. 1 and 2. The doors c^2 swing inwardly and into corresponding chambers or spaces and in the back wall g of said chambers or spaces are placed windows g^2 , and these windows g^2 correspond with the windows c^3 in the wall of the building over the doors c^2 and said windows afford light to the stairway well, as will be readily understood. At the right of the windows g^2 are shields h which extend downwardly from the top or ceiling of the chambers or spaces into which the doors c^2 swing, and these shields h operate to direct any smoke entering through the doors c in the direction of the passages f , and the shields f^2 as hereinbefore stated direct said smoke after it enters the flue e , upwardly, and it will be understood that the flue e is open at the top.

With this construction parties, in case of fire, can pass out through the windows a^2 at the opposite sides of the stairway well on to the corresponding galleries c from which they may pass by way of the doors or doorways c^2 into the chambers or spaces into which said doors open and from which said parties may pass directly on to the corresponding landings d^2 and then down the stairway, as will be readily understood. If, during the burning of the building, any smoke should escape from the windows at the opposite sides of the stairway well and this smoke should be blown into or drawn into the stairway well through the doors or doorways c^2 this smoke would follow the line indicated by the arrows X in Fig. 3 and would pass into the flue e and up and out at the top of said flue, and in this way the stairway well is made practically smokeproof.

The stairway well including the stairway therein and all the parts thereof is made of fireproof material, and in this way a fireproof and smokeproof stairway well is provided. The galleries c are also made preferably of fireproof material and preferably made solid or without apertures or openings, the object of this construction being to prevent updrafts of smoke or hot gases of combustion being drawn into, or being blown into the stairway well when the doors c^2 are open.

In practice, the top of the stairway well will be closed by transparent or translucent material and by reason of this fact and the method of constructing said well, there will be no updraft therein of any considerable amount.

In the construction shown in Fig. 5 the stairway well is placed outside of the wall a of the building and is formed integrally therewith or formed in connection therewith,

and in this form of construction the doors c^2 are placed in the back side of the stairway well, and the said well is provided with galleries i which extend entirely around it and to which access is provided through the windows a^2 , and in case of a fire, parties in the building may escape through the windows a^2 onto the galleries i and pass around the stairway well and enter at the doors c , as will be readily understood, and with this exception, the construction of the stairway well is exactly the same as that shown in Figs. 1 to 4, inclusive, and hereinbefore described.

The construction shown in Fig. 6 is the same as that shown in Fig. 5 except that the stairway well b is formed independent of the wall a of the building, and the construction shown in Fig. 7 is the same as that shown in Fig. 4 except that the stairway well b is formed independent of the wall a of the building.

The stairway well of our improved fire-escape apparatus will, in practice, be made of fireproof material, and will be made strong and substantial and if applied to or in a previously constructed frame building or an old building not made fireproof, the said stairway well may be so constructed as to remain standing, even though the building be burned down, and in such cases the stairway well will, as will be readily understood, be formed independently of the wall or walls of the building.

With our improved fire-escape apparatus any number of people in a burning building of any height may quickly escape to the ground, and it will be understood that our improved apparatus may be duplicated or a number of the same applied to very large buildings.

In the accompanying drawing the windows a^2 are shown as hinged windows, but this is not essential and other forms of windows may be employed; and other changes in and modifications of the construction herein described may be made, within the scope of the appended claims, without departing from the spirit of our invention or sacrificing its advantages. It will also be seen that with either form of construction shown access to the tower can only be had from outside the building, and the tower is also illuminated from the outside of the building in the day-time by windows arranged over the doorways and in the transverse walls rearwardly of said doorways, which transverse walls also form a part of the smoke flue and aid in directing the smoke which might enter through the doorways thereinto and these transverse walls also serve to prevent people rushing in through the doorways from falling down the stairway of the tower, such people being directed by said walls to the side entrance to the

stairway opposite the smoke flue and which is comparatively safe.

Having fully described our invention, what we claim as new and desire to secure by Letters Patent, is:—

1. A fire-escape for buildings, comprising a stairway well tower formed in connection with or adjacent to a wall of the building and provided with outside entrance doorways at the various floors of the building and means for reaching said doorways, said well tower being provided rearwardly of said doorways with partial transverse walls, and at one side of said doorways with a smoke flue formed partially by said transverse walls and at the opposite side of said doorways with a side entrance to the stairway in the tower, and the wall of the smoke flue inwardly of the doorways being provided with inlets and the space inwardly of the doorways being provided with means for directing smoke into said flues through said inlets.

2. A fire-escape for buildings, comprising a stairway well tower formed in connection with or adjacent to a wall of the building and provided with outside entrance door-

ways at the various floors of the building and means for reaching said doorways, said well tower being provided rearwardly of said doorways with partial transverse walls, and at one side of said doorways with a smoke flue formed partially by said transverse walls and at the opposite side of said doorways with a side entrance to the stairway in the tower, and the wall of the smoke flue inwardly of the doorways being provided with inlets and the space inwardly of the doorways being provided with means for directing smoke into said flues through said inlets, the well tower being also provided over the doorways and in the partial transverse walls rearwardly of said doorways with windows.

In testimony that we claim the foregoing as our invention we have signed our names in presence of the subscribing witnesses this 5th day of June, 1911.

JESSE R. TAFT.
CLIFFORD F. PEMBER.

Witnesses:

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F. G. AT LEE.

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