Sept. 29, 1925. **1,555,355**

J. A. CHARETTE

FIRE ESCAPE

Original Filed Jan. 8, 1923

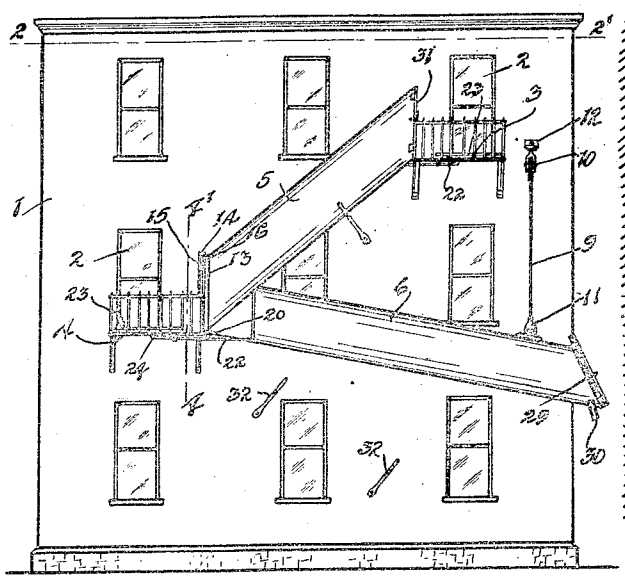


Fig 1

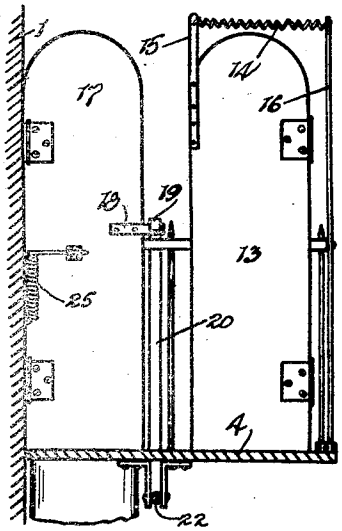


Fig 4

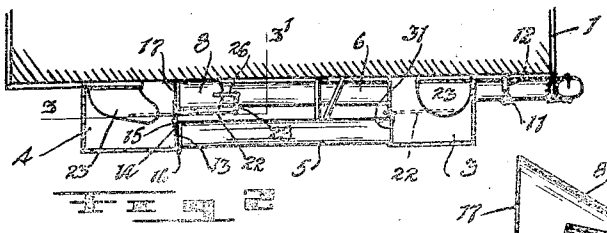


Fig 2

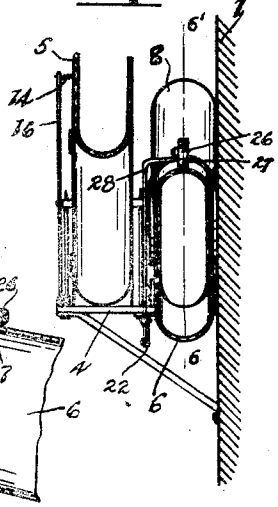


Fig 5

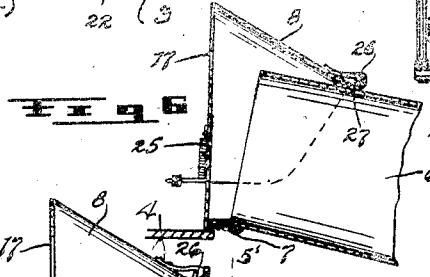


Fig 6

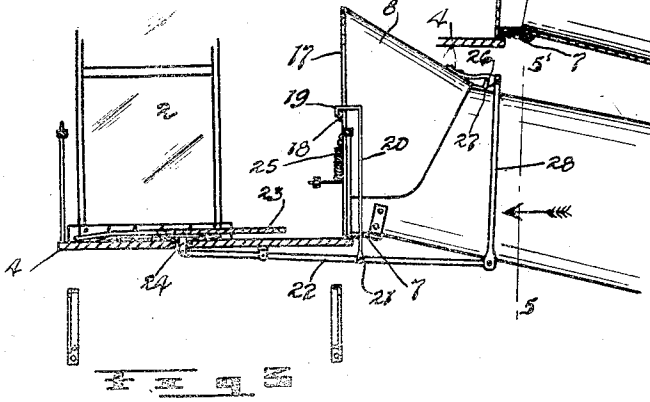


Fig 3

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UNITED STATES PATENT OFFICE.

JOSEPH ALPHONSE CHARETTE, OF ST. BONIFACE, MANITOBA, CANADA.

FIRE ESCAPE.

Application filed January 8, 1923, Serial No. 611,522. Renewed February 27, 1925.

To all whom it may concern:

Be it known that I, JOSEPH ALPHONSE CHARETTE, a subject of the King of Great Britain, and resident of the city of St. Boniface, in the Province of Manitoba, Canada, have invented certain new and useful Improvements in Fire Escapes, of which the following is the specification.

The invention relates to improvements in fire escapes, particularly adapted for use on houses and public buildings of various kinds, and an object of the invention is to provide a fire escape which can be attached to the side of an existing building and which can be entered from a window or door at each story and will carry the person entering, in safety to the ground.

A further object is to construct a fire escape wherein those escaping enter a series of shoots, passing between stories and slide in safety and without any physical exertion to the ground.

A further object is to construct shoots with gates or doors normally closing the ends thereof to exclude the weather and with the entrance doors to the shoots adapted to open automatically upon the approach of a person and the outlet doors from the shoot adapted to open and remain open upon being struck by the person sliding through the shoot.

A further object of the invention is to construct the lowermost shoot such that the free end thereof is normally elevated from the ground to clear traffic and so that it will automatically drop to working position upon the entrance door to that shoot being opened.

With the above more important objects in view the invention consists essentially in the arrangement and construction of parts hereinafter more particularly described and later pointed out in the appended claims, reference being had to the accompanying drawing in which:

Fig. 1 is a side view of a building equipped with my fire escape.

Fig. 2 is a horizontal sectional view at 2—2′ Fig. 1 and looking downwardly.

Fig. 3 is an enlarged detailed vertical sectional view at 3—3′ Fig. 2 and looking towards the building.

Fig. 4 is an enlarged detailed vertical sectional view at 4—4′ Fig. 1 and looking towards the gates.

Fig. 5 is a vertical sectional view at 5—5′ Fig. 3 and looking in the direction of the applied arrow.

Fig. 6 is a vertical sectional view at 6—6′ Fig. 5.

In the drawing like characters of reference indicate corresponding parts in the several figures.

The building 1 is provided with the customary windows 2, a window at each floor being utilized as an exit to my fire escape. A three story building is shown, but obviously any size building could be equipped with the fire escape shortly described by simply duplicating parts to pass from the upper story to the ground. In equipping the building with my fire escape I locate similar balconies or landings 3 and 4 at pre-selected windows, the landings being suitably supported from the wall of the building and being situated with respect to the windows so that one can pass out through the windows directly onto the balconies.

The balconies are staggered and connected by shoots which pass in inclined positions and alternate in opposite directions from the upper floors to the ground. The balcony 3 is connected to the balcony 4 by a metallic shoot 5 which is more or less oval in cross section and of a size such that one can sit in it and slide down from the top balcony to the lower one. The inclined position of the shoot is such that one entering the same can slide down by gravity and at a reasonable speed.

The lower shoot 6 is hinged at 7 to the balcony 4 at a location immediately to the inner side of the shoot 5 and it is adapted to swing from the position shown in Fig. 1 to the ground. The end of the shoot next the balcony 4 is enclosed by a housing 8 which covers the end of the shoot in all positions thereof. This hinged shoot is normally suspended clear of traffic by a coun-

ter balance which embodies a rope 9 passing over a pulley 10 and provided with a counter weight 11, the pulley being suspended by a suitable bracket 12 from the side of the building. The lower end of the shoot 5 is normally closed by a hinged gate 13, the gate being held closed by a coiled spring 14 extending between a vertical arm 15 secured to the gate and a vertical bar 16 secured to the side of the balcony. The bar 16 is positioned with respect to the gate such that when the gate is closed the spring is in tension and acting to hold the gate closed and so that when the gate is struck open from within, the spring will operate to pull the gate open and retain it open backed against the side of the balcony. According to this arrangement one sliding through the shoot will strike the door and cause it to open where it will remain.

The upper end of the shoot 6 is normally closed by a hinged door 17, the door being provided with a fixed latch 18 which is normally locked closed by a catch 19 located on the upper end of a locking bar 20, which passes downwardly and is pivotally attached at 21 to a rocker arm 22 pivotally mounted on the underside of the landing 4.

In a location directly above the landing 4 I locate a hinged horizontally lying pressure plate 23 which is adapted to be stepped on and depressed by the weight of a person approaching the door 17. This plate is elongated in the direction of the door 17 so as to be disposed in the path of persons passing to the door from the chute 5 as well as from the window beneath which the plate is positioned. A short arm 24 extends downwardly from this plate and through the landing and is pivotally attached to one end of the rocker arm 22 and the arrangement is such that the depression of the plate 23 will raise the bar 20 and release the catch from the latch. As soon as this occurs the door 17 is opened towards the wall by the action of a coiled spring 25 attached thereof. The pressure plate is also utilized to unlock the pivoted shoot 6. This shoot is normally locked in the elevated position by a hook shaped spring catch 26 permanently secured to the housing 8 and engageable with a lug 27 secured to the shoot. An operating bar 28 is pivotally attached to the catch 26 and to the rocker arm 22, the arrangement being such that the depression of the pressure plate raises the catch 26 and releases the shoot 6 to swing under the action of gravity, it being here understood that the counter weight 11 permits the shoot to slowly drop, under the action of gravity, to the ground.

The lower end of the shoot 6 is fitted with a hinged door 29 which is held in the opened and closed position by a spring mounted the same as that 14 associated with the door 13 so that the said door 29 opens when struck by one sliding through the shoot and remains open.

The underside of the shoot 6 is fitted with a shoe 30 adapted to contact with the ground when the said shoot swings downwardly.

The upper end of the shoot 5 is fitted with a hinged gate 31 which is normally locked closed by a catch and latch identical to that utilized in connection with the gate 17, the catch being controlled by a rocker bar and pressure plate of the same nature as hereinbefore described. The shoot 6 is supported in the down position by hangers 32 secured to the wall.

In order to better understand the fire escape I will now describe the manner in which it operates, assuming all doors closed and the shoot 6 locked in the up position.

A person leaving the burning building by any of the windows at the landings will step on the pressure plate at the landing which will automatically act to open the door to the down going shoot. If he enters the landing from the first story the depression of the plate will also act to release the shoot 6 to drop. If one, however, escapes from an upper story window and enters the down going shoot he will slide against the door at the lower end of that shoot and open it, then he will walk on the pressure plate which will open the entrance door to the next down going shoot. This action will continue, where the appliance is put on a high building, until the last shoot is reached, at which point the depression of the plate releases the lowermost shoot to drop to the ground so that the person is carried in safety from the burning building.

Whilst I have entered into a detailed description of the various controlling parts it will be readily understood that they can be modified without departing from the spirit of the invention as set forth in the accompanying claims.

What I claim as my invention is:

1. In a fire escape for a multiple story building, the combination with an inclined shoot extending between stories and a landing located at each end of the shoot, of a spring pressed gate normally closing the lower end of the shoot and being adapted to be opened by being struck by a person sliding through the shoot, a hinged gate located at the upper end of the shoot, a spring adapted to open the latter gate, means normally locking the latter gate closed a depressible plate located on the platform at the approach to the latter gate and an operating connection between the plate and the gate locking means adapted in the depression of the plate to release the locking means and free the gate to open.

2. In a fire escape for a building, the combination with a landing, a shoot having

one end pivotally connected to the landing and the other end counter balanced and normally elevated, of a normally closed and locked gate at the landing end of the shoot, a spring adapted to open the gate upon the locking means being released, releasable means normally locking the shoot in the elevated position, a depressible plate mounted on the landing at the approach to the shoot and means actuated by the depression of the plate for unlocking the gate and simultaneously releasing the shoot locking means.

Signed at Winnipeg, this 12th day of December, 1922.

JOSEPH ALPHONSE CHARETTE.