

P. STAN.
FIRE ESCAPE.
APPLICATION FILED JULY 1, 1908.

929,510.

Patented July 27, 1909.

Fig. 2.

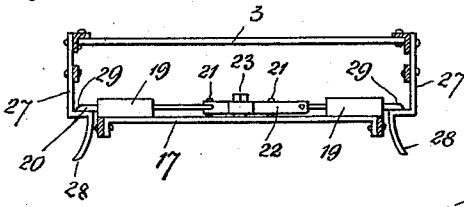


Fig. 1.

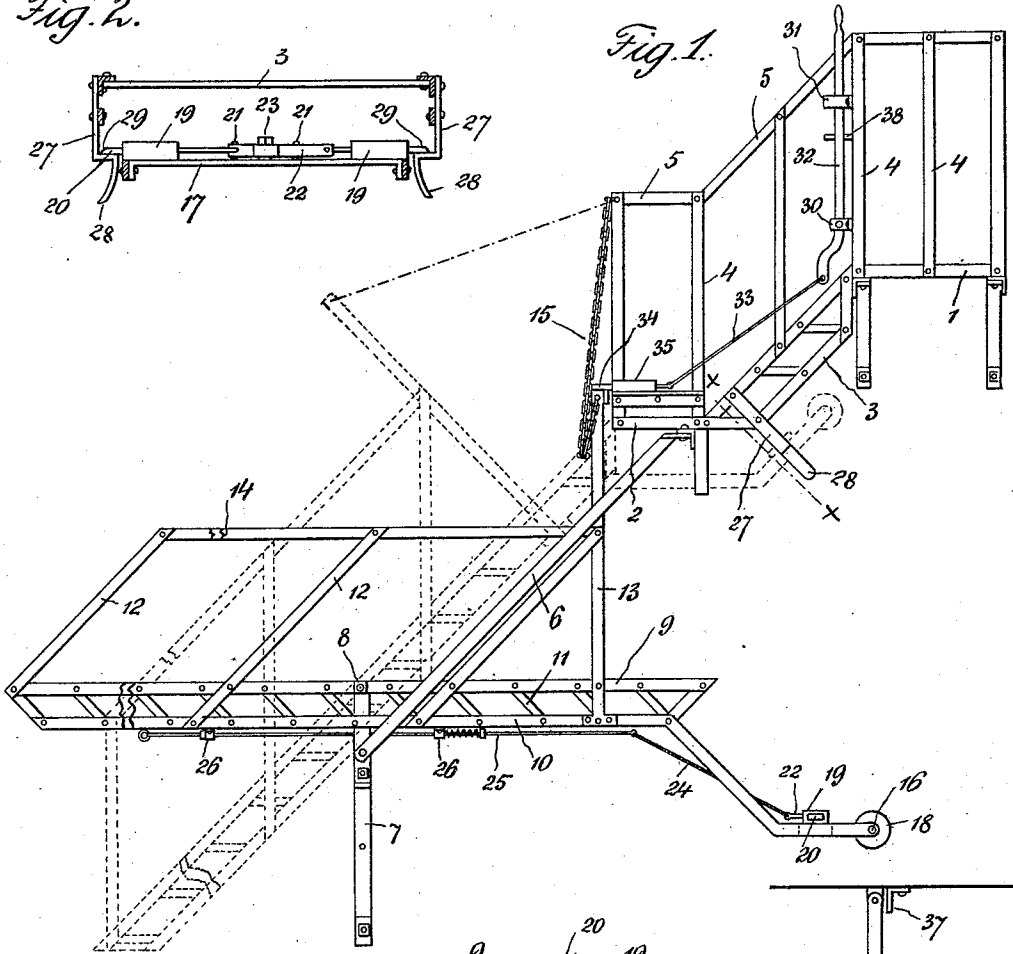


Fig. 3.

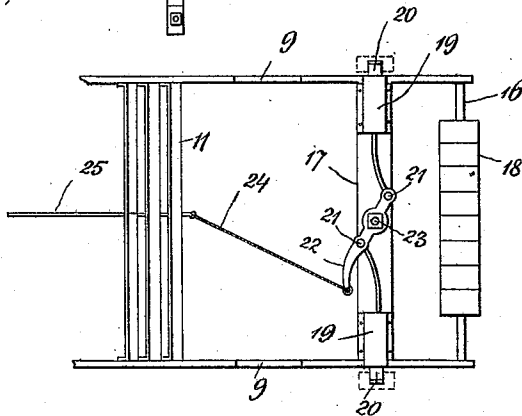
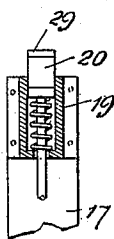
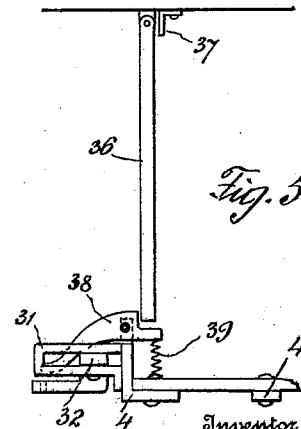


Fig. 4.

Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

PAUL STAN, OF HOMESTEAD, PENNSYLVANIA.

FIRE-ESCAPE.

No. 929,510.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed July 1, 1908. Serial No. 441,497.

To all whom it may concern:

Be it known that I, PAUL STAN, a subject of the King of Hungary, residing at Homestead, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to fire escapes, and more particularly to that type having pivoted or swinging landing sections or stairways.

15 The primary object of my invention is to provide a safety appliance in connection with a fire escape of the above type for preventing persons from accidentally stepping off of the fire escape when the landing section is not in position for landing purposes, thereby avoiding accidents that are of common occurrence with the above type of fire escape.

20 A further object of this invention is to provide a fire escape having a pivoted or fulcrumed landing section that can be easily and quickly placed in position for removing persons from the fire escape. To this end, I provide the first floor platform of a fire escape with a hinged door or gate, and arrange between the ground and first floor a pivoted or fulcrumed landing section or ladder which is normally retained in an elevated or horizontal position, to prevent the fire escape from being used for any purpose other than that it is intended for. The landing section or ladder is retained in an elevated or horizontal position by a locking mechanism which serves also as a lock for the door or gate. This locking mechanism is easily and quickly released to simultaneously permit of the landing section or ladder assuming an operative position, and the door or gate an open position, whereby persons upon the fire escape can easily and quickly descend.

25 A fire escape constructed in accordance with my invention is safe, positive in its action, easily installed and durable.

30 The detail construction entering into my invention will be presently described and then specifically pointed out in the appended claims.

35 In the drawings:—Figure 1 is a side elevation of a portion of the fire escape, illustrating the landing section or ladder in full

lines and partly broken away in a horizontal position, and said section or ladder in an operative position in dotted lines, Fig. 2 is a cross sectional view taken on the line $x-x$ of Fig. 1 with the landing section or ladder in an operative position, Fig. 3 is a horizontal sectional view of the spring held latch forming part of the locking mechanism, Fig. 4 is a plan of the weighted end of the landing section or ladder, and Fig. 5 is a plan of a portion of the fire escape illustrating the door or gate.

In the accompanying drawings, 1 and 2 designate fixed or stationary platforms connected by a stationary stairway 3, said platforms and stairway having balusters 4 and a railing 5.

Extending downwardly at an inclination from the fixed platform 2 is a brace 6 connecting with a bracket 7, said bracket being carried by the building to which said fire escape is attached. Between the brackets 7 of the building is pivoted or fulcrumed, as at 8, a tilting landing section or ladder, comprising side frames 9 and 10 connected by steps 11. The landing section or ladder is provided with balusters 12 and 13 connected by a railing 14, said baluster 13 extending beyond the railing and connecting by a chain 15 with one of the balusters of the fixed platform 2. This chain 15 is adapted to complete the balustrade between the fixed platform 2 and the landing section of the fire escape.

35 The side frames 10 of the landing section are extended rearwardly and connected by a rod 16 and a plate 17, said rod 16 being provided with counterbalancing weights 18, while the plate 17 is provided with latch casings 19 containing spring-held latches 20. The spring-held latches 20 are connected, as at 21, to a lever 22 pivotally mounted centrally of the plate 17, as at 23. The lever 22 is connected by a cable 24 to a spring-held rod 25, arranged upon the under side of the landing section in suitable bearing 26 provided therefor. When the landing section is tilted to the position shown in dotted lines in Fig. 1 of the drawings, the latches 20 are adapted to engage keepers 27 carried by the connecting stairway 3. The lower ends of the keepers 27 are curved, as at 28, and the outer ends of the latches are beveled, as at 29, whereby as the upper end of the landing section swings between said keepers, the

spring-held latches 20 will be forced inwardly until the landing section assumes the proper position, at which time said latches are released and firmly support the landing section in an inclined position.

One of the balusters of the fixed platform 1 is provided with a lug 30 and a strap 31. Pivottally connected to the lug 30 and extending through the strap 31 is an operating lever 32, the lower end of said lever being connected by a cable or rod 33 to a spring-held latch 34, arranged in a casing 35 supported by the platform 2. The spring-held latch 34 is adapted to engage the upper end of the baluster 13 and retain the landing section in a horizontal position, as shown in full lines in Fig. 1.

Hinged to the building in connection with which the fire escape is used is a door or gate 36, this door or gate being arranged upon the platform 1 at the upper end of the stairway 3. The door or gate 36 is prevented from swinging inwardly by a projection 37, carried by the building and is normally prevented from swinging outwardly by a horizontally pivoted latch 38, said latch being normally held in the position illustrated in Fig. 5, by a spring 39 arranged between said latch and one of the railings of the platform 1. A portion of the latch 38 lies in the path of travel of the lever 32 and is adapted to be engaged by said lever to release the door or gate 36 and permit of persons descending the fire escape.

When installing my fire escape, I pivot or fulcrum the landing section or ladder whereby the outer end thereof will be of a greater weight than the inner end, in order that the landing section or ladder will immediately assume an inclined position when the latch 34 is withdrawn from engagement with the upper end of the baluster 13.

It is apparent that the door or gate 36 cannot be opened without moving the lever 32, and when this lever is moved, it is obvious that the latch 34 will be withdrawn from the upper end of the baluster 13 and the landing section or ladder will immediately swing to an inclined position and be locked in said position by the latches 20 engaging the keepers 27. To place the landing section or ladder in a horizontal position, it is only necessary to pull upon the rod 25 to retract the latches 20 and then give the lower end of the landing section or ladder a swing upwardly, which movement causes the upper end of the baluster 13 to ride under the latch 34.

It will be obvious, that the forward portion of the landing section, that is, the portion of the landing section forward of the pivot 8 being of greater weight than the portion at the rear of said pivot, that the tendency of the landing section is to assume the operative position just as soon as the

locking means which holds it normally in the horizontal position is released. The counterbalance weights 18 are provided merely to assist in returning the landing section to the horizontal or inoperative position, and overcoming a portion of the excess weight on the forward portion of the landing section.

My fire escape in its entirety is constructed of strong and durable metal, and while I have only illustrated two platforms, it is obvious that the same may embody numerous platforms and connecting stairways.

While in the drawings forming a part of this application there is illustrated the preferred embodiments of my invention, it is to be understood that the elements there can be varied or changed as to the exact shape, proportion and manner of assemblage without departing from the spirit of the invention.

Having now described my invention what I claim as new, is:—

1. In a fire escape, the combination with fixed platforms and a stairway connecting said platforms, of a bracket arranged adjacent to one of said platforms, a tilting landing section supported by said bracket and adapted to swing into engagement with one of said platforms, said section comprising frames, weights carried by said frames, spring-held latches supported by said frames, a rod arranged under said landing section for moving said latches, keepers carried by said connecting stairway and adapted to be engaged by said latches for holding said landing section in an inclined position, a spring-held latch arranged upon one of said platforms for holding said landing section in a horizontal position, a hinged door arranged at the other of said platforms, a latch for holding said door in a closed position, and a lever pivottally supported by the last mentioned platform for simultaneously moving said latch and the spring-held latch supported by the other of said platforms, substantially as described.

2. In a fire escape, the combination with fixed platforms and a stairway connecting said platforms, of a bracket arranged adjacent to one of said platforms, a tilting landing section supported by said bracket and adapted to swing into engagement with one of said platforms, said section comprising frames, weights carried by said frames, spring-held latches supported by said frames, a rod arranged under said landing section for moving said latches, keepers carried by said connecting stairway and adapted to be engaged by said latches for holding said landing section in an inclined position, a spring-held latch arranged upon one of said platforms for holding said landing section in a horizontal position, a hinged door arranged at the other of said platforms, a latch for holding said door in a closed posi-

tion, and means supported by said platform for simultaneously releasing said door and the spring-held latch of said platform.

3. A fire escape comprising fixed platforms and a connecting stairway, a tilting landing section adapted to swing into engagement with one of said platforms, keepers carried by said connecting stairway, spring-held latches carried by said landing section and adapted to engage said keepers for maintaining said landing section in an inclined position, a spring-held latch supported by one of said platforms for holding said landing section in a horizontal position, a hinged door arranged at the other of said fixed platforms, and a lever supported by said fixed platform for simultaneously releasing said door and the spring-held latch of the other of said platforms.

4. A fire escape comprising fixed platforms, a pivoted landing section adapted to swing into engagement with one of said platforms, means carried by one of said platforms for engaging said landing section, and retaining the same in an inclined position, means carried by the same platform for holding said tilting landing section in a horizontal position, a hinged door arranged upon the other of said platforms, a latch for normally holding said door in a closed position, and means arranged upon said platform for simultaneously releasing said latches to permit of said door being opened and said landing section swinging to an inclined position.

5. In a fire escape, in combination with fixed platforms, a pivoted landing section adapted to swing from a horizontal inoperative position to an inclined operative position with respect to one of said platforms, the portion of said landing section forward of the pivot thereof being of greater weight than the portion to the rear of said pivot, said landing section when released movable by gravity to the operative position, counter-balancing means carried by the rear portion of said landing section, means whereby the landing section is automatically locked in its inclined operative position when moved thereto, and means whereby the said landing section is automatically locked

in its horizontal inoperative position when moved thereto.

6. In a fire escape, in combination with a fixed platform, a pivoted landing section adapted to swing from a normally horizontal inoperative position to an inclined operative position with respect to said platform, means whereby said landing section is automatically locked in the inclined operative position when moved thereto, said landing section when released movable by gravity to the inclined operative position, and means whereby said landing section is automatically locked in its horizontal inoperative position when moved thereto.

7. In a fire escape, in combination with the platform of a stationary fire escape, a pivoted landing section so disposed as to move from a normally horizontal inoperative position to an inclined operative position with respect to said platform, said landing position when released movable by gravity to the inclined operative position, locking means so disposed as to engage a part of the landing section when the latter is in its inoperative position to lock the same, and co-acting locking means on the landing section and fire escape for holding said landing section in the inclined operative position when moved thereto.

8. In combination with a stationary fire escape, a pivoted landing section normally held in an inoperative position with respect to the fire escape and movable to an operative position with respect to said fire escape, a hinged door arranged at the exit end of said fire escape, means for normally holding said door in a closed position and the landing section in an inoperative position, said means when actuated simultaneously releasing the door and the landing section, said landing section when released movable by gravity to the operative position, and means for automatically locking the same in operative position when moved thereto.

In testimony whereof I affix my signature in the presence of two witnesses.

PAUL STAN.

Witnesses:

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MAX H. SROLOVITZ.