(No Model.)

C. MONJEAU.

BALCONY AND FIRE ESCAPE COMBINED.

No. 313,511. Patented Mar. 10, 1885.

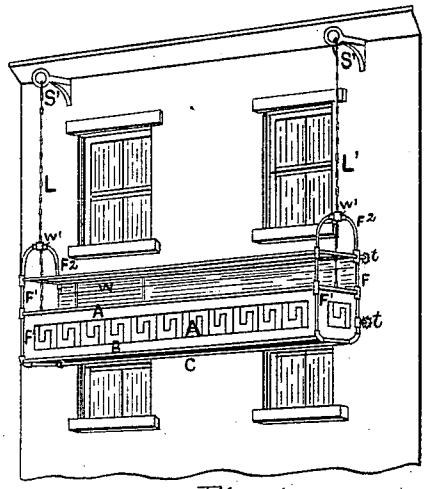


Fig. 1.

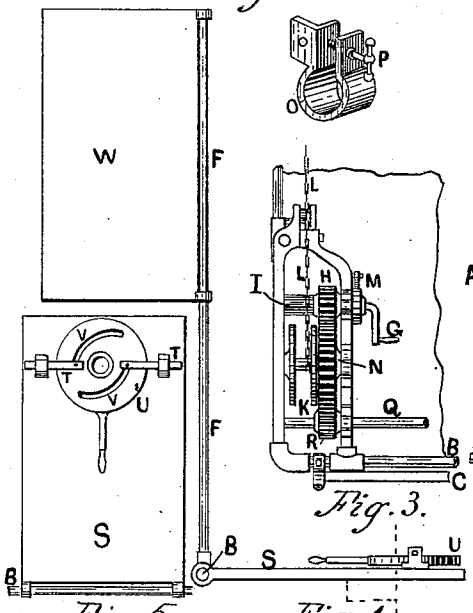


Fig. 3.

Fig. 5.

Fig. 4.

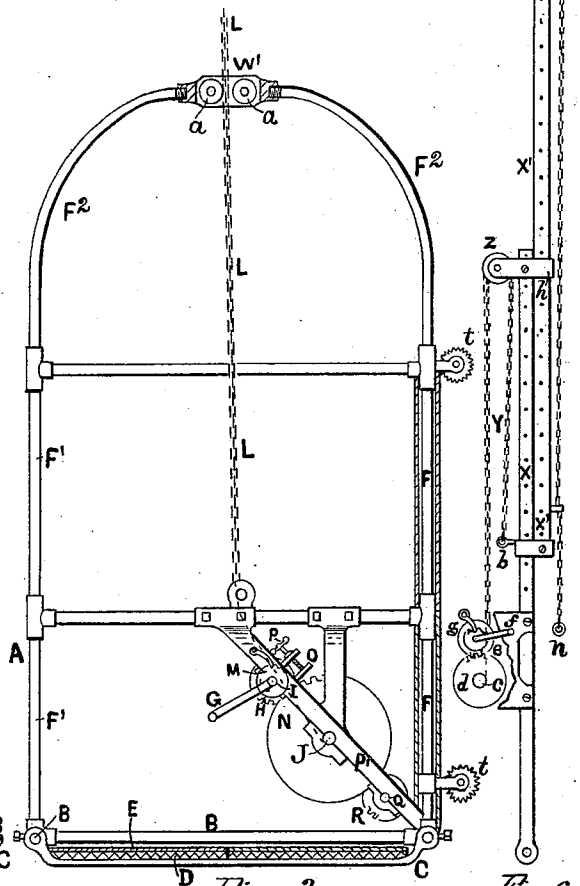


Fig. 2.

Fig. 6.

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UNITED STATES PATENT OFFICE.

CLEOPHAS MONJEAU, OF MIDDLETOWN, OHIO.

BALCONY AND FIRE-ESCAPE COMBINED.

SPECIFICATION forming part of Letters Patent No. 313,511, dated March 10, 1885.

Application filed March 16, 1883. (No model.)

To all whom it may concern:

Be it known that I, CLEOPHAS MONJEAU, of Middletown, in the county of Butler and State of Ohio, have invented an Improved Balcony and Fire-Escape Combined, of which the following is a specification.

The object of my invention is to provide a balcony which shall serve the purposes of a fire-escape when required; and it consists in the construction, combination, and arrangement upon the outer wall of a building of a suspended balcony adapted to be raised and lowered and securely held at any desired point temporarily, and in case of a fire in the building permit the occupants of such building to enter such balcony through an opening or window, and then lower said balcony to the ground or to such point as may be desired to permit a safe escape for such occupants; and also in further details of construction to carry out the objects of the invention, as hereinafter more fully described, and set forth in the claims.

Figure 1 represents a perspective view of a balcony embodying my invention suspended upon the outer wall of a building. Fig. 2 represents a vertical sectional elevation of the balcony constructed according to my invention. Fig. 3 represents an elevation of the hoisting and lowering mechanism of the balcony. Fig. 4 represents an elevation of the entrance and exit doors at the back side of the balcony. Fig. 5 represents an elevation of the lower door detached. Fig. 6 represents an elevation of a sectional adjustable ladder and hoisting mechanism which may be connected with the balcony.

A represents the front of the balcony constructed of any desired ornamental iron-work adapted to the purpose, being supported by and secured to the frame-work of the balcony, consisting of the rectangular floor-support frame B of iron pipe, coupled together by curved elbows and T-fittings provided with internal screw-threads corresponding with the screw-thread formed upon the ends of the pipe, whereby the several parts or sections are secured together in a very cheap, strong, and durable manner.

To the front and rear bottom pipes, B, are attached the iron floor-supports or "stringers" C, having eyes formed at each end through which the said pipes B are passed, the said stringers or supports C being provided at such intervals as may be required to support the iron floor, consisting of the lower corrugated sheet-metal portion, D, and the upper sheet-metal floor-plate, E, which rests upon the said corrugations, and thereby forms a series of air-spaces which will tend to prevent undue heat being communicated to said sheet-metal floor-plate E. These floor-plates D and E, or the corrugated and flat sheet-iron parts D and E, are secured together by a frame which may be pivoted or hinged to the front and rear pipes B, so as to permit of being turned up at each side of the balcony, so as to permit snow to fall through the openings in the bottom of the balcony thus formed.

F represents the two rear corner frame-supports formed of iron pipe in sections, and coupled together by the T-fittings, as shown in Fig. 2. Near the lower end of the said vertical pipes F is secured a projecting friction-wheel, *t*, with a roughened periphery adapted to rotate upon the surface of the outer wall of the building as the said balcony is raised or lowered by means of a crank, G, attached to the end of journal I, upon which is secured the pinion H, which gears with the gear-wheel N, secured upon the journal J, to which is secured the drum or flanged pulley K, between which the suspension-chains L are adapted to be wound when said crank is turned in the desired direction to raise the said balcony, and may be held suspended at any point required by the pawl and ratchet M, secured upon the said journal or shaft I, and in order to check the too rapid downward movement to the balcony, or to overcome or partially counteract the great weight acting upon the gear mechanism, I have provided a spring-brake, O, upon the said journal or shaft I, and which is made to clamp the same, so as to cause more or less friction thereon by means of the hand-screw P, which may be actuated by the operator, as occasion may require. This spring-brake O is shown removed from Fig. 3 and shown detached above it, and is provided with a projecting flange or lip by which it may be secured to the incline brace P', to the under side of which are journaled the said shafts I and J, and also the horizontal shaft Q, to which is secured the pinion R, the said

shaft Q extending the length of the said balcony, (or such distance as desired,) where it is provided with a pinion, H′, which engages with a gear-wheel, N′, secured to a shaft which also carries a chain-drum or flanged pulley (these gears are not shown, being in duplicate) upon which is simultaneously wound the opposite suspension-chain L′ when the said crank G is turned by the operator, the said suspension-chains L L′ being connected at their upper ends to suitable projecting arms or brackets, S′, secured to the building in a permanent manner at or near the eaves, or at any desired point above the upper windows, so that in case of a fire breaking out within any portion of a building to which my balcony fire-escape is attached, the same may be elevated or lowered into position at any desired window, and the lower portion, S, of the sheet-metal hinged door, provided in the back side of the said balcony, may be turned down outwardly, so that its top or outward end is brought to bear upon a window-sill or other projection, as shown in Fig. 4, and temporarily secured thereto or within the window-casings by means of the sliding bolts or bars T, which are forced outward so as to bring their roughened outward ends into contact with such window casings or jams by means of the pivoted cam-slotted plate U, which actuates the said sliding bolts or bars T by pins projecting from the inward ends of said bars within the curved slots V of the cam-plate U, which may be partially rotated about its axis by a projecting handle, as shown in Fig. 5. The upper section of the door W being hinged to the back side of the balcony, so as to permit it to be swung horizontally into the said balcony, persons or occupants of the building may enter through the window over the said door portion S, when the same are immediately closed and the balcony lowered to the desired position, as above described. Now, in order to guide the said balcony when being raised or lowered, the said end frames, F, and forward or front corner-frames, F′, similarly constructed of pipe and connected together in corresponding parts or sections, the upper portions of sections of pipe F^2 are bent or curved inwardly from the front and rear, and connected together at their upper ends by the socketed coupling W′, provided with friction-rolls *a*, which act to relieve the friction upon the said suspension-chains L L′ as they slide or pass through between the said friction-rolls *a*, journaled within the said couplings W, as shown in Fig. 2. Now, in order to reach the Mansard and other windows located above the outer vertical walls of a building, I have provided an adjustable and extensible jointed ladder, X, the lower end of which may be secured to the said stringers or floor-supports C in any suitable manner at or about the central portion of said balcony, and, when desired for use, may be extended vertically by raising or sliding the upper sections upward by means of a connecting-chain, Y, passing over a pulley, Z, its lower end being connected to a sliding guide, *b*, secured to the lower end of the section X′, and its opposite end to a shaft, *c*, provided with a gear-wheel, *d*, into which is geared a pinion, *e*, secured to a shaft, to the end of which is attached a crank, *f*, and to which is also secured a pawl and ratchet, *g*, as shown in Fig. 6, wherein it will be seen that if the said shaft *c* be rotated so as to wind the said chain Y thereon, said upper sections, X′, may be elevated or slid upward through the said sliding guide *b*, and through the guide *h*, secured to the upper end of the lower section, X, and within the opposite end portion of said guide *h* being pivoted the said friction-pulley Z, as shown.

In order that the top portion, X^2, may be inclined to the angle of the roof of any building, it is connected by a joint, *i*, which permits the extreme upper end portion to fall upon the roof when desired, projections at the end of each side piece of the said upper section, X^2, resting upon the same. This hinged upper section, X^2, may be raised or lowered or brought into line with the said lower sections by a chain, *n*, as shown in Fig. 6. It will be seen and understood that the doors and back side of the said balcony are constructed double, or of two thicknesses of sheet metal, leaving an air-space between. It is especially designed that this balcony shall serve all the purposes of the stationary or permanently-located balconies heretofore constructed upon the outer walls of buildings, and it will be observed that, if desired, it may be elevated or lowered upon the wall of the building to accommodate the occupants of any floor or story of such building.

It will be understood that the mechanical devices shown and described for the purpose of raising and lowering the said balcony may be changed, or any other well-known means employed without departing from the essential features of my invention.

Having thus described my invention, what I claim is—

1. A balcony suspended by chains adapted to be wound upon a shaft or unwound therefrom by a crank-and-gear mechanism and provided with a double iron back having doors adapted to open outwardly and inwardly, substantially as described, and for the purposes set forth.

2. A balcony suspended by chains adapted to be wound upon a shaft or unwound therefrom and provided with a double iron floor having air-spaces, substantially as described, and for the purposes set forth.

CLEOPHAS MONJEAU.

Witnesses:
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