No. 863,877. PATENTED AUG. 20, 1907.

G. REGONDI.

FOLDING BALCONY.

APPLICATION FILED MAR. 8, 1906.

3 SHEETS—SHEET 1.

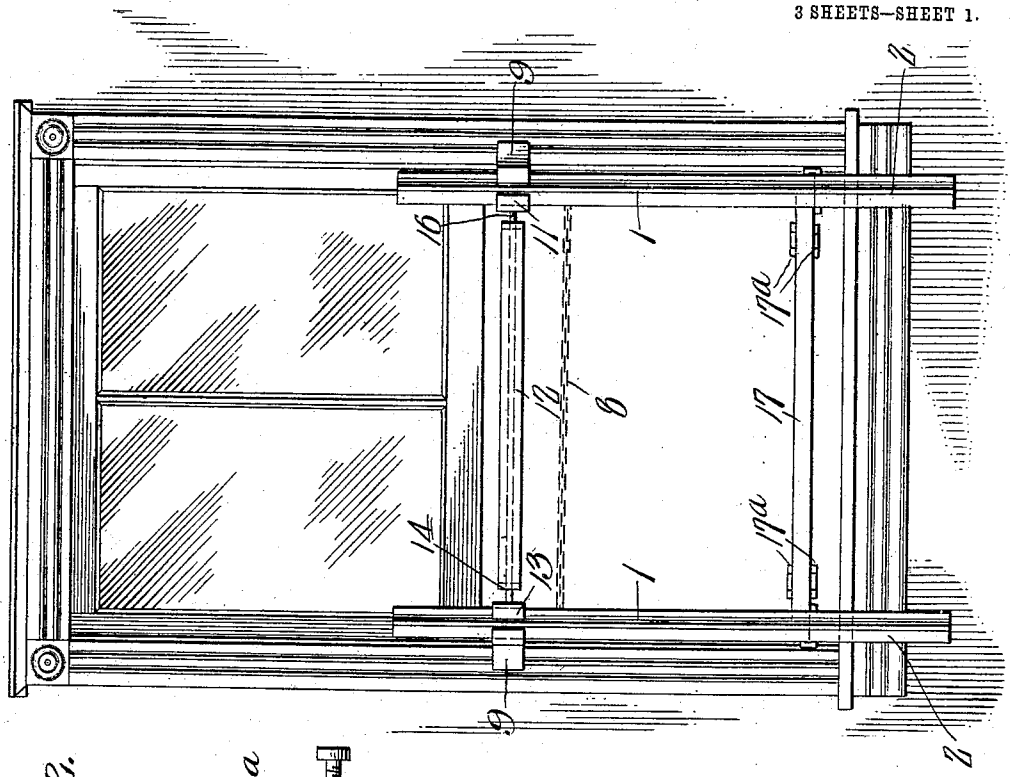


Fig. 2.

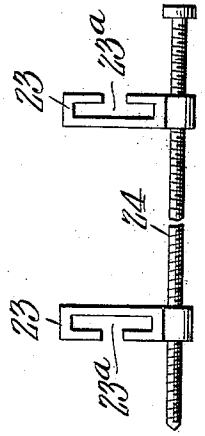


Fig. 7.

Fig. 1.

Witnesses

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3 SHEETS—SHEET 2.

Fig. 3.

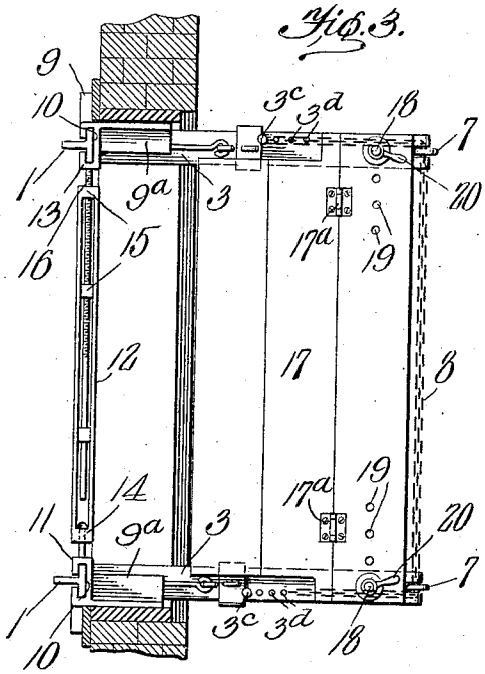


Fig. 8.

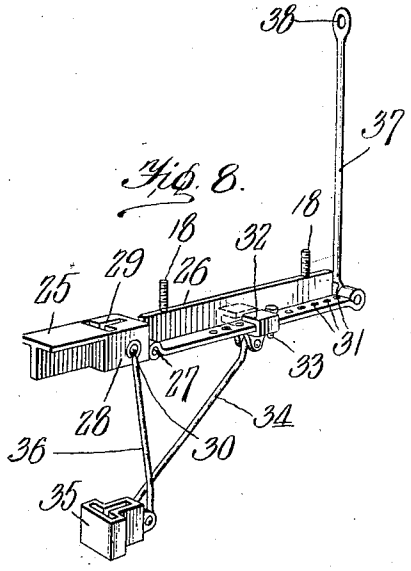
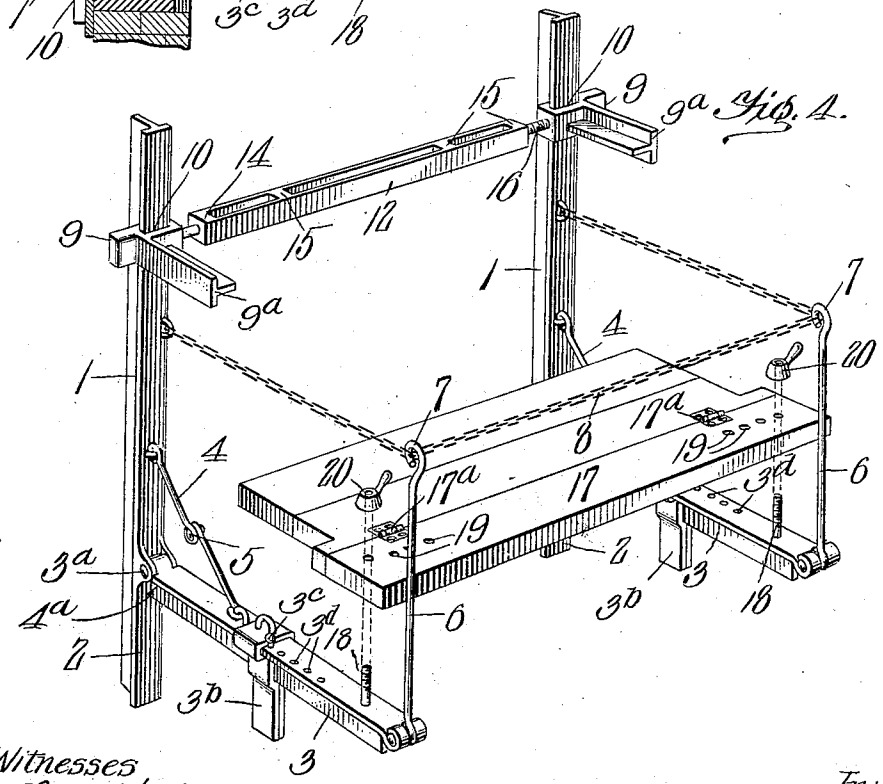


Fig. 4.



Witnesses

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3 SHEETS—SHEET 3.

Fig. 6.

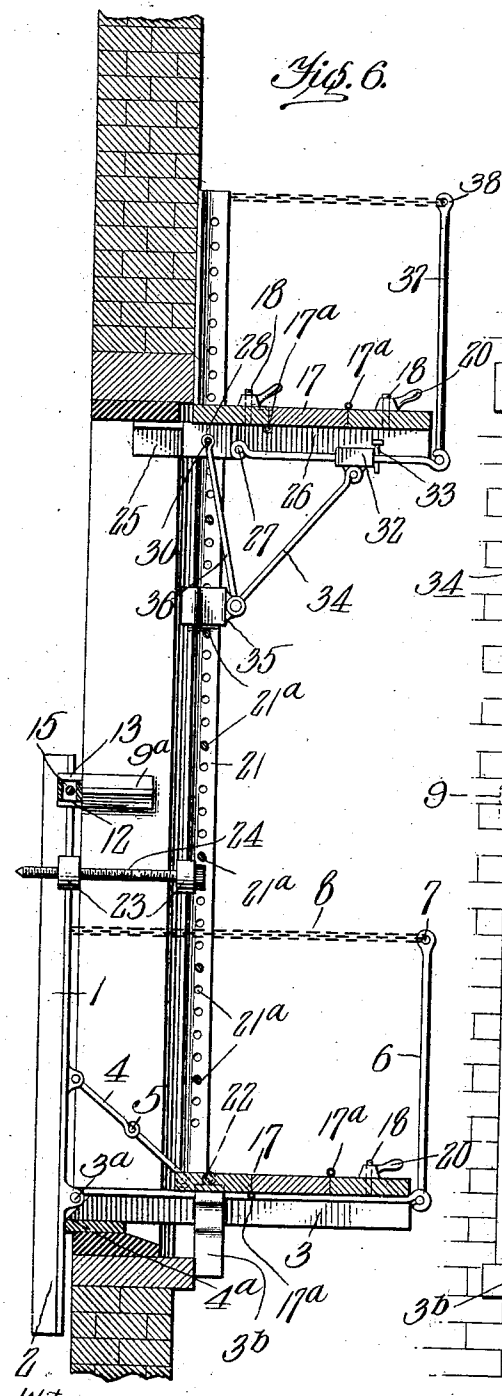
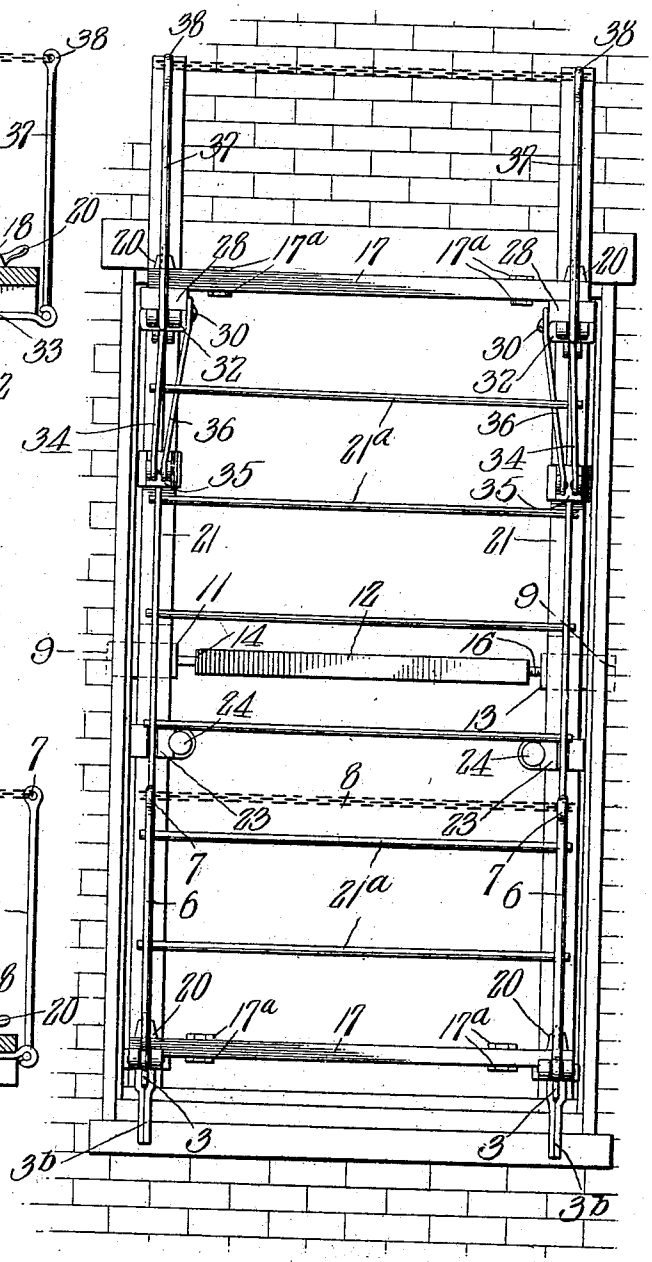


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

GIUSEPPE REGONDI, OF NEW BRIGHTON, NEW YORK.

FOLDING BALCONY.

No. 863,877. Specification of Letters Patent. Patented Aug. 20, 1907.

Application filed March 8, 1906. Serial No. 304,977.

To all whom it may concern:

Be it known that I, GIUSEPPE REGONDI, a subject of the King of Italy, and a resident of New Brighton, in the county of Richmond and State of New York, have invented certain new and useful Improvements in Folding Balconies, of which the following is a specification.

This invention relates to folding balconies and has for an object to provide a balcony which may be attached to completed building for washing windows, painting or the like, or to a building in which only the iron work has been erected.

A further object is to provide an expansible balcony whereby it may be secured in openings of various sizes. Another object is to construct a balcony which may be so folded that it will occupy a minimum space in storage and during transportation.

Other and further objects will appear in the following description and will be more particularly pointed out in the appended claims.

In the drawings: Figure 1 is a sectional view of my invention as a single platform when attached to a window frame; Fig. 2 is an elevation showing the interior of the window; Fig. 3 is a top plan view of the balcony as shown in Figs. 1 and 2: Fig. 4 is a perspective view of the balcony when used as a single platform; Fig. 5 is a front elevation of my invention with the supplemental platform attached thereto; Fig. 6 is a vertical section of the embodiment shown in Fig. 5; Fig. 7 is a detail view of the means for holding the main or lower platform standards to the upper or supplemental platform standards; and Fig. 8 is a detail perspective view of one of the upper supporting arms.

The invention employs a pair of main side frames, each comprising main standards 1 which are formed of iron T-beams. To the cross portion of each standard, a short distance above its lower end to provide an engaging portion 2, is pivoted at 3^a a platform supporting arm 3, also of T-shape in cross section and which is supported in a horizontal position by a brace 4, and also by the end 4^a of the lower portion of the beam of which the arm is formed. The brace is formed of two members which are hinged together at 5 to permit the arm to fold upon the standard 1. At the free end of the arm 3 is pivoted a guard post 6 provided with an eye 7 at its upper end to receive a guard chain 8. Slidable on the supporting arm 3 is a depending clamp 3^b formed of a strip of metal bent to form a T-shaped slot through which the arm 3 passes. This clamp 3^b is adapted to engage the front face of the sill or wall below the window or other opening and is held in various positions on the arm 3 by means of a pin 3^c which fits in any one of a series of openings 3^d, the openings providing for an adjustment of the clamp for building walls of different thicknesses.

The two side frames are connected together by an extensible bar which is provided at each end with longitudinal extensions 9 to engage the inner bases of the stiles of the windows and with lateral extensions 9^a to engage the side faces of the stiles and is formed with T-shaped slots 10 near each end, so that the bar may slide upon the cross portions of the standards. So that it may be extended, the bar is formed of three members 11, 12 and 13. The member 11, which carries one slot 10, one longitudinal extension 9, one lateral extension 9^a, has the member 12 swiveled thereto at 14. The central member 12 is provided with alined portions 15 having screw threaded openings for the reception of a screw threaded portion 16 on the member 13 which carries the other extension 9 and contains the slot 10. This extensible bar holds the two standards together at various distances apart and the horizontal arms are held together by the platform 17 which is in the form of a series of boards hinged together at 17^a to alternately swing in opposite directions. To cause the platform to hold the arms fixed relatively to one another, the arms are provided with screw threaded projections 18 which pass through openings 19 in the platform. These openings can be placed in the boards in series as shown in Fig. 4; or the openings may be bored at any time to suit any adjustment. The platform is held in place by means of thumb nuts 20.

In the embodiment shown in Figs. 5, 6 and 7, I have illustrated an upper or supplemental platform attached to the lower or main platform. This platform is also supported by two side frames. Each side frame comprises a standard 21 of T-shape in cross section pivoted at 22 to an adjustable clamp 3^b on a main supporting arm, and in this manner, these standards partake of the adjustment of the clamps and are in proper position to engage the walls of the building above the window. These standards 21 are held rigid and flat against the wall above the window at their upper ends by means of the adjustable clamping device shown in detail in Fig. 7. This device comprises a pair of members 23, each having a T-shaped groove 23^a to receive the cross-piece of either standard 1 or 21; and an oppositely threaded screw 24 connecting said grooved pieces.

Adjustable vertically upon each standard 21 is a horizontal arm, the arm being formed of two pieces 25 and 26 of metal T-shaped in cross-section and hinged together at their lower portions at 27. One of these pieces has its cross portion disposed upwardly and the other has said portion disposed downwardly. The hinge serves to permit the platform to be maintained horizontally when the wall of the building is of less or of greater

width than the distance between the lower ends of the standards 1 and 21, in which instance the standard would be inclined. The piece 25 has a block 28 welded to one end thereof and provided with a vertical T-shaped slot 29 through which a standard 21 works, the block 28 and the piece 25, being provided with a horizontal opening through which passes a pin or bolt 30. This pin or bolt 30 serves to hold the upper horizontal arm in various positions by passing through anyone of the vertical series of bolt openings in a standard 21. The other portion of the piece 25 serves as a rearward extension to engage beneath the top of a window frame or the like. The vertical series of bolt openings in the standards 21 permit rods 21ª to be fitted therein, the rods serving as a ladder for reaching the upper platform. The piece 26, which has its cross portion turned downwardly, is provided with a series of openings 31, and has a block 32 slidable thereon and a pin 33 is adapted to pass into anyone of the openings 31 to hold the block in various positions along the length of the piece 26. This block has a brace 34 pivoted to it, said brace having its lower end connected to a block 35 which is provided with a T-shaped slot and slides on the standard 21, being suspended by a link 36 from the bolt 30 on the piece 25 of the horizontal arm. Thus it will be seen that the brace travels vertically with the horizontal arm and supports it in any position to which the member 25 is adjusted, the member 25 and consequently the block 35 being prevented from sliding down the upright 21 by means of pin or bolt 30. It also serves to hold the piece or member 26 at various angles to the piece or member 25 so that when the member 25 is inclined, owing to the inclination of standards 21, the upper platform may be maintained horizontal.

The upper horizontal arms have guard posts 37 pivoted thereto and are provided with eyes 38 at their upper ends for the passage of a guard cable or chain. The arms are connected like the lower arms 3 by hinged boards 17, hinged at 17ª. They are also provided with threaded projections 18 which pass through openings 19 in the boards.

It will be apparent that I have provided a balcony which is adjustable in all desirable directions so that it may be employed upon any building either during or after completion thereof. When not in use it may be folded and stored in a very small space. Being constructed of iron T-beams, it is very strong and will hold a workman, with bricks or other building material.

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

1. The combination of the standards, lower horizontal arms pivoted to the standards and independently foldable on the latter, a floor-board removably supported on the horizontal arms and holding the lower ends of the standards in spaced relation, and a cross-bar detachably connected to and spacing apart the upper ends of the standards whereby the structure may be collapsed in the direction of both of its horizontal dimensions and the parts separately handled.

2. The combination of the standards, lower horizontal arms pivoted to the standards and independently foldable on the latter, a floor board removably supported on the horizontal arms and holding the lower ends of the standards in spaced relation, a cross bar detachably connected to and spacing apart the upper ends of the standards whereby the structure may be collapsed in the direction of both of its horizontal dimensions and the parts separately handled, and guard posts pivoted to the horizontal arms and independently foldable on the arms.

3. The combination with a pair of side frame standards, of an extensible bar connecting the standards and comprising three members, two of which have a pair of extensions at right angles to each other to engage the window frame and are fixed against lateral movement relatively to the standards, and the other of which is adjustable to vary the distance between the side frames whereby the latter may be always located adjacent to the window frame, and a platform suitably mounted on the side frames.

4. The combination with the standard provided with a vertical series of openings, of the horizontal arm vertically adjustable upon the standard, a pin passing through the arm and the upright, a block provided with a slot through which the standard extends, a brace connecting the arm and the block, and a link secured at its upper end by the pin and connected to the block.

5. The combination with the lower platform and its standards, of extensions on the standards to engage a window frame, upper platform standards supported upon the lower platform, and an upper platform supported by the latter standards.

6. The combination with the lower platform and its standards, extensions on the standards to engage a window frame, upper platform standards supported upon the lower platform, and an upper platform supported by the latter standards, and connections between the standards of the two platforms.

7. The combination with the lower platform and its standards, extensions on the standards to engage a window frame, upper platform standards supported upon the lower platform, and an upper platform vertically adjustable upon the standards.

8. The combination with a lower platform having means for detachably securing it within a window, of standards detachably secured to the lower platform, and an upper platform supported by the standards.

9. The combination with the lower platform having means for detachably securing it within a window frame, of standards supported on the lower platform, and an upper platform vertically adjustable on the standards.

10. In a balcony, the combination with the lower platform, of standards hinged thereto, and an upper platform supported by the standards and hinged so as to maintain a horizontal position.

11. In a balcony, the combination with the lower platform of standards hinged thereto, an upper platform supported by the standards and hinged so as to maintain a horizontal position, and braces slidable on the standards at their lower ends and having an adjustable connection with the upper platform.

12. In a balcony, the combination with a lower platform having standards, of an upper platform having standards pivoted to the lower platform, and adjustable devices connecting the standards of the two platforms.

13. In a balcony, the combination with a lower platform having standards, of standards pivoted to the lower platform, adjusting devices connecting the standards of the two platforms, and an upper platform adjustable vertically on the pivoted standards.

14. In a balcony, the combination with a lower platform having standards, of standards pivoted to the lower platform, adjusting devices connecting the standards of the two platforms, a hinged platform on the hinged standards, and means for maintaining said upper platform horizontal when the hinged standards are either inclined or vertical.

15. A side frame for balconies comprising a standard provided with a vertical series of openings; a horizontal arm composed of two members hinged together, one of which is provided with a slot to receive the standard and with a horizontal bolt opening and projects rearwardly; a brace having an adjustable connection with the other member at its upper end and sliding on the standard at its lower end; a link connected to the slotted member and

to the lower end of the brace; and a pin passing through the horizontal bolt opening and one of the openings in the standard.

16. In a balcony, the combination with the lower platform and its standard, of the upper platform having its standard adjustable on the lower platform to and from the standard of the latter.

17. A window balcony provided with a lower platform, an upper platform, standards supporting the upper platform on the lower platform and rods mounted on the standards to form a ladder to reach the upper platform.

The foregoing specification signed at New Brighton, New York, this twenty-sixth day of February, 1906.

GIUSEPPE REGONDI.

In presence of—
ALVINO CONTERNO,
ANDREW A. FETHERSTON.