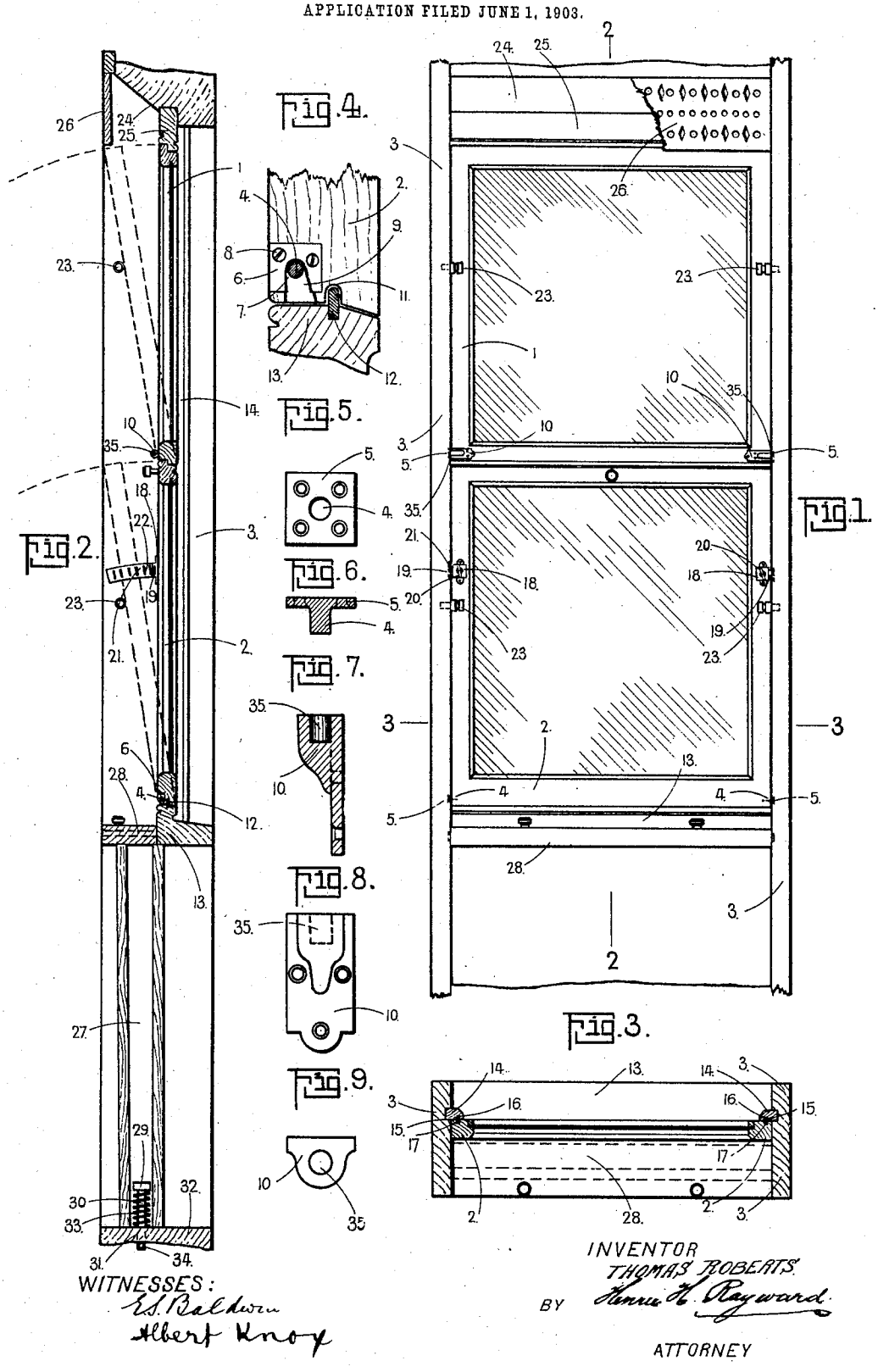
No. 794,121. PATENTED JULY 4, 1905.

T. ROBERTS.

WINDOW.

APPLICATION FILED JUNE 1, 1903.



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UNITED STATES PATENT OFFICE.

THOMAS ROBERTS, OF NELSON, NEW ZEALAND.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 794,121, dated July 4, 1905.

Application filed June 1, 1903. Serial No. 159,524.

To all whom it may concern:

Be it known that I, THOMAS ROBERTS, a subject of His Majesty the King of Great Britain and Ireland, residing at Nelson, in the Colony of New Zealand, have invented new and useful Improvements in and Relating to Windows, of which the following is a specification.

The object of this invention is more particularly the efficient ventilation of rooms and the like, and this is effected by the employment of window sashes and frames so constructed and arranged in combination that inlet and outlet currents of air can be obtained without creating undesirable drafts.

By the use of my invention the outside of a window can be conveniently cleaned from the inside of a room, and, if desired, the bottom sash can be entirely removed for this or other purposes.

In practice I construct a window with sashes arranged one above the other in the same plane in a frame, two of said sashes being pivotally supported at or near their lower ends, whereby they may be opened by inclining their upper ends toward the interior of the room. The sides or jambs of the said frame are parallel to the faces of the side edges of the sashes and are of sufficient width that the sashes when opened for ventilating purposes shall not project beyond the limits of the frame, so that side drafts are prevented.

The pivot-brackets are so constructed that the bottom sash may be readily taken out when required and to be, if desired, dropped into a pocket provided for its reception.

I will now describe my invention in detail by the aid of the accompanying drawings, wherein—

Figure 1 is a front elevation from inside a room; Fig. 2, a vertical central section on 2 2, Fig. 1; Fig. 3, a sectional plan on 3 3, Fig. 1; Fig. 4, a part-sectional end elevation drawn to a larger scale; Fig. 5, a front elevation of a pivot-pin and plate; Fig. 6, a sectional plan of the same; Figs. 7 and 8, respectively, sectional and front elevations of a pivot-socket; and Fig. 9, a corresponding plan.

Similar numerals of reference indicate the same or corresponding parts in all the figures.

Referring first to Figs. 1 to 4, the sashes 1 and 2 are pivoted one above the other at their lower ends in the frame 3, whereby they may be opened, as shown in dotted lines, Fig. 2.

The pivoting arrangement (shown in Figs. 4, 5, and 6) is particularly for use upon a sash which is designed to be withdrawn from the frame and comprises for each pivot a pivot-pin 4, made integral with a plate 5, by which it is secured by screws to the window-frame, and a plate 6, having a recess 7 formed to receive said pin, the plate being secured to the side of the sash by screws 8 and having a channel 9 communicating with the recess 7, so that the pivot-pin may pass out of the bracket when the sash is being taken out of the frame.

When it is not desired to remove the sash from the frame, the pivot-socket 10 (shown in detail in Figs. 7, 8, 9) is substituted for the plate 6 in Figs. 5 and 6. In this arrangement the socket 35 is screwed upon the front of the sash and receives a pivot-pin which is secured to the frame. The sash can, if desired, be turned upon the pivot to be reversed and to then hang nearly vertical.

To insure a weatherproof joint when the sash is closed, the lower edge of the lower sash has a plowed recess 11 (shown clearly in Fig. 4) extending from side to side, which receives a tongue 12, fixed in a groove in the window-sill 13, and the lower edge of the sash slopes downwardly and outwardly from said tongue. As shown in Fig. 3, the inner faces of the jambs of the frame 3 are comparatively wide and parallel with the faces of the side edges of the sashes 1 and 2.

Both the upper and lower sashes when closed shut against stops or flanges 14, (shown clearly in Fig. 3,) fixed in plowed grooves in the jambs of the window-frame and each having a tongue 15 fixed in a groove 16 and adapted to engage when the sash is closed with a corresponding groove 17, formed for its reception in the outside face of the sash. Locks 18, having bolts 19, which are operable by a thumb-piece 20, are fixed upon each side of the bottom sash, and plates 21, having recesses 22 to receive said bolts, are provided in the window-frame, whereby the sash may be secured when shut and when open to a convenient extent. The

top sashes may be opened and closed by means of cords and pulleys or otherwise, as most convenient. Stops 23 fit tightly into holes in the frame upon each side of and limit the opening of the sash.

The inside of the top part or soffit of the frame is sloped up at an angle, as shown at 24, Fig. 2, to permit a large and free passage for air without the sash having to be opened inconveniently far, a rail 25 being provided at the lower edge of such sloped soffit for the upper rail of the top sash to close against.

A perforated frieze 26 is secured to the frame above the upper sash for ornamental purposes.

A pocket 27 may be provided below the window-sill to receive the bottom sash, which may be taken out of the frame, said pocket having a cover 28, which slides in grooves in each side of the frame. To prevent shock when the sash is passed into the pocket, buffers 29 are employed, as shown in Fig. 2, each buffer having a stem 30 sliding in or through a hole 31 in the floor 32 of the pocket and having a spiral spring 33 threaded upon it, normally tending to upwardly project the buffer, which has a stop 34 to prevent it from rising out of the hole.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. For the purpose indicated in combination sashes pivotally supported one above the other in a window-frame, said sashes having grooves in the outer faces of their sides, jambs of the frame each having a plain face in one plane parallel with the edges of the sides of the sashes, stops fixed in grooves formed in said jambs, and a tongue upon each stop, adapted to fit into its corresponding groove in the outer face of sash substantially as specified and illustrated.

2. For the purpose indicated the combination of a sash pivoted near its lower end in a window-frame, and the upper part of said frame or soffit cut away at an angle to provide a large passage for air when said sash is opened and a rail fixed in a recess formed in said soffit against which the upper part of said sash butts when closed substantially as specified.

3. In combination with a window-sash pivoted near its lower end in a window-frame, of a soffit or upper part of said frame cut away at an angle to provide a large passage for air when said sash is opened, a rail fixed immediately below said soffit, against which the upper part of the sash shuts when closed, and a frieze fixed to said frame and extending downwardly in front of the portion which is cut away substantially as and for the purpose specified.

In testimony whereof I have signed this specification, this 24th day of January, 1903, in the presence of two subscribing witnesses.

THOMAS ROBERTS.

Witnesses:
FRED A. BAMFORD,
E. V. WATKIS.