

(No Model.)

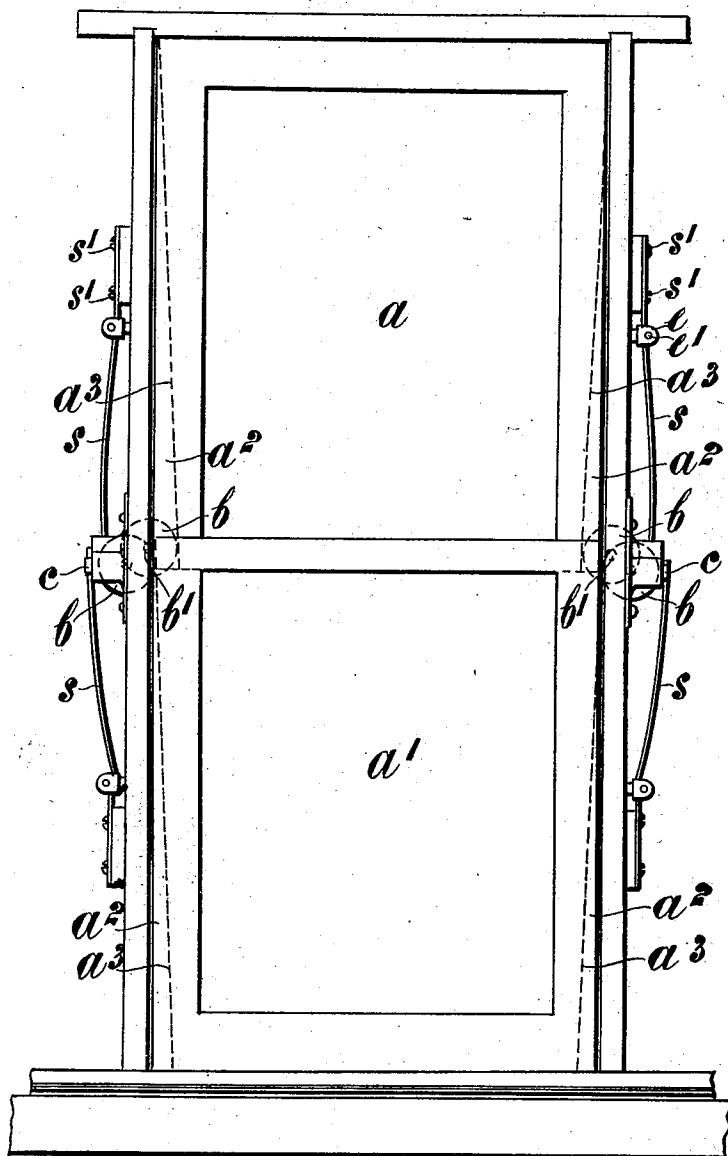
2 Sheets—Sheet 1.

A. JAMES.
SASH HOLDER.

No. 506,318.

Patented Oct. 10, 1893.

FIG. 1



Witnesses:

E. R. Rotton

E. H. Sturtevant.

Inventor:

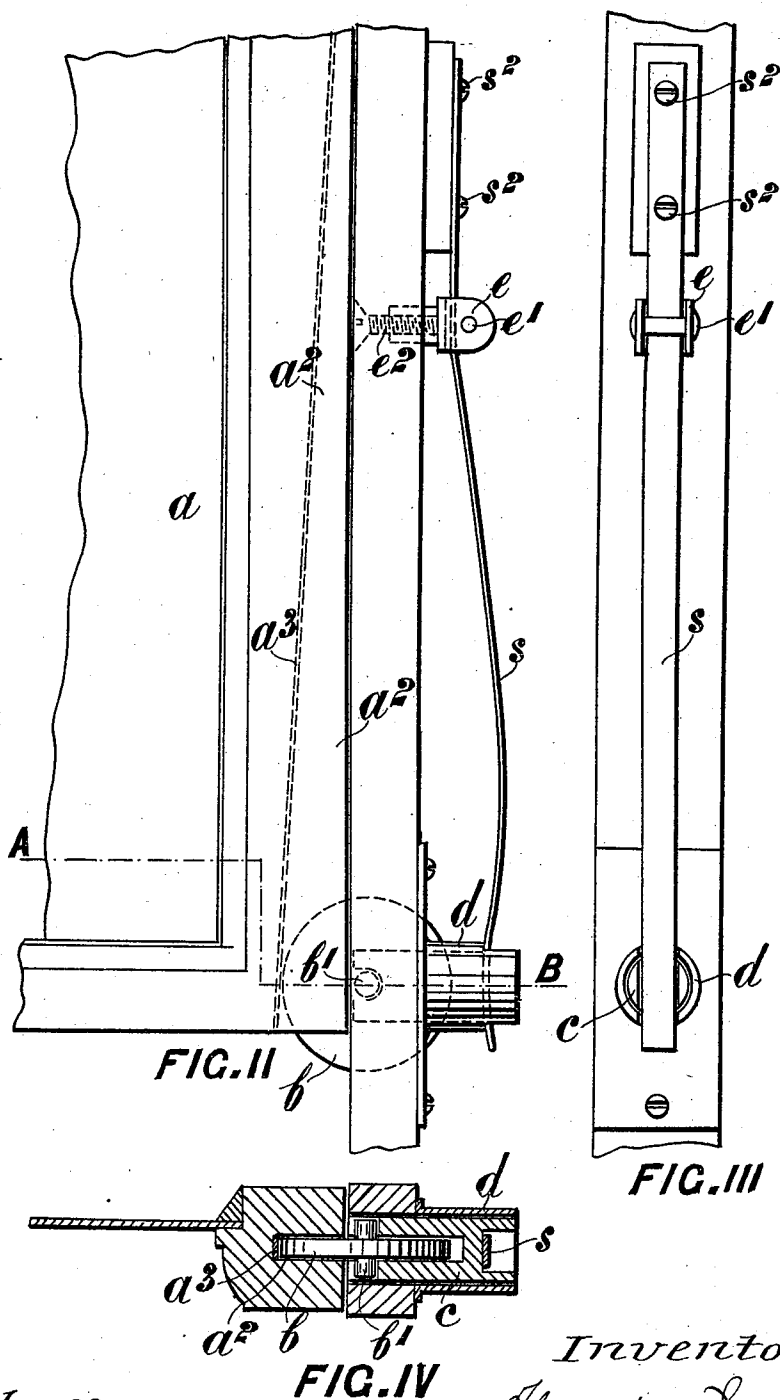
Alexander James

By *Richard A.*
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A. JAMES.
SASH HOLDER.

No. 506,318.

Patented Oct. 10, 1893.



Witnesses:

E. B. Bolton

E. H. Sturtevant

Inventor:

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UNITED STATES PATENT OFFICE.

ALEXANDER JAMES, OF WELLINGTON, NEW ZEALAND.

SASH-HOLDER.

SPECIFICATION forming part of Letters Patent No. 506,318, dated October 10, 1893.

Application filed May 20, 1893. Serial No. 474,855. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER JAMES, a subject of the Queen of Great Britain, residing at Wellington, in the Colony of New Zealand, have invented new and useful Improvements in Sash-Holders, of which the following is a specification.

The objects of my invention are to provide means whereby the ordinary sash weights and pulleys in window sashes and other like apparatus may be dispensed with, and to provide a simple, effectual, and easily operated apparatus whereby the sashes can be lifted and lowered with facility, and will remain open in any position desired, and so firmly held and guided as to prevent noise from rattling.

My invention is illustrated in the accompanying drawings in which—

Figure I is a front elevation of a pair of ordinary window sashes and frames with my apparatus attached. Fig. II is a front view of a part of one of the sashes and frames with my apparatus attached, but drawn to a larger scale than in Fig. I. Fig. III is an end view of the same. Fig. IV is a section through the line A—B.

(a) and (a') are the window sashes having formed on them tapered grooves or inclined planes (a²) which are (by preference) lined with a piece of steel (a³), see Fig. II, to prevent wear. These inclined planes are (by preference) made narrow so as not to weaken the sash, and are deep at their lower ends and tapered off to the top of the sash.

(b) are rollers which fit into the grooves (a²) and revolve in bearings formed in the slides (c) which slides fit into and slide in sockets (d) and have flanges (d') which are fastened firmly to the pulley stiles by means of the screws (d²).

(s) are springs fastened firmly at one end to the pulley stiles by means of the screws (s') and at the other end bearing against the slides (c) carrying the rollers (b) as shown in Fig. IV.

(e) are clips clipping the springs (s) by means of the pins (e') and regulating the pressure of the springs on the slides (c) by means of the screws (e²).

It will be seen from this description of the several parts and by reference to the drawings that I form inclined grooves (a²) in the sashes, such grooves being pressed by rollers (b) actuated by springs (s) firmly fastened at their upper ends to the pulley stiles and producing an upward tendency of the sash proportional to the strength of the springs (s) and the inclination of the inclined planes; that such pressure is regulated by the screws (e²) to produce the necessary pressure, and that by these means windows can be raised and lowered with facility without the use of sash weights and pulleys.

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—

In combination with a window sash, having grooves with inclined inner walls in its edges, loop springs secured at one end of the frame, rollers carried by the free end and bearing in the grooves, and a clip *e* laterally adjustable in the frame, the spring passing through said clip, substantially as described.

Dated this 22d day of March, 1893.

ALEXANDER JAMES.

Witnesses:

W. E. HUGHES,
W. ALEXANDER.