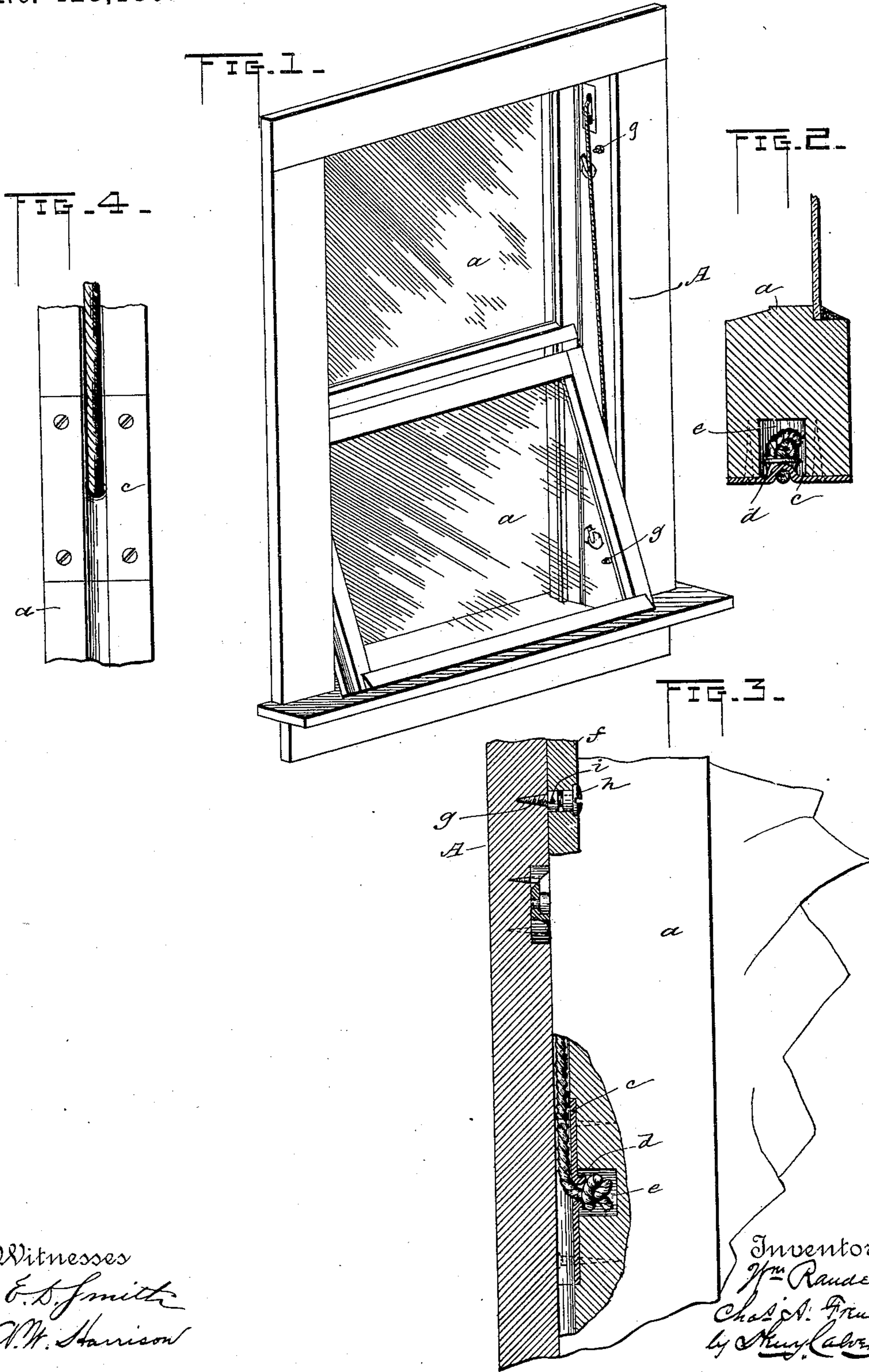


(No Model.)

W. RANDEL & C. A. FRENCH.
SASH CORD FASTENER.

No. 428,180.

Patented May 20, 1890.



Witnesses
E. D. Smith
A. W. Harrison

Inventors:
Wm. Randel, Jr.
Chas. A. French
by *Henry Cabot*
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM RANDEL, OF ELIZABETH, NEW JERSEY, AND CHARLES A. FRENCH,
OF BOSTON, MASSACHUSETTS.

SASH-CORD FASTENER.

SPECIFICATION forming part of Letters Patent No. 428,180, dated May 20, 1890.

Application filed February 16, 1889. Serial No. 300,125. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM RANDEL, of Elizabeth, New Jersey, and CHARLES A. FRENCH, of Boston, Massachusetts, both citizens of the United States, have invented certain new and useful Improvements in Windows, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The object of our invention is to provide means for securing windows in window frames or casings in such a manner that they may be readily removed for any purpose, and so that they can be turned to clean the outside
15 thereof, thereby avoiding the inconvenience and danger incidental to the ordinary means for securing the windows in the casings, which require the persons cleaning the windows to get partly or wholly outside. To this end we
20 removably secure the inner stop beads or strips to the window-frames by nails or screws having removable heads which can be readily taken off, so that the said beads can be
25 without removing the latter. The parting-strips are removably held in place by buttons pivoted to plates recessed or counterbored into the sash-tracks, the buttons being let
30 into the said plates so that they will not project beyond the outer faces thereof to interfere with the window-sashes, and the parting-strips being provided with recesses, into which the said buttons can extend to hold the said
35 strips in place. The sash-cords are preferably secured to the sashes by plates having
40 on the ends of the cords. This construction permits the windows to swivel readily on the cords when the former are turned over to clean their outer sides.

45 In the accompanying drawings, Figure 1 is a perspective view to illustrate our invention, the lower sash being removed from its place and reversed, so that its outer side can be readily cleaned by a person within. Fig. 2 is
50 a cross-section of one side of the sash and of the cord-attaching plate. Fig. 3 is a partial sectional view of the window-sash, window-

frame, and inner stop-bead, and also of the button and its carrying-plate. Fig. 4 is a partial edge view of the window-sash, showing one of the cord-attaching plates. 55

A denotes the window-frame, and *a* the sashes, the latter having grooves in their edges, as is usual, for the reception of the weight-cords *b*. The cords are preferably attached to the sashes by plates *c*, let into and
60 secured to the edges of the sashes, said plates having grooves, in which the cords can lie, and the holes through which the cords pass, the edges of said holes being rounded, and preferably surrounded on the inner sides of the
65 plates by bosses or annular projections *d*, which, with the knots at the ends of the cords, are received in holes *e*, bored in the sashes. This manner of attaching the cords to the
70 sashes affords a swivel-connection, which permits the sashes to be readily turned over to clean their outer sides when they are removed from the window-frames. The inner bead *f*
75 of the window-frame is preferably removably secured in place by nails or screws *g*, having removable heads *h*, internally threaded to fit threaded necks of the said nails or screws.
80 The bodies of the screws (when screws are employed) may have holes *i*, into which a pin or wire may be inserted to screw the screws into the window-frame. The heads *h* are herein shown as being nicked for the reception of a screw-driver; but it is obvious that any neat or ornamental heads adapted to be
85 screwed on or off the necks of the nails or screws by the thumb and finger of a person may be used instead of the nicked head, and thus the use of a screw-driver in removing the sashes will not be necessary.

90 From the foregoing it will be apparent that the window-sashes may be readily removed for repairing or cleaning without marring the frames or sashes, and also without the use of any tools, excepting a screw-driver, and even this may be dispensed with if thumb and finger heads for the nails or screws which secure
95 the inner beads in place be employed. It will also be obvious that our invention will avoid endangering the lives of persons who clean the windows by enabling them to clean both
100 sides of the windows from within the rooms, instead of being obliged to sit or stand on the

outside of the window-sills in cleaning the outer sides of the windows, as is the usual practice.

Having thus described our invention, we claim and desire to secure by Letters Patent—

5 1. The combination, with a window-sash having a hole or recess *e*, of a cord-attaching plate *c*, attached to said sash and having on its outer side a groove for the reception of the
10 cord, a rounded-edge circular hole or opening for the passage of the cord, and a boss or annular projection *d*, surrounding said hole or opening on the inner side of said plate and extending into said hole or recess *e* in the said
15 sash.

2. A sash-cord-attaching plate having a

cord-receiving groove on its inner face its entire length, and having a circular or non-slotted hole for the passage of the cord near its center, the edges of said hole being rounded 20 or chamfered off, so that the sash may be turned over with little friction, the cord still lying in the groove of the attaching-plate when the sash is reversed.

In testimony whereof we hereunto affix our 25 signatures.

WILLIAM RANDEL.
CHARLES A. FRENCH.

Witnesses:

JOSEPH G. COLEMAN,
J. G. GREENE.