(No Model.)

J. H. ROSE.

DEVICE FOR OPENING AND CLOSING SKYLIGHTS.

No. 270,340. Patented Jan. 9, 1883.

Fig. 1.

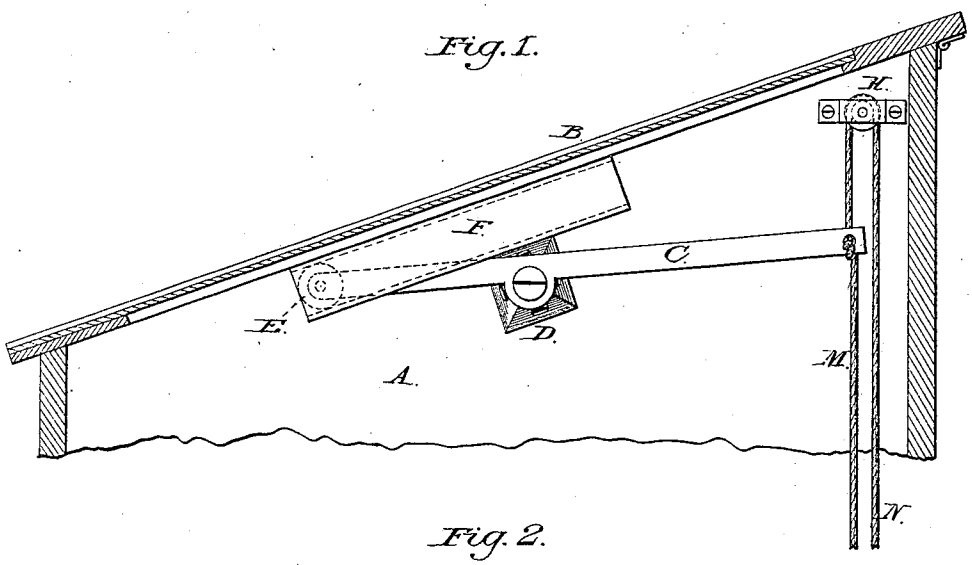

Fig. 2.

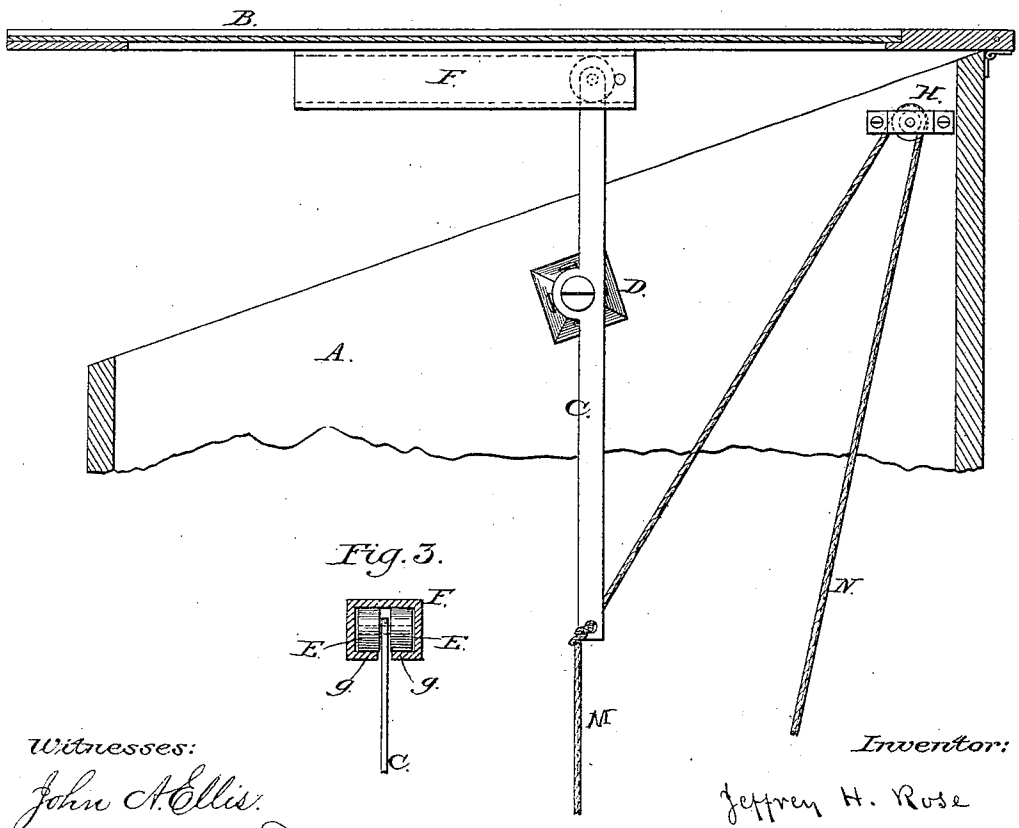

Fig. 3.

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UNITED STATES PATENT OFFICE.

JEFFREY H. ROSE, OF BROOKLYN, NEW YORK.

DEVICE FOR OPENING AND CLOSING SKYLIGHTS.

SPECIFICATION forming part of Letters Patent No. 270,340, dated January 9, 1883.

Application filed September 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, JEFFREY H. ROSE, of Brooklyn, Kings county, New York, have invented a new and useful Improvement in Devices for Opening and Closing Skylights; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to an improved device for opening and closing skylights, ventilators, and other forms of hinged doors and windows.

It consists of a lever pivoted to the side of the casing or frame inclosing the opening, and carrying upon the end of its outer arm one or more friction-rollers adapted to work in an extended case secured upon the window-sash, whereby the roller or rollers are held against the sash, although left free to traverse longitudinally thereon, the lever being so adjusted as that when swung into a line at right angles with the hinged sash it will in its movement open the same, and when swung back will operate positively to close it.

In the accompanying drawings, Figure 1 is a vertical section of a skylight fitted with my improved device for operating the same, the sash being closed; Fig. 2, a similar view, illustrating the skylight when opened; and Fig. 3, a transverse section through the case which confines the rollers, illustrating the construction and arrangement thereof.

A is the opening for a skylight, and B the sash hinged to its upper end to close the same, in the customary manner.

C is a lever pivoted by a suitable pivot attachment, D, to the side of the frame or casing of the skylight, at a point about midway between the front and rear of the casing. The upper or outer arm of the lever is so proportioned in length as that when the lever is swung into a vertical position the end of said arm shall open and raise the hinged sash B to the extreme height desired, and its pivot D is placed at such distance below the top of the casing as that the lever when swung around far enough to allow the sash to close down upon the frame, as shown in Fig. 1, shall assume approximately a horizontal position at right angles, or nearly so, to the frame of the skylight.

Friction-rollers E E, Fig. 3, of equal diameter, are pivoted upon the opposite sides of the outer end of the lever, so that their peripheries shall project out beyond the lever and bear against the sash or a suitable bearing provided therefor upon the sash. Such a bearing is furnished by a longitudinal metallic case, F, which is secured against the face of the casing, and is adapted to inclose the rollers on each side of the lever and provide ways in which they may traverse back and forth as the lever is swung up and down. The inwardly-bent outer edges or flanges, *g g*, of the case afford an outer bearing for the rollers, so that they shall operate automatically to draw down and close the sash when the lever is swung into its horizontal position, the lever extending out through the central longitudinal slot left between said edges, as shown in Fig. 1. By means of this case F the movement of the lever is made to actuate the sash positively in both directions independently of its position, whether made to open vertically, as shown in the drawings, or to close horizontally against a lateral opening, such as a transom over a door.

To the inner longer end of the lever C cords M N are attached, one of which, M, depends freely therefrom, while the other, N, is led over a friction-pulley, H, secured to the side of the skylight-frame at a point above the pivot D of the lever, and at a distance therefrom equal to the length of the inner arm, so that by pulling the cord N when the lever is down and the skylight open (see Fig. 2) the lever will be drawn into a horizontal position to close the sash, (see Fig. 1,) while a pull upon the cord M when the sash is closed will operate to draw the lever into a vertical position, and thus open the sash.

It is evident that a single friction-roller E may be employed instead of two, the case F being adapted thereto in form and dimensions by reducing its width and omitting one of the flanges *g*.

The combination, as described, of a pivoted lever, C, with a hinged sash, B, by means of an extended slotted case, F, engaging one or two friction-rollers, E E, upon said lever, is applicable to the movement of any hinged window, door, or shutter, and may be made to operate in any desired position. I contemplate the use of a bent lever instead of a straight le-

ver, C, for this purpose, its outer end being connected with the sash by means of ways formed in case F, inclosing one or more friction-rollers upon said outer end.

For opening simultaneously two sashes arranged in juxtaposition, the levers actuating each sash, in manner as described, may be connected at their inner ends by a suitable link or coupling-rod, or the cords may be led together and united in one.

It is evident that by fastening the lever or the cords operating the same the sash may be locked either when open or closed.

I do not claim broadly the raising of a hinged sash or shutter by means of a pivoted lever made to swing against the same.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a hinged sash or door, and with the outer end of the lever pivoted to the door or window frame, of one or more friction-rollers upon the end of said lever, adapted to engage an extended case inclosing said roller or rollers, and thereby secure the sash to the lever and yet permit a free movement of the latter, all substantially in the manner and for the purpose herein set forth.

2. The combination, with the frame or casing A, hinged sash B, and pivoted lever C, of a skylight or transom, and with friction-rollers E and a case, F, secured to the sash and engaging said rollers, of cords M and N, attached to the inner end of said lever C, and a friction-roller, H, secured to the casing A, and over which one of said cords is led, all substantially in the manner and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JEFFREY H. ROSE.

Witnesses:

WM. H. DRAKE,

WM. S. GUINNEAU.