

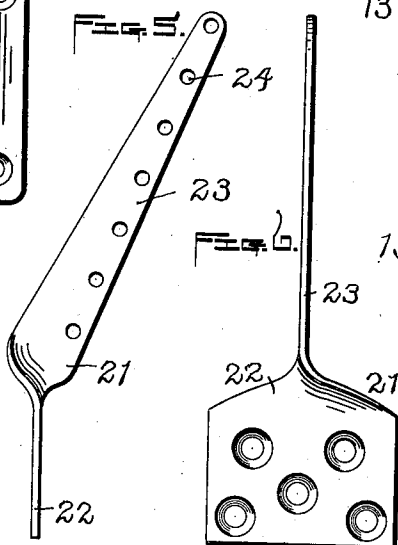
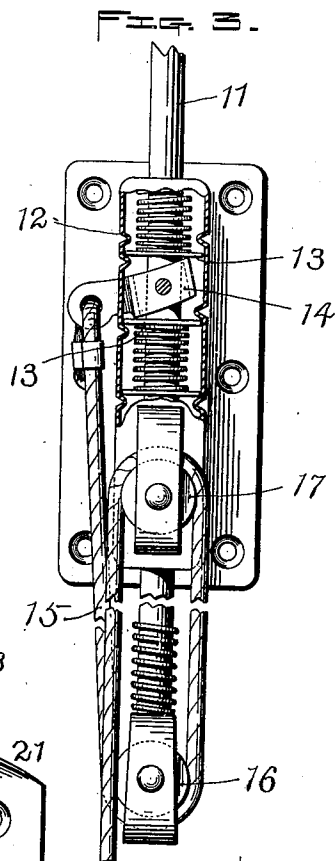
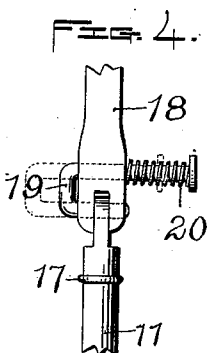
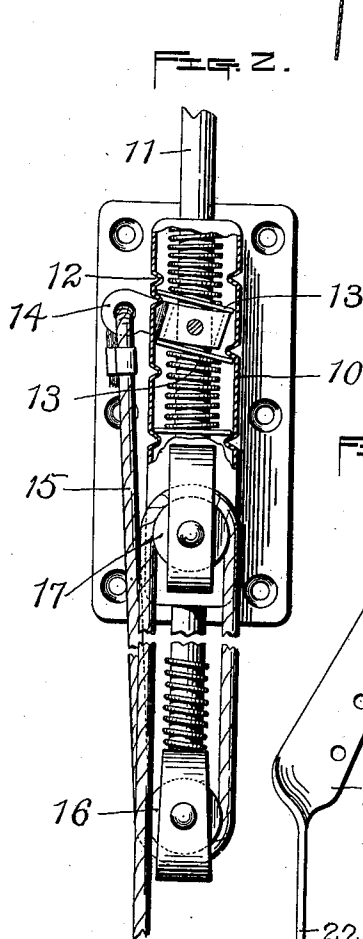
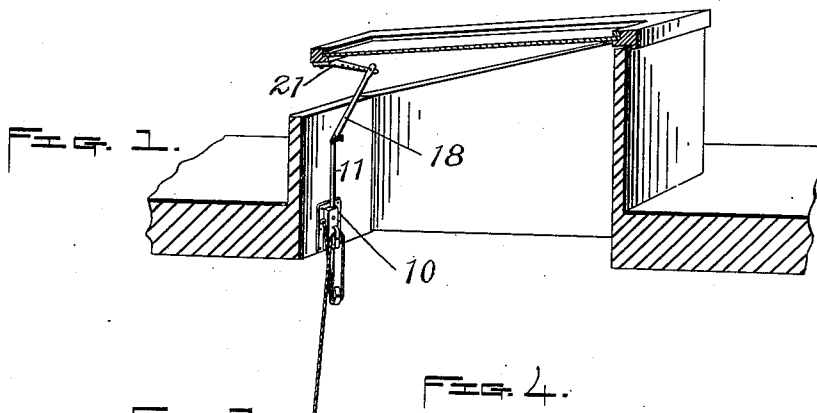
No. 636,338.

Patented Nov. 7, 1899.

S. I. HOWARD.
SKYLIGHT LIFTER.

(Application filed May 20, 1899.)

(No Model.)



WITNESSES,

L. Forrest Nisson.
M. C. Regan.

IN WITNESS WHEREOF,

S. I. Howard.

By Southgate & Southgate Attys

UNITED STATES PATENT OFFICE.

SAMUEL I. HOWARD, OF WORCESTER, MASSACHUSETTS.

SKYLIGHT-LIFTER.

SPECIFICATION forming part of Letters Patent No. 636,338, dated November 7, 1899.

Application filed May 20, 1899. Serial No. 717,555. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL I. HOWARD, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Skylight-Lifter, of which the following is a specification.

My invention relates to that class of skylight-lifters shown in Letters Patent of the United States No. 604,473, granted to me May 24, 1898; and the objects of my invention are to provide a lighter, stronger, and less expensive construction by employing stamped sheet metal to form the casing of my skylight-lifter, to provide a simple and efficient form of spring-catch forming a detachable connection between the operating slide or rod and the skylight, so that the skylight may be disconnected from the skylight-lifter and thrown completely open when it is desired to have access to the roof, to provide means for adjustably connecting the operating-link with the bottom bar of the skylight, and to improve the details and arrangements of parts, as hereinafter described, and more particularly pointed out in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is a sectional perspective view of a skylight, showing the application of one of my skylight-lifters thereto. Fig. 2 is a front view, partially broken away, of the parts comprised by my skylight-lifter. Fig. 3 is a similar view showing the parts in a different relative position. Fig. 4 is a detail view of the spring-catch forming a detachable connection between the operating rod or slide and its link, and Figs. 5 and 6 are detail views illustrating the form of connecting-piece which may be employed for connecting the link to the bottom bar of the skylight.

Referring to the drawings and in detail, a skylight-lifter constructed according to my present invention comprises a casing 10, having a perforated flange for receiving screws to secure the same in place. Extending down through the casing 10 is an operating slide or rod 11. Mounted on the operating slide or rod 11 are perforated clamping-plates 13, which are normally inclined or tipped to the position illustrated in Fig. 2 by means of springs coiled on the operating slide or rod.

The body portion of the casing 10 is provided with insets 12, on which the clamping-plates 13 may swivel or turn, and which also form stops for limiting the motion thereof. A releasing-lever 14 is journaled on a stud in the casing 10 and is arranged between the clamping-plates 13, so that when the releasing-lever is operated the clamping-plates 13 will be turned, as illustrated in Fig. 3, to release their grip on the operating slide or rod 11. A cord 15 has its upper end connected to the releasing-lever 14 and is trained around a pulley 16 on the lower end of the operating slide or rod 11, then up over a pulley 17, journaled on the face of the casing 10, and then down in position to be conveniently operated. The operating rod or slide 11 is connected to the skylight by means of a link or rod 18. The link or rod 18 may be connected to the skylight in any ordinary way; but in practice I have found that it is preferable to provide a connecting-piece for this purpose, which may be secured to the bottom bar of the skylight and which may extend in therefrom in position to engage the link 18.

As illustrated in Fig. 5, the connecting-piece 21 comprises a body portion 22, which may be screwed onto the bottom bar of a skylight, and an arm or portion 23, extending inward therefrom, having a series of perforations for receiving a pin to connect the same to the link 18. This form of connection I have found especially desirable, as many skylights are now glazed or provided with a single pane of glass, and this fact has necessitated a connection from the bottom bar of the skylight, although where the skylight is provided with a center bar the link 18 can be directly connected thereto as desired.

In many buildings access to the roof can be gained through a skylight alone, and on this account it is desirable to construct skylight-lifters so that they will not interfere with throwing the skylight back to fully open the same. To accomplish this purpose, I preferably provide a detachable connection between the operating rod or slide 11 and the connecting link or rod 18. This detachable connection is most clearly illustrated in Fig. 4. As shown in this figure, the detachable connection is formed by a spring-catch of a substantially U-shaped form, both legs of the

U extending through the link 18 and a spring 20 being coiled on the longer leg of the catch, so as to normally hold the short leg in the position shown to connect the parts together.

- 5 When the spring-catch is pressed back, as illustrated by dotted lines, the hinged joint between the link 18 and the operating rod or slide will be released, so that the skylight-lifter will not then interfere with fully
10 opening or throwing back the skylight to the desired extent. The use of this spring-catch is also advantageous, as it permits my skylight-lifters to be more compactly packed for shipment or storage, and in order to pre-
15 vent the operating rod or slide 11 from being withdrawn from the casing 10 a wire stop-ring is preferably secured on the upper end thereof, as shown in Fig. 4.

- I am aware that certain features of my im-
20 proved skylight-lifter may be modified or changed by those who are skilled in the art and that parts thereof may be omitted or varied without departing from the scope of my invention as expressed in the claims. I do
25 not wish, therefore, to be limited to the exact form which I have herein shown and described; but

What I do claim, and desire to secure by Letters Patent of the United States, is—

- 30 1. The combination of a skylight-lifter comprising a casing, an operating rod or slide mounted therein, means for shifting the operating-rod and for holding the same in its adjusted position, a skylight, a link connect-

ing the operating-rod and skylight, and a 35 spring-pressed catch forming a detachable connection between the skylight and the operating-rod of said skylight-lifter, substantially as described.

2. The combination of a skylight-lifter com- 40 prising a casing, an operating rod or slide mounted therein, spring-pressed clamping-plates, a releasing-lever therefor, and a cord connected to operate said releasing-lever and shift the operating-rod, a link for connecting 45 the operating-rod and skylight, and a detachable connection between the skylight and operating-rod comprising a U-shaped catch having a short leg forming a pivot for a hinged joint, and a spring coiled on the longer leg 50 thereof, substantially as described.

3. The combination of a skylight-lifter comprising a casing, an operating slide or rod 55 mounted therein, means for shifting the slide and for holding the same in its adjusted position, a skylight, a connecting link or rod, and a piece for receiving the connecting-link, comprising an arm having a series of perforations therein extending in from the bottom bar of the skylight, substantially as described. 60

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

SAMUEL I. HOWARD.

Witnesses:

FREDERICK B. HARLOW,
PHILIP W. SOUTHGATE.