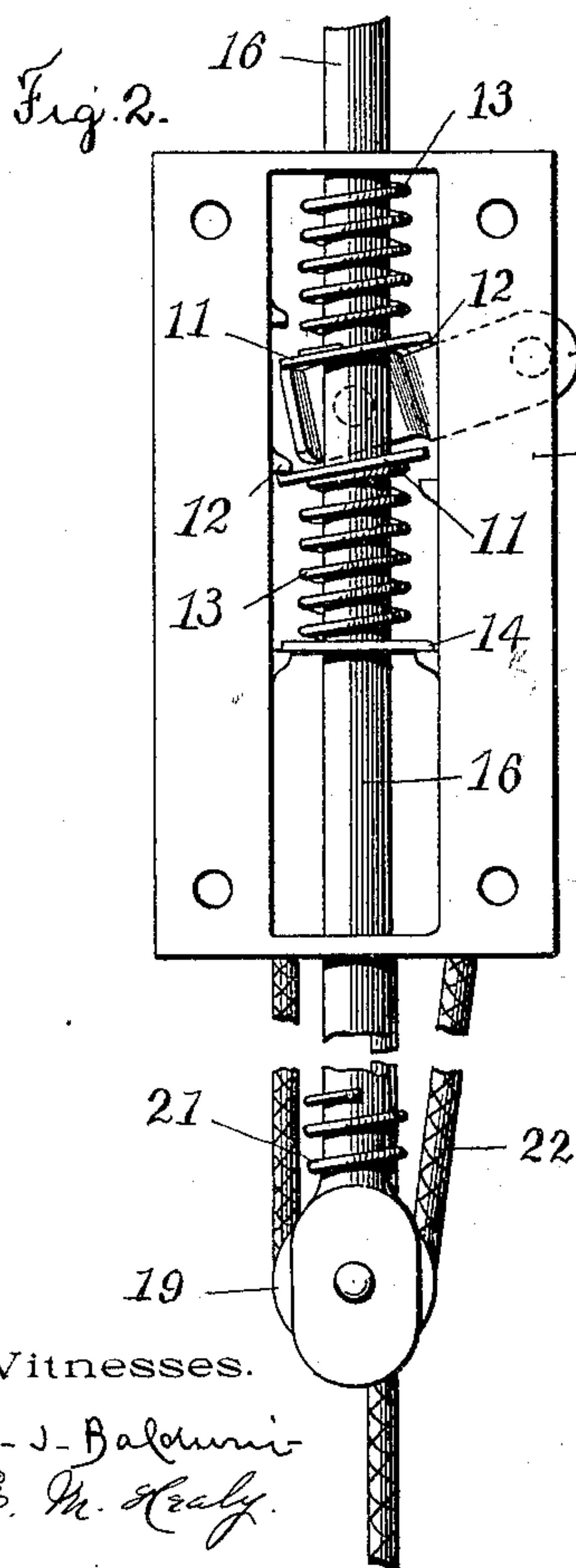
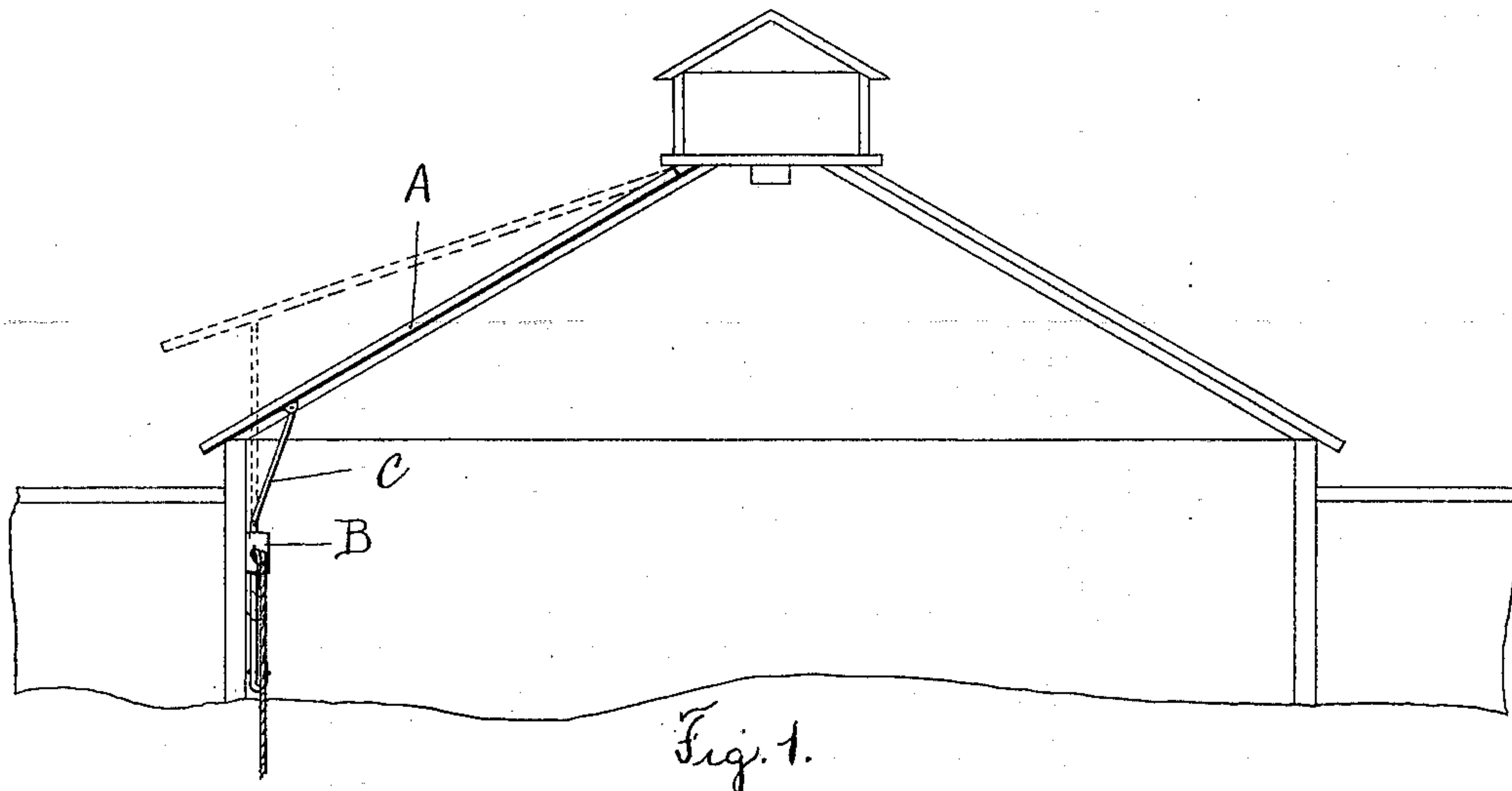


(No Model.)

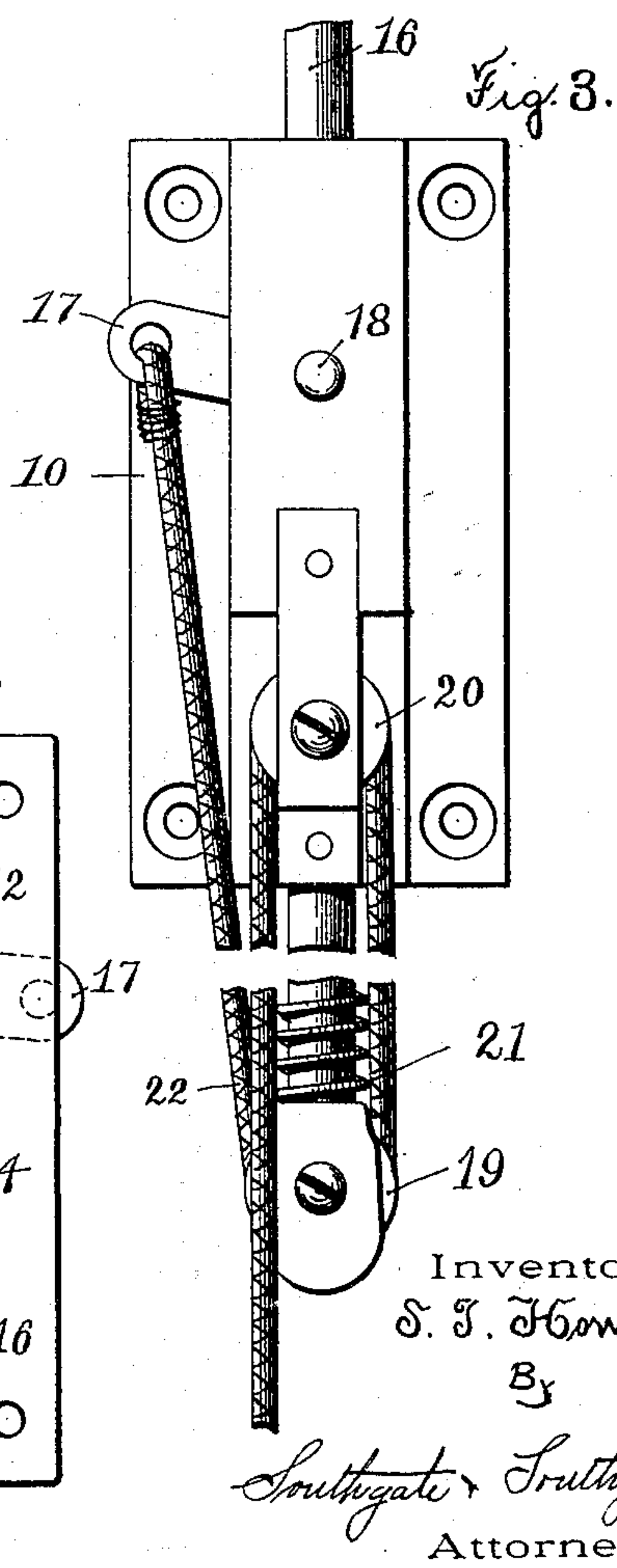
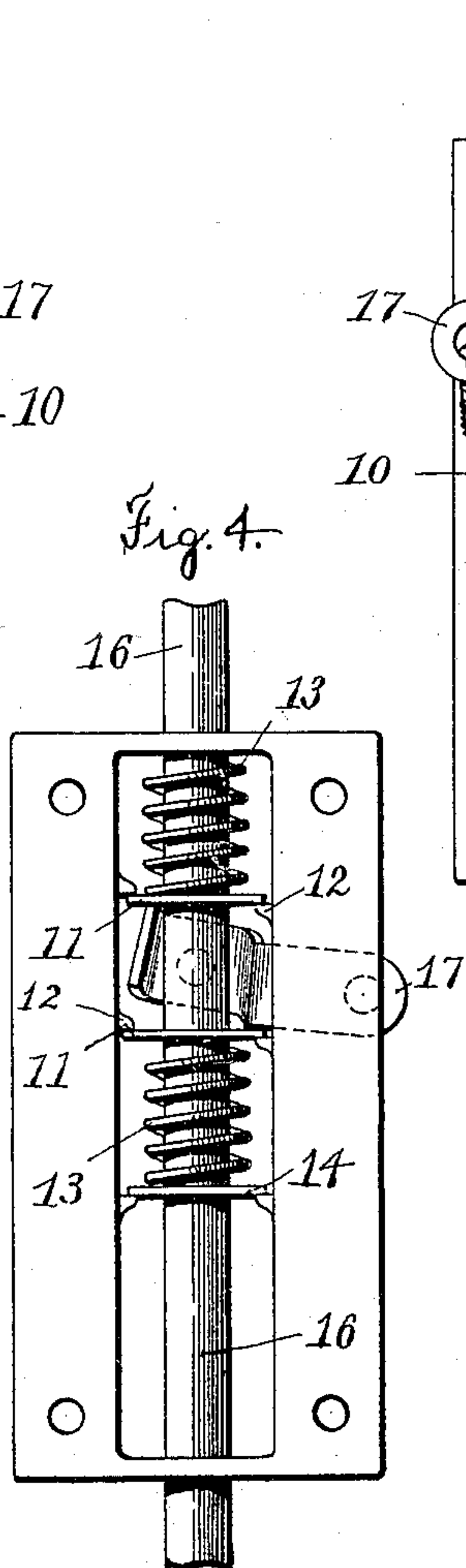
S. I. HOWARD.  
SKYLIGHT LIFTER.

No. 604,473.

Patented May 24, 1898.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

SAMUEL I. HOWARD, OF WORCESTER, MASSACHUSETTS.

## SKYLIGHT-LIFTER.

SPECIFICATION forming part of Letters Patent No. 604,473, dated May 24, 1898.

Application filed September 24, 1897. Serial No. 652,836. (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 Improvement in Skylight-Lifters, of which the following is a specification.

My invention relates to an operating device for supporting and operating the hinged sections of skylights or similar constructions; and the object of my invention is to provide a strong, simple, efficient, and inexpensive skylight-lifter which may be controlled by a single flexible connection or cord to shift the hinged section of a skylight to any desired position and which will automatically lock the skylight in its adjusted position when the flexible connection or cord is released.

To these ends my invention consists of the parts and combinations 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 diagrammatic view illustrating the application of a skylight-lifting device constructed according to my invention. Fig. 2 is a rear view of my skylight-lifting device. Fig. 3 is a front view thereof, and Fig. 4 is a rear view showing the parts in a different relative position.

A skylight-lifting device constructed according to my invention comprises a movable slide or rod, a lock for holding the slide or rod in its adjusted position, and a flexible connection arranged to simultaneously release the lock and shift the slide.

Referring to the drawings and in detail, A designates a hinged section or sash forming part of an ordinary skylight, and B designates a skylight-lifter constructed according to my invention, which is connected to operate the hinged section or sash A by means of a link C.

My skylight-lifter B, as herein illustrated, comprises a casing or shell 10, movably mounted in which is a rod or slide 16.

The locking devices which I employ for holding the movable rod or slide 16 in its adjusted position comprise perforated plates 11, which engage lugs 12 in the casing 10 and are normally clamped or tipped into frictional engagement with the rod 16 by means of the

coiled springs 13, the lower coiled spring, as illustrated, being arranged to engage a plate or abutment 14, supported by lugs in the casing 10.

Pivoted on a rivet 18 in the casing 10 is a releasing-lever 17, which is arranged to turn the clamping-plates 11 against the tension of their springs 13 and out of frictional engagement with the rod 16.

The flexible connection or operating-cord 22 is fastened at one end to the releasing-lever 17 and passes around a pulley 19, journaled in the lower end of the slide 16, and over a pulley 20, journaled in the casing 10.

A cushioning-spring, as 21, may be mounted on the rod 16 to prevent the rod from becoming jammed or stuck against the casing 10 when raised to its highest position.

In operating a skylight as thus constructed the frictional clamping-plates 11 will be moved out of engagement with the rod 16 whenever tension is put upon the flexible operating connection or cord 22. This will allow the hinged sash or skylight section A to be raised or lowered by pulling in or letting out the cord 22, as desired. At the same time whenever the tension of the cord 22 is entirely relaxed the perforated plates 11 will be immediately tilted or tipped into frictional engagement with the slide 16 to immediately clamp or lock the skylight in its adjusted position, and I regard this feature as especially advantageous, as on this account skylight-sections operated by lifting devices constructed according to my invention cannot be violently shut down or slammed in such a manner as to break the glass therein.

A further advantage in the use of a skylight-lifting device constructed according to my invention resides in the fact that my lifting device is controlled from and operated by a single flexible connection or cord, and on this account my lifting devices are especially applicable to high-studded apartments, where the skylights are situated to considerable heights above the floor from which they are to be operated.

I am aware that many changes may be made in the construction of my skylight-lifting device by those who are skilled in the art without departing from the scope of my invention as expressed in the claims. For exam-



ple, instead of employing two perforated locking-plates 11, as shown in the drawings, a single locking-plate and spring may be used, if desired. I do not wish, therefore, to be limited to the form which I have shown and described; but

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

1. In a skylight-lifter, the combination of  
10 a slide, a frictional catch for said slide, a releasing-lever, and a flexible cord or connection connected to simultaneously operate the releasing-lever and slide so that a straight  
15 downward pull or tension on the cord will release the catch and shift the slide, and so  
that, when the cord is slackened, the catch will automatically secure the slide in its adjusted position, substantially as described.

2. In a skylight-lifter, the combination of

a slide, a frictional catch comprising tilting  
20 plates and springs for normally holding said plates in engagement with the slide, a releasing-lever for said plates, pulleys journaled on  
the slide and a stationary point respectively,  
25 an operating-cord secured to the releasing-lever and passing over said pulleys so that a straight pull or tension on the cord will release the catch, and shift the slide, and so  
that, when the cord is slackened, the catch  
will automatically secure the slide in its ad-  
30 justed position, substantially as described.

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

SAMUEL I. HOWARD.

Witnesses:

PHILIP W. SOUTHGATE,  
LOUIS W. SOUTHGATE.