

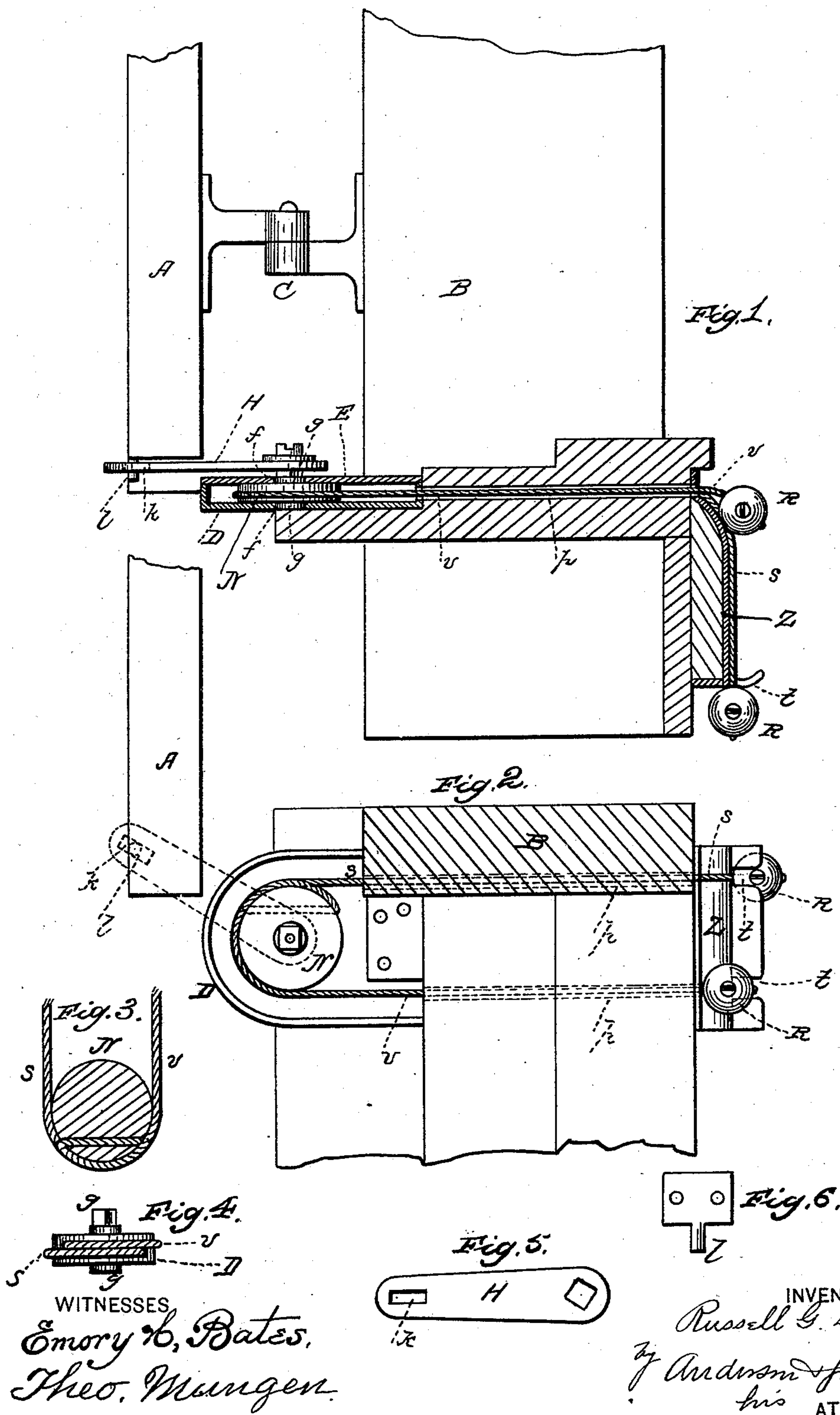
(No Model.)

R. G. DUDLEY.

SHUTTER WORKER.

No. 285,347.

Patented Sept. 18, 1883.



WITNESSES
Emory W. Bates.
Theo. Mungen.

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UNITED STATES PATENT OFFICE.

RUSSELL G. DUDLEY, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO THE
DUDLEY SHUTTER WORKER AND BURGLAR ALARM COMPANY OF
NEW YORK.

SHUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 285,347, dated September 18, 1883.

Application filed June 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, RUSSELL G. DUDLEY, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Shutter-Workers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a vertical sectional view of my device. Fig. 2 is a horizontal sectional view of the same, and Figs. 3, 4, 5, and 6 are detail views.

This invention has relation to shutter-workers; and it consists in the construction and novel arrangement of devices, as hereinafter set forth, and pointed out in the appended claims.

In the accompanying drawings, the letter A designates a shutter, and B the window-casing. C C represent the hinges.

D indicates a recessed or incasing plate, which is secured to the sill portion of the window-casing. It is provided with a top plate, E, and with bearings *f* for the journal *g* of a horizontally-vibrating arm, H, the outer end of which is slotted, as at *k*, to engage a pin, *l*, extending downward from the lower end of the shutter, near its hinged edge, but sufficiently distant from the pivotal axis of the hinges to afford leverage. On the journal portion of the arm H is rigidly secured a grooved pulley, N, to which are secured the opening and closing cords or chains *s* and *v*. Usually the pulley is perforated in the direction of a chord on the outer side, the perforation being a little oblique, as indicated in the drawings, so that when a single cord is employed, its middle portion having been passed through the perforation, the branches are carried around the front portion of the pulley in opposite directions and through perforations

p in the window-casing. The cord is preferably made of twisted wires, or of twisted wires inclosing a cord of softer material, such as cotton or hemp. On the ends of the operating cords or branches are secured balls R, of metal, wood, hard rubber, or other suitable material.

Z represents a curved guard-plate, which is secured to the inside of the base portion of the window-casing, and *t t* are notches made in a flange thereof, or catches provided at the lower portion thereof to engage the knobs or balls R of the operating branches *s* and *v*. In this manner a guard-plate is provided to prevent the wearing away of the wood-work.

The operation is as follows: When the cord *s* is pulled, the pulley N is turned, operating the arm H, which, through the medium of the pin *l* on the shutter, causes the latter to open outward. The slot *k* of the arm H serves to provide the requisite play in adapting the parts to work easily together. When the cord *v* is pulled, the arm H is by means of the pulley N rotated inward, closing the shutter.

It is obvious that set-screws may be used in any position relative to the operating-cords for holding them, when desirable, such set-screws being used instead of the notches or catches hereinbefore referred to.

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

1. The incased pulley having the slotted arm H, in combination with opening and closing cords and a pin on the shutter, substantially as specified.

2. In a shutter-worker, the rear plate, Z, and catches *t t*, in combination with the operating-cords *s* and *v* and their knobs or balls R, all adapted to operate in connection with the pulley N, arm H, and the pin on the shutter, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

RUSSELL G. DUDLEY.

Witnesses:

THEO. MUNGEN,

EMORY H. BATES.