

(No Model.)

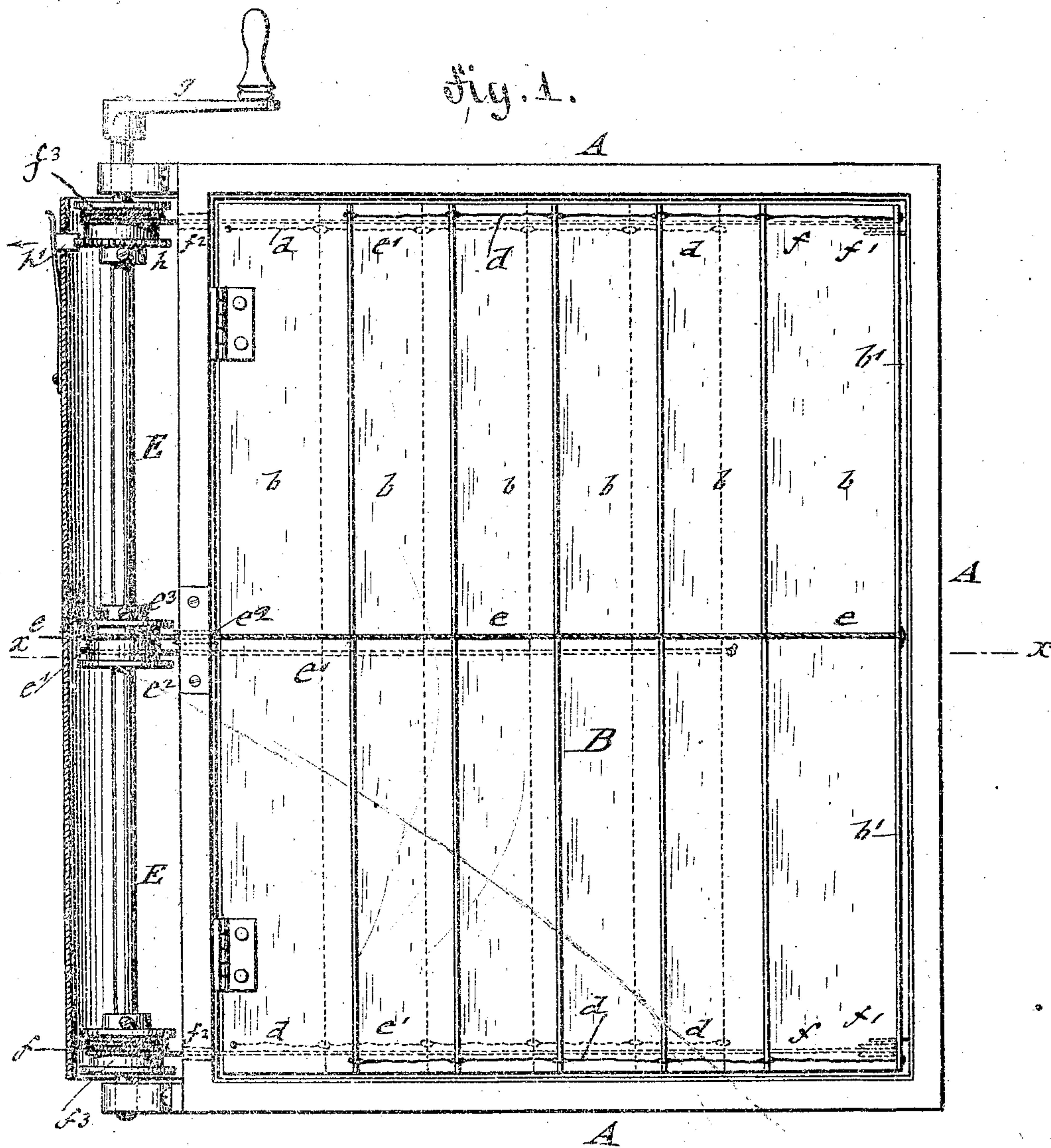
2 Sheets—Sheet 1.

J. E. BRIGGS.

SHUTTER FOR SKYLIGHTS.

No. 362,602.

Patented May 10, 1887.



WITNESSES:

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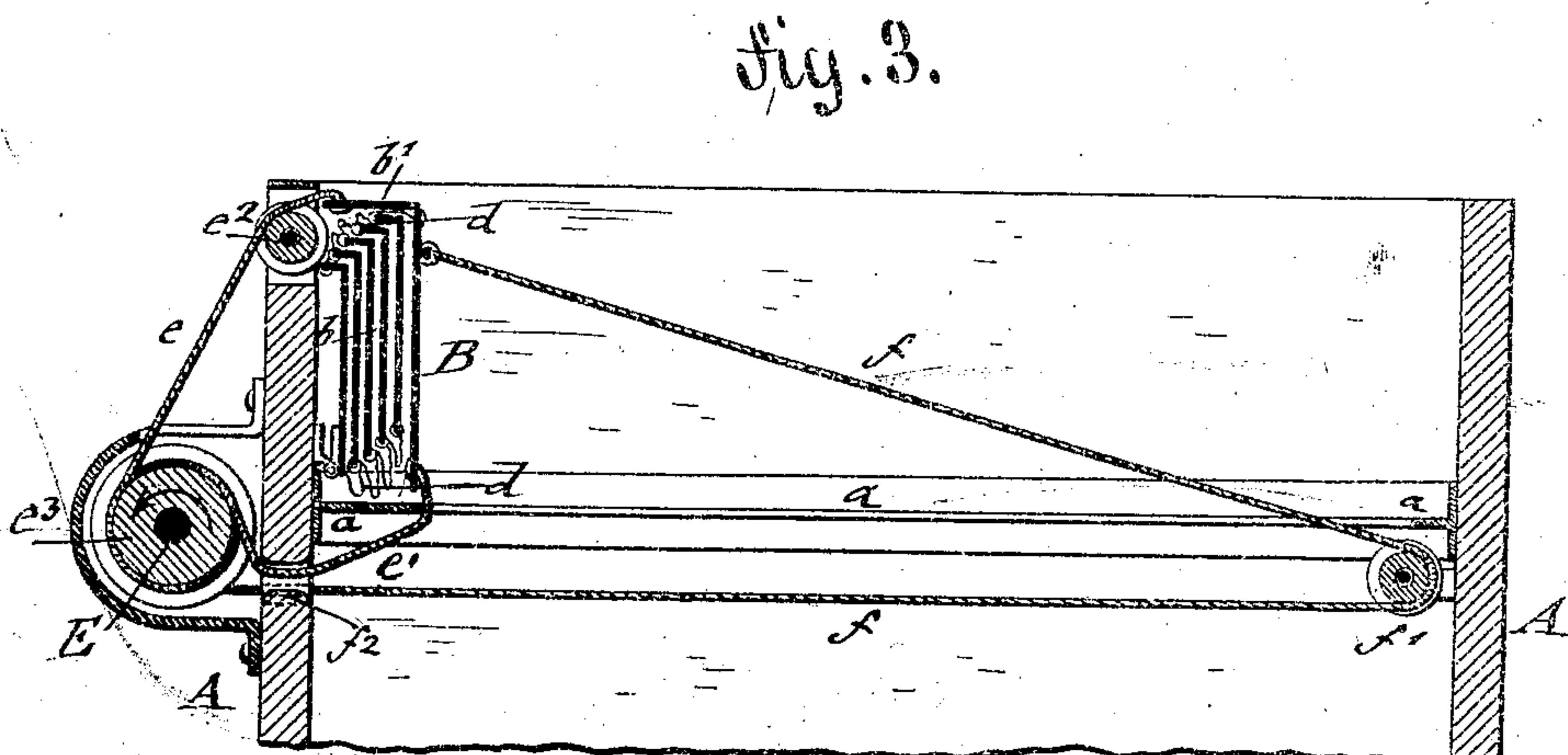
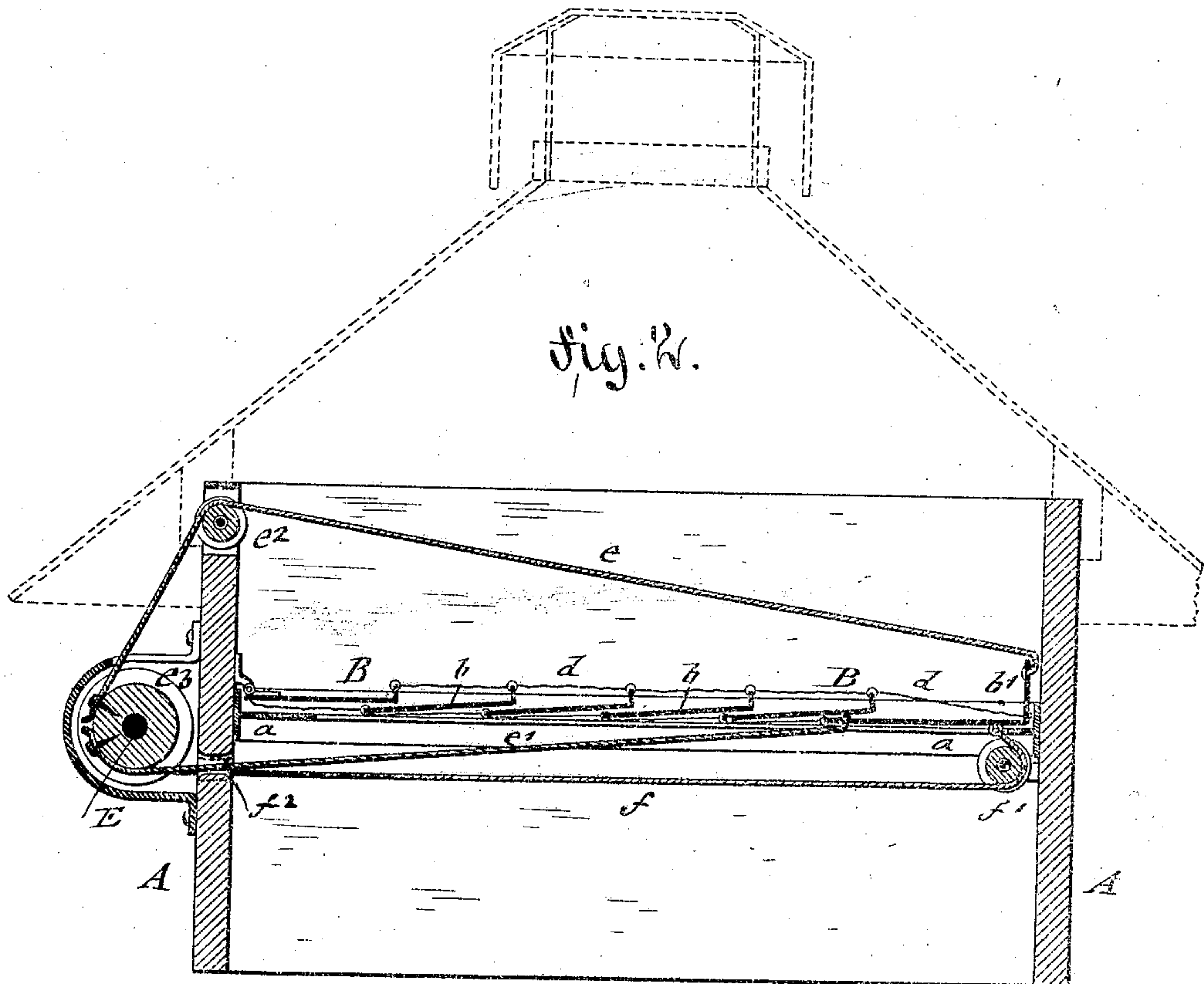
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WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES E. BRIGGS, OF BROOKLYN, ASSIGNOR OF TWO-THIRDS TO HENRY HILDBURGH, OF NEW YORK, N. Y.

SHUTTER FOR SKYLIGHTS.

SPECIFICATION forming part of Letters Patent No. 362,602, dated May 10, 1887.

Application filed January 24, 1887. Serial No. 225,243. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. BRIGGS, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Shutters for Skylights, of which the following is a specification.

This invention relates to an improved shutter for skylights, by which the space below the skylight can be securely shut off, the shutter forming an effective protection against the spread of fire, as well as a safeguard against burglars; and the invention consists of a skylight-casing having a horizontal supporting-flange, a shutter formed of a series of slats flanged at one edge and adapted to be folded up at one side of the casing, one end slat being hinged to the casing, while the opposite end slat is provided with a larger protecting-flange. The opening or closing of the shutter-slats is accomplished by wire cords or chains, which pass from a suitable roller over guide-pulleys to the outermost or covering shutter-slat. The individual slats are connected with each other by longitudinal cords, which are attached to the flanges of the same. The winding-up roller is locked by a pawl-and-ratchet device, and operated by a hand-crank or other suitable device.

In the accompanying drawings, Figure 1 represents a plan of my improved skylight-shutter, partly in section, showing the shutter in closed position; and Figs. 2 and 3 are vertical longitudinal sections on line *x x*, Fig. 1, showing the shutter respectively in closed position and folded up at one side of the casing.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the casing, which is closed by a skylight of any approved construction. The casing A is provided with a horizontal flange, *a*, which extends along the inner surface of the casing and serves as a rest for the folding shutter B. The shutter B is made of a number of slats, *b*, which are provided with bent-up flanges at one edge. The slat *b* at one end of the shutter B is hinged to one side of the casing and connected with the remaining slats by longitudinal cords *d*, which are attached to the flanges and to the opposite edges of the slats. The opposite end slat *b* is provided with a wider

flange, *b'*, which extends over the remaining slats *b b* when the same are folded up, as shown in Fig. 3.

The shutter B is folded up by cords or chains *e e'*, of which the cord *e* is attached to the flange *b'* of the outermost slat *b*, and passed over a guide-pulley, *e²*, to a pulley, *e³*, on a shaft, E, while the cord *e'* is attached to the opposite edge of the outermost slat *b*, and also wound up on the pulley *e³*, but in opposite direction to the cord *e*, as shown in Fig. 1.

The shutter B is extended, so as to close the casing A, by two cords, *f f*, which are attached to the outermost end slat, near the corners of the same, and passed over pulleys *f'* and through holes *f²* of the casing to pulley *f³* on the shaft E, as shown in Figs. 1, 2, and 3. The shaft E turns in suitable bearings attached to brackets at the outside of the casing A.

On turning the shaft E in one direction the cords *f f* extend the shutter and place the slats in closed position on the supporting-flange *a*, as shown in Fig. 3, while the cords *e e'* are simultaneously unwound from the pulley *e³*. On turning the shaft E in opposite direction the shutter is opened by the cords *e e'* and folded up at one side of the casing A, as shown in Fig. 3, the cords *f* being unwound from the pulleys *f³* at the same time.

The shaft E is turned by a hand-crank, *g*, or other suitable means, and serves, in connection with the cords *e e'* and *f f* and *d d*, to fold up or extend the shutter B. When the shutter is folded and raised on its hinge-connection with the casing, the outermost slat *b* incloses, by its wider flange, *b'*, the slats *b b*, as shown in Fig. 2.

The shaft E is locked in open or closed position by means of a ratchet and pawl, *h h'*, the pawl being released from the ratchet-wheel whenever the shutter is to be folded or extended, and dropped again into the ratchet-wheel when it is desired to retain the shutter in folded or extended position.

The shutter forms a protective device for the shafts or skylights, so as to prevent effectually the draft generally produced through the skylight-shaft in case of fire, and bring thereby the fire within easier control, while it forms, also, to some extent, a safety device against the entrance of burglars through the skylight.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a skylight casing or shaft having a supporting-flange, of a shutter composed of slats, the innermost end slat being hinged to the casing and the outermost slat provided with a flange extending at right angles thereto, longitudinal cords connecting said slats, and mechanism, substantially as described, whereby said shutter-slats are either folded up at one side of the casing or extended so as to close the casing, substantially as shown and described.

2. The combination, with a skylight shaft or casing having a supporting guide-flange, of a folding shutter formed of slats connected by longitudinal cords, the innermost slat being hinged to the casing and the outermost slat provided with a covering-flange, a shaft having pulleys, cords connecting the outermost slat with one pulley in said shaft for opening and folding the shutter, and cords, also

connecting the outermost slat with pulleys on said shaft, for extending the shutter and closing the casing, substantially as shown and described.

3. The combination, with a skylight shaft or casing, A, having a supporting guide-flange, *a*, of a folding shutter, B, composed of flanged slats *b b*, connected by longitudinal cords *d d*, the innermost slat being hinged to one side of the casing, while the outermost slat is provided with a wider flange, *b'*, a shaft, F, having pulleys *e'* and *f'*, cords *e e'* and *f f'*, guide-pulleys *e'' f''*, and a pawl-and-ratchet device, *h h'*, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

JAMES E. BRIGGS.

Witnesses:

PAUL GOEPEL,
SIDNEY MANN.