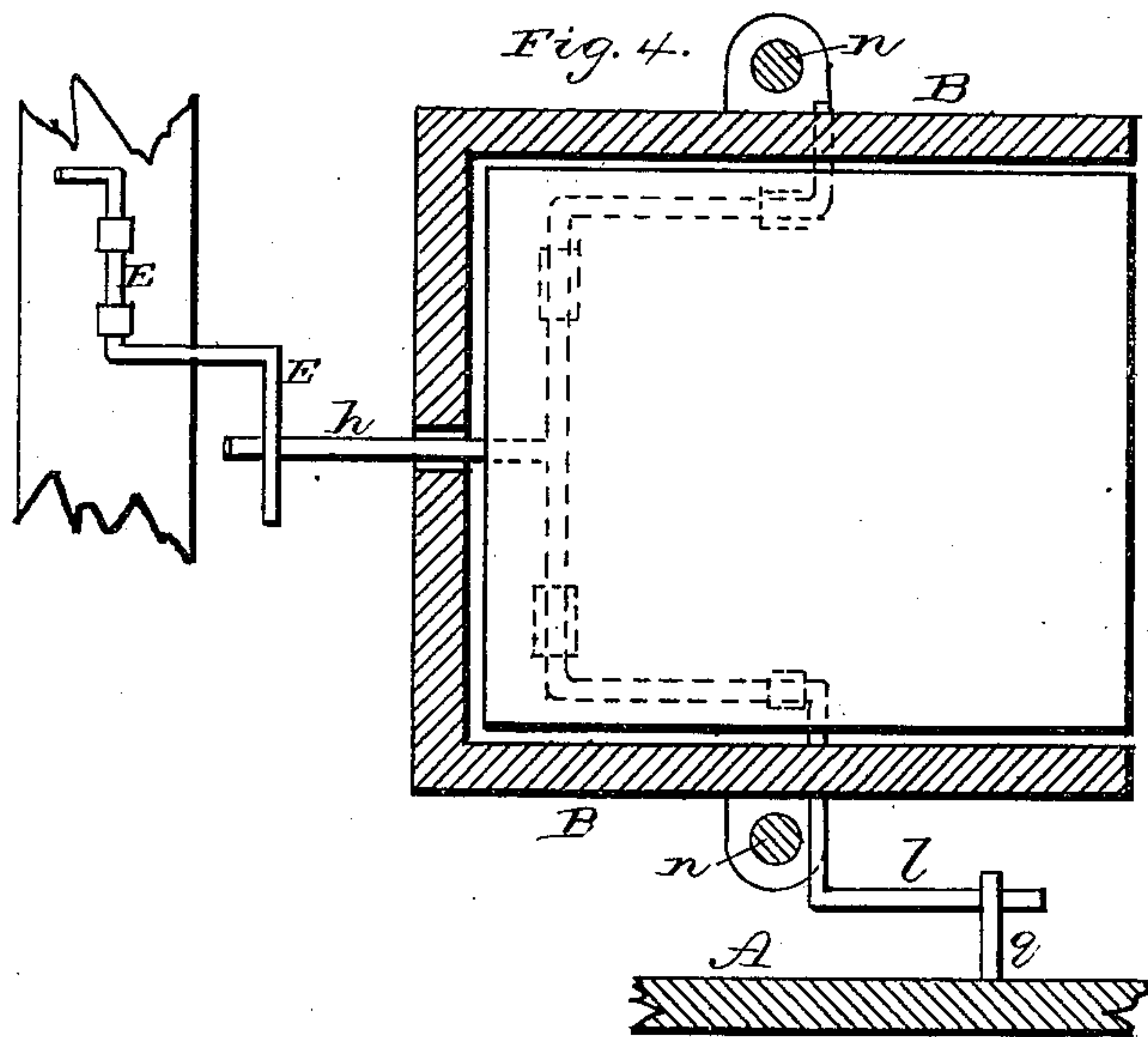
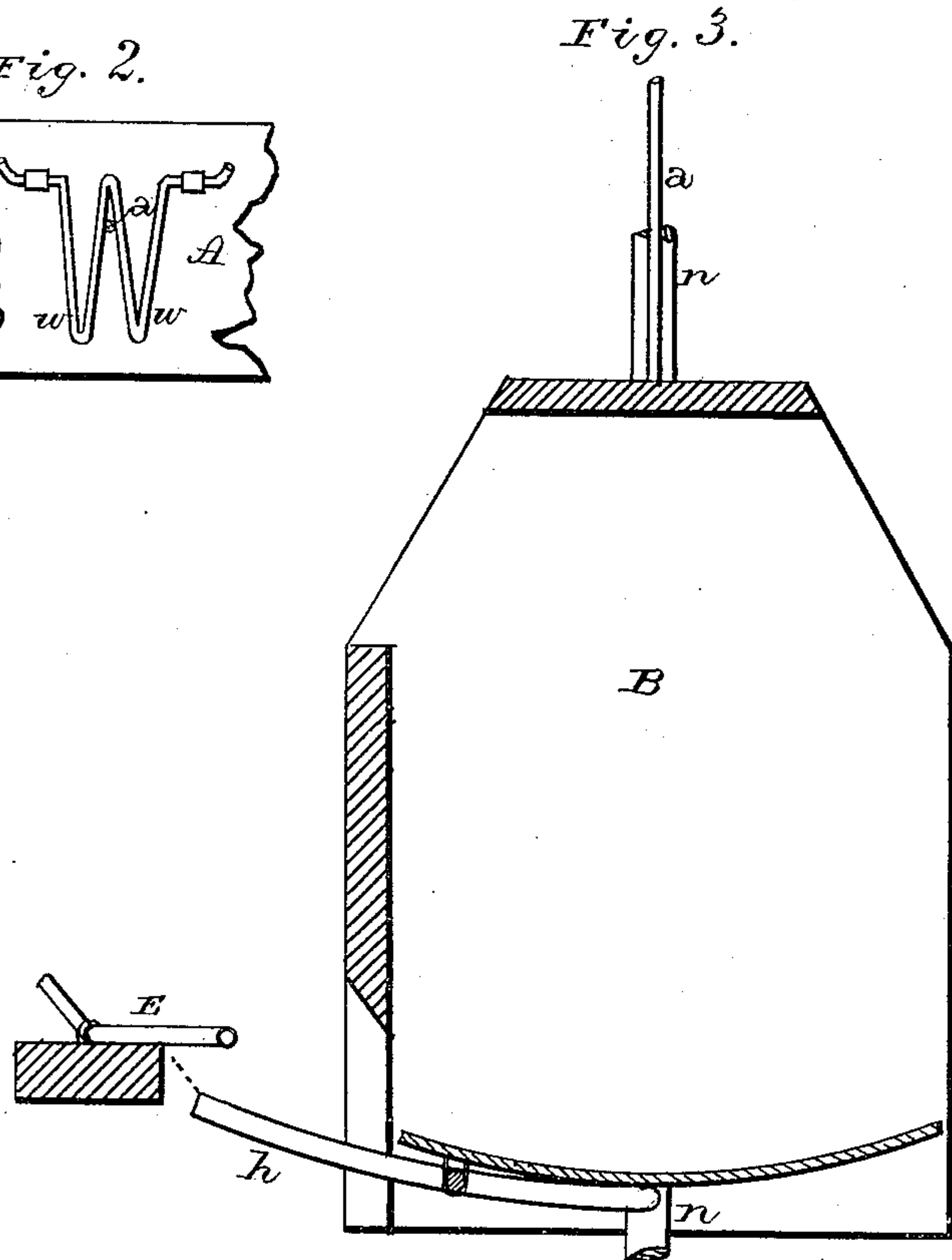
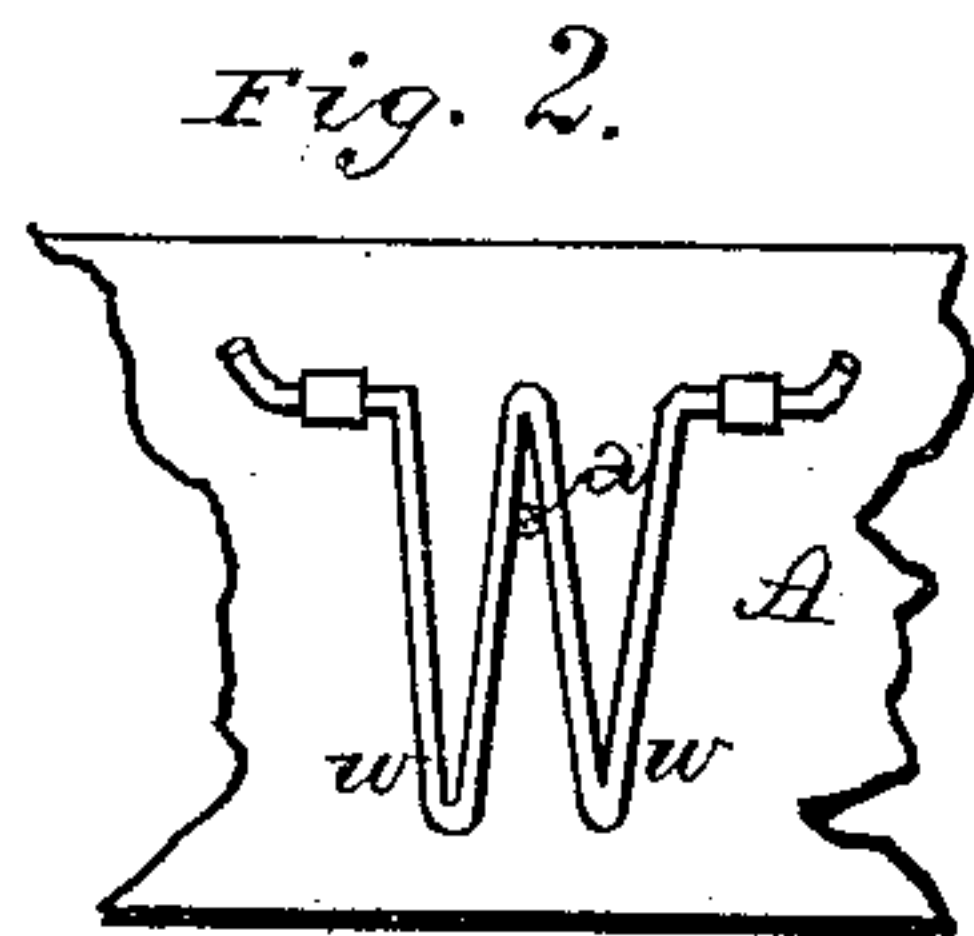
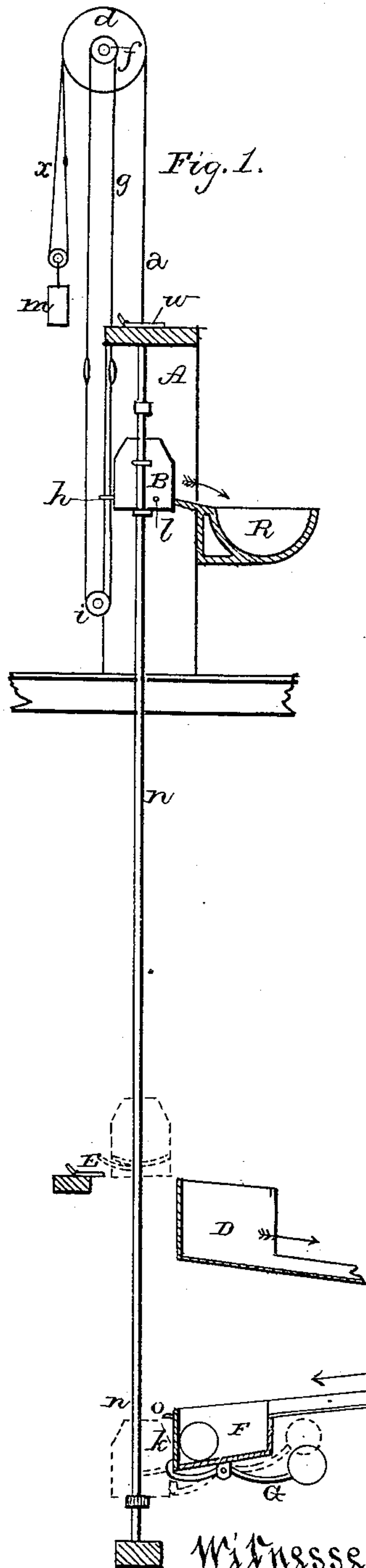


(No Model.)

J. C. MILLER.
ELEVATOR FOR CASH CARRIERS.

No. 329,475.

Patented Nov. 3, 1885.



WITNESSES:

L. F. Gardner
Jno. E. Properi.

Inventor.
Jas. C. Miller,
per *J. A. Lehmann,*
att'y.

UNITED STATES PATENT OFFICE.

JAMES C. MILLER, OF ALLEGHENY, PENNSYLVANIA.

ELEVATOR FOR CASH-CARRIERS.

SPECIFICATION forming part of Letters Patent No. 329,475, dated November 3, 1885.

Application filed May 18, 1885. Serial No. 165,955. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. MILLER, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Elevators for Cash-Carriers, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improvement in elevators for cash-carriers; and it consists in an arrangement by which a communication is established between the upper and lower stories of a building for carrying balls containing cash and automatically delivering the same.

The object of my invention is to perfect the system of cash-carriers in which balls to hold cash are used, said balls rolling on inclines to convey their contents to the cashier and back to the salesman, so that balls and cash can be sent from the upper to a lower floor and returned without any other means of conveyance. As now applied this manner of conveying is limited to only one story, so that the money paid for goods in an upper story has to be carried down to the cashier by the clerks.

The accompanying drawings represent my invention.

Figure 1, elevation of the whole apparatus; Fig. 2, plan view of check W; Fig. 3, sectional elevation of carrier-box with arm for tilting its bottom; Fig. 4, sectional plan of the same.

A represents an open box or frame permanently fastened to the floor of an upper story of a building, with which story a communication by means of a carrier-box is to be established. From the top through the interior of the frame A downward extend guides *n*, that guide a carrier-box placed between them.

B is the carrier-box, used for the conveyance of one ball at a time from the upper to a lower story, to deliver the same at a certain place, receive a ball at another, and return it to the place of departure to deliver it. The carrier-box is open in front, closed at the sides and back; its bottom hinged to tilt forward when struck by obstructions suitably placed for that purpose; has two projecting pins, one of them, *l*, at its side and another, *h*, at the rear. The carrier-box B is upheld, lowered,

and raised by a cord, *a*, one end of which is fastened to its top, and, passing upward through the frame A to and over a sheave, *d*, is weighted at its other end, *m*, to balance the carrier-box to keep it stationary. Fastened to the sheave *d* is another smaller one, *f*, over which an endless cord, *g*, is stretched, that also passes over a pulley, *i*, near the floor, by pulling which cord the sheaves are turned and the carrier-box is either raised or lowered. The carrier-box, when lowered, first arrives at a receiving-box, D, opposite to which is a hinged arm, E, that strikes the pin *h* in the rear of the bottom of the carrier-box, and, tilting it, causes the ball to roll forward into the receiving-box D, whence it is carried over ways to the cashier. The hinged arm E is made to resist any pressure applied from above, but to readily yield when pushed from below, so that when the carrier is raised up from below, the arm E proves no hinderance to its passage. After delivering the ball, the carrier may be raised to return empty to the upper story; but if a ball is to be sent up, the carrier is to be lowered to a delivery-box, F, below. The delivery-box F is in communication with ways for carrying balls, and inclines downward. Its front is closed by a removable piece, K, that is fastened to the end of a weighted lever, G, placed under the box F. At the top of the front piece, K, is a projection, O, that, when the carrier is lowered, is struck and pressed down by it, whereby the front of the delivery-box F becomes opened, allowing a ball contained in it to roll out into the carrier in front of it. The lever G, as soon as the carrier is raised, closes the delivery-box and prevents the escape of any ball that may be remaining behind in the box. On its return to the box A the pin *l*, projecting from the side of the bottom of the carrier, encounters a peg, *q*, in the box A, by which it is tilted forward, and the ball rolled out into a receiver, R.

To prevent the carrier from descending lower than to a certain point, a knot, *x*, is tied in the cord *a*, which stops the cord when the knot arrives at a check, W, on top of the box A. The cord passes through the middle of the check and is not impeded until the knot strikes it from above. The check is hinged at its ends, and can be lifted up to let the knot pass through, so that if the carrier is to de-

scend lower down than the place indicated by the knot, by raising the check it will be allowed to go down as far as the length of the cord admits. The check, when the carrier is raised up, forms no obstruction, since the knot striking it from below lifts it out of its way.

Having thus described my invention, I claim—

1. The combination of the carrier-box, provided with a tilting bottom and the projections *h l*, with suitable stops or devices attached to the stationary frame-work, for the projections to strike against, substantially as shown.

2. The combination of the delivery-box having a movable side, and the weighted lever which holds the side closed, with the delivery-box, substantially as described.

3. The combination of the carrier-box, the suspension cord *a*, sheaves *d f*, endless cord *g*, and pulley *i*, substantially as set forth.

4. The combination of the frame A, carrier-box B, guides *n*, receiving-box D, arm E, and delivery-box F, the box B being provided with a tilting bottom and projections and the box F with a movable side and lever for keeping it closed, substantially as specified.

5. The combination of the movable check W with the cord *a* and box B, substantially as shown.

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

JAMES C. MILLER.

Witnesses:

LOUIS MOESER,
T. F. LEHMANN.