

(No Model.)

G. C. TEWKSBURY.

ELEVATOR.

No. 255,051.

Patented Mar. 14, 1882.

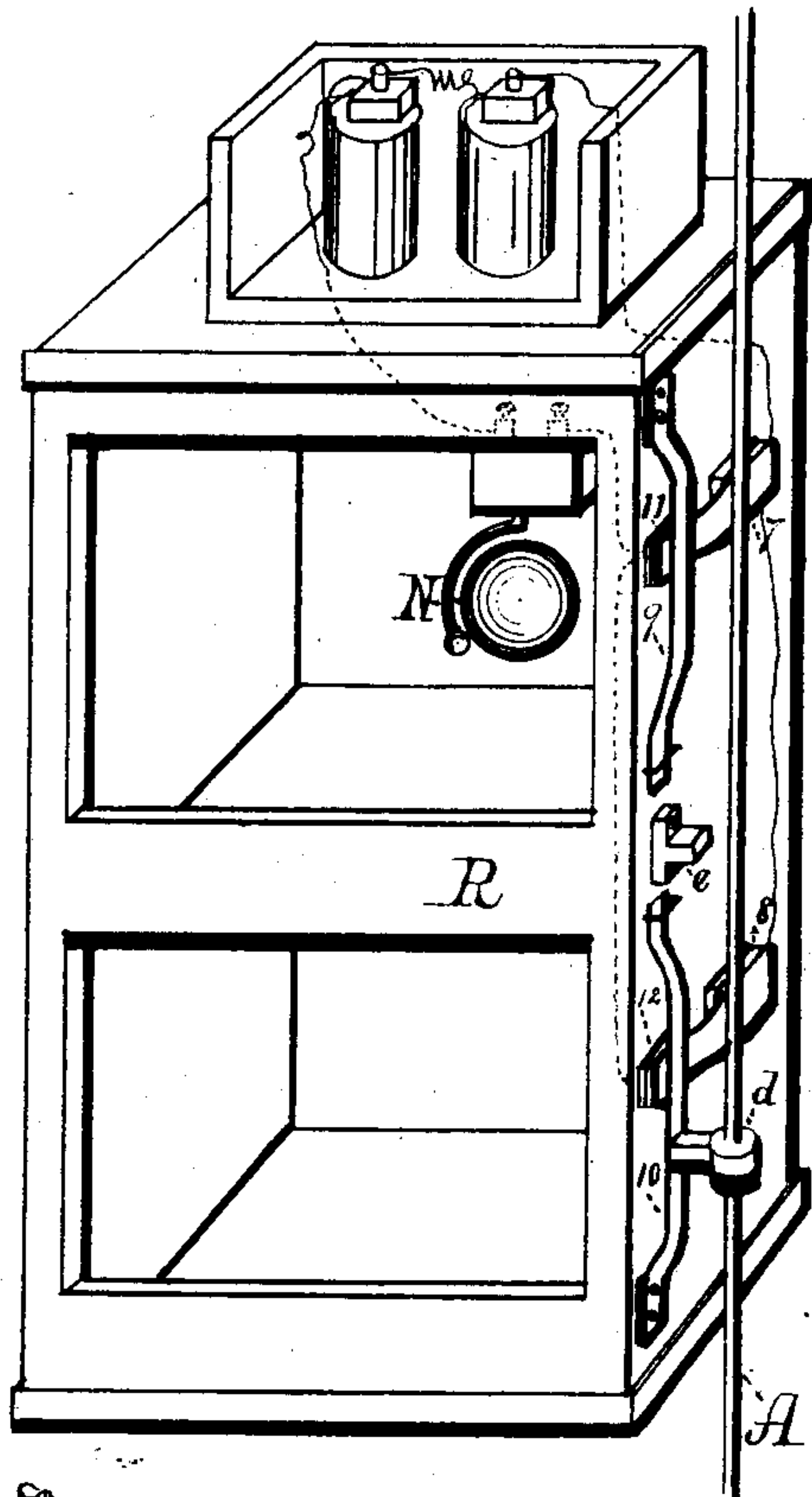


Fig 1

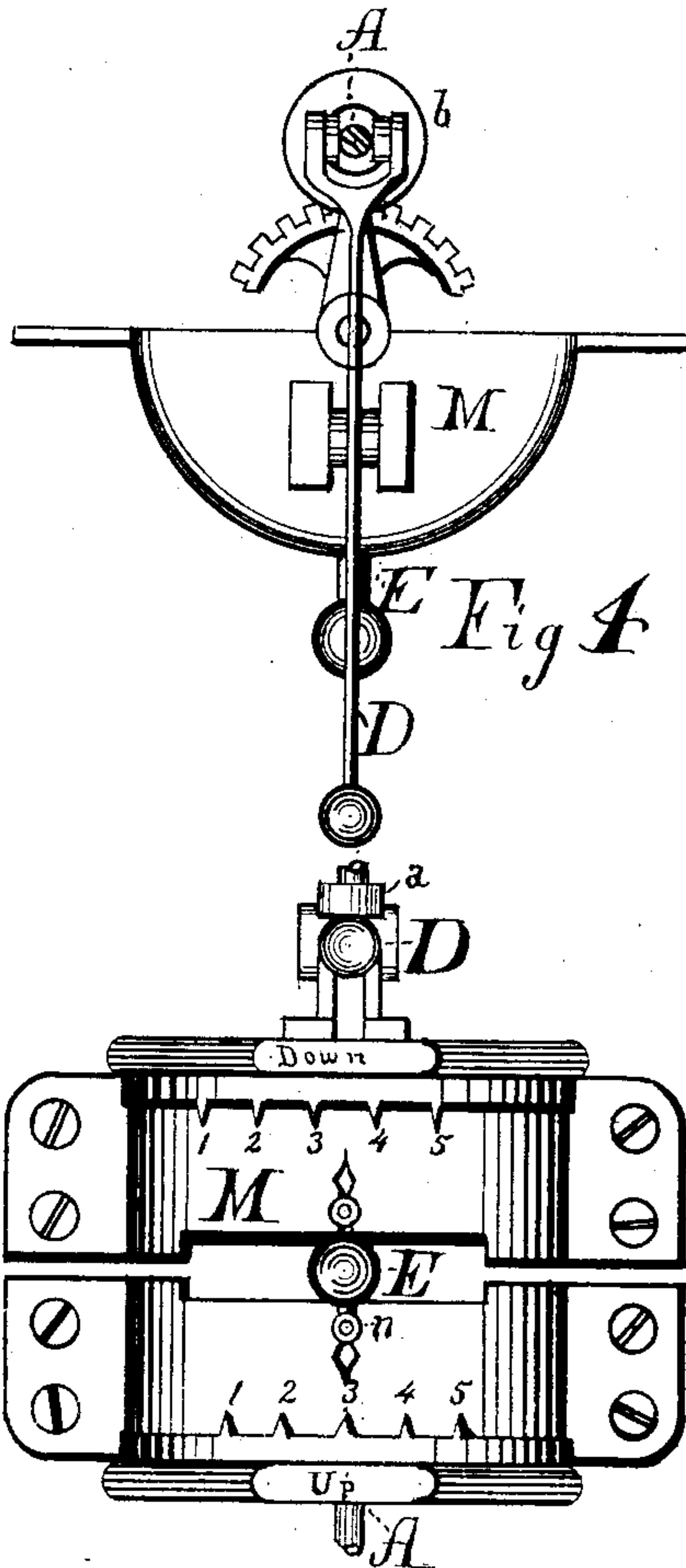


Fig 3

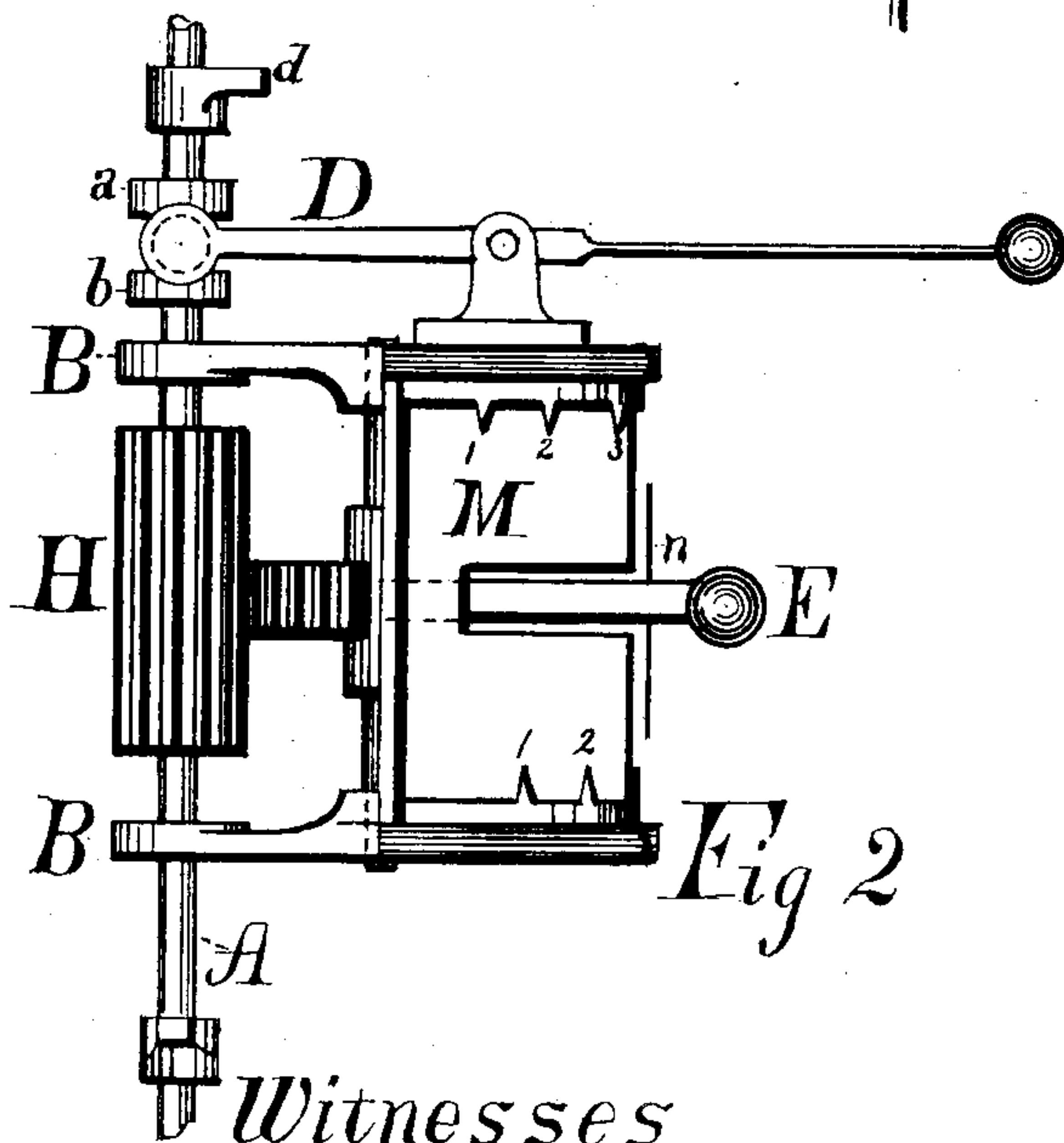


Fig 2

Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE C. TEWKSBURY, OF LYNN, MASSACHUSETTS.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 255,051, dated March 14, 1882.

Application filed January 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE C. TEWKSBURY, a citizen of the United States, residing at Lynn, in the county of Essex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Elevators, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in that class of elevators commonly used in buildings for carrying merchandise from one story thereof to another, and is especially adapted to be used upon the elevator for which Letters Patent have been allowed to myself upon application filed July 14, 1881, and October 3, 1881.

The invention consists in combining with the elevator-box suitable devices whereby the arrival of the elevator-box at its destination is signalized to persons in that part of the building.

It further consists in combining with the shipper-rod suitable devices whereby the elevator may be more easily set in motion, and a modified form of indicator whereby the line of projection of the stop-fingers arranged at different points on the shipper-rod may be more easily and definitely arranged.

Figure 1 of the drawings is a perspective view of the elevator-box and devices for sounding the alarm. Fig. 2 is a side elevation of the shipping device and indicator. Fig. 3 is a front elevation of the same. Fig. 4 is a plan of the same.

The construction and combination of the shipper-rod and driving mechanism are fully described in my specification filed, and as reference may be had thereto it will not be repeated here. The shipper-rod A extends the entire length of the elevator-well. It is arranged to slide vertically and also turn in suitable bearings, B, which bearings B may be attached to the indicator M, as shown in the drawings, or directly to the walls of the building. Said shipper-rod A is swiveled at its upper end to the belt-shifting lever, (not shown,) so that a vertical movement of the rod will set the elevator in motion or bring it to a stop whenever occasion requires. This vertical movement of the rod A is effected by means of the lever D, which lever D (there being one

at each story of the building) is fulcrumed upon the indicator-box M, as shown, and opens out into a fork at the end, so as to span the rod A between two fixed collars, *a b*. Said rod A carries stop-fingers *d*, fixed upon the rod—one at each story of the building—which project from the rod at different angles, like so many radii of a circle. Each of said stop-fingers *d* may (by turning the shipper-rod A) be successively brought into the same vertical line with a dog, *e*, fixed upon the side of the elevator-box R. This revolving movement of the shipper-rod A is effected by means of the lever-handle E. Said handle is pivoted as shown in Fig. 2, and carries the segment of a gear on its opposite end, which meshes in with a pinion, H, which pinion H is fixed upon the shipper-rod A. Said handle E is operated through a horizontal slot cut in the semi-cylindrical shell or case M, which, being provided with marks or pointers engraved upon the face thereof, is termed an "indicator." Said marks or pointers are preferably arranged in two rows, one on each side of the handle E, to correspond with the two directions in which it is possible for the elevator to travel. Each of said rows contains a mark or pointer for each story or place in the building at which it is intended for the elevator to stop. They are numbered from one upward, to correspond with the number of the different stories or stopping-places in the building, and those in one row are slightly out of line with those in the opposite row, as shown in Fig. 3.

The stop-fingers *d* are fixed upon the rod A with reference to the handles E, and also with reference to the pointers on the indicator M, so that a movement of the handle E, which brings the needle *n* into line with a mark or pointer on the indicator M, carries the finger *d* in that story of the building which corresponds with that number of the pointer at which the needle points into direct vertical line with the dog *e* upon the elevator-box R, and when the elevator-box R in ascending or descending reaches that point in the building at which the finger thus arranged is located the dog *e* upon the box engages with the finger on the rod and moves the rod sufficiently to shift the driving-belts, whereupon the elevator stops.

It will now be understood that should the op-

erator desire to start the elevator and have it stop at any given story of the building he has only to turn the handle E till the needle *n* registers with that pointer on the index whose number corresponds with the number of the given story and then raise or depress the lever D according to the direction in which the elevator must travel in order to reach the given point or station.

It will be evident from the foregoing that only one series of pointers and numbers are required in order to determine and arrange the position of the several stop-fingers, *d*; but if two rows are constructed and arranged, as shown in Fig. 3, the needle *n* can be arranged by reference to the upper or lower row of pointers according to whether the elevator is to travel upward or downward, and when this arrangement is followed out the position of the needle *n* shows, first, (when the elevator is in motion,) its destination, as also the direction in which it moves; and, second, (when the elevator is at rest,) the place where it is stationed, as also the direction in which it traveled in order to arrive there.

Attached to the side of the elevator-box R are two metallic springs, 7 8. One end of each spring is secured to the side of the box R, while the opposite ends thereof tend respectively to press outward against the vertical springs 9 10. Under the free end of the springs 7 8 are metallic plates 11 12, which are also secured to the side of the box R. Pressure upon either of the springs 9 10 carries inward the end of the corresponding spring, 7 or 8, till it comes in contact with the corresponding plate, 11 or 12.

Upon the elevator-box R is stationed an ordinary electric battery, and on the inside of the box is an electric bell, N. Connection is made by wire with the battery, the bell, each of the springs 7 8, and the plates 11 12 in such manner that when either of the springs 7 or 8 presses upon its corresponding plate, 11 or 12, the electric circuit is complete and the bell N rings; but so long as neither of the springs 7 or 8 presses upon the corresponding plate, 11 or 12, the electric circuit is broken and the bell N will not ring.

The vertical springs 9 10 are placed upon the elevator-box R in direct vertical line with the dog *e*, and spring outward sufficiently so as the finger upon the shipper-rod A, which is ar-

ranged to stop the elevator by engaging with the dog *e*, as before described, will also depress the spring 9 or 10 sufficiently to complete the electric circuit and allow the bell to ring while the elevator passes.

It will be understood from the foregoing that when the elevator moves upward the electric circuit is completed by the stop-finger pressing inward the spring 9, while if it moves downward the circuit is completed by pressure upon the spring 10, and as the said springs are both arranged in direct vertical line with the dog *e* they are acted upon by that one of the stop-fingers only which is set in line with the dog *e* for the purpose of stopping the elevator. Hence an alarm is given only when the elevator is about to stop.

What I claim is—

1. In combination, an elevator-car, a shipper-rod having radial projections, an indicator, a handle for giving rotary motion to the said shipper-rod, and an independent pivoted lever for moving the said rod vertically, whereby the belts are shipped.

2. The combination of the shipper-rod having radial projections, the indicator-box having a gage or scale, and a handle having an index-hand and adapted to move horizontally in the slot in the indicator-box.

3. In an elevator, the combination of the shipper-rod having the elongated pinion, the handle D, having the rack, and the pivoted lever connected to the shipper-rod.

4. The described indicator consisting of a box or case having a double gage or scale and a central horizontal slot, in combination with the handle having an index-hand for each of said gages.

5. In combination with the shipping-lever having projections adapted to be set in the path of the elevator-dog, a device carried by the car adapted to close an electric circuit by contact with one of the said projections and thereby operate an alarm.

6. The combination of the plates 12, the spring 7, the battery, the alarm, and suitable electrical connections, with the spring 9 and the shipper-rod.

GEO. C. TEWKSBURY.

Witnesses:

C. B. TUTTLE,

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