

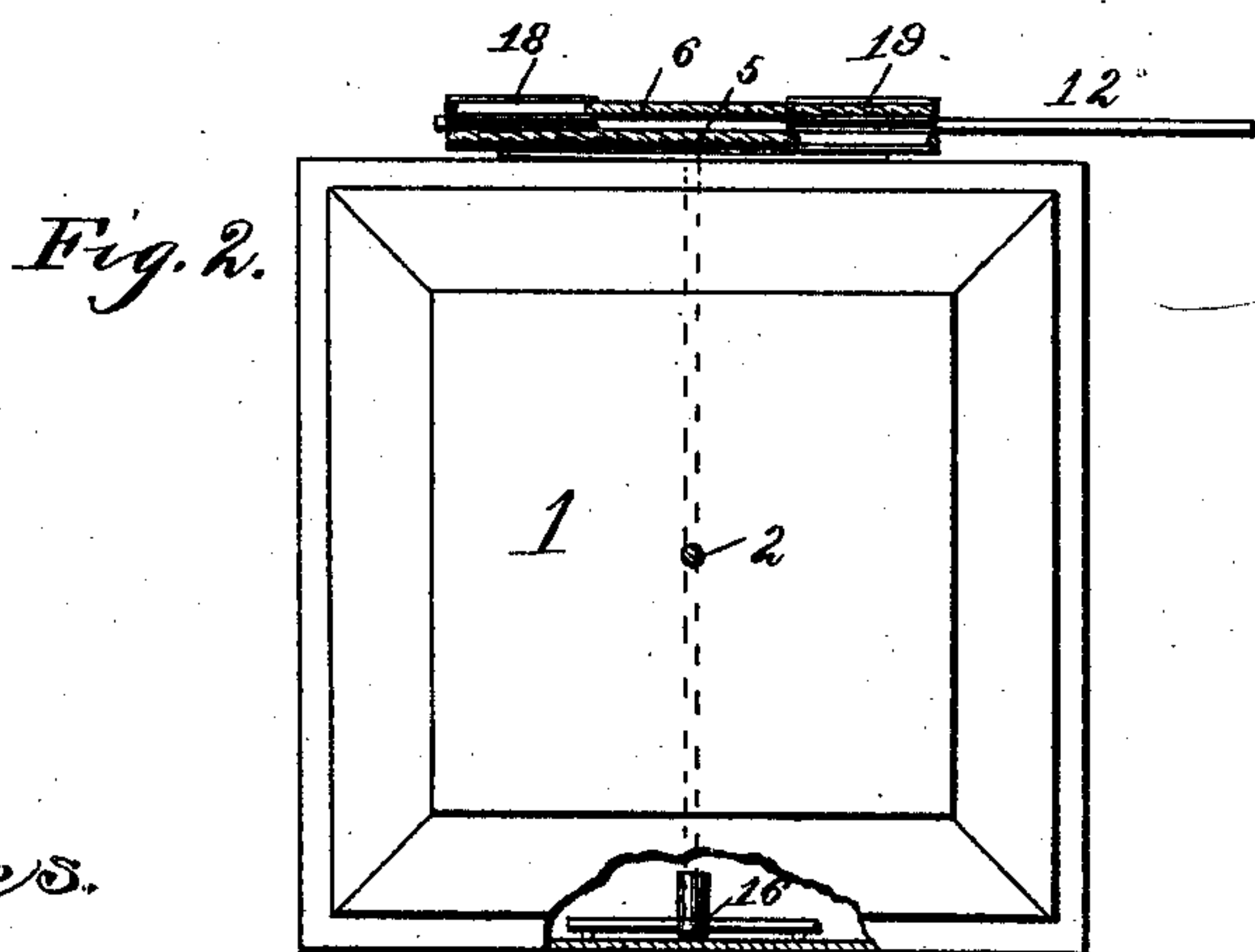
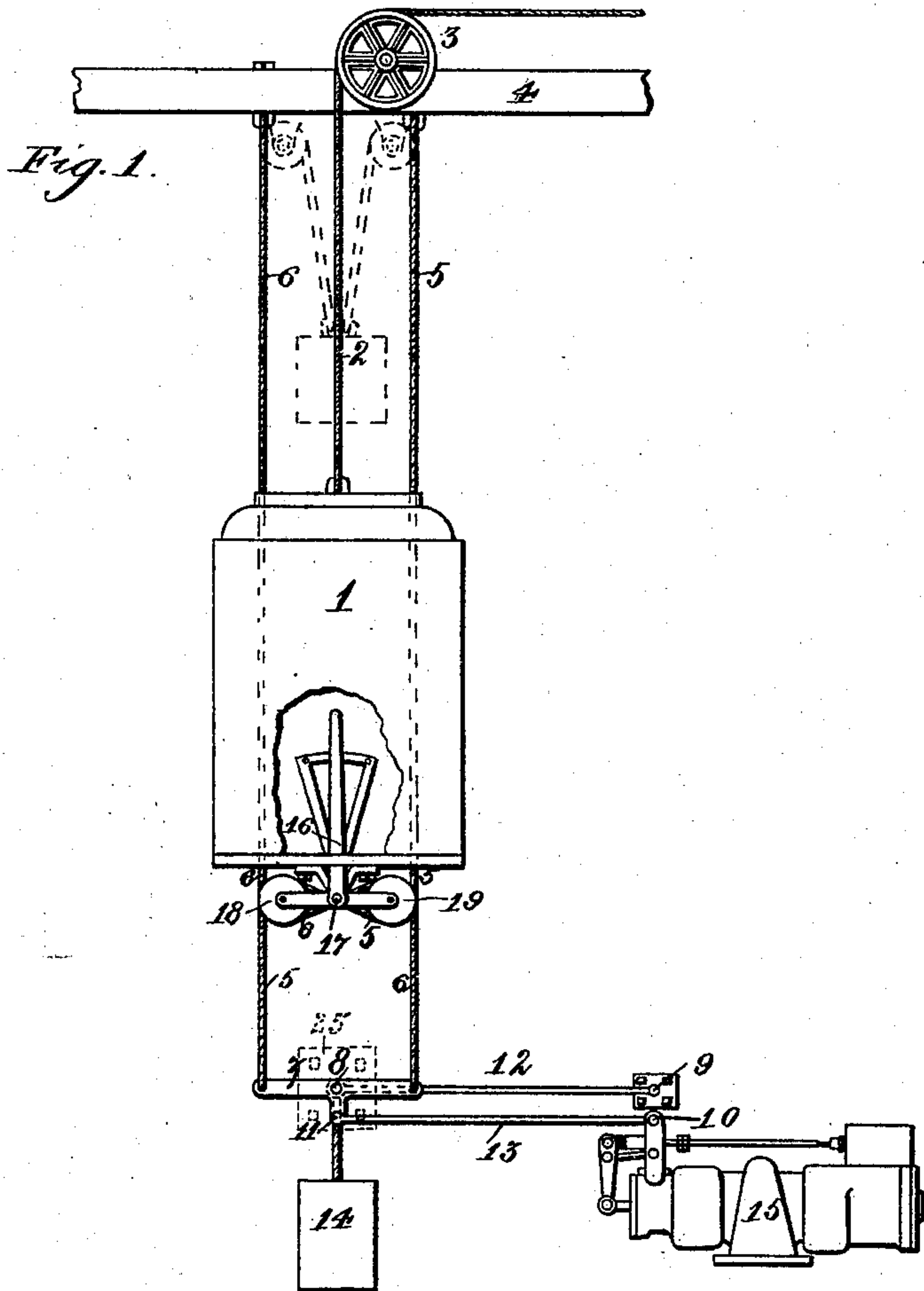
(No Model.)

J. I. VEEDER.

MEANS FOR CONTROLLING ELEVATORS.

No. 372,280.

Patented Oct. 25, 1887.



Witnesses.

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UNITED STATES PATENT OFFICE.

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MEANS FOR CONTROLLING ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 372,280, dated October 25, 1887.

Application filed April 2, 1887. Serial No. 233,410. (No model.)

To all whom it may concern:

Be it known that I, JOHN IRWIN VEEDER, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Means for Controlling the Operation of Elevators, of which the following is a full specification.

My invention relates to that class of valve-control apparatus in which two standing cables are employed, by the alternate shortening of which the valves are operated.

My invention consists in the application to a valve-control gear of the class described of weighting devices, whereby the tension of the operating-cables is constantly maintained, whatever may be the variations in length of the cables, from alterations in temperature, &c., or from wear, and whereby the accuracy of the action of the cables upon the valve is preserved, so long as the variations in length of the two cables are respectively equal. As both control-cables are of the same material and exposed to like conditions, it is evident that the differences in their variation will be comparatively slight and will require adjustment only at long intervals.

In the drawings, Figure 1 is a side view of an elevator-car and so much of the control apparatus as is needed to illustrate my invention. Fig. 2 is a view of the car from above.

1 is the elevator-car suspended by the hoisting-rope 2, which passes over sheave 3, supported by beam 4. To the beam 4, or any other fixed support, are fastened the control-cables 5 and 6. Control-cable 5 passes downward under sheave 19, over sheave 18, thence to one end of lever 7. Control-cable 6 passes under sheave 18 and over sheave 19, thence to the other end of lever 7. Sheaves 18 and 19 are carried upon the extremities of the hand-lever 16, which is pivoted to the car at 17, and is operated by the attendant in the car. With the arrangement of cables described, the movement of the hand-lever 16 will be followed by a corresponding movement of the lever 7 connected to the valve-gear. The lever 7 is pivoted at 8 to a radius-bar, 12, which moves about a fixed center, 9. The short arm of lever 7 is connected to the valve-gear by the rod 13, said rod being of the same length as radius-bar 12 and parallel thereto. The point 9 being a

fixed pivotal point, the parallelogram bounded by 9 8 11 10 is maintained as a parallelogram; but vertical movement of the pivot 8, caused by an equal stretching or contraction of the cables 5 6, is permitted without affecting the position of the point 10 of the valve-gear, and therefore without affecting the valve. The valve apparatus used for illustrating my invention, and marked 15, is well known in this art, one construction thereof being shown in Patent No. 314,720, to George H. Reynolds, and needs no further description. The weight 14 is suspended from the pivot 8, and it is thus in effect connected to both control-cables 5 and 6 and serves to maintain an equable tension on both.

I have shown the weight as attached to the lower ends of the control-cables; but it would be equally efficient if attached to their upper ends, as shown in dotted lines, or in any equivalent manner by which the downward pull of the weight is converted into an upward strain on the cables. In this case the pivot 8 should be made a fixed point by attaching it to any stationary part of the frame-work, a plate, 25, for so securing it, being shown in dotted line in Fig. 1.

The double cables 5 and 6 may be made of one continuous rope with fixed points, as indicated, instead of being cut before being applied.

I claim—

1. In an elevator-control mechanism, the combination of double standing cables, a take-up device on the car, and a weight suspended from both said cables for maintaining their tension.

2. In an elevator-control mechanism, the combination, with the pivoted lever of a cable device by which the valve is shifted, of a radius-bar, such as 12, whereby vertical motion is allowed said lever without disturbing the operation of the valve by said lever.

3. The combination, with the cables of an elevator-control mechanism, of the lever 7, the suspended weight 14, the radius-bar 12, and the valve-lever 13.

JOHN IRWIN VEEDER.

Witnesses:

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