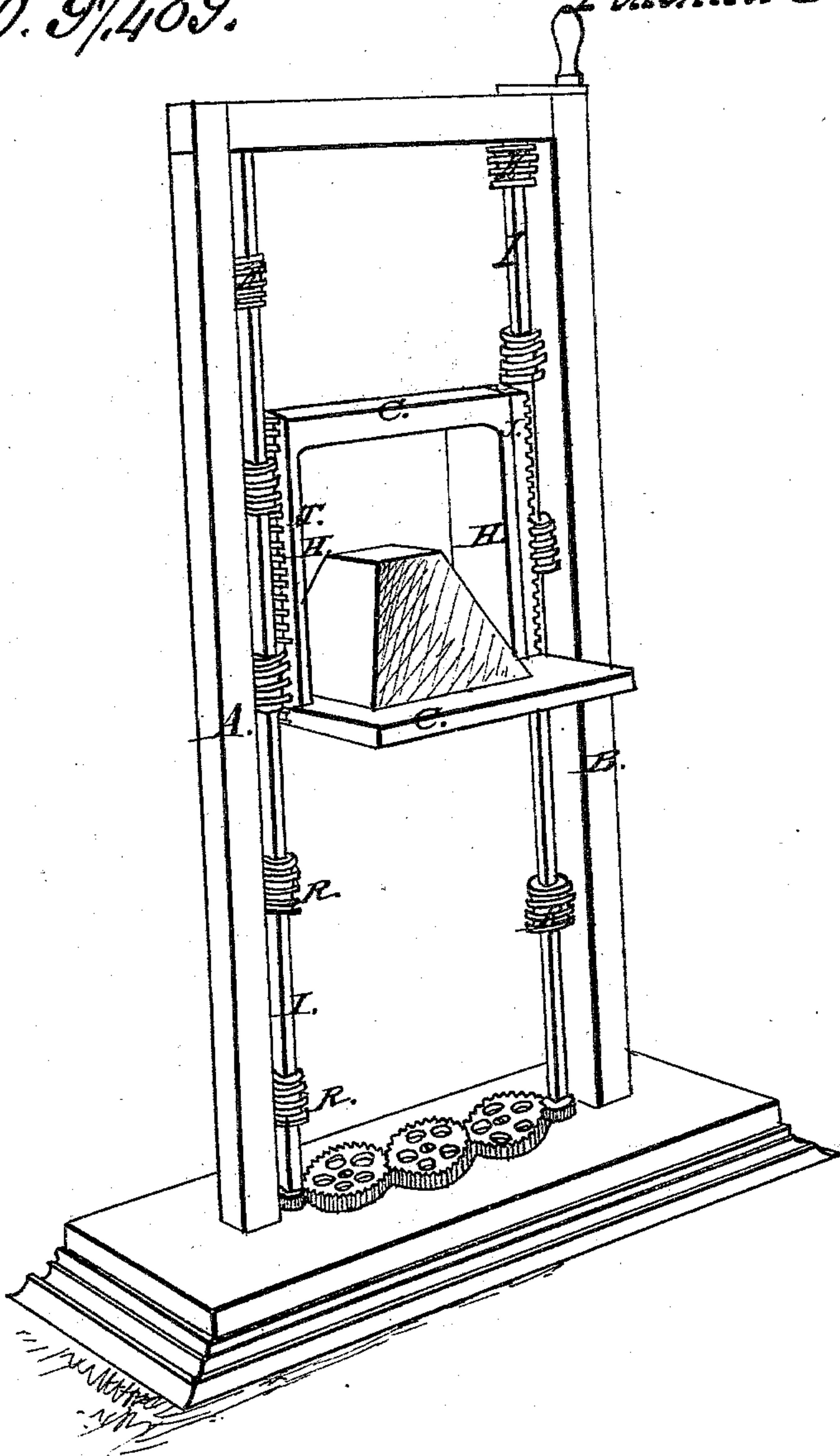


W. Edson,

Elevator.

No. 97,489.

Patented Dec. 7. 1869



Witnesses:

P. H. Ogley
Jos. R. Edson

Inventor:

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Letters Patent No. 97,489, dated December 7, 1869.

IMPROVEMENT IN ELEVATORS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, WILLIAM EDSON, of Boston, in the county of Suffolk, and State of Massachusetts, have invented certain new and useful Improvements in Elevators for Hotels, Stores, &c.; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

My invention consists in an improved method of constructing elevators, for use in hotels, stores, and similar buildings, the elevator to be operated by screws, constructed and arranged in a novel manner, as hereinafter more fully explained.

Figure 1 is a perspective view of my improved apparatus.

I construct as follows:

To the inner face of each of the posts A B is secured a vertical shaft, I, in such a manner as to permit the shafts to freely rotate.

Upon these shafts I are secured a series of bosses or screws, R, of a diameter of six inches or more, they being placed at uniform intervals or distances apart, and firmly secured.

The object of making the shafts and bosses thus, is, that it is much cheaper than to take a shaft of the necessary size, and cut a screw in it its whole length; and by making the bosses of so much greater diameter than the shaft, it affords an opportunity to attach pedestal-boxes or bearings to the posts A, for the support of the shafts I at frequent intervals between the bosses R, thus affording any desired number of supporting-points for the shafts, and enabling me to use smaller shafts, and keep them rigid, and at the same time use bosses or screws of larger diameter, and consequently giving much larger bearing-surfaces to the screw-threads on the bosses, which, as will be seen hereinafter, support and move the load to be raised or lowered.

I can construct a cage or platform, C, in any suitable manner, of such a width as, when complete, to fill the space crosswise between the screw-shafts.

To the outer faces of the sides H of the cage, I firmly secure a plate, J, which reaches from top to bottom of the cage C, these plates J being formed with a semicircular groove, running vertically, on their outer faces, of a size corresponding to the diameter of the bosses R, and having a screw-thread cut in these grooves to correspond with the thread on the bosses R.

The bosses I make usually about a foot in length; and the plates J should be of such a length that when the cage is placed in position, the plates will bear on one or more of the bosses at all times. It is obvious, that if desired, they may be arranged to bear on more of the bosses, and, where they are intended to raise heavy weights, this may be desirable.

It will readily be perceived that an elevator, constructed on this plan, can be made to raise a very heavy weight, and, at the same time, by so arranging the driving-mechanism as to give to the shafts I a rapid rotation, the cage can be raised or lowered with rapidity, when desired.

Another great advantage of this plan is, that there is but little or no danger of the cage falling, as it will stand wherever stopped, unless the screw-threads be made with great pitch.

When it is desired to use the elevator for raising heavy weights, the screw should have less pitch; but where the weight to be raised is less, the pitch of the screws may be increased, and they may be made with double or treble threads, if desired.

Having thus described my invention,

What I claim, is—

1. The shafts I, having a series of screws or bosses, R, arranged thereon, substantially as and for the purpose described.

2. In combination with the shafts I, having the bosses R secured thereon, the plates J, having the semicircular grooves, with screw-threads cut therein, said parts being arranged for joint operation, substantially as described.

WILLIAM EDSON.

Witnesses:

R. N. EAGH,
JOS. R. EDSON.