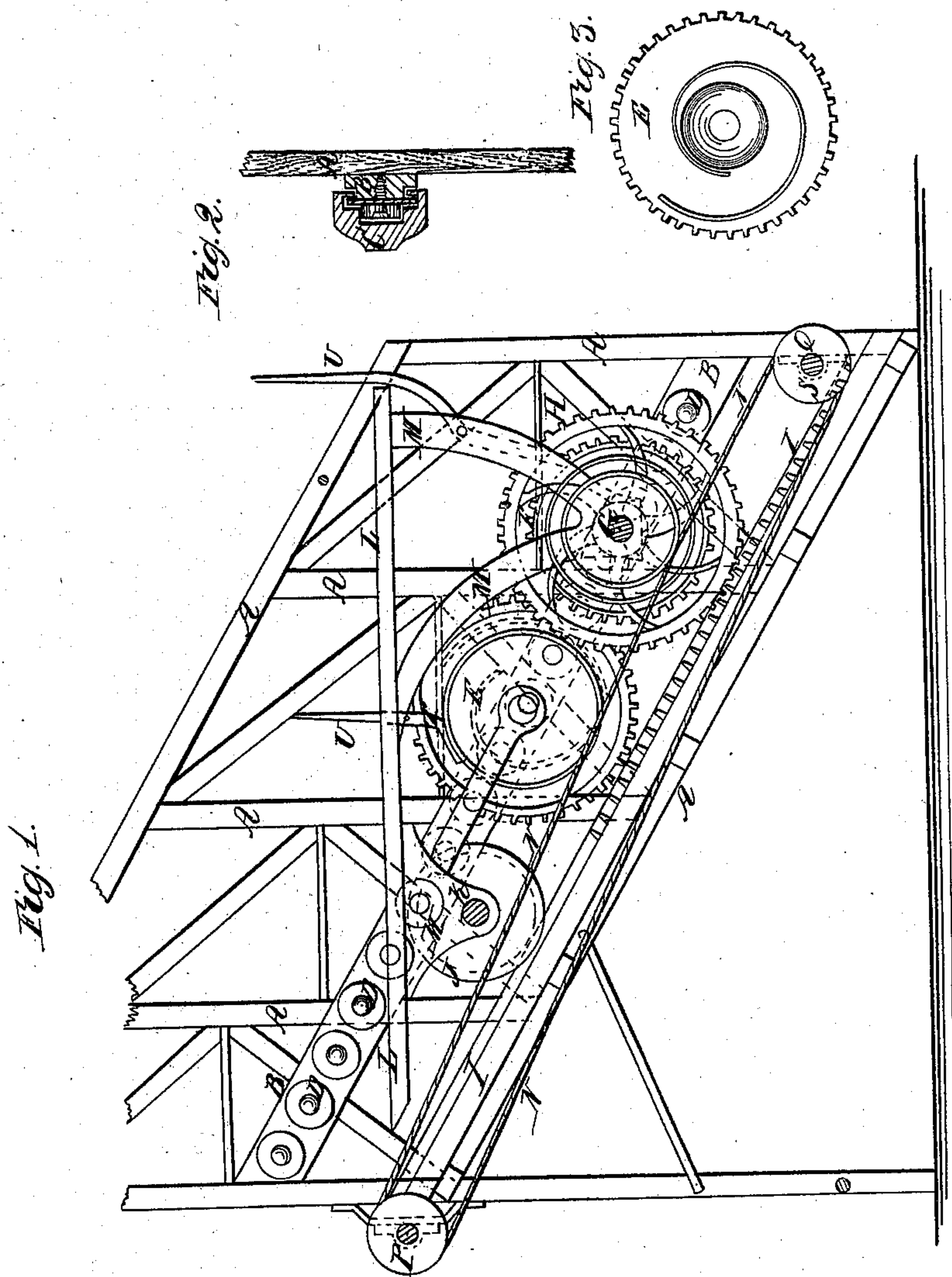


T. B. Simonton,

Elevator,

No. 100,811,

Patented Mar. 15 1870.



Witnesses:
A. W. Almqvist
Edgar Bok

Inventor:
T. B. Simonton
By Munn & Co
Attys

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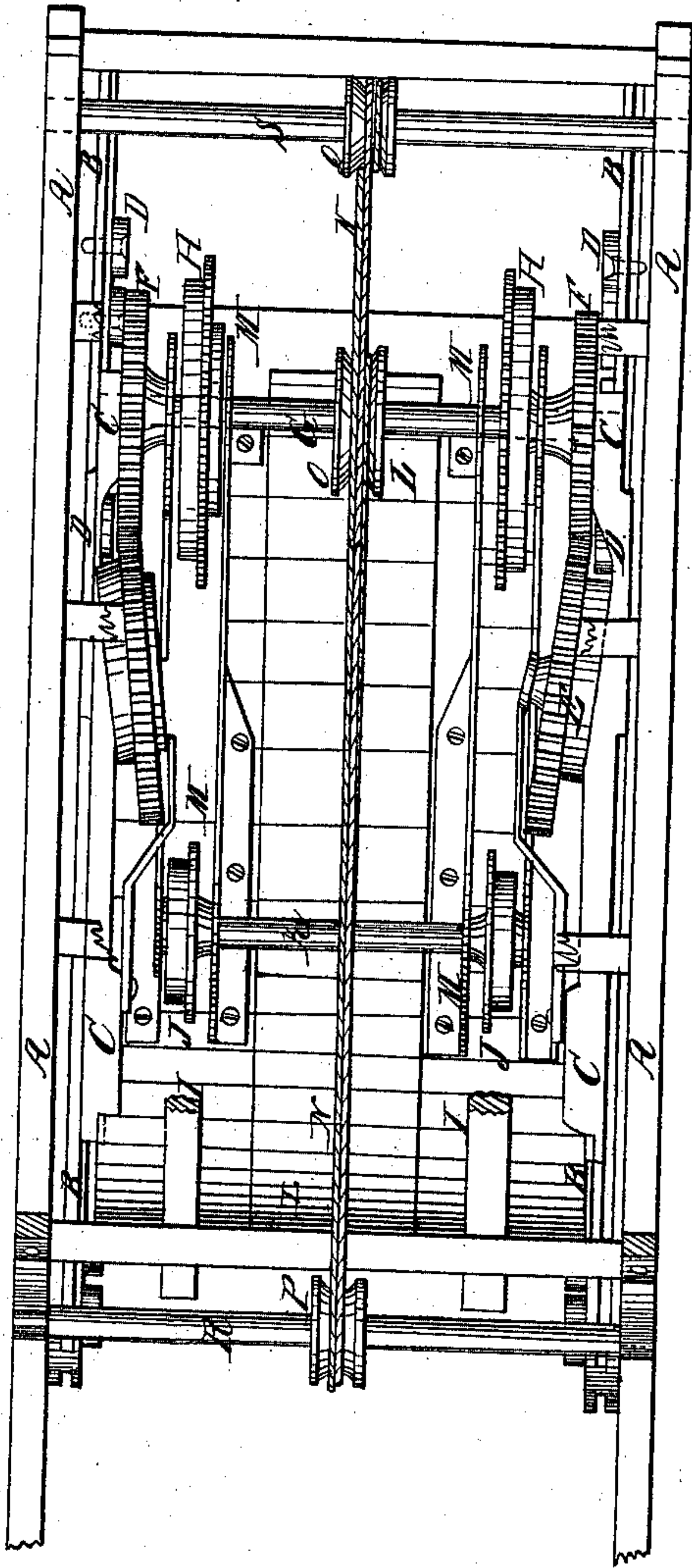


Fig. 4.

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United States Patent Office.

THOMAS B. SIMONTON, OF WILLIAMSBURG, NEW YORK.

Letters Patent No. 100,811, dated March 15, 1870.

IMPROVED INCLINE-PLANE ELEVATOR.

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, THOMAS B. SIMONTON, of Williamsburg, in the county of Kings, and State of New York, have invented a new and useful Improvement in Incline-Plane Elevator; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1, Sheet I, is a vertical section of my improved elevator.

Figure 2, Sheet I, is a detail cross-section of one of the ways and sliding bars of the same.

Figure 3, Sheet I, is a detail side view of one of the scroll-wheels.

Figure 4, Sheet II, is an under-side view of my improved elevator, part of the frame-work being broken away to show the construction.

Similar letters of reference indicate corresponding parts.

My invention has for its object to improve the construction of my improved elevator patented November 24, 1868, and numbered 84,385, so as to adapt it for use upon the inclines of railways for carrying cars up and down said inclines; and

It consists in the construction and combination of various parts of the apparatus, as hereinafter more fully described.

A represents the frame-work of the elevator, to the side parts of which the ways B are securely attached.

C are bars that slide longitudinally upon the ways B, and with which the movable parts of the elevator are connected.

The upper and lower edges of the ways B are grooved longitudinally, and the sliding bars C are made with hook flanges, which enter the grooves in the ways B, and thus hold the sliding bars in their places upon said ways.

To each of the ways B is pivoted a series or row of rollers, D, upon which the spiral scroll of the scroll-wheels E take hold, so that the elevator-platform may be raised or lowered by revolving the scroll-wheels E in one or the other direction.

The scroll-wheels E revolve upon axles, attached in an inclined position to the sliding bars C, so that the upper sides of the said scroll-wheels E may be inclined inward, as shown in fig. 4, to enable the scroll of said wheels to work properly upon the rollers D of the sliding bars C.

In the rim of the scroll-wheels E are formed teeth, into which mesh the teeth of the gear-wheels F, attached to the shaft G, so that the said gear-wheels F may be revolved to operate the scroll-wheels E by revolving said shaft G.

To the shaft G are also attached flanged wheels H, the treads of which roll upon the rails I of the track, which rails I may be attached to ties laid upon the ground or attached to the frame-work A of the elevator, as circumstances may require.

J is another set of flanged wheels, rolling upon the track I and attached to the axle K, which is connected with the sliding bars C.

One or more of the flanged wheels H J have teeth formed upon the edges of their flanges, which mesh into the teeth of racks formed in or connected with the rails I, as shown in fig. 1.

L is the platform, which is connected with and supported from the axles G K by a frame-work, M, which is so constructed as to support the said platform L in a horizontal position while passing up and down the incline.

N is the endless rope or chain, by means of which the apparatus is raised and lowered.

The endless rope or chain N passes around the pulley or wheel O, attached to one or the other of the axles G K, making one or more turns about said pulley.

The rope or chain N passes around the pulleys P and Q, attached to the shafts R and S, secured, respectively, to suitable supports at the upper and lower ends of the incline.

The elevator may be operated by power applied to one or the other of the shafts R S, as may be convenient.

Upon one or more of the wheels E H J are formed flanges, upon which the shoes of the brakes T may operate.

The brakes T may be applied by means of levers V, passing up at the sides or ends or through slots in the platform L, so that they may be conveniently operated by the attendant or attendants standing upon said platform.

The brake or brakes T U should be powerful enough to stop and hold the apparatus and its load at any point of the incline, should anything get out of order or break, or should it be necessary from any other cause to hold the apparatus stationary.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. The series or rows of rollers D, in combination with the ways B and sliding bars C with which the movable parts of the elevator are connected, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the hooked flanges of the sliding bars C with the grooved sides of the ways B, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the flanged wheels and tracks H J with the scroll-wheels E, sliding bars C, and ways B, substantially as herein shown and described, and for the purpose set forth.

4. The combination of the toothed flanges of the wheels H J, or either of them, with the toothed racks of the rails I, when used in connection with the operating-mechanism of the elevator herein described, substantially as and for the purpose set forth.

5. In combination with the rails I, gear-wheels F, rollers D, and ways B, the wheels E H J and brakes T U, as and for the purpose set forth.

The above specification of my invention signed by me this 19th day of October, 1869.

THOS. B. SIMONTON.

Witnesses:

W. S. HILL,
JAMES T. GRAHAM.