

*Bennett & Green,*

*Elevator.*

*No. 103414.*

*Patented May 24, 1870.*

Fig. 1.

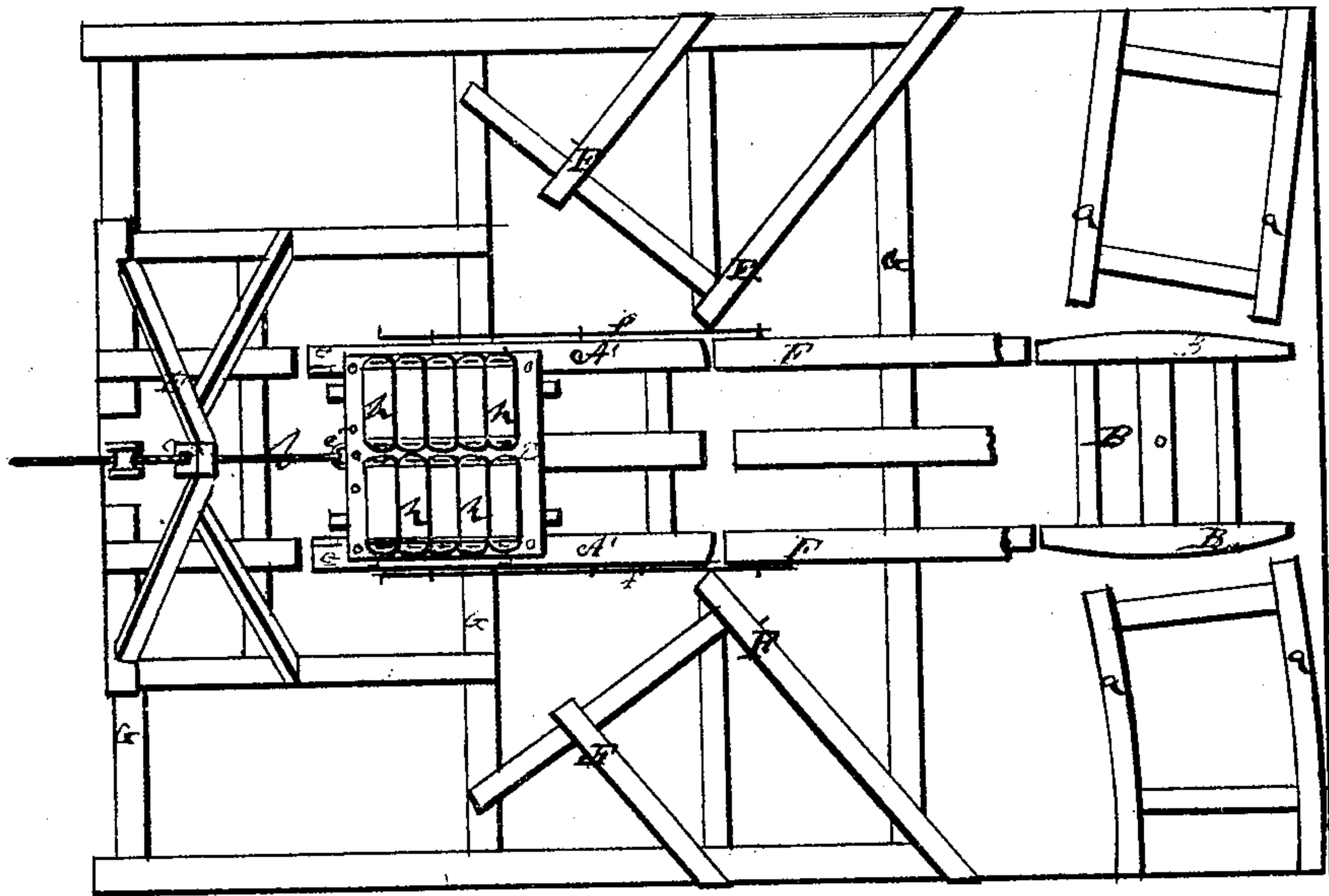
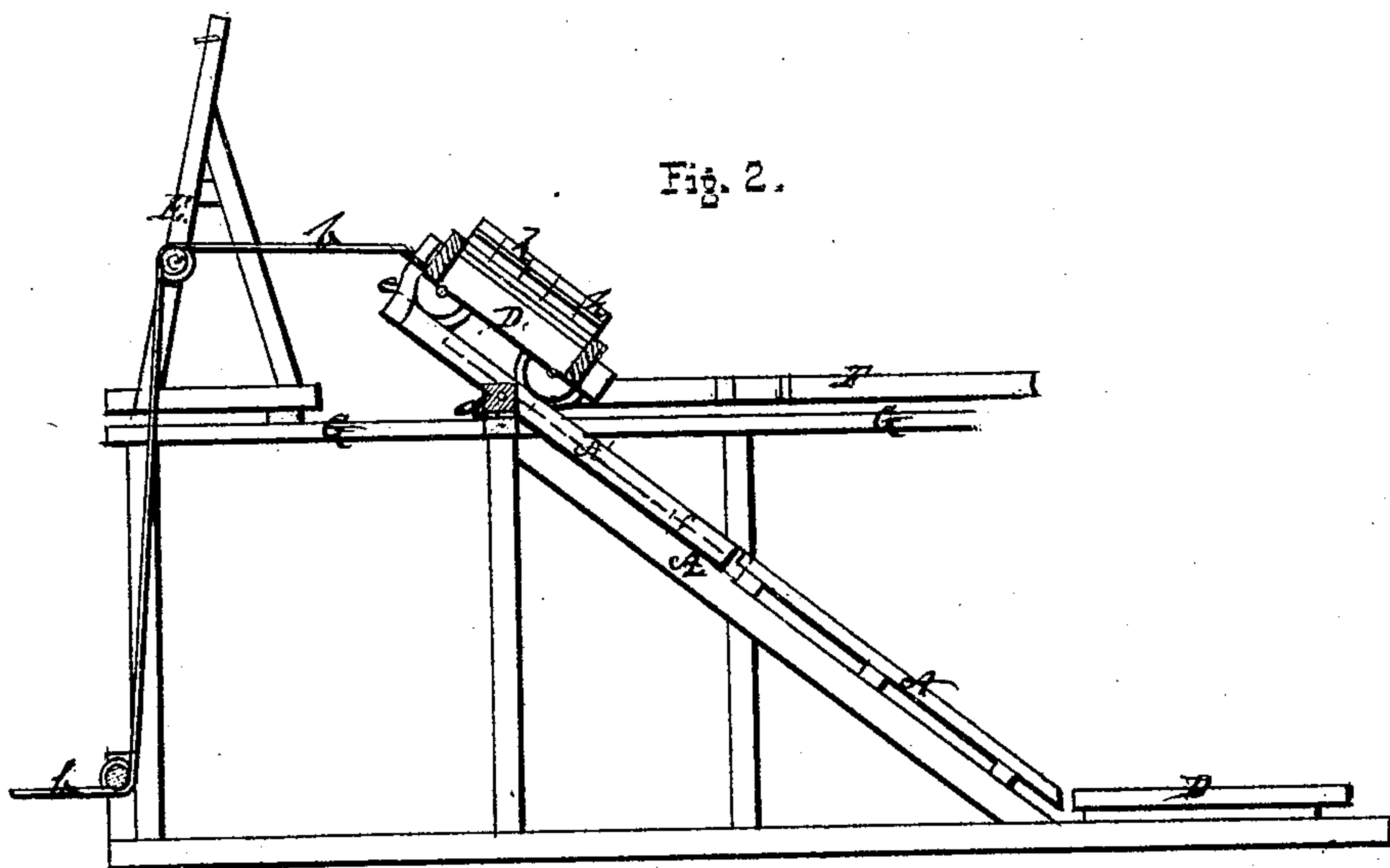


Fig. 2.



Witnesses.

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# United States Patent Office.

JOHN C. BENNETT AND DAVID N. GREEN, OF COLDWATER, MICHIGAN.

Letters Patent No. 103,414, dated May 24, 1870.

## IMPROVEMENT IN ELEVATORS FOR BUILDING MATERIAL.

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

To all whom it may concern:

Be it known that we, JOHN C. BENNETT and DAVID N. GREEN, of the city of Coldwater, in the county of Branch and State of Michigan, have invented certain new and useful Improvements in Apparatus for Raising Stone, Brick, Mortar, and all kinds of material for the erection of buildings, &c.; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 represents a plan or top view of the framework of a building, with the apparatus for elevating and distributing the material to the various points to be used.

Figure 2 is a side elevation and section, showing the inclined tram-way elevator and car, with a hoisting apparatus.

The object of our invention is to save manual labor, to facilitate and cheapen the construction of public and other buildings in the process of erection, by carrying up brick, mortar, lumber, and all other material which is required in large quantities, and distributing the same conveniently for use.

Our invention consists in the arrangement and combination of portable tram-roads or car-tracks, turn-tables, an inclined railway, of which a portion is made to tilt, the same forming a turn-table, and truck-cars, provided with brick and mortar boxes, and other fixtures for holding lumber and all kinds of material used in large quantities, for the erection of all kinds of buildings, bridges, or other structures, so that, when the car is elevated to either story, platform, or staging, it, with its contents, is easily conveyed to any portion of the structure, to be deposited for use.

To enable others to make and use our improvements, we will describe them more in detail, referring to the drawings and to the letters marked thereon.

In the construction of public buildings, private edifices, or any large structure, made wholly or in part of masonry, when the timbers and joists are placed for the first story, or at a height that it becomes necessary to erect a staging to work on, we place in some convenient position an inclined railway, A, or car-track, so arranged as to allow of our taking the truck-car D to any desired place on the ground by means of two or more auxiliary tracks or tram-roads *a a* to the piles of brick, or mortar, or other material to be used in the building.

When the car D is loaded, it is moved onto the turn-table B, which is placed at the foot of the inclined track A, when the car is placed in position for being drawn up the incline by means of a chain or rope, *b*, passing over the sheave or pulley *c* in the derrick or frame-work E, erected for the purpose, to be operated by steam, horse, or other sufficient power, placed in any desired position.

The inclined track A is made in sections, of any desired lengths, the upper section A' being so constructed and hinged to a timber, *d*, as to admit of its tilting up from the incline to a horizontal position, when the car D is brought up, so as to counterbalance the lower end, which preponderates and resumes its inclined position when the car is off from it, unless it is secured to the tram-roads or tracks F F by the slide-bolts *f f* placed on the sides of it.

The tilting section of track A' also forms a turn-table to connect with the branch tracks or tram-roads F F, so that a loaded car can be moved in any direction on the frame-work of the building, to convey the material to either side.

On the upper ends of the track or upper turn-table A' are inserted bumpers *e e*, for the purpose of stopping the car D in the right place, when drawn up, to balance the track for assuming the horizontal position for moving off. The stops or bumpers *e e* can be taken out to allow the car D to be moved forward in a direct line under the derrick E, so that the car can be run to either of the four walls or sides of the building, or to any point on a staging or platform that the auxiliary rails or tram-roads may be placed.

The derrick-frame E is made portable, so that it can be easily moved to any place on the floor-timbers or joists G G, and carried up as one story above another is built, and the building progresses.

The feet of the derrick are provided with spuds of iron, so that it is held from slipping on the boards or timber, and, by its own weight, will hold itself sufficiently firm for all ordinary purposes.

The inclined plane between the track A A may have a plank, C, on which the workmen may ascend and descend, thereby dispensing with ladders.

Any number of cars or trucks may be employed in the construction of large buildings, and supplied with the appropriate means of holding the various material, such as beams, joists, plank, boards, laths, &c., from slipping off the car while it is being elevated.

The car D is so constructed as to contain any number of boxes for carrying brick or mortar. The boxes *h h* may be made of suitable sizes, so as to contain as many bricks or as much mortar as can be conveniently handled by one man, taken from the car, and placed within reach of the masons.

The boxes for carrying the bricks are made with ends and two sides, if desired to distinguish them from the mortar-boxes or hods, which have the two ends and only one side, they all being provided with handles at the ends for carrying.

When long timbers, beams, girders, or joists are to be taken up the inclined track, it is only necessary to leave off the brick and mortar boxes *h h*, draw the chain or rope *b* through the ring *i* of the car, make a



noose of it around the timber, placed so as to nearly balance on the car, and it is securely held for elevating to the required height.

If desired to use but one car for elevating all of the heavy material in a building, stakes may be fitted in the sides of the truck on car D, and any well-known device may be used for binding the load to the car so that it will not slip off.

It has been practically demonstrated for nearly the last two years that, by the employment of the mechanism constructed and arranged as above described, more than fifty per cent. of the cost of the tending of the masons has been saved, and much time and labor in elevating and placing the timbers.

What we claim as our invention, and desire to secure by Letters Patent, is—

The combination of the portable tram-roads, the inclined railway-track, the turn-tables, the truck-car, and the brick and mortar boxes, all constructed and arranged to operate substantially in the manner as and for the purposes herein specified.

In testimony whereof, we hereunto subscribe our names in the presence of witnesses.

DAVID N. GREEN.  
JOHN C. BENNETT.

Witnesses:

JOHN CHANDLER,  
E. R. ROOT.