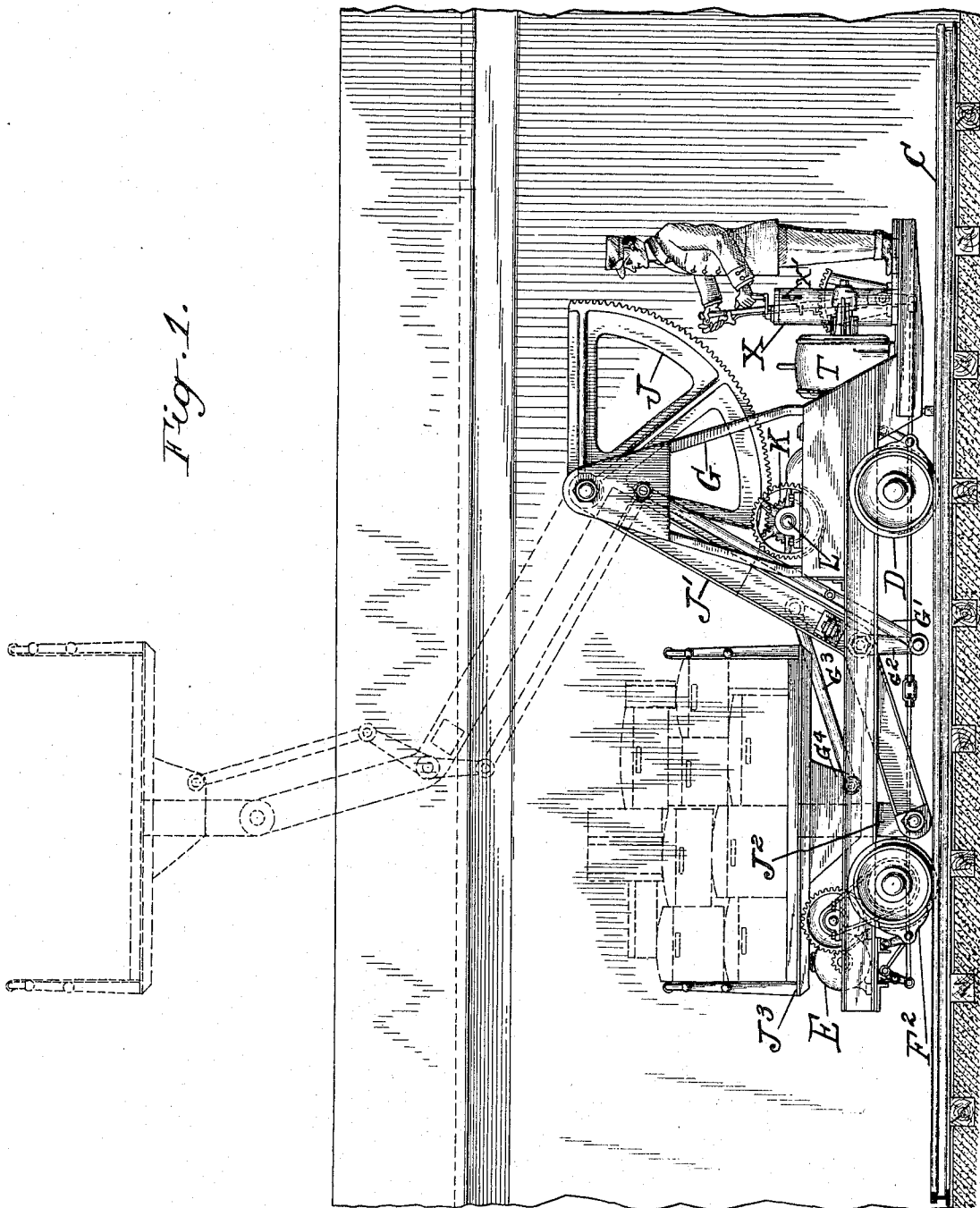


T. E. BROWN.
ELEVATING BAGGAGE TRUCK.
APPLICATION FILED JAN. 15, 1913.

1,141,928.

Patented June 8, 1915.
3 SHEETS—SHEET 1.



Witnesses:
James A. Bethell
Walter C. Strong

Thomas E. Brown
Inventor

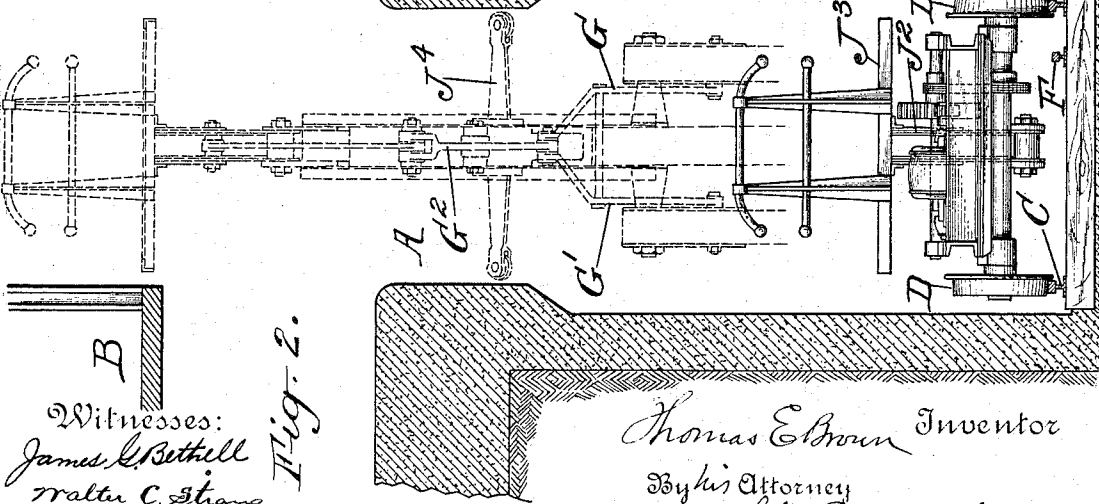
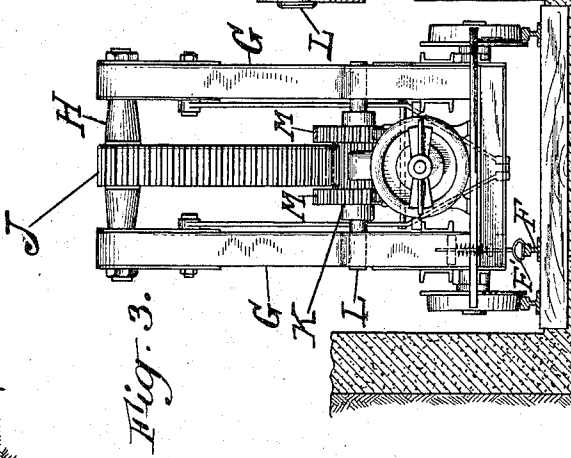
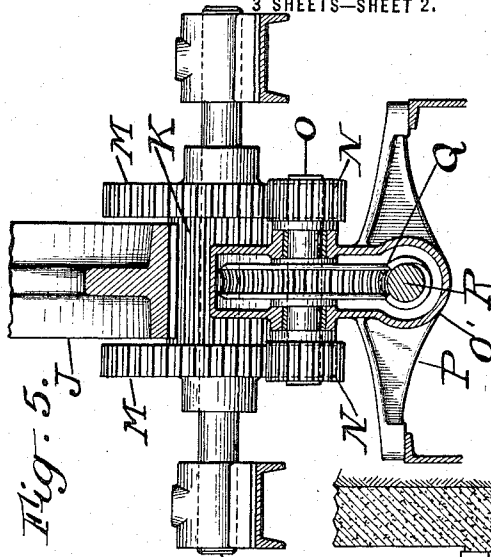
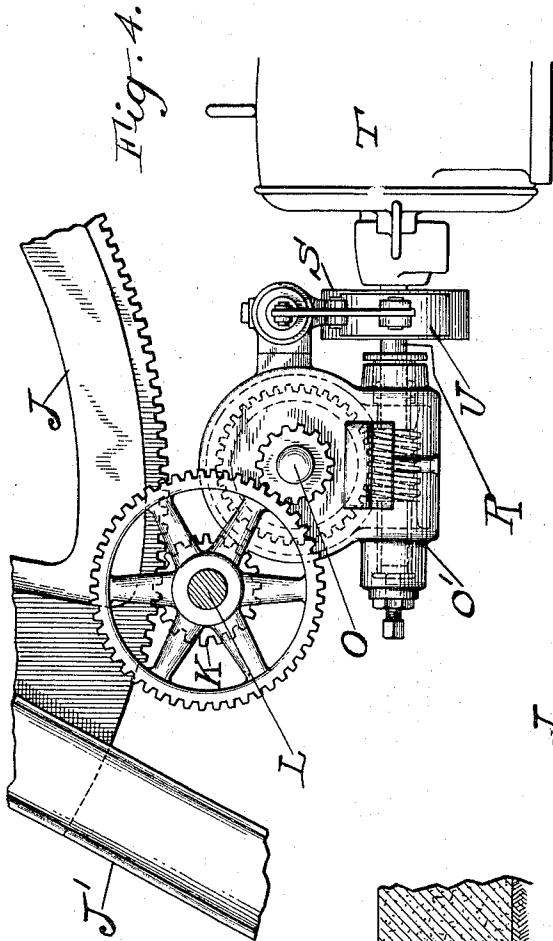
By his Attorney
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3 SHEETS—SHEET 2.



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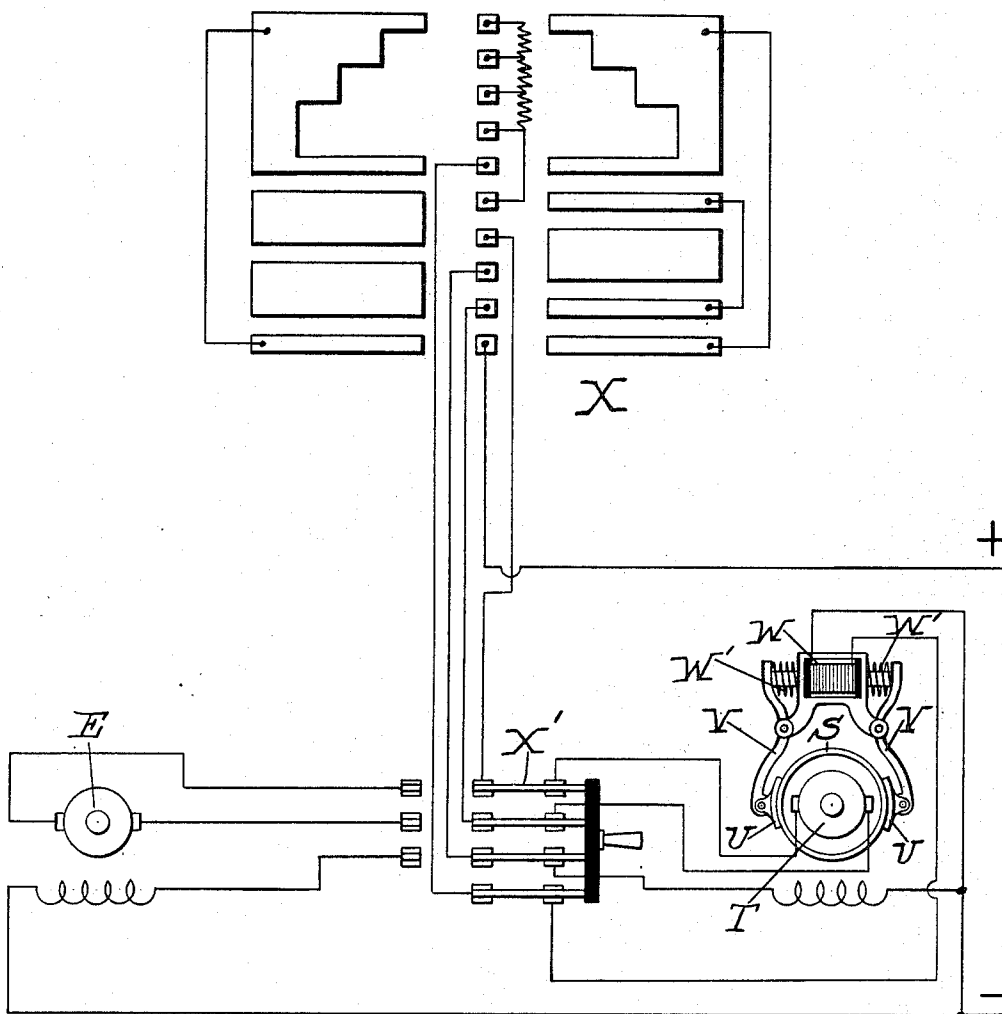
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3 SHEETS—SHEET 3.

Fig. 6.



WITNESSES:

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INVENTOR

BY *Thompson*
ATTORNEY

UNITED STATES PATENT OFFICE

THOMAS E. BROWN, OF NEW YORK, N. Y., ASSIGNOR TO OTIS ELEVATOR COMPANY, OF JERSEY CITY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

ELEVATING BAGGAGE-TRUCK.

1,141,928.

Specification of Letters Patent.

Patented June 8, 1915.

Application filed January 15, 1913. Serial No. 742,125.

To all whom it may concern:

Be it known that I, THOMAS E. BROWN, a citizen of the United States, residing in New York, in the county of New York and State of New York, have invented a new and useful Improvement in Elevating Baggage-Trucks, of which the following is a specification.

My invention relates to a truck, on which is a crane, operable vertically to elevate and lower a platform or like receptacle, loaded with baggage or other articles to be lifted to or lowered from one level to another, and in the example disclosed, is more particularly designed and adapted to be used to transport, raise and lower the platform of a baggage truck in tunnels below a railroad track and the train on the track containing baggage cars at a railroad terminal.

My invention also involves the application of motive power both to propel the truck and to elevate and lower the crane with its load of baggage.

The objects of the invention are to provide a truck, which may be loaded with baggage in the railroad terminal baggage room, be moved to the tunnel below the railroad track upon which the train of cars to be loaded with baggage is standing, and the crane on the truck be operated to lift or lower the load of baggage up to the door of the car to receive or discharge it. Of course, it is plain that the truck can be loaded at the car door with baggage, the crane be operated to lower the baggage and the truck be moved to the baggage room with its load of baggage. The truck can also be used simply as a mere elevating or lowering means to transfer baggage to and from the ordinary baggage trucks and baggage car; and in still other cases, my invention can be used to raise and lower the ordinary baggage truck with its load of baggage.

A still further object of my invention is to provide motive power to propel the truck and to lift and lower the crane with and without its load of baggage and to sustain the crane at any elevation within its range of operation. I attain this object by the use of electric motors, all of which will more particularly appear in the description following and the drawings accompanying the same.

I attain these objects by the mechanism

illustrated in the accompanying drawings, 55 in which—

Figure 1 is a side or lengthwise elevation of the truck in a tunnel, the crane being shown in dotted lines as elevated through the top of the tunnel; Figs. 2 and 3 are end views of the same; Fig. 4 is a detail view of the gearing for elevating and lowering the crane; Fig. 5 is a vertical cross section through Fig. 4; Fig. 6 is a view of the motive power, the controller and the electrical circuits therefor, together with a view of the brake pulley and brake therefor.

Similar letters refer to similar parts throughout the several views.

The tunnel, heretofore referred to, is indicated in the drawings by the reference character A, and a corner of the baggage car door by the character B. As shown in Fig. 2 the tunnel is along the side of the car and open at the top, and of sufficient width for the passage therethrough of the baggage platform or receptacle. In the floor or bottom of the tunnel is a rail track, C, on which the wheels, D, of the truck run, and which also support the same. In this instance, the truck is moved by an electric motor E, on the chassis of the truck, to take current from a third rail F, through a sliding contact F' (see Fig. 3), the motor shaft being geared and belted to the wheels or axle of the truck, as preferred. Of course, any other suitable motor and connections might be used to propel the truck. Suitable brakes B', are used to brake the truck wheels, through brake rod connections and a hand lever to operate the same, as shown, under the control of the truckman. On the chassis of the truck is a pair of uprights G, one upright on one side and the other on the other side of the chassis, shown in this instance substantially as an A-frame. Mounted in the upper end of the uprights is a shaft H; and secured on the shaft is a gear-toothed sector, J, the teeth of which mesh with a gear-toothed pinion K, secured to a shaft L journaled in the base of the A-frame. The shaft L has fast on it, on either side of the pinion K, gear-toothed pinions M, which mesh with gear toothed pinions, N, fast on a shaft O, mounted in a casting O' rising from a strut P, across the base of the uprights at their bottom. On the middle of the shaft O is a worm wheel Q, mesh-

ing with a worm shaft R, journaled in the casting O', fast on which is a brake pulley S. The shaft R is coupled or otherwise secured to the armature shaft of an electric motor T. There is a pair of brake shoes U, to engage the pulley S, which shoes are supported by levers V, pivoted to the casting. One end of the levers pivotally carries a brake shoe to be pressed against the pulley; and the other end of the levers carries a core of an electromagnet W. Sleeved on the cores of the magnet, between the levers and a portion of the casing supporting the magnet, are coiled springs W', which serve to apply the brake shoes to the pulley. The purpose of the magnet is, upon energization, to attract the cores toward each other to release the brake shoes from the pulley. There is an electric controller X for the motor. The motors E and T and the electromagnet W, are energized by current taken from the third rail and are controlled by a drum electric controller X. There is a four-blade knife switch X', between the controller and the motors and electro-magnet, which switch is operable to be turned to connect the controller with the motor E, and the motor T and the magnet.

In Fig. 6 is diagrammatically shown a conventional drum electric controller, electric motors, knife switch, electromagnet and the various circuits therebetween; in the light of which it will be sufficient to state that when the switch is thrown between the motor E and the controller, the latter may be turned to make the proper contacts to complete the circuits for the motor to cause the same to be energized and propel the truck; and to control the motor to start and stop and control the speed and direction of movement of the same; and that when the switch is turned to connect the controller and motor T and the electromagnet W, the controller can be operated to cause the motor and the magnet to be energized—the latter to release the brake shoes from the pulley S, and the former, the motor T, to operate to rotate the worm shaft R to turn the sector J, and to start and stop the movement of the same and to control its rate and direction of movement.

There is a pair of rigid elbow arms J'; one end of the arms being fast to the sector and the other end pivotally supporting one end of a pair of uprights J², the other end of the latter being rigidly fast to a platform J³, or other receptacle on which the baggage or other articles will be loaded. There is a pair of links G¹ pivoted at one end to the uprights G, and the other end to one end of a bell crank lever G², the latter being pivoted at its elbow to the arms J' at their elbow; the other end of the lever G² being pivoted to a link G³, the other end of which is pivoted to plates G⁴, fast to the under

side of the platform. This arrangement of arms and links between the sector and the platform enables the latter to be raised and lowered by the sector and maintained in a level or horizontal position. In some instances it may be found to be desirable to guide or brace laterally the crane in its movement, by securing a crosshead J⁴ to the same, as indicated in dotted lines in the drawings, the ends of the crosshead abutting against the side walls of the tunnel.

The mode of operation of my truck is so plain from its description that it is deemed unnecessary to describe it in detail; it is sufficient to observe that upon the closing of the circuit by the switch X' between the third rail or other source of current, the motor E and the controller X, and upon a movement of the handle of the latter, the truck will be started and propelled in the direction desired and stopped by the motor-man; that upon the closing by the switch X' of the circuit between the source of current, the motor T, the brake coil W, and the controller X, upon a movement of the handle of the latter, the brakes are released from the pulley, and the motor is caused to lift and lower the platform; the brake coil to be deenergized, and the springs permitted to apply the brake shoes to the pulley to retard the movement of its shaft or hold the same against being turned by the weight of the platform or the load.

What I claim is:—

1. A truck adapted to run on tracks, an elevating platform, a crane to elevate the same, means to actuate the crane, and a crosshead to guide and steady the crane in its movement.

2. A truck adapted to run on tracks, an elevating platform, a vertically oscillatory crane comprising substantially an elbow lever, one end pivoted to the under side of the platform and the other end formed of a gear-toothed sector, and a power-actuable toothed-gearing meshing with the sector to oscillate the crane.

3. A truck adapted to run on tracks, an elevating platform, a vertically oscillatory crane, comprising substantially an elbow lever, one end pivoted to the under side of the platform and the other end formed of a gear-toothed sector, an upright or stand on which the crane is fulcrumed, means to maintain the platform level in its elevating movement, comprising a bent lever pivoted to the crane and links connecting the same with the platform and stand, and a power-actuable gear-toothed gearing, meshing with the sector, to oscillate the crane.

4. A truck adapted to run on tracks, an elevating platform, power means to elevate the same, a brake to hold the platform elevated and to retard its rate of elevating.

5. A truck adapted to run on tracks and

comprising an elevating platform, an electric motor to elevate the same, a brake for the platform, means to apply the brake, and an electromagnet to release the same.

5 6. A truck adapted to run on tracks and comprising an elevating platform, an electric motor to elevate the same, a shaft between the motor and the platform, a brake for the latter, comprising a wheel fast on
10 the shaft, brake shoes, means to apply the

shoes to the wheel, an electromagnet to release the shoes, and an electric controller for the motor and the magnet.

In testimony whereof, I have signed my name to this specification in the presence 15 of two subscribing witnesses.

THOMAS E. BROWN.

Witnesses:

GUSTAV WESTLIN,
W. W. WHITE, Jr.