

No. 616,263.

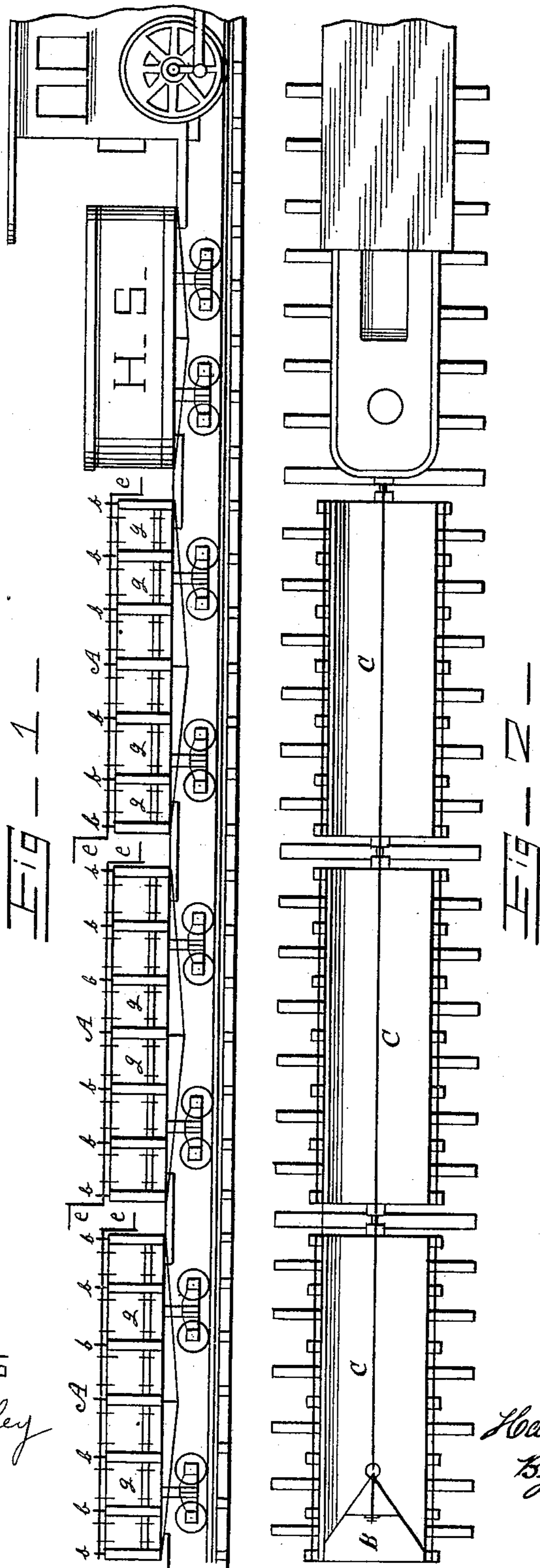
Patented Dec. 20, 1898.

H. SHEPHERD.
BALLAST CAR.

(Application filed Mar. 7, 1898.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES

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E. K. Powers

INVENTOR

Harry Shepherd
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Atty

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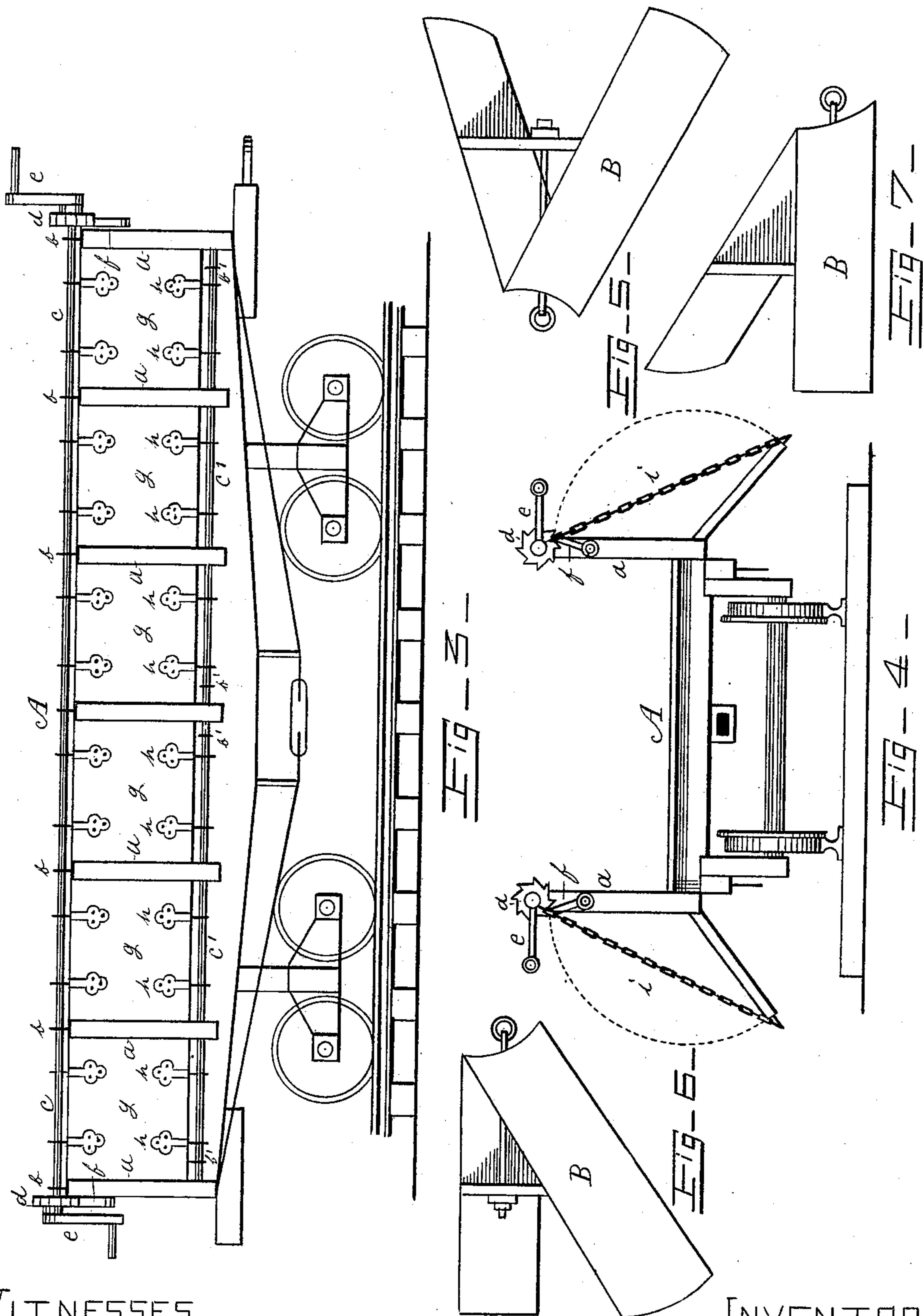
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UNITED STATES PATENT OFFICE.

HARRY SHEPHERD, OF MINNEAPOLIS, MINNESOTA.

BALLAST-CAR.

SPECIFICATION forming part of Letters Patent No. 616,263, dated December 20, 1898.

Application filed March 7, 1898. Serial No. 672,991. (No model.)

To all whom it may concern:

Be it known that I, HARRY SHEPHERD, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and useful Improvement in Ballast-Cars, of which the following is a specification.

My invention relates to railroad construction, and has for its object the production of a car to carry gravel for ballasting the track adapted to being unloaded by means of plows, as will hereinafter be understood.

My invention is shown in the accompanying drawings, in which—

Figure 1 is a side elevation of a train of my cars. Fig. 2 is a top view of the same. Fig. 3 is a side elevation of one of my cars on a larger scale. Fig. 4 is an end elevation thereof; and Figs. 5, 6, and 7 are details.

My invention consists in equipping ordinary flat-cars with side-boards adapted to hold loads of gravel in place during transportation and to serve as inclines or aprons when the train has reached its destination and its load is being plowed off. To this end I erect along the sides of the car A strong posts *a*, preferably seven on each side. Into the tops of these posts I screw eyebolts *b*, through which I pass iron rods *c*, which extend the entire length of the car. Upon the ends of these rods *c* I affix ratchet-wheels *d* and crank-handles *e*. Pawls *f* engage the teeth of the ratchet-wheels *d*. Into the side beams of the car A and just below the edge of its floor I screw other eyebolts *b'*, through which I pass other iron rods *c'*. Into the spaces between the posts *a* I fit side-boards *g*. These side-boards *g* are provided with straps or hinges *h*, which swing upon the iron rod *c'*. To the upper rods *c* I affix chains *i*, which extend to and are connected with the upper edge of the side-boards *g*. These chains *i* are of sufficient length to permit of the side-boards *g* dropping to a vertical position, if need be, and are adapted to be wound upon the iron rod *c*. Three forms of plows B are used in removing the gravel from this form of car, the first being a center or double plow. (Shown in Fig. 5.) This form is designed to remove the gravel from both sides of the cars, apportioning it to both sides of the track. The second form, a side or single plow, (shown in Fig. 6,) is designed to remove the gravel from the right-hand side of the cars, and the third form, another side or single plow, (shown in Fig. 7,)

is designed to remove the gravel from the left-hand side of the cars. One of these plows B is fastened to a cable C and placed at the rear end of the train, the forward end of the said cable being attached to the locomotive D or to a stationary engine placed at the forward end of the train.

The operation of a ballast-train is as follows: The side-boards *g* being in place, as shown in Fig. 1, the train is drawn to or backed into a gravel-pit and when loaded is hauled to the place of distribution. The pawls *f* are now released from the teeth of the ratchet-wheels *d*, thereby releasing the side-boards *g*, which swing outward and downward, as shown by dotted lines in Fig. 4, until they are at the required angle, where they are "set" by reaffixing the pawls *f* into the teeth of the ratchet-wheel *d*. The train is now "cut" at the forward end of the first loaded car and the engineer signaled "Go ahead." Now as the engine moves forward, pulling upon the cable C, (the double plow being attached thereto,) the gravel is shoved from both sides of the cars, slides down the side-boards *g*, (now inclines or aprons,) and lands outside and away from the rails or track. Hence the train is ready to be drawn or backed from the dumping-ground. This is an important advantage and is the point of excellence in my invention, as heretofore and at the present time the gravel when plowed off falls against and upon the track and requires the use of shovels in removing it therefrom before the train can "pull out."

Having thus described my invention and set forth its advantages, what I claim as new, and desire to secure by Letters Patent, is—

In a ballast-car adapted to being unloaded by means of a plow drawn upon its floor or deck, the combination with the plow and the cable thereunto affixed; of the side-boards *g* hinged at their lower edges, and operated by the chains *i* affixed at their upper edges; and the longitudinal rods *c* provided with the ratchet-wheel *d*, the crank-handles *e* and the pawls *f*, which serve as windlasses for raising and holding the said side-boards in place, substantially as shown and for the purposes specified.

HARRY SHEPHERD.

Witnesses:

WILLIAM J. HIRTH,
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