

2 Sheets—Sheet 1.

# COALING LOCOMOTIVES AND CHUTE THEREFOR.

No. 259,529.

Patented June 13, 1882.

*Fig. 1*

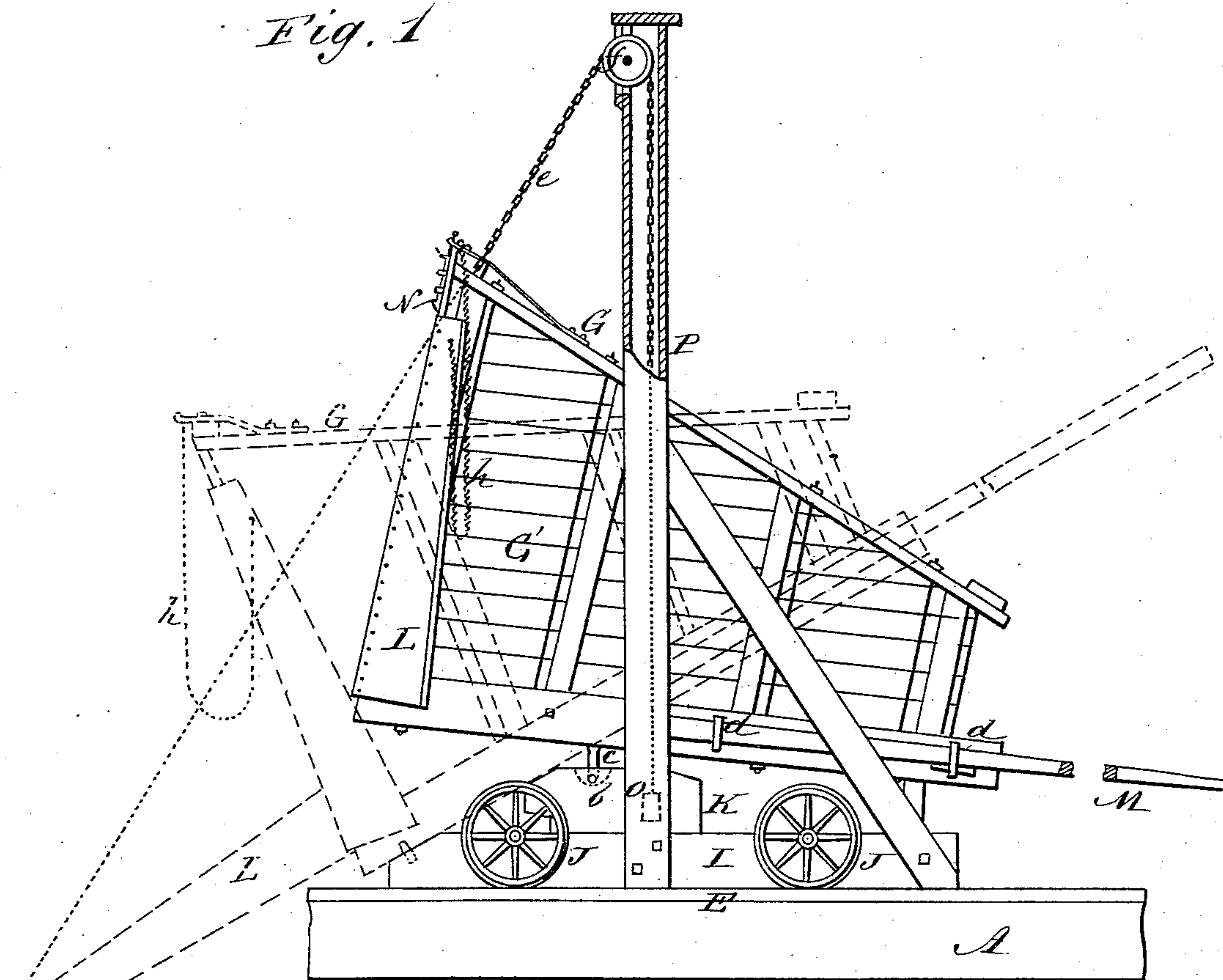
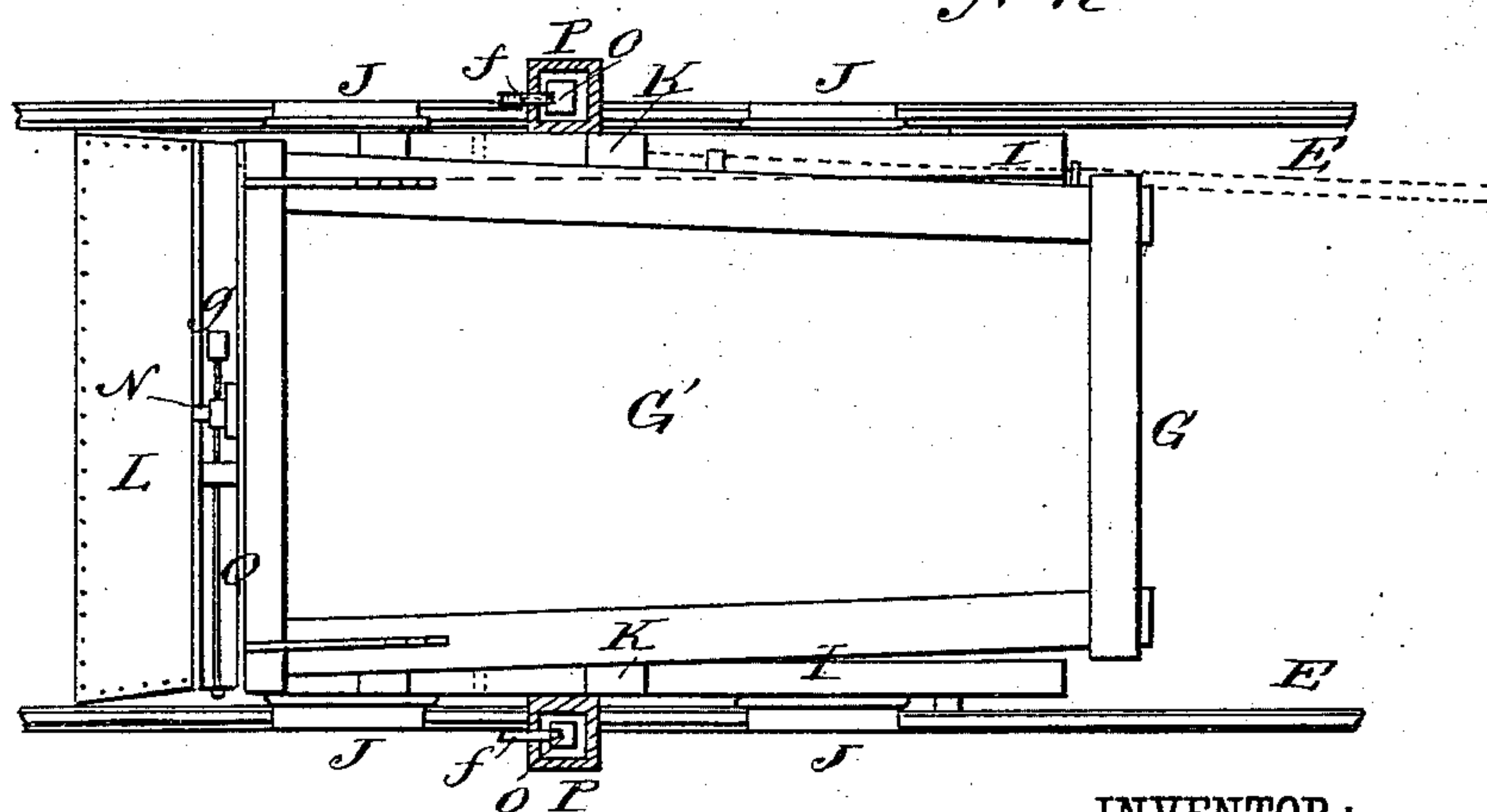


Fig. 2



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(No Model.)

2 Sheets—Sheet 2.

C. GORHAM & W. BARTLETT.  
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Fig. 3

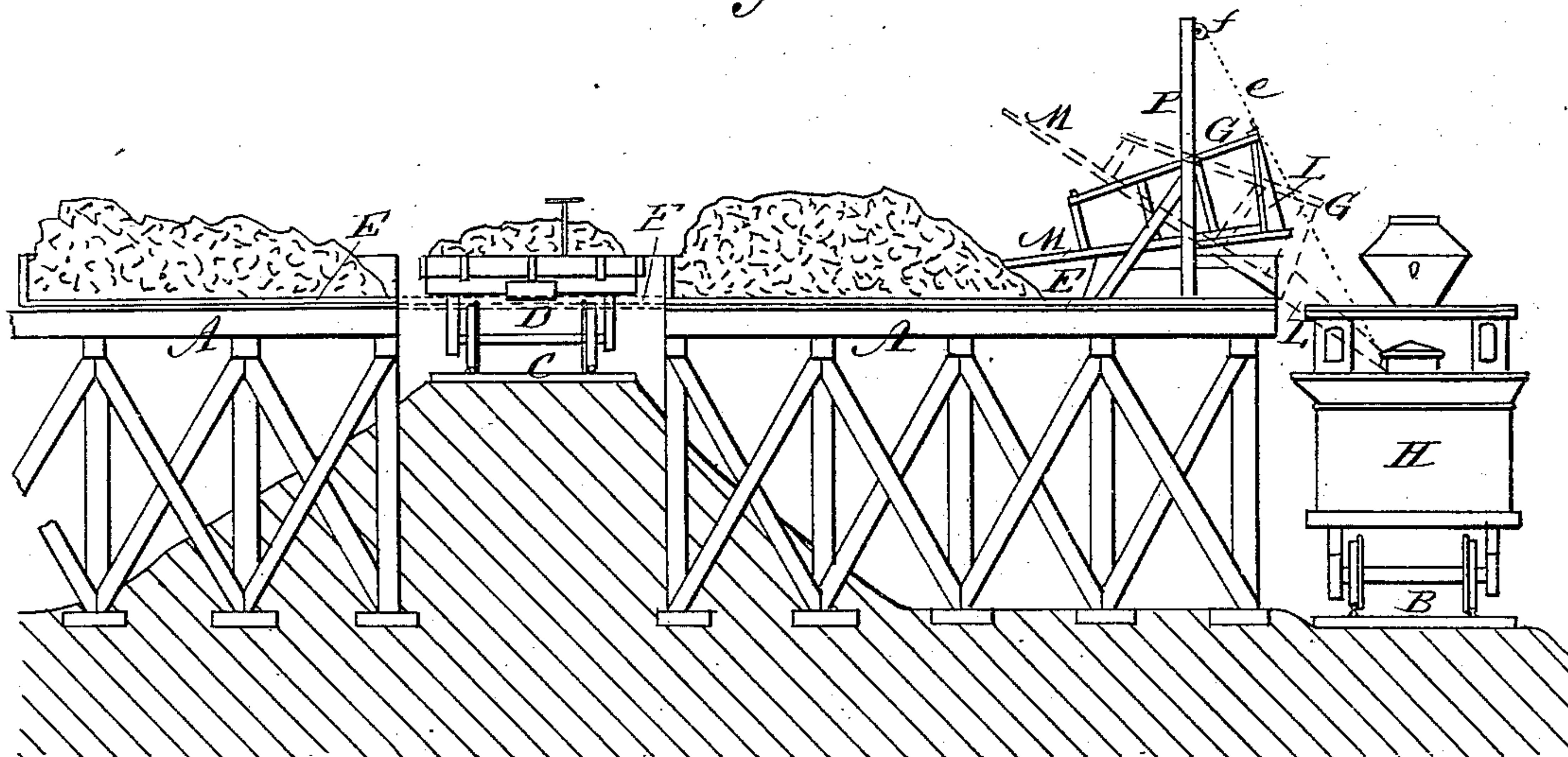


Fig. 4

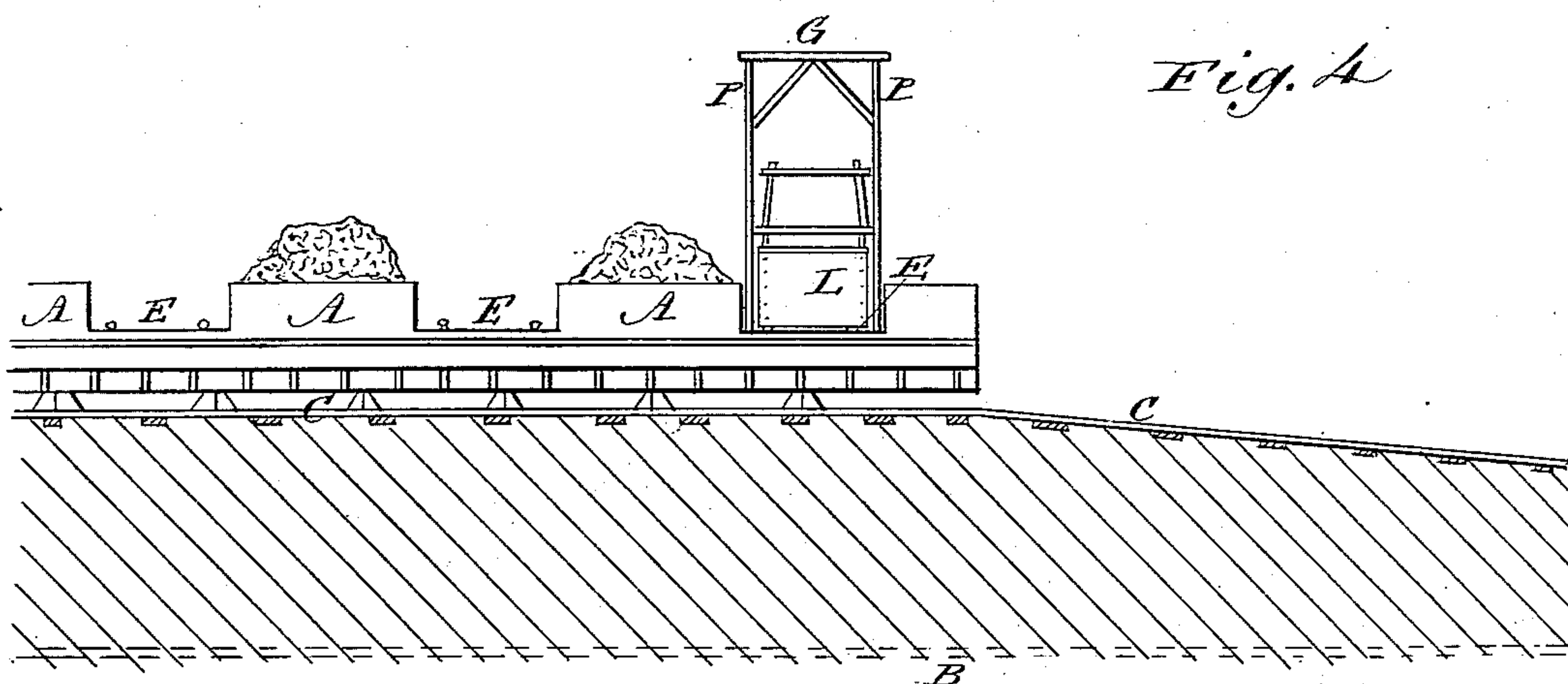
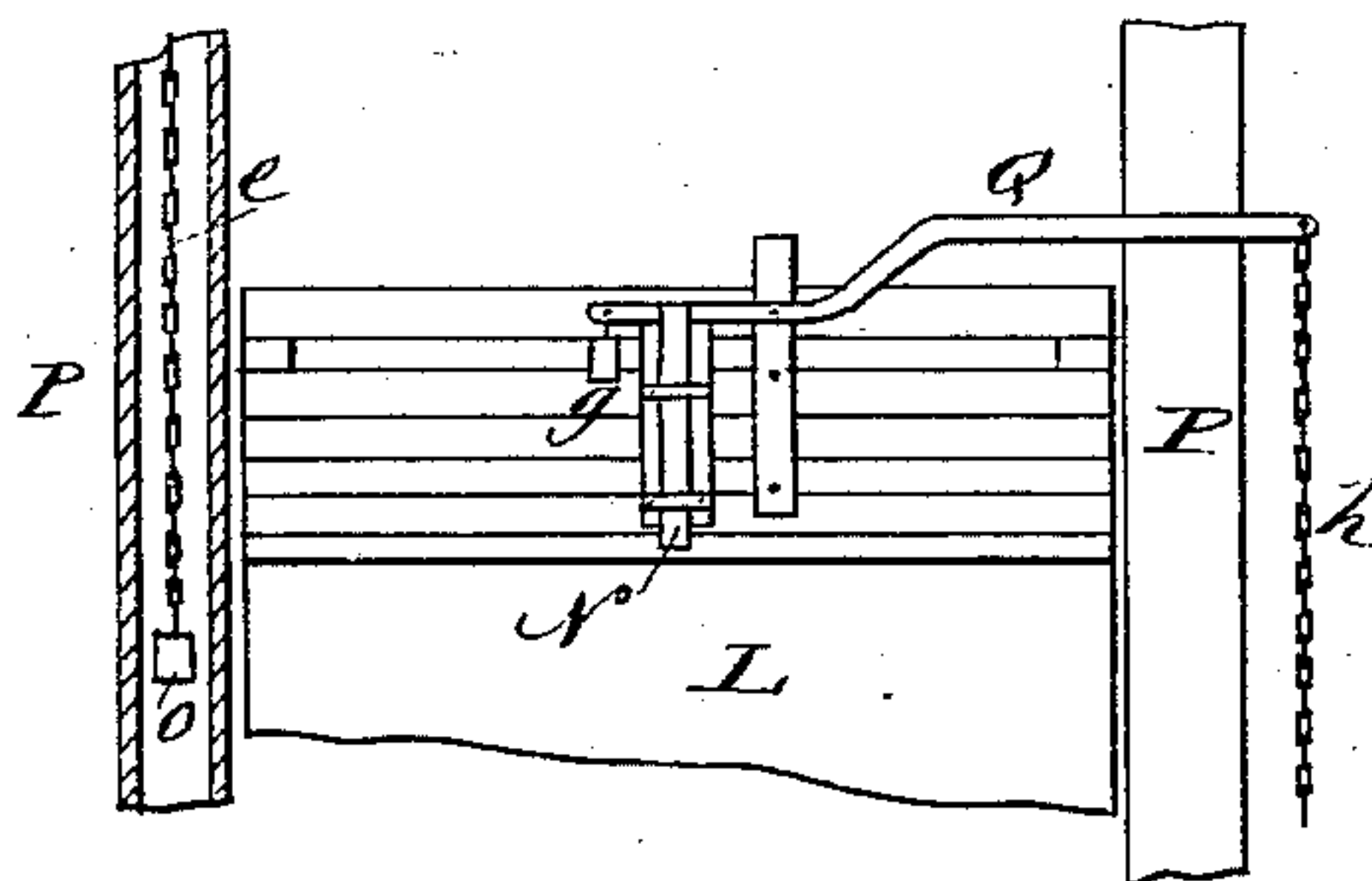


Fig. 5



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## COALING LOCOMOTIVES AND CHUTE THEREFOR.

SPECIFICATION forming part of Letters Patent No. 259,529, dated June 13, 1882.

Application filed April 27, 1882. (No model.)

*To all whom it may concern:*

Be it known that we, CORNELIUS GORHAM, of De Soto, in the county of Jefferson and State of Missouri, and WINTHROP BARTLETT, of St. Louis, in the county of St. Louis and State of Missouri, have invented a new and useful Improvement in Coaling Locomotives and Chutes Therefor, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a side view of a portable coal-chute constructed in accordance with our invention and showing by full and dotted lines the chute in different positions. Fig. 2 is a plan of the same. Fig. 3 is a sectional elevation of certain tracks, storage-platforms, and chute in position for coaling a locomotive in accordance with our invention. Fig. 4 is a sectional elevation in part of the same in a plane at right angles to Fig. 3, and Fig. 5 is a partly-sectional front view of the delivery end of the chute with means for securing said end when closed.

The objects of our invention are to facilitate the coaling of locomotives and to economize the handling of the coal for such purpose, to enable the fireman of a locomotive to coal it without the assistance of additional labor, to reduce the first cost of constructing coal chutes and platforms, and to provide a large storage capacity for each chute.

To these and other ends the invention consists in a portable coal-chute mounted upon a truck and of peculiar construction, with facility of being tilted to discharge its load, the same forming a complete article of manufacture, which may be readily shipped for use; and the invention furthermore consists in certain arrangements of tracks, storage-platforms, and other means or devices, whereby the loading and unloading of said chute is facilitated, and the objects hereinbefore sought to be attained are secured.

In the drawings, A A indicate any desired number of storage-platforms for the coal arranged parallel with one another at a suitable elevation for coaling purposes above the main

track B of a line of railroad. These storage-platforms are arranged at suitable distances apart for a series of interposed side or inclined tracks, C, leading up to them or sufficiently below them to allow of coal being delivered onto them from trucks D. Said platforms A are arranged parallel with the main track and of any desired length and width, but, as hereinbefore specified, above it, and have tracks E E upon and across them for the portable chute G to run upon. These tracks may be connected by bridge-rails F, where they are interrupted by the depressed intersecting side tracks, C, to provide for running the chute from one storage-platform to another, for the purpose of loading said chute with coal.

In Fig. 3 a locomotive, H, is represented in position on the main track B, for receiving coal from the portable chute G at the delivery end of one of the tracks E.

The chute G is constructed as follows: I is a frame suspended by means of proper boxes on the axles of two pairs of wheels, J J, the whole forming a truck, upon which the chute rests. This truck is arranged to run upon either track E, arranged upon or crossing the storage-platforms A A. Secured on the frame I of the truck, upon each of its opposite sides, is a block, K. Each of these blocks is provided in its upper surface with a suitably-constructed concave recess or bearing, b, to receive within it a rocker-arm, c, of cylindrical construction, with side arms or projections on its lower portion. These rocker-arms—that is, one on either side—are connected with the floor of the body of the chute, and support said body and provide for the tilting of it endwise on the bearings b as a base.

The body G' of the chute is of tapering construction in direction of its length. The larger end is provided with an apron, L, hinged below to the floor of the body, and serving when raised to close said end, but being capable of being lowered to the position shown for it by dotted lines in Figs. 1 and 3, to provide for discharging the coal from the chute. When the apron L is raised and the chute is in the position represented by full lines in Fig. 1 said chute G is loaded with coal and is pushed to the delivery side of the platform A or dis-



charging end of the track E on the platform upon which it travels. Said chute, having its larger end foremost, is then tilted or inclined upon the bearings *b* of its rocker-arms *c* by means of a lever or levers, M, inserted within keepers *d* on its sides to the position represented by dotted lines in Fig. 3, in which position it remains until it is desired to deliver the coal to a locomotive. The apron L should be kept closed until it is required to deliver the coal, to prevent the coal from running out, and is secured in this position by a bolt or latch, N, shown in detail in Fig. 5. By raising the latch the weight of the coal forces the apron L open or down to the position represented for it by dotted lines in Figs. 1 and 3, when it constitutes a spout-extension of the chute, through which the coal passes from the body of the chute to the tender. After the coal has been discharged from the chute the apron L is returned to its raised or closed position by weights O, suspended by chains *e*, in upright tubes or boxes P, extending upward on either side of the chute, each of said chains passing over a pulley, *f*, and being attached at its outer end to the upper portion of the apron, which thus is balanced or made self-closing. As the apron L is thus closed it strikes against the beveled nose of the bolt or latch N and forces it up, and then passes under the latch, which, falling down, holds the apron closed.

To secure the dropping down of the latch over the apron a weight, *g*, is hung upon the lever Q, by which, through a rope or chain, *h*, the latch is raised by the fireman on the tender when it is required to deliver the coal thereto from the chute.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. The method herein described of coaling

locomotives by means of a portable chute hung to rock or tilt upon a truck by which it is carried, coaling-platforms having a track or tracks for the truck portion of the chute to run upon, and intersecting inclined tracks for conveying the coal to the platforms, said inclined tracks and platform-tracks being arranged at a higher elevation than the main track, essentially as herein set forth.

2. The combination, with the main track B, of the coaling-platforms A A, the tracks E E, arranged upon or crossing said platforms, the bridge-rails F, and one or more intersecting inclined tracks, C, substantially as and for the purpose herein set forth.

3. The coaling-chute G, constructed of a box or body part having a hinged apron, L, arranged to form, when raised, a closed end to said body, and, when lowered, a delivery-spout or extension of said chute, and a truck upon which the body of the chute is mounted with freedom to rock endwise, substantially as shown and described.

4. The body G of the chute, supported by rocker-arms *c* in bearings *b* on or in a truck by which said body is carried, in combination with the apron L, hinged below to said body, and made self-closing when relieved from the weight of coal on its interior surface, essentially as herein set forth.

5. The combination of the self-closing latch N with its attached operating-lever Q, and the hinged apron L at the end of the chute, for operation in relation with each other, substantially as herein described.

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