

M. A. BLAKLEY & J. CAHILL.

Elevating Apparatus.

No. 135,511.

Patented Feb. 4, 1873.

Fig. 1.

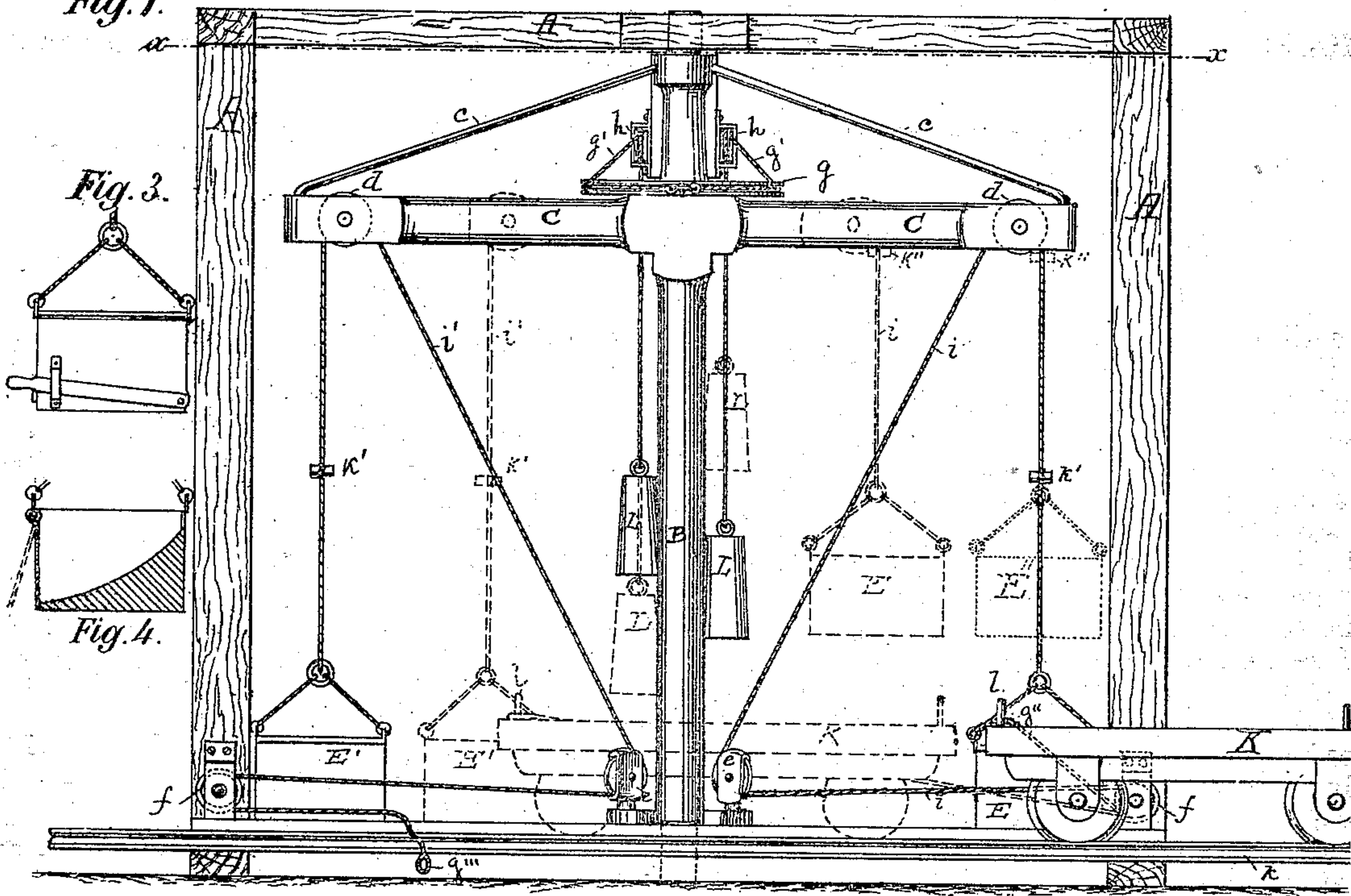
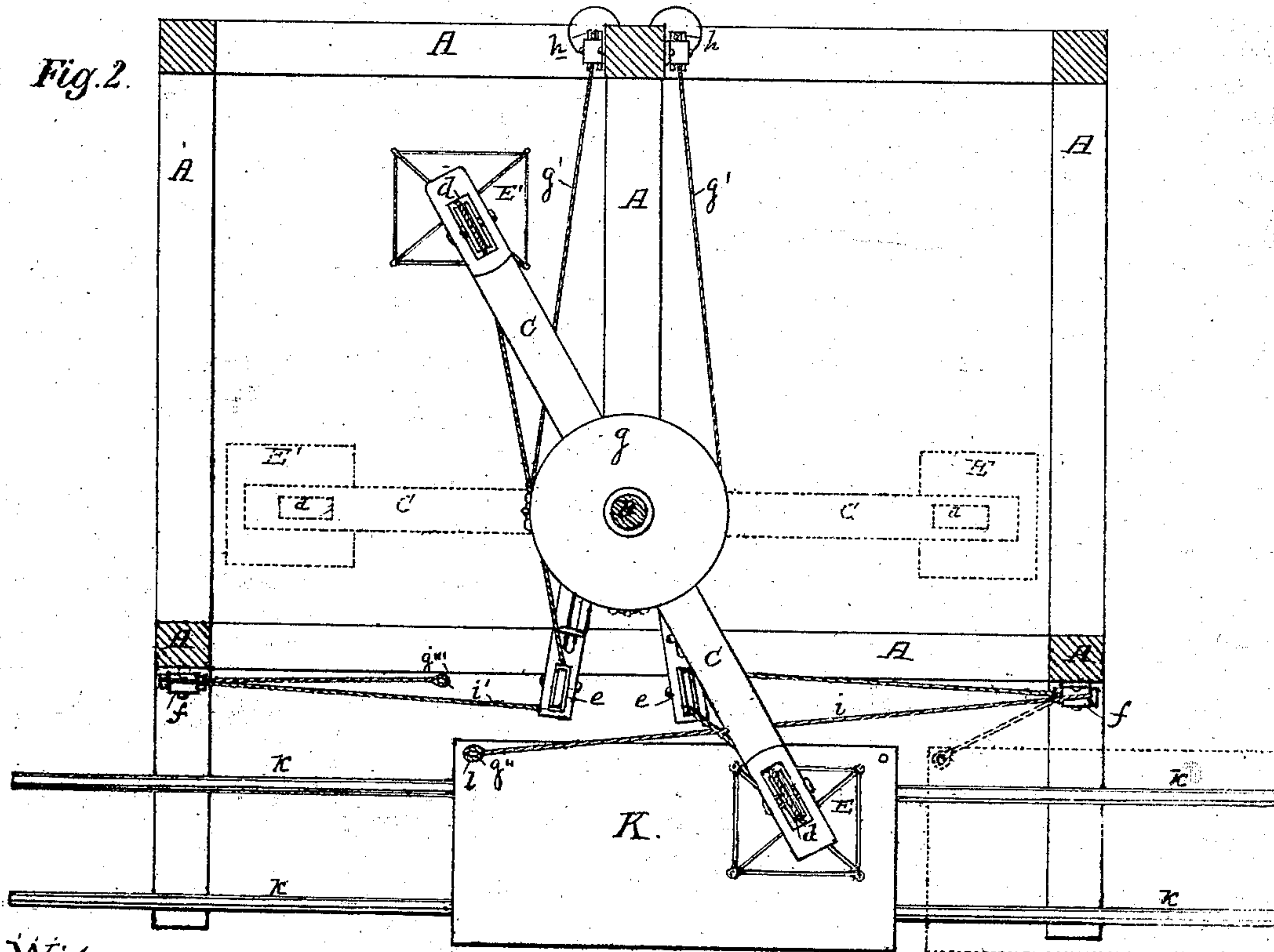


Fig. 2.



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## IMPROVEMENT IN ELEVATING APPARATUS.

Specification forming part of Letters Patent No. 135,511, dated February 4, 1873.

*To all whom it may concern:*

Be it known that we, MOSES A. BLAKLEY and JOSEPH CAHILL, of Chattanooga, in the county of Hamilton and State of Tennessee, have invented certain Improvements in Elevating Apparatus, of which the following is a specification; and we do hereby declare that the same is a full, clear, and exact description of our said invention, reference being had to the accompanying drawing and to the letters of reference marked thereon.

Our invention relates to an elevating apparatus specially designed to be used in the loading of coal upon railroad cars or locomotive tenders; and is so arranged that the car itself, in its moving upon the track, is the operator by which the load is first elevated to a height greater than that of the car, and then swung over it to a point from which it may be dumped or deposited therein. Our invention further relates to the peculiar construction of the elevator-buckets, which is intended to facilitate the emptying of the coal therefrom.

In the accompanying drawing, forming a part of this specification, Figure 1 is an elevation of the apparatus looking from the track side. Fig. 2 is a sectional plan upon line *x x* of the elevator, track, and car. Fig. 3 is a side view of one of the elevating-buckets. Fig. 4 is a vertical section of the same.

Similar letters of reference indicate similar parts of the invention in all the figures.

A A represent the frame-work or scaffolding. B is the mast, and C C are the booms of the elevator. Principal braces are shown by *c c*. The mast is secured at its head and heel in such wise that it may revolve freely. Sheaves near the ends of the booms are represented by *d d*, and snatch-blocks at the heel of the mast by *e e*. Other guiding-pulleys are shown by *f f*. Upon the mast, just above the booms, is a rope-wheel, *g*, to the periphery of which two ropes, *g'*, are attached, leading through the blocks *h*. Passing over the sheaves *d* and through the snatch-blocks *e* are two ropes, *i i'*, having at one end the elevator-buckets E E', and loops *g'' g'''* at the other. The railway track is represented by *k*, and the car by K.

Referring, now, to Fig. 2, we will suppose the car and booms of the elevator to be in

the positions indicated by the dotted lines. The loop *g''* is placed over the pin *l* near the front end of the car. As the car is moved forward the bucket E is raised until the stop *k'*, attached to the rope, is brought up to the under side of the boom, as shown at *k''*, when the bucket E is caused to occupy the position in which it is shown in dotted lines at E''. As the car continues forward, the stop still being at the under side of the boom, the strain upon the rope *i* tends to swing the boom and bucket over the car to the position shown upon the plan. While thus placed the hinged side of the bucket is freed, and the coal is deposited within the car. The rope *i* is then detached from the pin upon the car, and the boom, by the action of the counter-weights L attached to the ropes *g'*, is again swung to the position shown in Fig. 2 by the dotted lines. At the same time the bucket E is allowed to descend slowly by its own weight. The car is then run still further forward, and the loop *g'''* upon the other rope *g'* placed over the pin at the other end of the car. The car is then backed and the bucket E' raised and swung over the car in the same manner as that hereinbefore described.

It will be seen that as one bucket is being elevated, swung, and emptied the other can be filling.

The bottom of the bucket is of such construction, as shown in Fig. 4, that the coal, when the hinged side is freed, at once falls therefrom.

Having thus described our invention, what we claim as new, and wish to secure by Letters Patent, is—

A swinging elevator, consisting of the mast B secured at head and heel, booms C C, rope-wheel *g*, and counter-weights L L with intervening ropes and sheaves, substantially as hereinbefore set forth, for the purposes specified.

In testimony whereof we have hereunto signed our names.

MOSES ALPHONSO BLAKLEY.  
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Witnesses:

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