J. M. LAFFERTY.

Coal-Chute.

No. 162,832. Patented May 4, 1875.

Fig. 1.

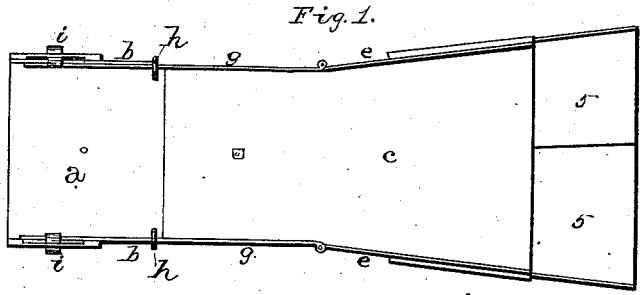


Fig. 2.

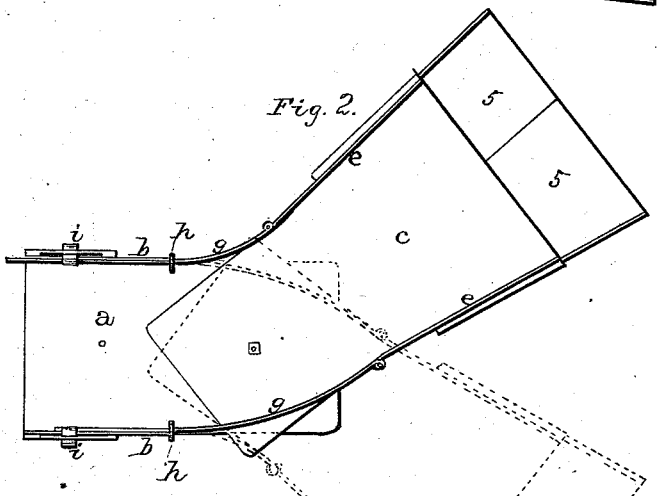
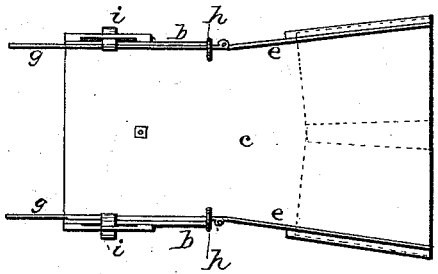


Fig. 3.



WITNESSES.

J. Wm. Larner.

Chas. W. Lemon

INVENTOR.

J. M. Lafferty

per

F. A. Lehmann, atty

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

JOHN M. LAFFERTY, OF MANSFIELD VALLEY, PENNSYLVANIA.

IMPROVEMENT IN EXTENSIBLE COAL-CHUTES.

Specification forming part of Letters Patent No. **162,832**, dated May 4, 1875; application filed March 23, 1875.

To all whom it may concern:

Be it known that I, JOHN M. LAFFERTY, of Mansfield Valley, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Coal-Chutes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in coal-chutes; and it consists in making the chute in two parts, the lower one of which is pivoted to the upper in such a manner that it can be moved from side to side, so as to distribute the coal evenly in all parts of the cars, as will be more fully described hereafter.

The accompanying drawing represents my invention.

a represents the upper end of the chute, which is provided with the two short vertical sides *b*. The bottom of this part *a* extends a considerable distance below the lower ends of these sides, and pivoted upon the top of this extension of the bottom is the lower movable part *c* of the chute. The lower part has the two rigid vertical sides *e* secured to its lowest end, and hinged to the upper ends of these two sides are the two elastic sides *g*. These two sides *g* extend on beyond the upper end of the bottom of the part *c*, inside of the upper part of the chute *a*. Secured to the lower ends of the walls or sides *b* are the fixed guides *h*, and at or near the upper ends of the walls are the movable guides *i*, which guides catch over the edges of the hinged walls or sides *g*, so as to retain them in position when the lower part of the chute is moved to either side. The upper end of the bottom of the part *c* overlaps the extension of the part *a* nearly up to the walls *b*, and the extension of the bottom on the part *c* should be just wide enough to pass easily in between the walls *b* when it is desired to connect the two parts rigidly together. The screw-bolt upon which the lower end of the chute is pivoted can be drawn out, the movable part *c* pushed up into the part *a*, and the bolt be placed in the upper hole, to render the chute rigid as if made of one piece.

In order to make the chute adjustable, so as to cause it to deliver the coal in the extreme ends of the cars, to the under side of the lower part of the chute are attached the two extensions 5, which can be drawn out or pushed back under the chute, as may be desired.

Having thus described my invention, I claim—

1. The upper part *a* and short vertical sides *b*, in combination with the movable part *c* and the rigid vertical sides *e*, substantially as and for the purpose specified.

2. The two parts *a c* and flexible walls *g*, in combination with the fixed guides *h* and the sides *b b* and *e e*, all as and for the purpose herein described.

3. A coal-chute composed of the two parts *a c*, whereby the chute can be lengthened out and made flexible, or be shortened and made rigid, substantially as shown.

In testimony that I claim the foregoing I have hereunto set my hand this 23d day of March, 1875.

JOHN M. LAFFERTY.

Witnesses:

F. A. LEHMANN,

WM. B. UPPERMAN.