

R. DUNBAR & J. KEEGAN.  
Coal-Chute.

No. 164,278.

Patented June 8, 1875.

Fig: 1.

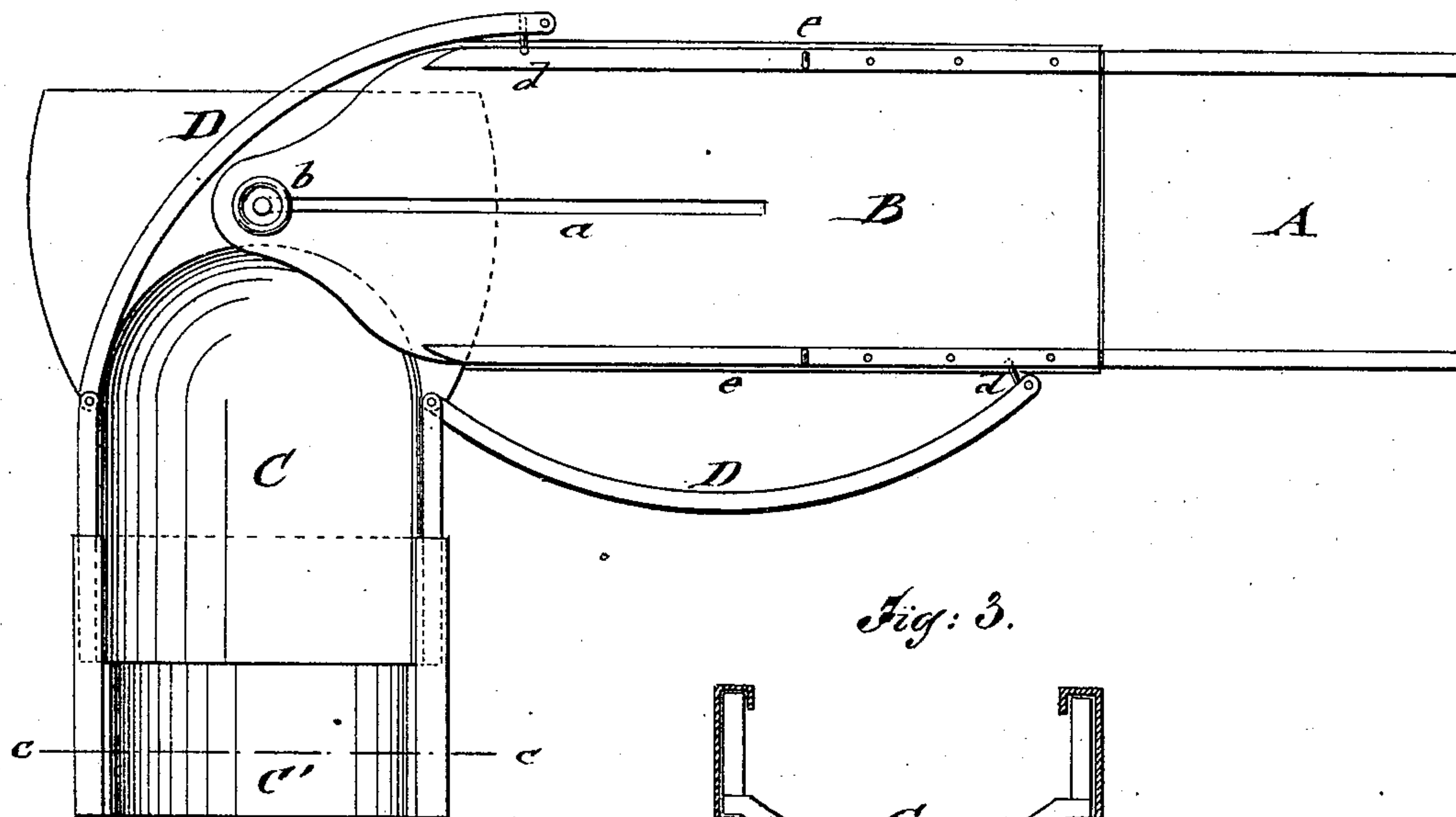


Fig: 3.

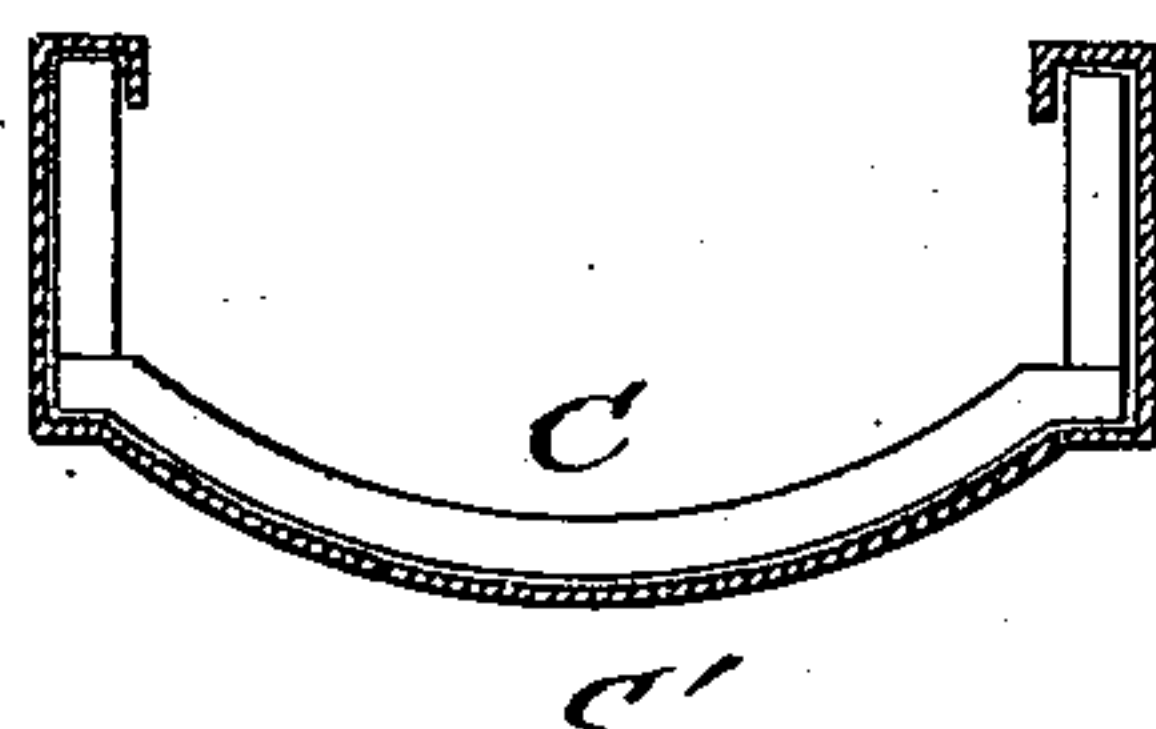


Fig: 2.

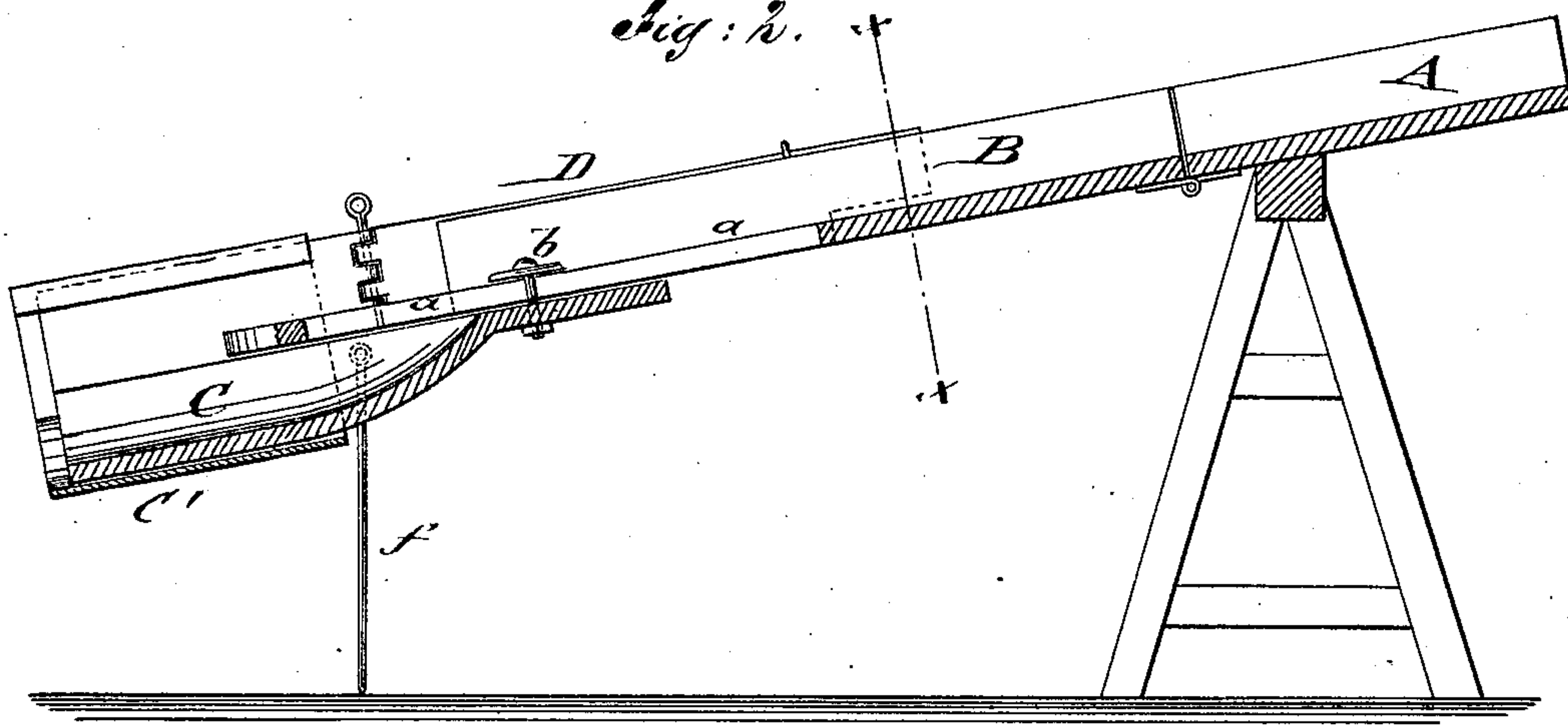
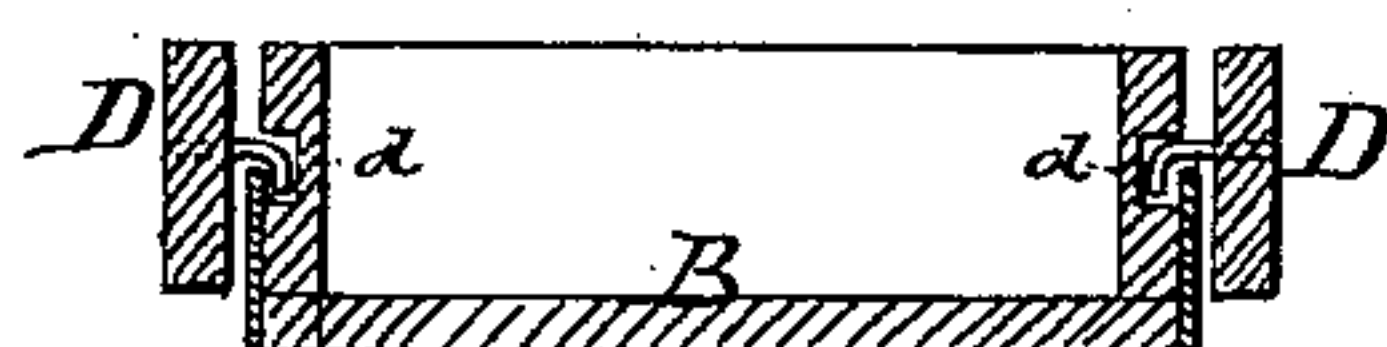


Fig: 4.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ROBERT DUNBAR, OF MANSFIELD VALLEY, AND JOHN KEEGAN, OF  
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## IMPROVEMENT IN COAL-CHUTES.

Specification forming part of Letters Patent No. **164,278**, dated June 8, 1875; application filed  
May 15, 1875.

*To all whom it may concern:*

Be it known that we, ROBERT DUNBAR, of Mansfield Valley, in the county of Allegheny and State of Pennsylvania, and JOHN KEEGAN, of McDonald, in the county of Washington and State of Pennsylvania, have invented a new and Improved Coal-Chute, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top view of our improved coal-chute; Fig. 2, a vertical longitudinal section of the same; and Figs. 3 and 4, respectively, are vertical transverse sections on the line *c c*, Fig. 1, and *y y*, Fig. 2.

Similar letters of reference indicate corresponding parts.

The object of our invention is to provide a coal-chute by which box and flat cars, boats, &c., may be directly and evenly laden with coal without shoveling the coal to the corners or ends of the cars, &c.; and the invention consists of a chute with laterally-swinging end scoop, that may be set to any angle with the chute, for discharging the coal in every direction into the car or boat.

In the drawing, A represents a stationary section of our coal-chute, which is supported at suitable inclination for conveying the coal. A detachable section, B, is hinged or otherwise connected to the stationary section A, and suspended from trestle-work by rods attached to staples at the top part of the same. The end of section B is provided with a central longitudinal slot, *a*, for guiding the bolt *b* of a scoop, C, which is applied to the end of section B. The scoop C is further connected with section B by curved side guard-plates D, which are hinged to the sides of the scoop, and guided by hook-pins *d*, or other devices, at the opposite ends, along grooves and guide-plates *e*, at the outer sides of section B.

The scoop C may be swung on its pivot-bolt

*a* to any angle with the chute up to ninety degrees, while the guard-plates D follow at the same time the motion of the scoop and slide along the guide-strips of the section B.

The guard-plates serve to convey the coal from the chute-sections to the scoop at whatever angle the same is set, and allow thereby the direct discharge of the coal from the chute to any part of the car or boat without the necessity of shoveling the main portion from the point of discharge to the corners or sides.

The scoop C has a sliding extension, C', which may be drawn out when the coal is required to be thrown farther. Supporting-rods *f* at the bottom of the scoop prevent the breaking down of the same when charged with coal.

After use the scoop is slid up under section B, to take up less space, and be always available for use.

The direction of the scoop is readily governed by the attendant, and thereby the charging of boats, cars, &c., with coal or other articles facilitated and expedited, as the coal is conveyed directly and uniformly to the different parts of the same.

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

A chute for discharging coal or other articles into cars, boats, &c., provided with a swinging and sliding scoop, connected by curved adjustable guard-plates to the sides of the chute-section, to be set to any angle thereto, for conveying the coal without shoveling to any part of the car or boat, substantially in the manner and for the purpose set forth.

ROBERT DUNBAR.  
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Witnesses:

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