JOSEPH RHODES.

Improvement in Coal-Chutes.

No. 115,640. Patented June 6, 1871.

Fig. 1

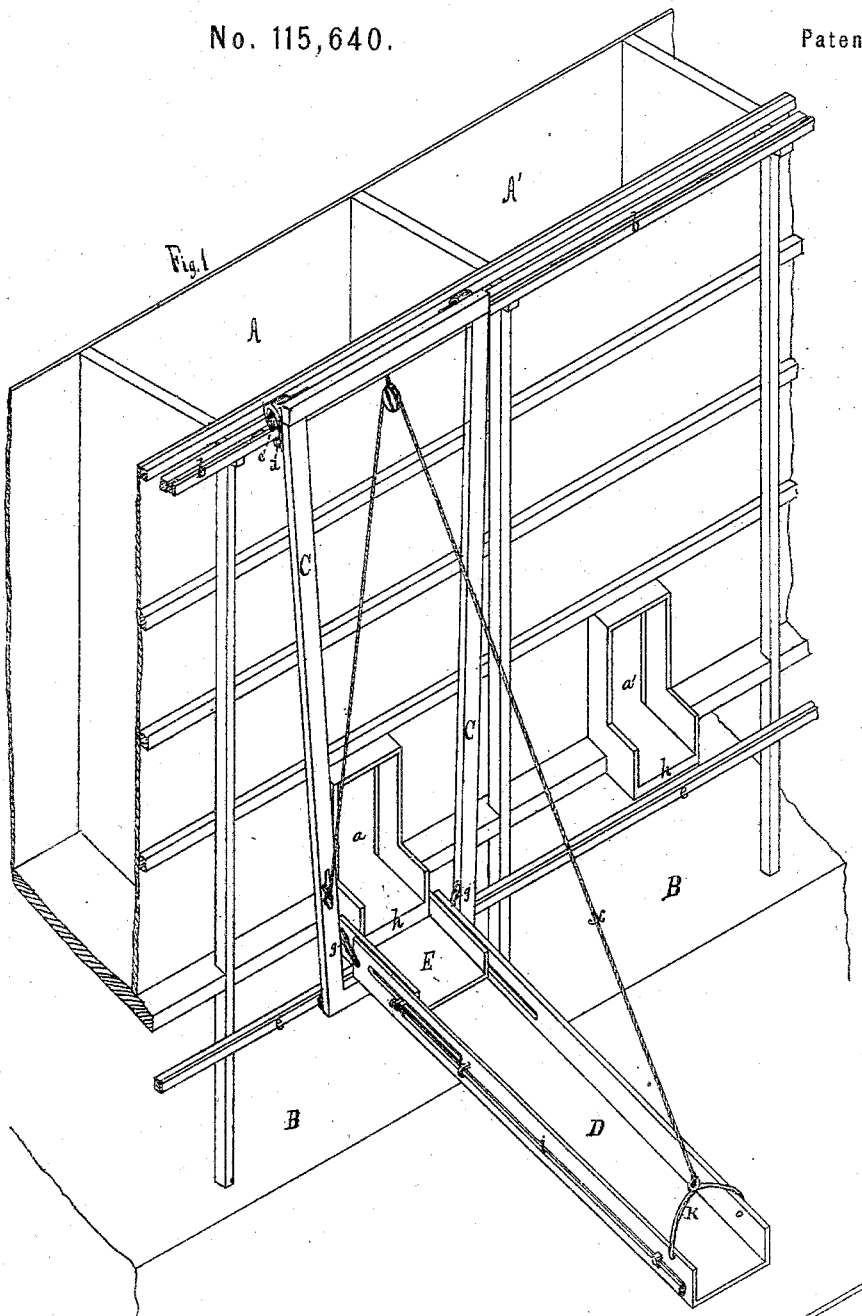


Fig. 2

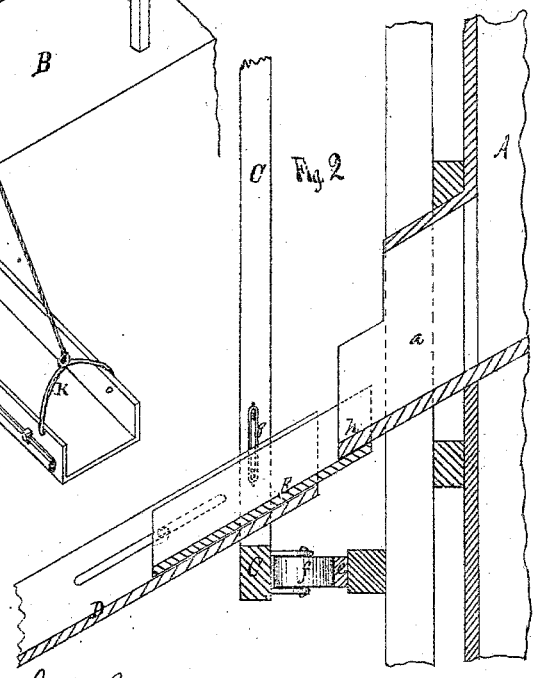
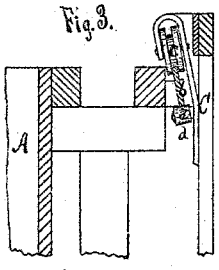


Fig. 3.



Witnesses

J. R. Drake

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Joseph Rhodes Inventor, By

J. Fraser & Co Attys

UNITED STATES PATENT OFFICE.

JOSEPH RHODES, OF DUNKIRK, NEW YORK.

IMPROVEMENT IN COAL-CHUTES.

Specification forming part of Letters Patent No. 115,640, dated June 6, 1871.

I, JOSEPH RHODES, of Dunkirk, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Chutes for Coal-Wharves, &c., of which the following is a specification:

Nature of the Invention.

The object of this invention is to facilitate loading of vessels from coal-pockets and make one chute do the work of several; and the invention consists in hanging an extension chute to a sliding frame, so that there is a lateral swing to it. It also consists in moving this frame on tracks arranged on the entire front of the coal-receivers, by which the chute is moved from one pocket to another, as hereinafter fully explained.

General Description.

In the drawing, Figure 1 is a perspective view of the coal-receivers, showing the tracks, frame, and chute. Fig. 2 is a sectional side elevation of the extension chute. Fig. 3 is a detail view, showing the arrangement of the upper wheels of a track.

A A represent the coal pockets or receivers, standing on the wharf B. The coal is dumped into these from cars running on tracks on top, and the coal is drawn out through openings *a a*. On the front, near the top of this line of coal-receivers, I arrange a narrow track, *b*, and which stands out a little way. On this track is hung the chute-frame C, by means of grooved wheels *c c*, which are attached inside the frame, and run on the narrow track fitting in the grooves. These wheels move in a small frame, set at an angle to fit the inwardly-slanting track, so arranged in order to keep the wheels more securely on the track than if set straight. (See Fig. 3.) Attached to the same frame that holds the grooved wheel is a small friction-roller, *d*, which hugs the under side of the rail *b* and keeps the frame from jumping the track. Beneath the coal-openings *a a* I place another flat track, *e*, and attach to the inside of the lower ends of the frame *c* flat rollers *f f*, (see Fig. 2,) which facilitate the moving of the frame across the entire front of the coal-receptacles. The frame C is made narrower at the lower end than at the top, and is wide enough to inclose the coal-openings *a*. Hung inside this lower part of the frame, by means of chains or links *g g*, is the chute D or spout-conductor of the coal, the upper or widest part sitting under the coal-opening of the pocket. For the purpose of preventing any dropping of coal between the chute and pocket I arrange, inside the chute D, an auxiliary or smaller chute, E, which is made to slide under the coal-opening *a*, and effectually close the space *h* by means of rods *i i* arranged outside the chute D, by which it is moved up or back. A bail, *k*, is fastened to the lower end of the chute D, and is raised up or lowered to any desired pitch by pulleys attached to the top of the frame C and cord *x*.

The usual method of unloading these coal-pockets is by a stationary chute hinged to each opening, which is raised as soon as the pocket is emptied, and so on. In loading a vessel, she is moored so that her hatchway comes exactly opposite the mouth or discharging end of the chute, and when that is clogged the vessel has to be moved until another hatchway comes exactly in place.

A special advantage of my construction is, by hanging the chute by chains or links to the frame C, a lateral swing can be given to the discharge end of the chute so that the direction of the coal can be changed as it rushes into the vessel's hold, and not all be deposited in one pile, or force the vessel to be moved a few feet or inches, more or less, to accommodate the stationary chute. The special feature of novelty is the frame and chute, by which they can be slid from one pocket to another, and one chute do the work of the many now employed. This is highly important to coal-dealers that ship largely, for, instead of a stationary chute attached to each pocket, two or three of mine will unload forty or more in a very short time. The simplicity of its construction and of its working are important advantages.

What I claim is—

1. In combination with the coal pockets or receivers A A, the sliding frame C, bearing and having a spout, D, said frame and spout being capable of being moved from one discharge-outlet to another of said pockets, as herein described.

2. In combination with the sliding frame C, the friction-wheels *c c* and *d d* at the top, and

rollers *f f* at the bottom, acting upon the tracks *b* and *e*, in the manner and for the purposes specified.

3. In combination with the chute D and outlet-spouts *a a*, the extension E, having an end movement for closing the break between said parts, as hereinbefore described.

4. The sliding frame C, the adjustable chute D, hung upon the chains or links *g g*, and raised by cord *x* at the outer end, and the extension E moved by slides or rods *i i*, the whole arranged as described, and operating in the manner and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOSEPH RHODES.

Witnesses:

J. K. DRAKE,

C. N. WOODWARD.