(No Model.)

W. G. BARNARD.

APPARATUS FOR LOADING COAL.

No. 285,952. Patented Oct. 2, 1883.

Fig. 1.

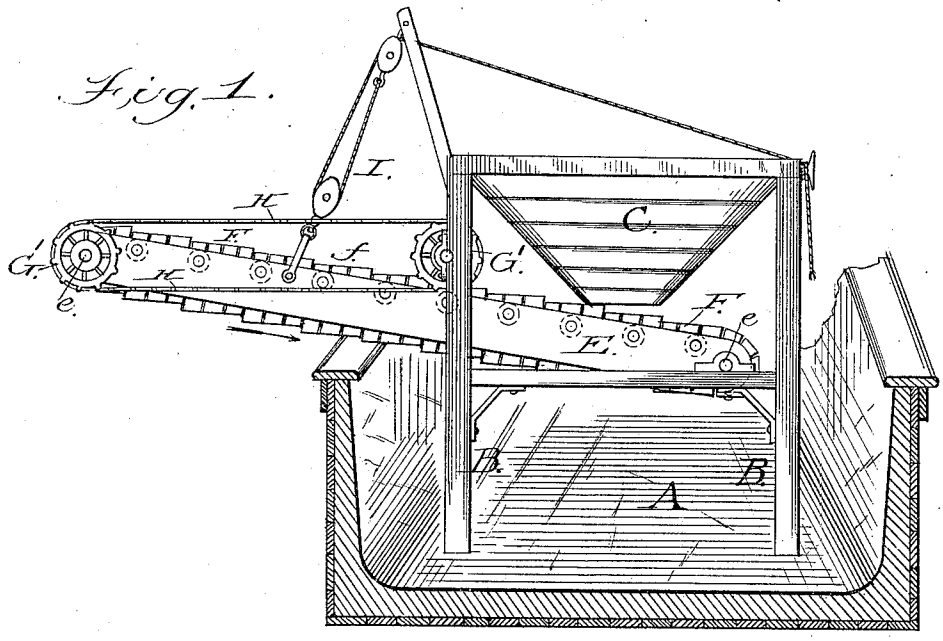


Fig. 2.

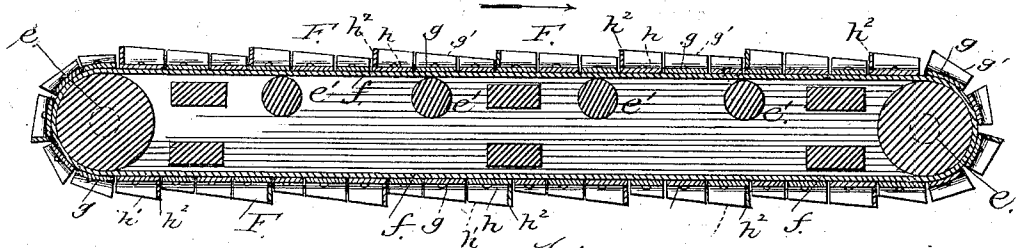
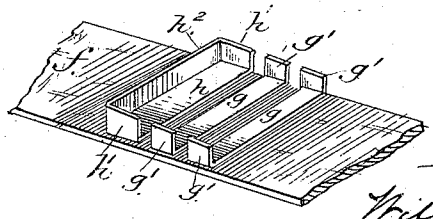


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM G. BARNARD, OF BELLAIRE, OHIO.

APPARATUS FOR LOADING COAL.

SPECIFICATION forming part of Letters Patent No. 285,952, dated October 2, 1883.

Application filed August 13, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM G. BARNARD, a citizen of the United States, residing at Bellaire, in the county of Belmont and State of Ohio, have invented certain new and useful Improvements in Apparatus for Loading Coal; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being made to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a side elevation partly in section; Fig. 2, a longitudinal section through the carrier-belt and buckets secured thereto; and Fig. 3 is a detail perspective view, showing one of the elevator-buckets.

This invention relates to certain new and useful improvements in an apparatus more especially designed for loading coal on steamers, barges, and cars from a storing-crib; and the invention consists in a novel construction of buckets connected to a carrying-belt, by which said carrier-belt can be run on a horizontal plane, or any inclination therefrom, without danger of spilling or wasting the coal, and also permitting said buckets to pass readily around the driving and supporting pulleys upon which the carrier-belt is mounted, and also in a novel construction and combination of parts, all as will be hereinafter fully described, and set forth in the claims hereto annexed.

In the drawings, A represent a section of a large barge, on which is mounted and secured a frame, B, for supporting the crib C and the pivoted and adjustable frame E, containing the end rollers, *e e*, upon which the endless carrier *f*, provided with the buckets F, is mounted, and the intermediate rollers, *e'*, for supporting and carrying said carrier-belt, with its buckets, and thereby permitting it to run loosely, and without much tension on the belt.

In order to have the buckets F of sufficient size, so that they may be run on a horizontal plane, or any inclination thereto, without spilling their contents, and to readily and easily pass around and over the rollers upon which the carrier-belt is mounted, they are constructed as follows: Each bucket is composed of transverse metallic strips *g g*, secured to said carrier-belt, and having turned-up ends *g' g'*, and an intermediate metallic strip, *h*, also secured to said belt, and having turned-up ends *h' h'* and turned-up edge h^2, forming the rear of one bucket and the front of the next succeeding bucket. These strips *g* and *h* are arranged in close proximity to each other, as shown in Fig. 2, so that when not passing over the end rollers, *e e*, they form close-fitting buckets for containing the coal; but being constructed in sections, as shown, they will readily adapt themselves to the conformation of said rollers *e e* in passing around and over them. The endless carrier-belt is driven through the medium of sprocket-wheels G G', the wheel G being mounted on the end of the shaft of one of the rollers *e*, and the other wheel, G', mounted in the frame of the apparatus, and connected together by a chain-belt, H. The shaft of the wheel G' receives its motion through the medium of a small steam-engine or other motor connected thereto.

The inclination of the carrier-belt can be changed through the medium of a block and tackle, I, (all as clearly shown in Fig. 1,) above or below level, so that coal can be loaded from a stationary crib to boats of different levels and at any stage of the height or level of the water.

The machine is movable, and can be readily shifted from one crib to another and worked without moving the engine, which is connected to a shaft. The coal passes through an opening in the bottom of the crib into the buckets F, and is carried forward and emptied in passing over one of the rollers *e*, upon which the carrier-belt is mounted.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The carrier-belt provided with the sectional buckets composed of transverse metallic strips *g*, with turned-up ends *g'*, and intermediate transverse strips, *h*, having turned-up ends *h'* and turned-up edge h^2, arranged in close proximity to each other, substantially as herein shown and described.

2. The combination of the pivoted and adjustable frame E, provided with the rollers *e e'*, the endless carrier-belt provided with the sectional buckets F, and means for operating said

carrier-belt, substantially as herein shown and described.

3. The combination, with frame B, of the pivoted frame E, provided with the rollers *e e'*, the endless carrier-belt provided with the sectional buckets F, means for operating said belt, and the block and tackle for adjusting and regulating the inclination of the pivoted frame E, substantially as herein shown and described.

WILLIAM G. BARNARD.

Witnesses:
W. J. FERREN,
W. C. WARNOCK.