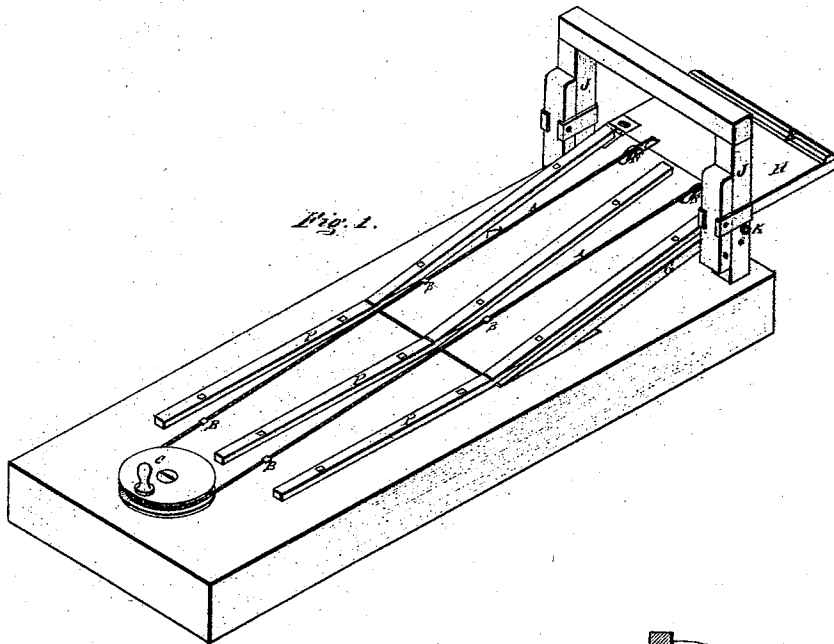


*J. E. Wootten,*

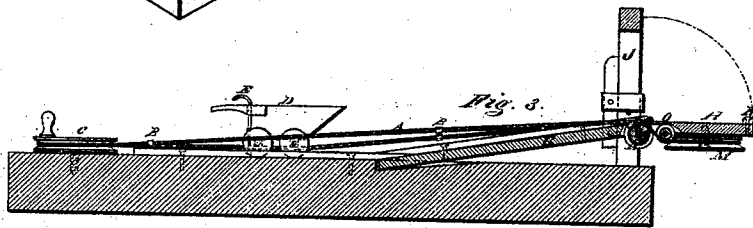
*Moving Coal &c*

*No. 104,093*

*Patented June 7, 1870.*

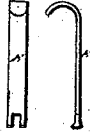


*Fig. 1.*

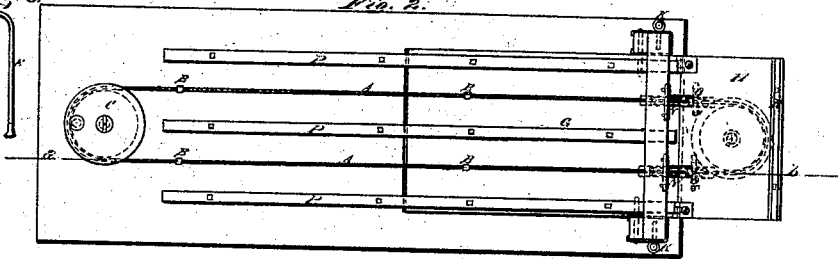


*Fig. 3.*

*Fig. 5. Fig. 6.*



*Fig. 2.*



WITNESSES:

*Wm Cameron*  
*H. Hood*

INVENTOR,

*John Eastburn Wootten*

# United States Patent Office.

JOHN EASTBURN WOOTTEN, OF READING, PENNSYLVANIA.

Letters Patent No. 104,093, dated June 7, 1870.

## IMPROVEMENT IN MACHINERY FOR MOVING COAL OR OTHER MINERALS.

The Schedule referred to in these Letters Patent and making part of the same

I, JOHN EASTBURN WOOTTEN, of Reading, in the county of Berks and State of Pennsylvania, have invented certain improvements in Machinery for Moving Anthracite Coal, or other minerals, of which the following is a specification.

### *Nature and Object of the Invention.*

At the terminal points of the important coal-bearing railroads it becomes necessary, in the absence of a constant and adequate supply of vessels or boats, to empty the railroad cars of their contents upon the wharves at such terminal points, in order that the cars may be promptly returned to the mines for reloading; thus there is often a large accumulation of coal upon the wharves, which heretofore has only been placed in the holds of vessels or boats by means of hand wheelbarrows; and this being a very expensive, as well as a laborious and very slow operation, I have devised the following-described apparatus for the purpose of cheapening and facilitating the movement of the coal from the wharf to the vessel.

### *Description of the Accompanying Drawing.*

Figure 1 is a perspective view.  
Figure 2, a ground plan.  
Figure 3, a longitudinal section on the line *a b*.  
Figure 4, an end view of one of the barrows.  
Figures 5 and 6, detached views of part of the barrow.

### *General Description.*

A is an endless belt or band, of wire rope or other suitable material, upon which, at any desired intervals, should be placed the carriers B B B.

Motion is imparted to the endless band A by means of the drum C, which, in turn, is impelled by a steam-engine, or any other convenient or efficient motive power.

D is a barrow, of any convenient capacity. I prefer, however, that it should contain five hundred and sixty pounds, or one quarter of a gross ton of coal. This barrow is so constructed that it is readily lifted up at its rear when loaded, and when so lifted its contents will be discharged from the front end without difficulty.

At the rear end of the barrow is a drag-bar, E, which is secured to the barrow by means of the straps *e e*, but which do not hold the bar so tightly as to prevent its vertical movement when necessary.

The lower end of the bar E is bifurcated, for the purpose of straddling the endless band A, as hereinafter described.

G is an inclined plane, the object of which is to elevate the barrow D to a sufficient height that the contents may with facility be dumped into the hold of a

vessel lying at the wharf, beyond the outer end of the plane.

To this outer end of inclined plane G is hinged the platform H, which, by means of the supporting pins K K, is rendered adjustable, between uprights J J' to any height that may be required for facilitating the dumpage of the coal into vessels, under the varying conditions of the rise and fall of tide and the settling of the vessel under increasing load.

The platform H is hinged, so that when not in use it may be hoisted to within the water line of wharf.

On the under side of platform H is placed a drum, M, around which the band A passes, and to which it is guided by the sheaves N O.

P P are tramways, upon which the barrow D is moved, and which guides its direction.

Having thus described the construction of my improved apparatus, I will endeavor to describe its mode of operation, which is as follows:

Steam, or other motive power, having been applied to cause drum C to revolve, the endless band A is thereby set in motion.

The barrow D, having been filled with coal, is placed upon the tramway. The bar E is then allowed to fall so that its lower end shall straddle the band A.

When, by the movement of the band A, the carrier B is brought into contact with the bar E, the barrow D is started and impelled until it reaches the sheave N, at which point the rope is deflected, and passing downward, thereby becomes detached from the end of bar E. The barrow having thus been delivered to very near the required point, it is only necessary to move it to the chock-block R, when the rear end can be raised and the contents discharged, after which it is placed upon the return tramway, the bar E placed in position upon the band A, and the barrow returned to the point at which it may be desirable to refill it.

### *Claims.*

1. The combination of the two parallel tracks P P, an endless rope passing forward at the center of one track and returning at the center of the other, and a platform extending beyond the ends of both tracks, and beyond sheaves which conduct the said rope below the platform, as described.

2. The said platform, arranged, in respect to the outer ends of the tracks, as described, when adjustable as set forth and combined with a horizontal drum turning below the said platform.

JOHN EASTBURN WOOTTEN.

Witnesses:

HENRY R. LAUCKS,  
P. KELTON.