P. SHANNON.

COAL-SCREEN.

No. 180,943. Patented Aug. 8, 1876.

Fig. 1.

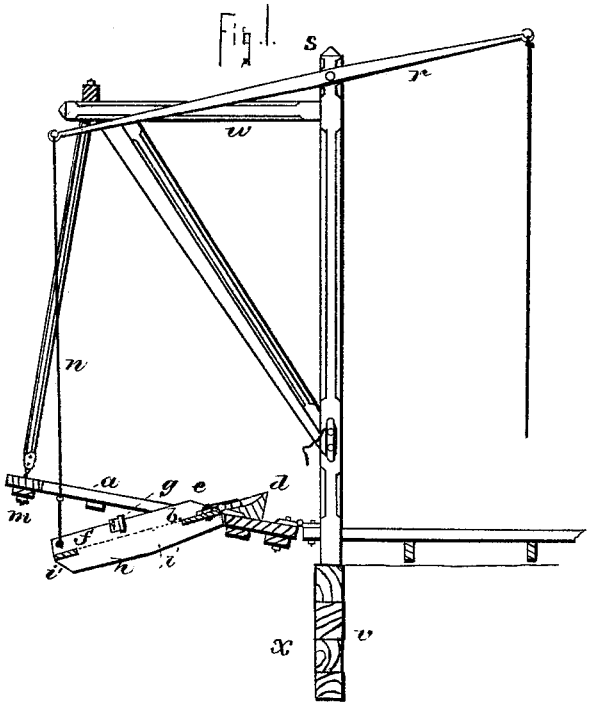
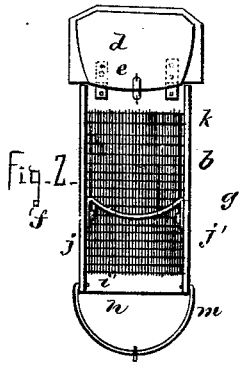


Fig. 2.



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PATRICK SHANNON, OF ITHACA, NEW YORK.

IMPROVEMENT IN COAL-SCREENS.

Specification forming part of Letters Patent No. **180,943**, dated August 8, 1876; application filed June 10, 1876.

To all whom it may concern:

Be it known that I, PATRICK SHANNON, of Ithaca, Tompkins county, New York, have invented an Improved Shipping Coal Screen or Sieve, of which the following is a specification, reference being had to the accompanying drawings, and to the letters thereupon.

My object is to facilitate the removal of the dust of coal from the coal as it is being shipped on board of canal boats or other vessels, cars, and vehicles, or as it is transferred from one car to another car; and the nature of my invention will be apparent as I describe my coal-screen.

Figure 1 is a side elevation of my coal-screen, which is hinged so as to be adjustable in a pit in a platform, and which platform extends from a dock over the water; or from a car or other structure, where it is used over a rail-track or road, and is adjustable by tackle-blocks and rope; and Fig. 2 is a view of my screen from above.

In the figures, *a* is the hinged platform, which is made of any convenient dimensions, usually large enough to allow men with wheel-barrows to go on it, on each side of the screen, and empty the coal on the top of the screen *b* and its apron *d*. The screen is seen to be hinged to the platform *a*, and when in use hangs inclined at any convenient angle below the platform, that the coal may slide when put on the top of the screen. The use of the apron *d* is to receive the coal higher above the screen, and to aid the flow or sliding of the coal over the screen. This apron *d* is loose, except as held by staples and links *e*, or similar devices to the screen, and is hollowed out more or less in its center, and slides the coal that falls on it on the screen. The wire netting of the screen is seen at *f*, and a little above it, but across the middle portion of it is a cross-bar or stop, *g*, which is either a straight or curved bar of metal or wood, and is adjusted by set-screws at each end, at such a distance above the wire netting as to check the sliding of the coal, so that it shall not go in masses over the screen, but by an even flow, that the dust may be more perfectly separated. The set-screws are in slots for this adjustment of its height above the screen. Below the wire netting, which is the screen proper, is the dust-pocket *i*, made either single, double, or with more parts, according to the size of the screen. This pocket for the dust is made, preferably, with a sheet-metal bottom, which is fast to the wood frame of the screen on all sides except that next to the hinges of the screen and platform, or at its upper end, where an open space is left between the frame of the screen and the sheet-metal bottom of the pocket, and is the mouth or exit for the dust from the pocket. A bail, *m*, is fast to the lower end of the screen, to which the iron rod or rope *n* is fast, which rod or rope connects with the lower end of the swing-pole *r*, which swing-pole has a pivot, *s*, at any convenient place on the frame-work *w* above, and which frame sustains the hinged platform. The farther end of the pole *r* has a rod or rope by which the pole and screen are moved. Instead of this pole a rope with a weight to balance the screen may be used, or a tackle and rope, or other quick means for dumping the dust out of the pocket.

The method of using my screen and parts connected therewith is as follows: The platform and screen are, if necessary, drawn up out of the way of masts or other parts of the vessel, canal-boat, or other transporting-vehicle to be loaded with coal. The canal-boat, for example, is then drawn alongside of the dock *v*, when the platform is lowered to fit the boat, and then the screen is let down into a hatchway, or other place or opening by which the coal is let into the boat, and adjusted so that the coal will run over its surface, care being had to leave a space at or near X for a scow or small boat to lie, which is to receive the dust. Coal is now brought by a gang of men with wheelbarrows, if the coal is taken from piles on the dock, and dumped on the top of the screen, or on the apron *d* when it slides over the screen regulated by the stop or bar *g*, and experience has amply shown that a double row of wheelbarrows, one on each side of the screen and apron, may rapidly dump their coal on the screen and apron, and the separation of the dust be easily done, more readily than by a large number of ordinary screens, with more men. When there has accumulated considerable dust in the pocket described, the screen is raised by the rod *n*, the pole *r*, and rope, or equivalent device, so high that the dust slides out of the exit of the pocket, and

falls into the scow or boat lying at or near X, and this process is continued until the boat is loaded. The same description, in all its essential parts, holds true, if, instead of men by wheelbarrows bringing the coal, an elevated coal-pocket is opened, and by a sluiceway coal is let on the apron and screen; or an arrangement is made of the essential parts of my screen, so that cars are dumped and run their coal directly on the apron and screen; or the platform, screen, and elevating-frame *w* are not fixed to a dock, but on a boat, a car, or any other movable or fixed structure, and used to load other cars, wagons, or vehicles; or it is arranged for a retail coal-yard.

The advantages and uses of my invention are apparent to those skilled in the art to which it appertains.

I claim—

1. The screen *b*, constructed with the netting *f*, and the dust-pocket *i* beneath the netting, having an orifice or exit at or near the hinged end of the screen, and emptied by raising the screen on its hinges, substantially as set forth.

2. The cross or regulating bar *g*, in combination with the screen *b* and pocket *i*, for the purpose of producing an even or regular sliding of the coal over the screen, and a more complete separation of the coal-dust, as set forth.

3. The screen *b*, with pocket *i* closed save at its exit or orifice, at its hinged end, in combination with the spring-pole *r*, or other suitable device for raising and lowering the same in emptying the pocket, as set forth.

4. The link or chain *e*, in combination with the screen *b*, pocket *i*, and apron *d*, for holding the apron *d* in a fixed position to the screen and pocket, as set forth.

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Witnesses:

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