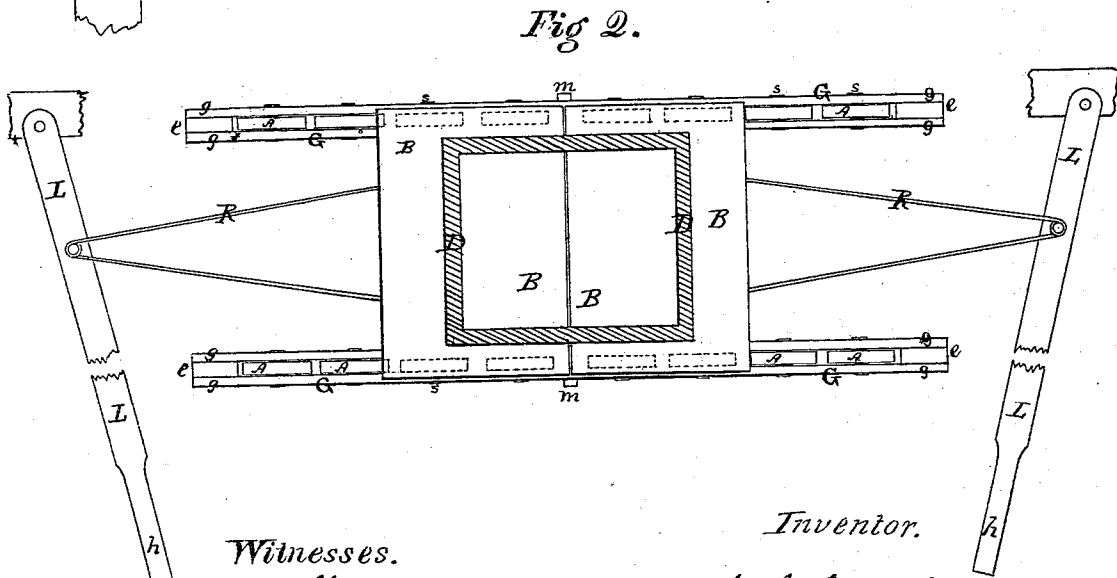
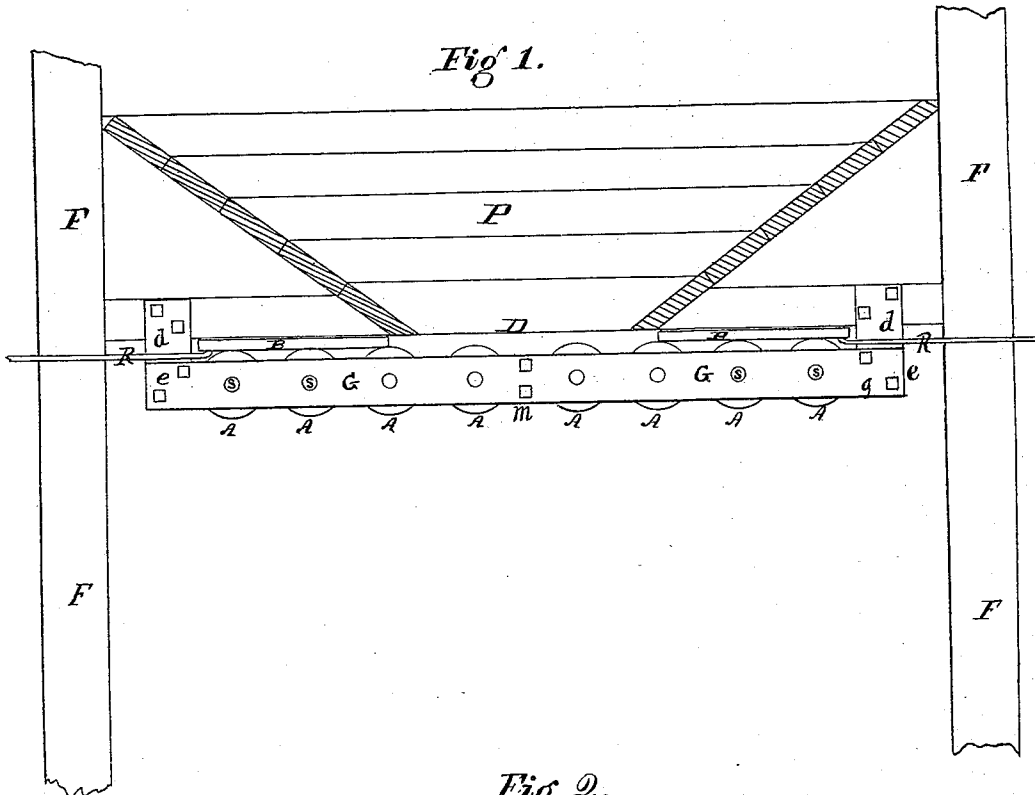


A. C. BUCHANAN.

Coal-Pockets for Storage and Delivery of Coal.

No. 148,663.

Patented March 17, 1874.



Witnesses.

*Henry W. Sherman*  
*Isaac A. Russell*

Inventor.

*A. C. Buchanan*

# UNITED STATES PATENT OFFICE.

ALEXANDER C. BUCHANAN, OF PROVIDENCE, RHODE ISLAND.

## IMPROVEMENT IN COAL-POCKETS FOR STORAGE AND DELIVERY OF COAL.

Specification forming part of Letters Patent No. **148,663**, dated March 17, 1874; application filed November 13, 1873.

*To all whom it may concern:*

Be it known that I, ALEXANDER C. BUCHANAN, of the city and county of Providence and State of Rhode Island, have invented a new and useful Improvement in Coal-Pockets for the Storage and Delivery of Coal, of which the following is a specification, referring to the accompanying drawing, making part of the same, in which—

Figure 1 is a front elevation and section of a coal-pocket with my improvement. Fig. 2 is a plan of the improved parts of the same.

Similar letters mark like parts in all the figures.

My invention consists in providing the doors of the coal-pocket, from which the coal is delivered, with a gang of wheels or rollers mounted in a suitable frame on each side, upon which the doors may be easily opened and shut against the resistance of the weight of the coal on the doors when shut, and the current of the moving mass as it is delivered from the pocket, by means of a lever or other suitable device for the purpose.

In the drawing, F is the upright frame-work which supports the coal-pocket and its contents in an elevated position, so that cars or carts may be drawn underneath and receive coal from the pocket P, the sides of which incline toward the delivery D, which is closed by two sliding doors, B B, which are of cast-iron, and necessarily very strong and heavy, to sustain the weight of the coal, as well as the strain, wear, and force of the moving mass in shutting off the same when the requisite quantity has been delivered from the pocket. The said doors are opened and shut by a stout and powerful lever, L, connected by a rod, R, to each, and operated by one man at the handle end *h* of each.

Besides the obstructions above mentioned, there are other causes which render the doors difficult to slide open, and both difficult and hazardous to shut when once opened, as the same have been heretofore constructed and

mounted. One of the principal causes of difficulty in opening the doors is the settling of the moisture of the coal into the bottom of the pocket, and freezing all the parts together, in which case it becomes necessary to thaw the mass to start the doors, by putting a fire under the same. Besides this, the grit of the coal and obstructing wedge or other shaped lumps often prevent the doors from sliding open when mounted in the usual way on sliding strips or guides. But it is in the difficulty of shutting the doors against the force of the crowding, driving mass of coal, that the ordinary provision of guides is found inadequate and often useless, and frequently dangerous in throwing down and burying the team and men engaged in the delivery of the coal from the pocket. To overcome these difficulties my invention is designed, by which said doors B B are supported on a gang of wheels, A A, mounted in a frame, G, consisting of two parallel pieces, *g*, between which the rollers rotate on suitable studs S passing through both pieces *g*, and secured therein at the ends. The pieces *g* are bolted firmly together in the middle *m* and at the ends *e*, to the two upright arms *d*, which are bolted to the cross-pieces of the frame-work F.

The rollers or wheels should be of ample diameter—say, from two and a half to five inches and upward; and, by preference, I would have no more than two wheels under each end of the doors at a time, so that the door will slide easily and with some little yielding, if need be, to accommodate itself to the mass of coal and its movements, as above specified.

Having described my invention, I claim—

The wheels or rollers A A, &c., and the frame G, in combination with the doors B B and coal-pocket P, operating substantially as shown and described.

A. C. BUCHANAN.

Witnesses:

HENRY H. SHERMAN,  
ISAAC A. BROWNELL.