

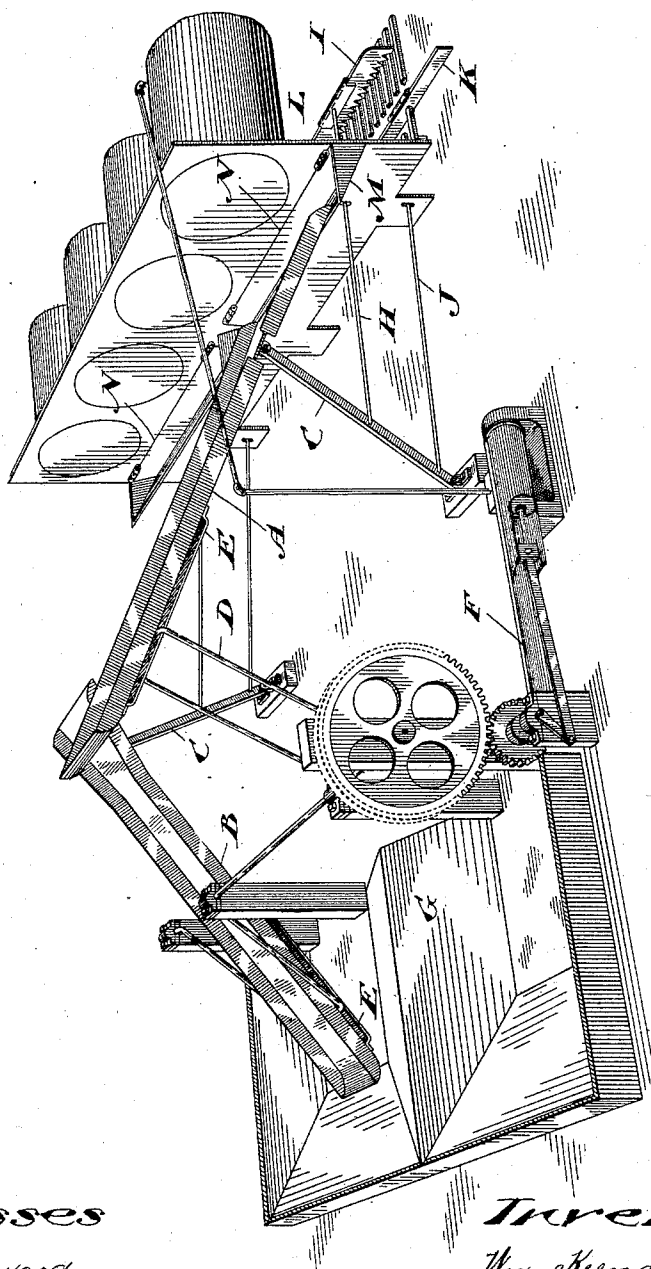
(No Model.)

W. KEENAN.

MACHINE FOR AUTOMATICALLY MOVING COAL, &c.

No. 469,478.

Patented Feb. 23, 1892.



Witnesses

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WILLIAM KEENAN, OF KORAH, CANADA.

MACHINE FOR AUTOMATICALLY MOVING COAL, &c.

SPECIFICATION forming part of Letters Patent No. 469,478, dated February 23, 1892.

Application filed August 21, 1891. Serial No. 403,278. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM KEENAN, farmer, of the township of Korah, in the District of Algoma, in the Province of Ontario, Canada, have invented a certain new and Improved Machine for Automatically Moving Coal and other Material, of which the following is a specification.

The object of the invention is to design a machine by which coal and other material may be moved from one point to another practically without manual labor; and it consists, essentially, of one or more chutes supported on suitable cranks and operated by an engine or other appropriate power in such a manner that one end of the said chute is forced into the pile of coal or other material, gathering a supply, which is raised and discharged out of the opposite end of the chute into the furnace or other point it is intended to be discharged, substantially as hereinafter more particularly explained.

The figure is a perspective view of my improved machine applied to a nest of boilers and arranged to furnish a constant supply of coal to the furnaces.

Although my device may be used for conveying grain and other material, an explanation of its application to a nest of boilers will be sufficient to enable the points of the invention to be easily understood. I show two chutes in operation; but of course any one will understand that in some cases one chute will be sufficient and in others a number of chutes will have to be employed.

A and B represent the two chutes. The front end of each chute is supported by a bar C, the said bar being hinged to the bottom of its chute and suitably pivoted at its lower end, as indicated. A long throw-crank D is carried in an elongated bearing E, formed in the bottom of the chute A, and the shaft of the said crank is suitably journaled and properly geared to the engine F or other driving-motor.

G is a coal-bin, of which a portion only is shown, provided with a slanting bottom, so that the coal will naturally gravitate toward the path of the chute. A rod H is connected at one end to the bar C, and at the other end has a plate I pivoted on it, which plate is lo-

cated in the furnace just above the grates, and is so connected to its rod that in moving from the front of the furnace to the back it will push the coal in front of it, whereas on its return stroke it will float over the coal in the furnace. J is a similar rod connected to the bar C and extending into the ash-pit, and has a plate K connected to it in such a manner that when moving toward the front of the ash-pit it will draw the ashes with it, but in moving toward the back of the ash-pit it will not act upon the ashes.

I have described the mechanism in connection with one chute A. The chute B is provided with similar parts.

In the drawing I show the chute A traveling toward the furnace L, while the chute B is traveling toward the coal-bin G. A trough M is formed before each furnace-door N, which doors are hinged so that they will open when pressed against and close again as soon as the pressure is removed. We will assume that the chute A has gathered a supply of coal from its bin and is traveling toward the trough M. When it reaches the trough M, it remains sufficiently long to discharge its entire contents into the trough M, the coal thus deposited falling through the door N into the furnace L. The plate I moves at the same time and pushes a portion of the coal toward the rear of the furnace. As the crank continues to move, the chute A is carried back, and as it assumes the position of the chute B in the drawing it gathers up a fresh supply of coal, and the operation described is repeated. When the chute is moving from the furnace, the plate K is drawn by its rod toward the front of the furnace, and in this way moves the ashes toward the mouth of the ash-pit, when they can be easily carried away.

A machine such as I have described, when applied to a nest of boilers, enables the furnaces connected to the said boilers to be regularly and automatically fed with practically little or no manual labor. The only manual labor required is to arrange that the coal in the bin G be kept within reaching distance of the moving chutes.

What I claim as my invention is—

1. A machine consisting of one or more chutes, one end of each chute supported upon

the end of a pivoted bar, the opposite end
having an elongated bearing fitted onto a long
throw-crank connected to a shaft suitably
 journaled and geared to an engine or other
5 suitable driving power, substantially as and
for the purpose specified.

2. A machine consisting of one or more
chutes, one end of each chute supported upon
the end of a pivoted bar, the opposite end
10 having an elongated bearing fitted onto a long
throw-crank connected to a shaft suitably

journaled and geared to an engine or other
suitable driving power, in combination with
the rods H and J, connected to the support-
ing-bar of the chute and having a plate piv- 15
oted on the end of each of the said rods, sub-
stantially as and for the purpose specified.

Toronto, July 28, 1891.

WILLIAM KEENAN.

In presence of—

I. EDW. MAYBEE,

W. G. McMILLAN.