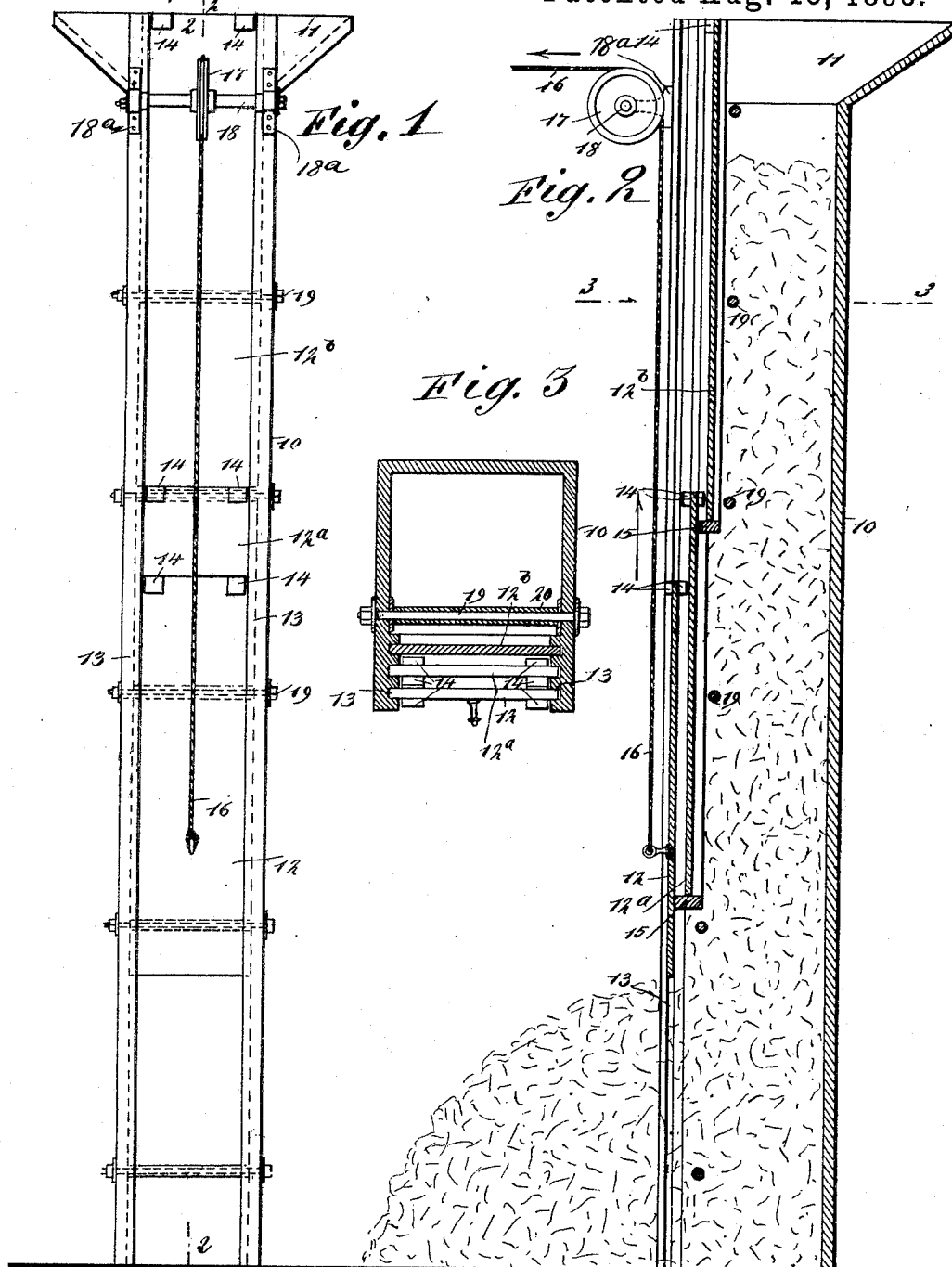


(No Model.)

J. F. SCHMADEKE.
COAL CHUTE.

No. 503,439.

Patented Aug. 15, 1893.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN F. SCHMADEKE, OF BROOKLYN, NEW YORK.

COAL-CHUTE.

SPECIFICATION forming part of Letters Patent No. 503,439, dated August 15, 1893.

Application filed April 29, 1893. Serial No. 472,412. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. SCHMADEKE, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Coal-Chute, of which the following is a full, clear, and exact description.

My invention relates to improvements in coal chutes, and especially to such as are used at places where coal is dumped and allowed to drop a considerable distance. At such places, particularly where the coal is unloaded from cars on a high dump, the coal gets badly broken and a consequent loss ensues.

The object of my invention is to produce a simple chute, which may be used in connection with the hoppers at such dumps, which will almost entirely prevent the breaking of coal; and also to construct and arrange the doors of the chute so that the chute may be opened for a little distance from the bottom or for its entire height, according to the amount of coal which is to be discharged from the chute.

To this end my invention consists of certain features of construction and combinations of parts, as will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of the chute embodying my invention with the lower door partially raised. Fig. 2 is a vertical section on the line 2—2 in Fig. 1; and Fig. 3 is a sectional plan on the line 3—3 in Fig. 2, on an enlarged scale.

The chute 10 is an elongated box-like structure of the general shape of ordinary chutes, being arranged vertically, and at its upper end it connects with a hopper 11 in which the coal is dumped. The chute is provided on its front side with a plurality of vertically movable doors 12, 12^a and 12^b which are arranged one behind the other and one above another, and the drawings show three of these doors but a greater or less number may be used, the number being regulated according to the height of the chute. The doors are held to slide vertically in suitable slideways 13, and

each, except the upper one, is provided on its front and back sides and at the top near its side edges with blocks 14, the blocks of one being adapted to strike the blocks of the other, so that when an outer chute is raised, it will also raise the next inner chute. The upper door has blocks on its front side only, as it does not have to raise any door behind it. The doors above the lower one are adapted to drop into contact with stops 15 which hold them at a correct height, and the doors are all brought normally into closed position. The doors may be raised in any convenient way, but a preferred way of raising them is by means of a cable 16, which is secured to the lower door and which extends upward over a pulley 17, which is carried by the shaft 18 journaled in suitable supports 18^a near the top of the chute, and the cable extends outward to a point where it may be conveniently reached. The chute is provided with cross rods 19 to prevent it from spreading, and these are preferably passed through sleeves 20 which have washers at their ends to abut with the sides of the chute and prevent the sleeve from entering the wood. As above remarked the doors are normally dropped into closed position and consequently the chute is always full so long as there is any coal in the hopper 11. To form a coal pile the chute is first filled and then the lower door is raised as in Fig. 2 whereupon the column of coal will slowly descend until no more will pass out of the lower door opening. The next car or bucket load will again fill the hopper and upper end of the chute and the operator will then raise the second door a little which will allow more coal to escape slowly out and so on. Thus while the hopper is constantly being filled from the car being unloaded the coal will be permitted to escape until the pile reaches the top of the chute and thus the only fall which the coal will have is that which it receives in the first filling of the chute since after the chute is once filled it will be kept practically so. As at present practiced a coal dump is formed by building an elevated track and running the cars thereon and dumping them; the coal having a perpendicular fall of many feet and this is kept up until the pile reaches the track.

My invention almost entirely obviates such breakage.

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

5 Patent—

1. A coal chute open at its top to receive the coal and having one side open and a series of vertically sliding doors closing the open side of the chute and adapted to be successively raised beginning with the lowermost door, substantially as set forth.
2. A coal chute open at its top to receive

the coal and having one side open, and a series of vertically sliding parallel doors closing the said open side at different heights, 15 projections on the doors to be engaged successively as the lower door is raised and means for raising the lower door to cause its projection to engage that of the second door and so on successively, substantially as set forth.

JOHN F. SCHMADEKE.

Witnesses:

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JOHN KNESEL.