

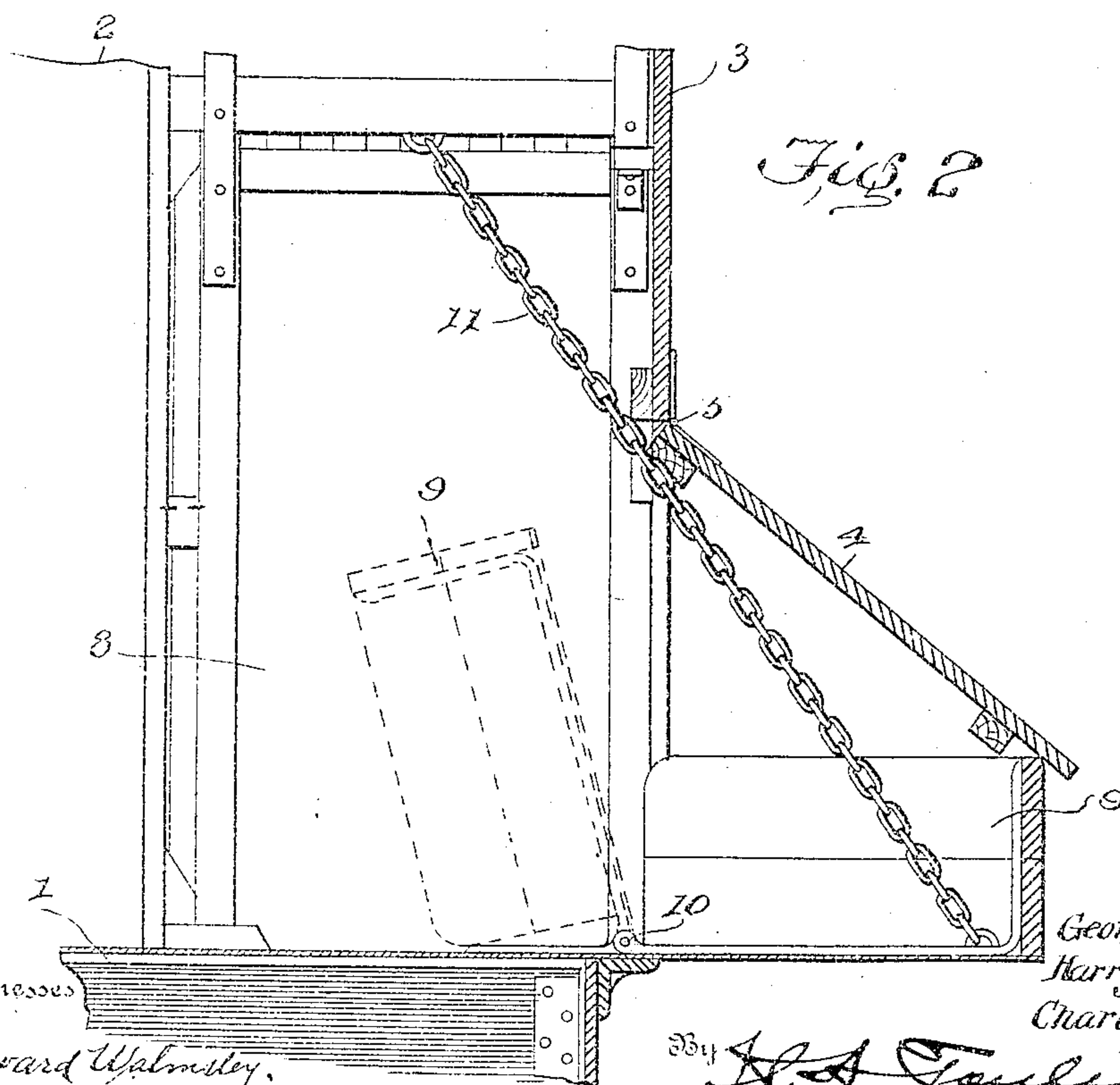
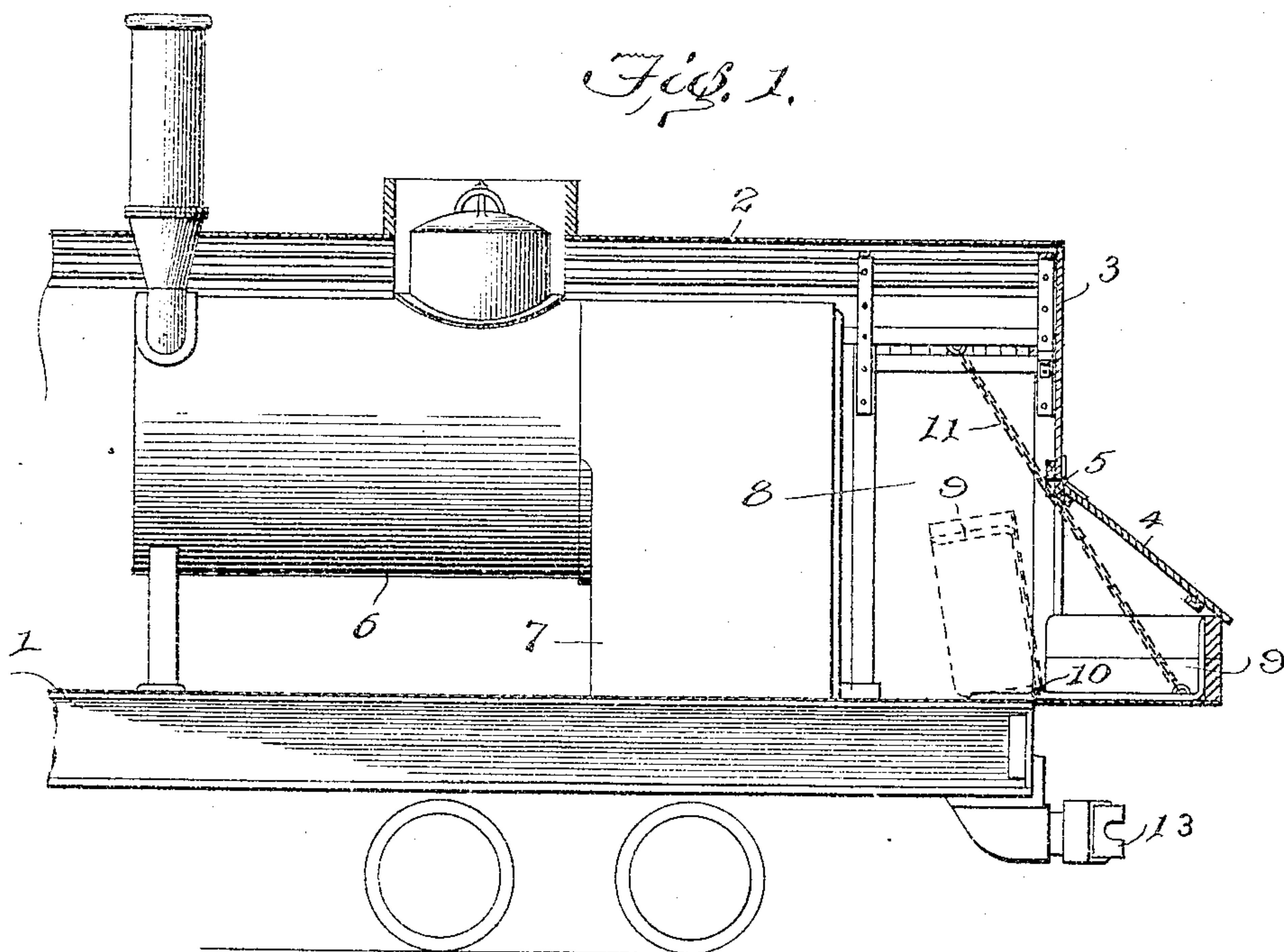
No. 778,677.

PATENTED DEC. 27, 1904.

G. W. KING, H. J. BARNHART & C. B. KING.

STEAM SHOVEL OR THE LIKE.

APPLICATION FILED OCT. 31, 1904.



Witnesses

J. Howard Walmsley,
Irvine Miller.

Inventors,
George W. King,
Harry J. Barnhart
Charles B. King.

By *A. A. Faulstich,*
Attorney

UNITED STATES PATENT OFFICE.

GEORGE W. KING, HARRY J. BARNHART, AND CHARLES B. KING, OF
MARION, OHIO, ASSIGNORS TO THE MARION STEAM SHOVEL COM-
PANY, OF MARION, OHIO, A CORPORATION OF OHIO.

STEAM-SHOVEL OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 778,677, dated December 27, 1904.

Application filed October 31, 1904. Serial No. 230,722.

To all whom it may concern:

Be it known that we, GEORGE W. KING, HARRY J. BARNHART, and CHARLES B. KING, citizens of the United States, residing at Marion, in the county of Marion and State of Ohio, have invented certain new and useful Improvements in Steam-Shovels or the Like, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to steam-shovels and the like, and has for its object to provide for ample firing-space when the shovel is at work, compactness during transportation, and adequate protection of the coal-box and firing-space.

To these ends our invention comprises means whereby the coal-box may be so connected to the car as to be swung out therefrom to give a maximum of firing-space when the shovel is at work, said box being adapted to be swung in within the normal boundaries of the car-body for the sake of compactness in transportation or when the shovel is not at work, the structure comprising in its preferred form a hinged portion of the rear wall of the car-body, which portion forms a cover for the box when it is swung out and a closure for the opening in the end of the car-body when the box is swung in.

In the accompanying drawings, Figure 1 is a side elevation of so much of a steam-shovel embodying our invention in one form as is necessary to a comprehension thereof, the upper portion of the car being in longitudinal section; and Fig. 2 is an enlarged view showing in detail the rear portion of the structure shown in Fig. 1.

In steam-shovels as now constructed, comprising a car and machinery and a boiler and furnace mounted thereon, the provision of ample space for the proper working of the structure without undue increase in the size of the car is of material importance.

It is the object of our present invention to provide a construction whereby ample firing-space is provided for the fireman or stoker who supplies the boiler-furnace with fuel while

the shovel is at work, arranging the fuel-supply conveniently to the firing-space and furnace, while at the same time no undue increase in the length of the car is required, and the apparatus when ready for transportation is of the usual dimensions. It is also desirable to inclose and protect the parts during transportation and at the same time to protect the fuel and firing-space while the shovel is at work. These desirable ends we attain by the construction shown in the drawings, in which—

1 indicates the frame of the car, upon which the machinery of the shovel is mounted. This frame supports the usual car-body 2, having an end wall 3, the lower portion of which (indicated at 4) is hinged at its upper edge, as indicated at 5, so as to swing outward and upward, thus leaving an opening in the rear end wall of the car-body.

6 indicates the boiler, having the usual furnace 7, said boiler and furnace being so located on the rear portion of the car as to leave a firing-space 8 between the rear firing or furnace end of the boiler and the rear extremity of the car. At said rear extremity of the car there is located a coal-box 9, preferably open at the top and front and hinged to the rear edge of the car, as indicated at 10; so that the bottom of said coal-box is continuous with and forms an extension of the floor of the firing-space when the parts are in working position. In this position of the parts the coal-box extends rearward from the car, lying entirely beyond the end of the car, so as not to obstruct the firing-space. The coal-box may be supported in this its working position by means of chains 11 or any other suitable supporting means. We prefer to connect these chains, as shown, to the upper portion of the car-body at the sides thereof and to the rear lower portion of the coal-box at the sides of this latter. The working position of the coal-box is shown in full lines. When the machine is not in use or when it is desired to prepare it for shipment or transportation, the coal-box may be tilted forward into the position shown in dotted lines, resting upon the deck or floor of the firing-space and lying entirely within the usual boun-

daries of the car. When thus folded or tilted forward, it will be seen that the coal-box does not project beyond the car so as to interfere with the use of the coupler 13 at the rear end of the car, and when swung out into working position, as shown in full lines, the coal-box does not obstruct or diminish the firing-space and is in a position where it may be readily filled with fuel and is at the same time conveniently accessible to the fireman.

It will be observed that when the coal-box is in working position the hinged portion 4 of the rear end wall of the car-body forms, in effect, a cover for the coal-box in the form of an inclined roof which will protect the fuel therein, its free end resting on the rear upper edge of the box, so as to give free access to the fuel in the box from the front thereof. In this position of the parts the opening in the rear end wall of the car-body is in a large measure protected by said box and its cover. When the box is tilted forward into shipping position, the cover or wall section 4 falls automatically into a vertical position, in which it may be secured in any suitable manner, closing the opening in the end wall of the car and inclosing and protecting the fire-space and coal-box during transportation.

We do not wish to be understood as limiting ourselves to the precise details of construction hereinbefore described and shown in the accompanying drawings, as it is obvious that various modifications may be made therein without departing from the principle of our invention.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a steam-shovel or the like, the combination, with a car having a boiler mounted thereon and provided with a firing-space between the boiler-furnace and the rear end of the car, of a coal-box pivoted at its forward edge to the rear end of the car so as to be swung forward to rest on the car within the firing-space when not in use, said box extending rearward beyond the end of the car when in use, and means for supporting said box in this latter position, substantially as described.

2. In a steam-shovel or the like, the combination, with a car having a frame and body,

and a boiler mounted on said frame so as to have a firing-space between the boiler-furnace and the rear end of the car, of a coal-box pivoted at its forward end to the rear end of the frame so as to be swung forward to rest on the flooring of the firing-space when not in use, said box extending rearward beyond the end of the car when in use, and means for supporting said box in this latter position, the end wall of the body having an opening through which the box may swing, a part of said end wall being hinged at its upper edge to the top of said opening, said part forming an inclined cover for the box, upon which it rests when the box is in working position, and assuming a vertical position to close the opening in the end wall when the box is swung forward into non-working position, substantially as described.

3. In a steam-shovel or the like, the combination, with a car having a firing-space, of a coal-box connected to said car so as to be swung out therefrom to give a maximum of firing-space when the shovel is at work, said box being adapted to be swung into the firing-space within the normal boundaries of the car for compactness in transportation, substantially as described.

4. In a steam-shovel or the like, the combination, with a car having a firing-space, of a coal-box connected to said car so as to be swung out therefrom to give a maximum of firing-space when the shovel is at work, said box being adapted to be swung into the firing-space within the normal boundaries of the car for compactness in transportation, the car-body having an opening for the passage of the box and a portion of the wall of said body hinged to the upper margin of said opening so as to rest on and form a cover for the box when it is swung out and a closure for the opening when the box is swung in, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

GEORGE W. KING.
HARRY J. BARNHART.
CHARLES B. KING.

Witnesses:

GEORGE A. CHENEY,
FRANK H. KING.