

No. 761,594.

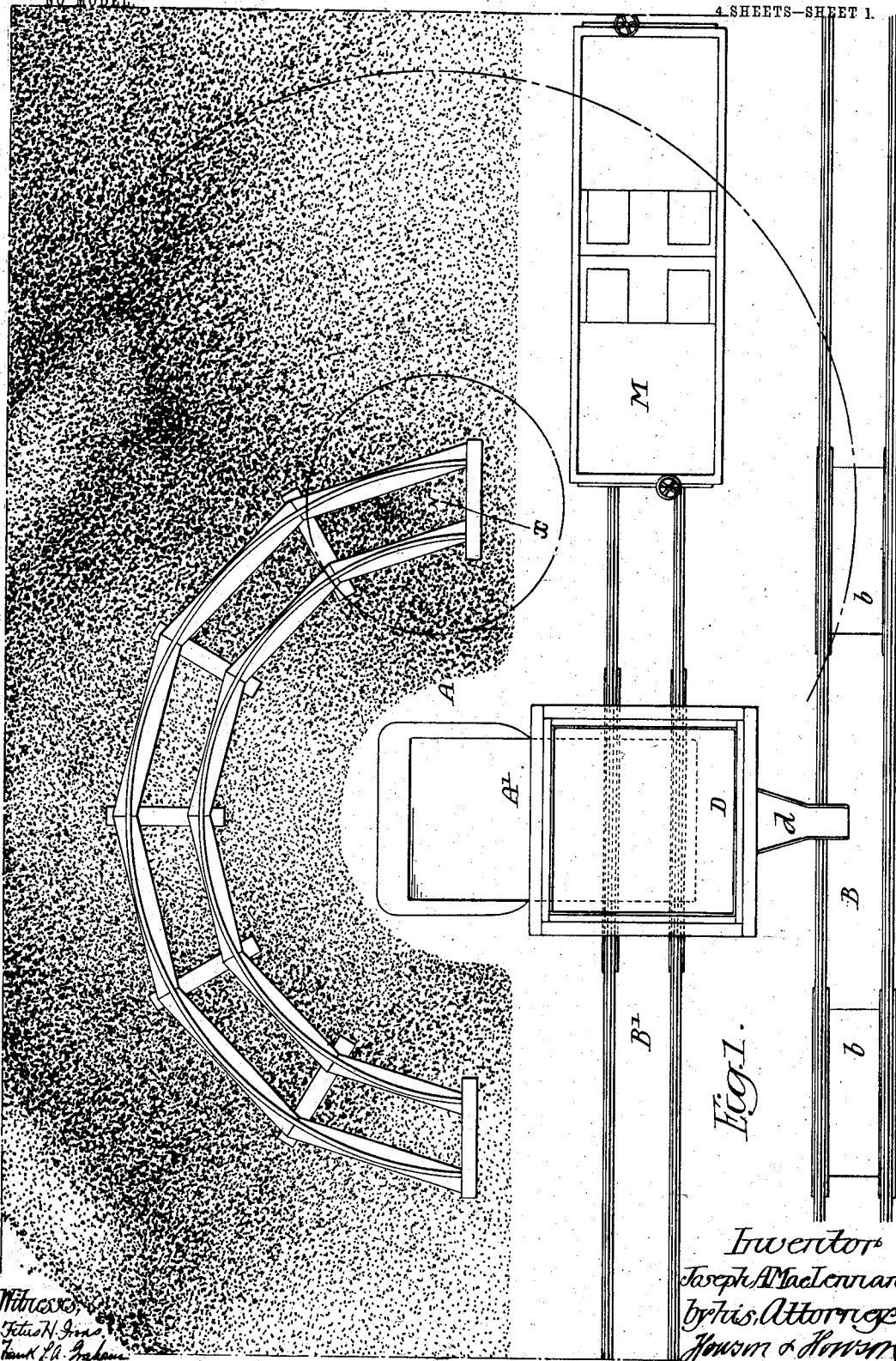
PATENTED MAY 31, 1904.

J. A. MACLENNAN.
STORAGE APPARATUS FOR COALING STATIONS.

APPLICATION FILED FEB. 17, 1904.

NO MODEL

4 SHEETS—SHEET 1.



Witnesses
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Frank E. Johnson

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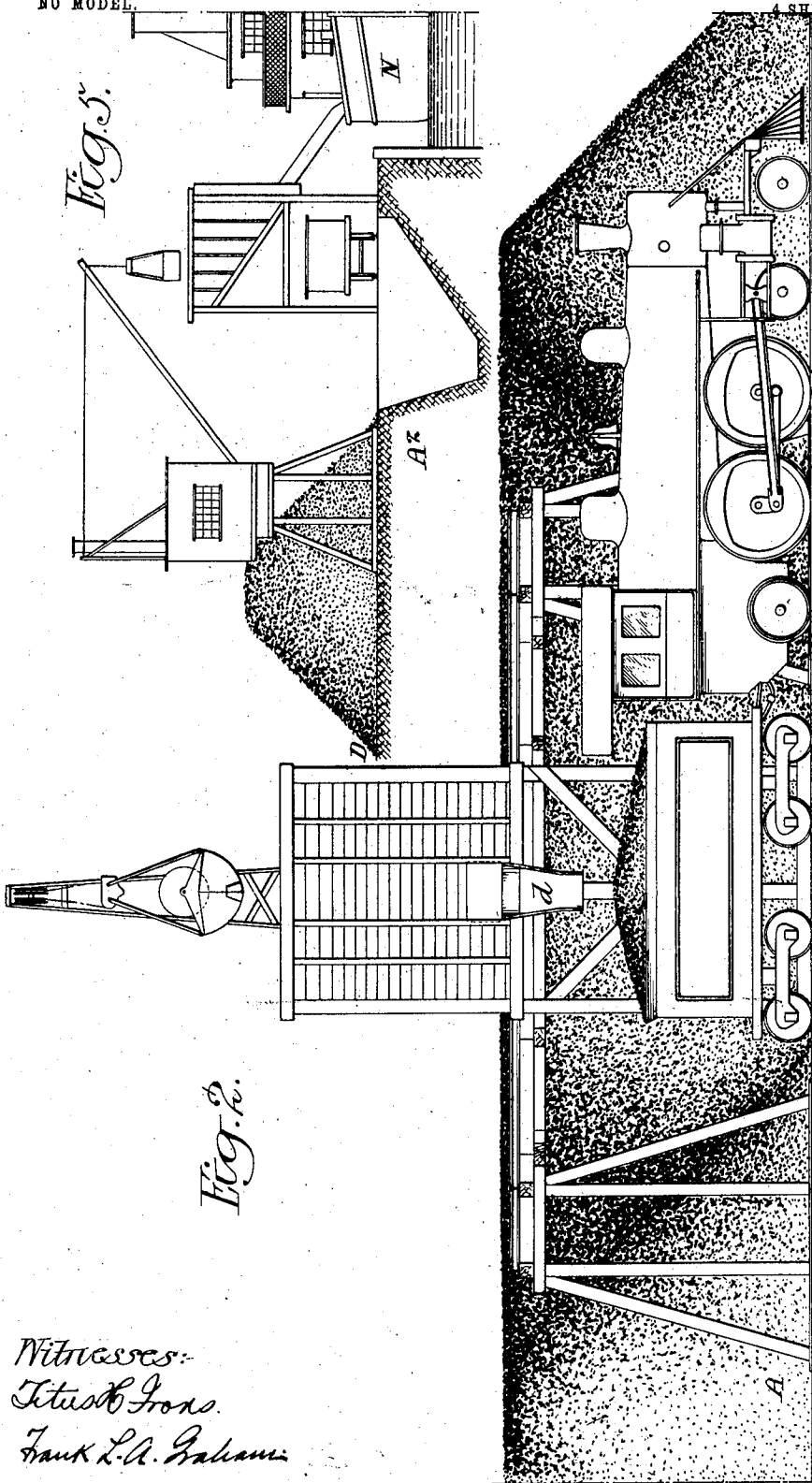


Fig. 3.

Fig. 2.

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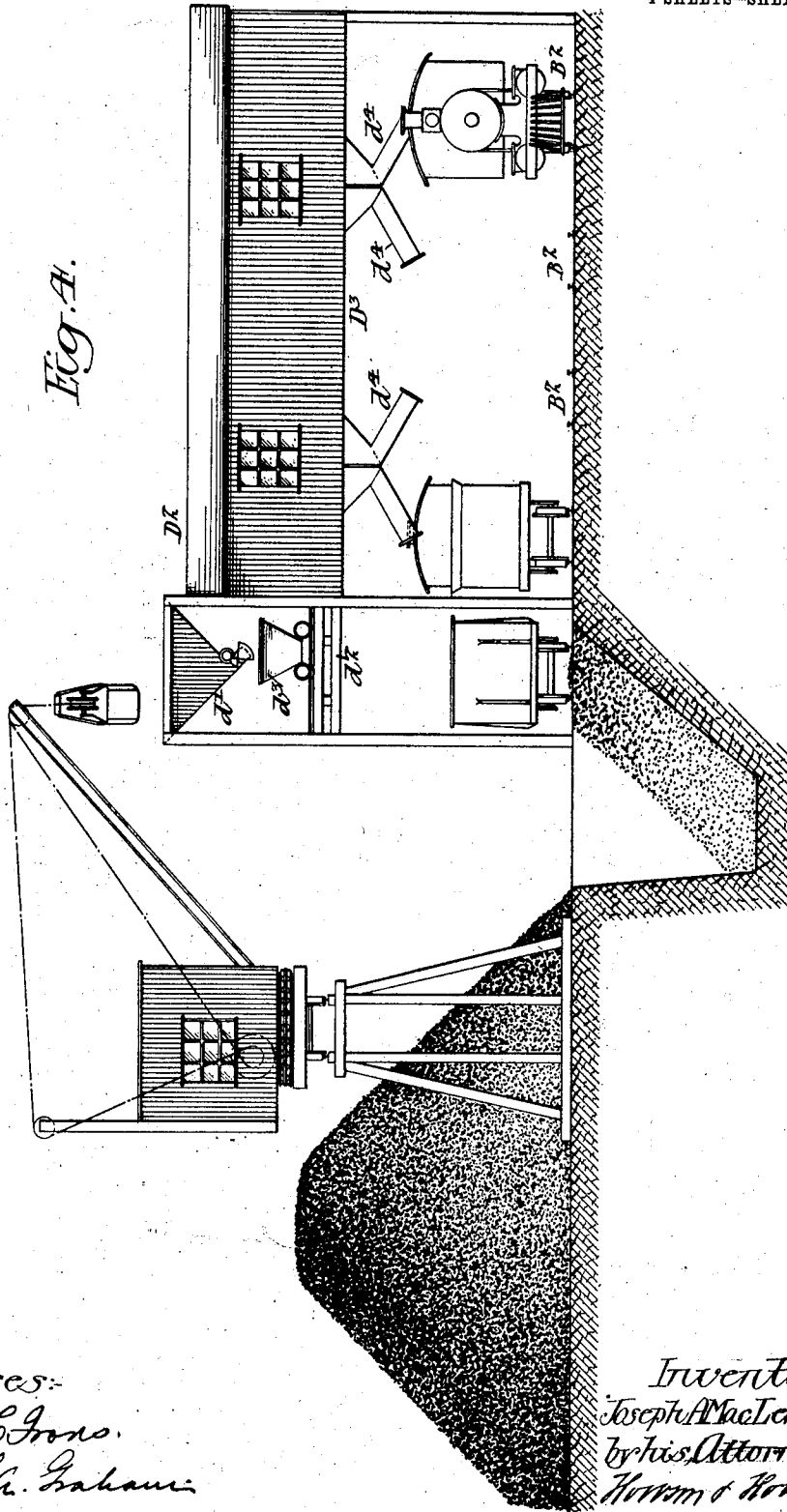


Fig. A.

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UNITED STATES PATENT OFFICE.

JOSEPH A. MACLENNAN, OF AMBLER, PENNSYLVANIA, ASSIGNOR TO THE DODGE COAL STORAGE COMPANY, OF NAUGATUCK, CONNECTICUT, A CORPORATION OF CONNECTICUT.

STORAGE APPARATUS FOR COALING-STATIONS.

SPECIFICATION forming part of Letters Patent No. 761,594, dated May 31, 1904.

Application filed February 17, 1904. Serial No. 193,979. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH A. MACLENNAN, a citizen of the United States, residing in Ambler, Montgomery county, Pennsylvania, have invented certain Improvements in Storage Apparatus for Coaling-Stations, of which the following is a specification.

The object of my invention is to provide means for storing coal in bulk at a railway or steamboat coaling-station in a comparatively inexpensive manner and to provide means for filling a bin from the pile and for removing ashes from the pit adjacent to the pile. This object I attain in the following manner, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of my improved coal-storage apparatus for railway coaling-stations. Fig. 2 is a face view. Fig. 3 is an end view. Fig. 4 is a view illustrating a modification of the bin construction and the means for charging the locomotive-tenders with coal from the bin, and Fig. 5 is a view showing my invention applied to a steamboat coaling-station.

Referring in the first instance to Figs. 1, 2, and 3, A is the floor upon which the coal is to be piled. At one side of this floor are two tracks B B'. B is the coaling-track, and B' is the siding between the coaling-track and the floor and upon which the coal-cars are run, from which the supply for the coal-pile is drawn. Directly above the siding-track B' is an elevated, coal-pocket D, supported on vertical standards D', suitably braced and mounted sufficiently above the track to allow clearance for a locomotive. The bottom of the coal-pocket is preferably inclined toward the coaling-track B, upon which the locomotive is run when its tender is to be supplied with coal. In the present instance I have shown an adjustable chute Z, which can be raised clear of the locomotive or cars on the track, and when it is desired to charge the tender with coal it can be lowered, so as to direct the coal into the tender, as indicated in Fig. 3. Between the siding-track B' and the piling-floor is a pit A'. This pit extends, prefer-

ably, under the track B', so that when the coal-cars on the track B' are discharged the coal will flow into the pit. The pit is open between the piling-floor and the standards of the bin to allow for the passage of a bucket into the pit, the pit being the center around which the semicircular pile is formed, as illustrated in Fig. 1. Mounted upon the piling-floor is a segmental trestle C, upon which is a track c, and on the track is a truck E, carrying a pivoted crane E'. The base E² of the crane is mounted so as to swing in a complete circle on the truck E. Projecting from the base E² is a boom F, from which extends suitable ropes for raising and lowering the boom, and suspended from the end of the boom is a bucket I. This bucket in the present instance is of the clam-shell type, and ropes extend from the bucket to the operating mechanism on the base E² for raising and lowering and opening and closing the bucket. The segmental track is built around the pit as a center, and as the bin D is directly in front of the pit the boom can be so adjusted that the bucket can be lowered into the pit or may be moved over the bin to discharge material into the bin or pile coal on the floor within a certain radius. Between the rails of the coaling-track B are one or more ash-pits b, which are preferably in such a position with respect to the bin that when the tender is being charged with coal from the bin ashes can be discharged from the locomotive directly into a pit. The boom of the crane is of such a length that when the crane is moved, for instance to the position x, Fig. 1, the boom can be adjusted so that the bucket can be lowered directly into the ash-pit b at one side of the coal-pocket and remove ashes therefrom and transfer the ashes into a car M (shown in Fig. 1) on the siding-track B' or into a pit, if desired, at the side of the track. Thus my improved apparatus can be used not only for handling coal, but also for handling ashes. It will be understood that in plants of any size the truck of the crane is driven by power, so that it can be shifted to any point along the segmental track. I pref-

erably form the pile by beginning at one end and build from this end over the segmental piling-floor. The coal is first discharged into the pit from cars on a siding B', and the
 5 bucket of the crane removes the coal from this pit and delivers it to any point desired on the piling-floor, or the crane may be so operated that the coal can be removed from the pit and discharged into the bin when it is
 10 desired to fill the bin immediately without transferring it to the piling-floor, in the case of an emergency, for instance. The coal in the bin is kept, preferably, at a certain height by the operator removing coal from the piling-floor and discharging it into the bin, so
 15 that a locomotive coming on the track B can quickly coal by simply removing a certain amount of coal from the bin by gravity. At the same time the ashes can be discharged
 20 from the locomotive into the ash-pit b, and when the crane is not in use in storing coal or loading the bin it can be used to remove ashes from the pit and transfer them to a pile or discharge them directly into cars on the
 25 siding B'. Thus by my improved arrangement I am enabled to make a comparatively cheap coaling-station for railway service and which can be economically operated.

In Fig. 4 I have shown a modification of the coal-pocket. The coal-pocket D (shown in Fig. 3) is especially applicable to a single-track coaling-station; but the pocket D² (shown in Fig. 4) is intended to be used as a coaling-station having two or more tracks. D² is the
 35 coal-pocket, having a hopper d' and a frame D³ extending over the tracks B². On the frame D³ is a track d², on which is a hopper-car d³, which can receive coal from the hopper d' and transfer it to any of the chutes d⁴ above
 40 the tracks B².

In Fig. 5 I have shown my invention used as a steamboat coaling-station. In place of the track B, I mount the apparatus on a wharf A², so that a vessel N can be supplied with
 45 coal from the coal-pocket D. The crane may be used when moved into position to transfer material from the vessel to the wharf or to cars on the tracks, if desired.

I claim as my invention—

50 1. The combination of a piling-floor, an elevated segmental track, a truck carrying a boom-crane a bucket suspended from the boom of said crane, a pit and an elevated coal-pocket so situated in respect to the segmental track,
 55 that the crane can remove material from the pit or deliver it to the pocket while at any point on the track, substantially as described.

2. The combination of a piling-floor, a segmental track mounted above said floor, a crane

arranged to travel on the track a bucket hung
 60 from said crane, a pit and an elevated coal-pocket at or near the point from which the arc of the track is taken, so that the crane can remove material from the pit and transfer it to the floor, or remove material from the floor
 65 and discharge it into the coal-pocket, a track so arranged in respect to the pit that a car on said track can discharge into the pit, substantially as described.

3. The combination of a coaling-track, a siding-track, coal-pocket above the siding-track
 70 having a chute by which a locomotive on the coaling-track can be charged with coal from the pocket, a pit under the siding-track and to one side of the bin, a piling-floor at one side of
 75 the track, a segmental track above the piling-floor, a crane mounted on the segmental track and having a bucket suspended from the boom thereof, said crane being so arranged in respect to the pit and the bin that it can receive
 80 material from the pit and transfer it to the piling-floor or receive material from the piling-floor and transfer it to the bin, substantially as described.

4. The combination of a coaling-track, a siding-track, a coal-pocket above the siding-track,
 85 an ash-pit between the rails of the coaling-track, a piling-floor at one side of the siding-track, a pit forming the center for the piling-floor and extending under the siding-track, a
 90 segmental track mounted above the piling-floor, a crane on the segmental track, the ash-pit of the coaling-track being in such a position in respect to the segmental track that the bucket carried by the crane can be shifted
 95 to either remove material from the coal-pit and deliver it onto the piling-floor, or discharge material from the piling-floor into the bin, or remove material from the ash-pit into a car on the siding, substantially as described. 100

5. The combination of a coal-pocket adjacent to a track or wharf edge from which coal
 105 can be delivered into a locomotive or boat, a pit near the track or wharf edge, a piling-floor back of the pit, a segmental track of which the pit is the center each end of the segmental track being near the coaling-track or wharf-line, a crane on the segmental track having a boom, a bucket hung from the boom, substantially as described. 110

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH A. MACLENNAN.

Witnesses:

WILL. A. BARR,
 JOS. H. KLEIN.