(No Model.)

J. M. DODGE.

PILING AND REMOVING MACHINERY FOR COAL.

No. 453,966. Patented June 9, 1891.

FIG. 1.

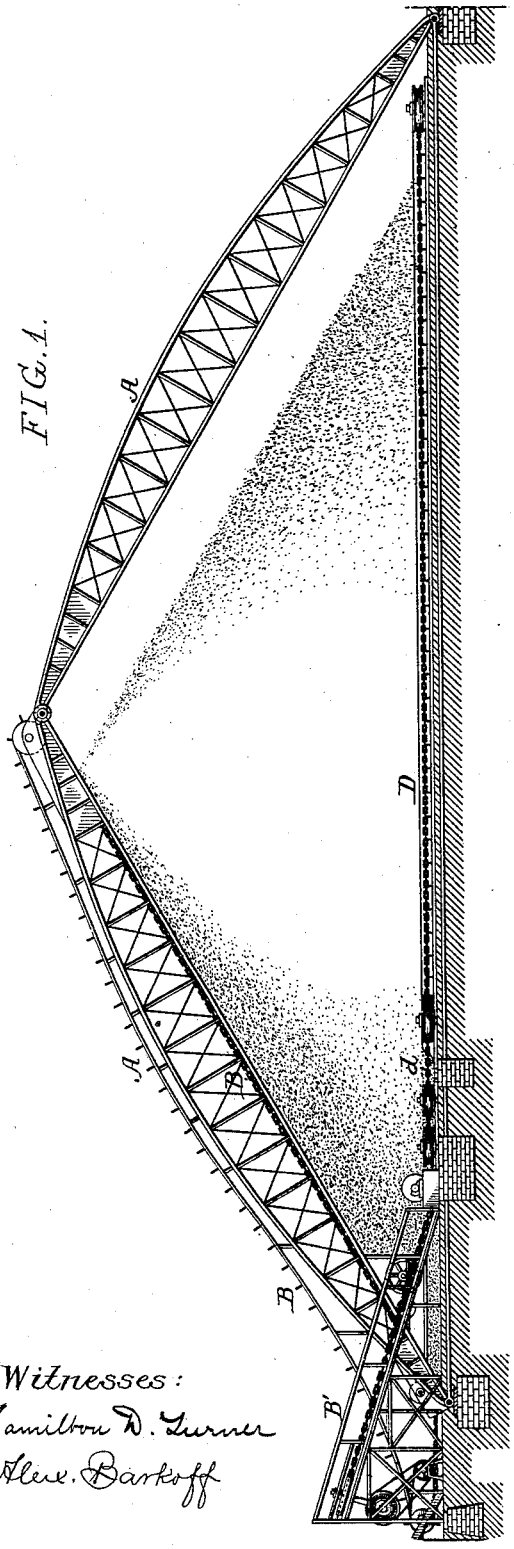
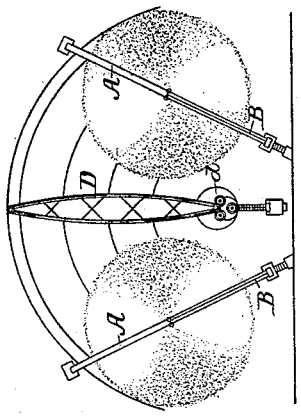


FIG. 2.



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UNITED STATES PATENT OFFICE.

JAMES M. DODGE, OF PHILADELPHIA, PENNSYLVANIA.

PILING AND REMOVING MACHINERY FOR COAL.

SPECIFICATION forming part of Letters Patent No. 453,966, dated June 9, 1891.

Application filed February 6, 1891. Serial No. 380,462. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. DODGE, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Piling and Removing Machinery for Coal and Analogous Material, of which the following is a specification.

My invention relates to apparatus whereby coal or analogous material is piled in large storage-heaps, and is removed as required by a conveyer which attacks the pile at the base and is free to move transversely, the object of my invention being to permit of the action of said removing device throughout an area within which is contained the entire base of the pile, so that said pile can be completely removed. This object I attain by means of a special construction of piler and a special construction and location of the remover in respect thereto.

In the accompanying drawings, Figure 1 is a side view illustrating my invention, and Fig. 2 is a plan view.

Heretofore in coal-handling machinery of this character the piling apparatus was so constructed as to form an obstruction for the free passage of the removing-trough or conveyer completely under the structure. Consequently only a portion of the coal could be removed by the trough, the remainder of the coal having to be shoveled or otherwise conveyed into the path of the trough or removed independently thereof. This necessitated a great loss of time and added greatly to the expense of handling the material. By my present invention I form a shear having legs A A, which completely span the formed pile of coal or other material. On one of the legs of the sheers is the conveyer B, of any suitable construction, for carrying the material up to form the pile. This conveying apparatus, as well as the form of truss, is fully set forth in my patent, No. 446,814, dated February 17, 1891, and therefore need not be described in detail in this present application. Adjacent to the sheers of the piling machinery is the removing-trough D, which in the present instance is pivoted at *d*, and is of such proportions as to swing freely under the sheers to remove the coal thereunder, as clearly shown in Fig. 2. This trough is provided with a suitable conveyer which moves in the direction of the length of the trough to carry the material to the pivot-point, from which point it is distributed as required. In the present instance it is carried up the incline plane B′ and loaded in cars or boats, as the case may be. The conveyers of both the piling and removing apparatus are driven in the present instance from the same engine or from the same line-shafting.

In Fig. 2 I have shown a double removing-trough situated between two piling structures and so arranged as to swing freely under both structures. This is the most economical method of building a plant, as one removing-trough can be used for two piling structures.

I claim as my invention—

The combination, in an apparatus for removing or piling coal or analogous material, of the sheers of the piling apparatus spanning the pile of the material, with a horizontally-movable conveying-trough and a conveyer thereon for removing the material from the pile, the arrangement of parts being such that the removing-trough can pass freely under the sheers of the piling apparatus to remove the coal piled thereunder, substantially as set forth.

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

JAMES M. DODGE.

Witnesses:
HENRY HOWSON,
WM. D. CONNER.