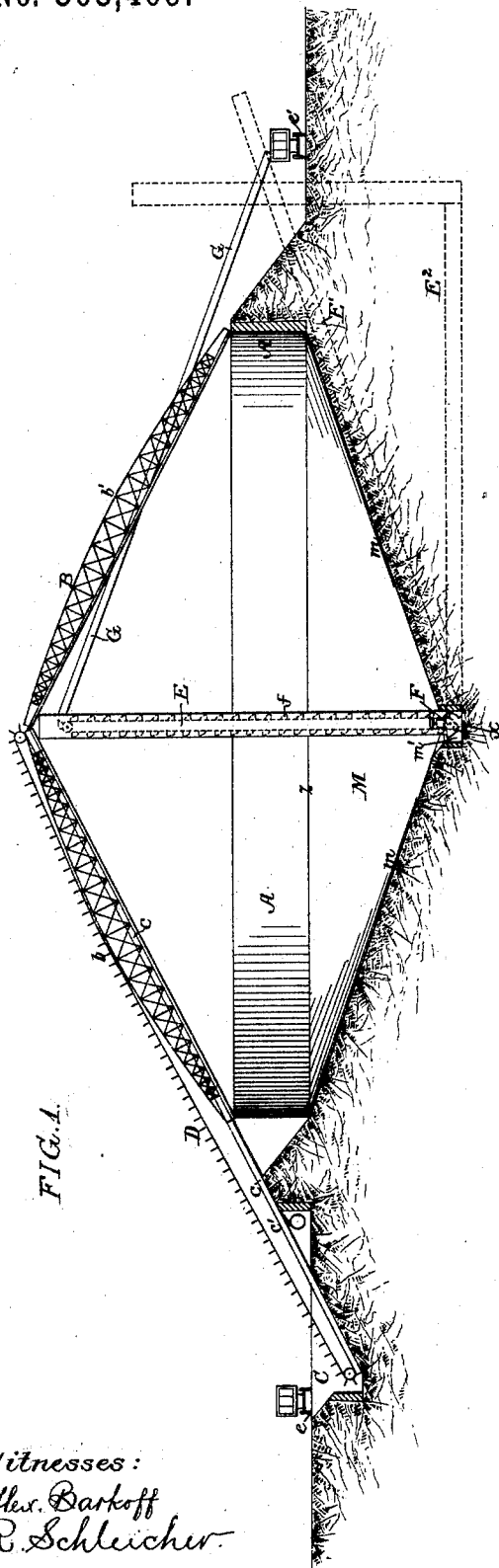


(No Model.)

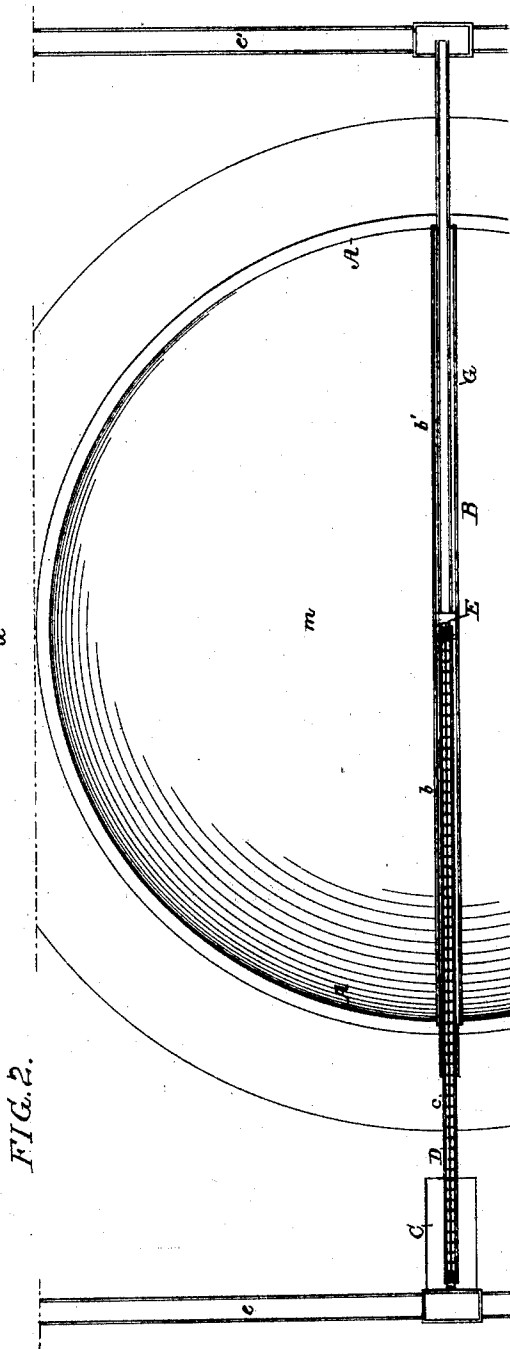
J. M. DODGE.
APPARATUS FOR PILING COAL.

No. 503,409.

Patented Aug. 15, 1893.



Witnesses:
Wm. Barkoff
R. Schleicher



Inventor:
James M. Dodge
by his Attorneys
Hiram Johnson

UNITED STATES PATENT OFFICE.

JAMES M. DODGE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE
DODGE COAL STORAGE COMPANY, OF SAME PLACE.

APPARATUS FOR PILING COAL.

SPECIFICATION forming part of Letters Patent No. 503,409, dated August 15, 1893.

Application filed March 2, 1893. Serial No. 464,367. (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 Apparatus for Piling Coal or Analogous Material, of which the following is a specification.

The object of my invention is to increase the storage capacity of apparatus for piling coal or analogous material, and to dispense with the pivoted re-loader or remover. This object I attain in the following manner, reference being had to the accompanying drawings, in which—

Figure 1, is a sectional elevation with part of the apparatus shown in side view. Fig. 2, is a plan view of one-half the structure.

Heretofore in piling apparatus of this character, the floor has been level, not extending below the anchorage of the shears, consequently the quantity of coal piled was limited to the space between the shears and the level floor, but I greatly increase the capacity of the pile without increasing its diameter, by inclining the floor from the edges down to a point x , preferably at the center, below the line z , as shown in Fig. 1, making a basin M with inclined sides, and where space is limited, I build a wall A around the basin, or extend it only on opposite sides. Suitable drainage outlets are provided to carry away water that may accumulate in the basin.

B is a shear truss having two legs b , b' coupled together at their upper ends, and having their lower ends suitably anchored. Stays and guy ropes are used to steady the truss. On the leg B is an inclined way c which extends down beyond the truss, and in the present instance, into a receiving bin C. The conveying truss has an open bottom, and in the present instance I have shown a longitudinal movable belt for closing the opening as the pile increases in height, but it will be understood that other means of closing the opening may be used without departing from my invention, and that other piling apparatus may be used to form the pile. The receiving tracks e are so situated in respect to the bin C as to discharge into said bin. On the opposite side of the structure are the tracks for the cars to be loaded from the pile. In some instances

both tracks may be placed on one side of the basin, or at other points as desired.

In forming the pile the material is carried up by suitable conveyers. In the present instance a flighted chain conveyer D is used, to the first point of discharge, and then allowed to fall by gravity into the basin M, the sides m of this basin being inclined toward the point x , the material will naturally flow toward that point. Extending from the point x to a point near the apex of the shear structure, is a vertical conveying chute E having a flighted endless conveyer f therein, which extends into a boot or receiver F situated in a pit m' . Extending from the upper portion of the conveyer trough E is an inclined discharge trough or spout G which is supported by the leg b' of the truss structure B in the present instance, and extends beyond the truss and above the track e' , so that as material is discharged from the chute G it falls directly into the cars; the trough G however, may terminate in a delivery bin, or terminate above a wharf, depending altogether upon the locality of the apparatus. It will thus be seen that to remove material from the pile, the conveyer f is set in motion and receives material at the point x and carries it up and discharges it into the delivery trough, the material flowing into the receiver F by gravity. By this means all the material forming the pile can be discharged from this central point.

It will be understood that in some instances, a vertical discharge conveyer may be dispensed with, and a side discharge conveyer be used, either extending parallel with the incline side of the basin as shown by dotted lines E' , or extending horizontally under ground and connected to a vertical shaft, as also shown by dotted lines E'' .

I claim as my invention—

1. The combination in apparatus for piling coal or analogous material, of the piling floor in the form of a basin with sides inclining toward a point of discharge, a receiver and discharging conveyer whereby the material will flow by gravity to the receiver and be discharged by the conveyer, substantially as described.

2. The combination in apparatus for piling coal or analogous material, of the shear struct-

ure, conveyer thereon, a basin M directly under the shear structure and adapted to receive material from the said structure as it is carried up and discharged by the conveyer, substantially as described.

3. The combination of the basin M having an inclined bottom forming a conical bottom, a shear structure mounted above said basin, a conveyer for carrying material up said structure and discharging it under the truss, with a centrally situated discharge conveyer having its receiver at the lowermost point of the basin so as to receive material at this point and carry it away from the pile, substantially as described.

4. The combination of the shear structure, a piling conveyer carried by said shear structure, a delivery chute also carried by said shear structure, with a vertical discharge conveyer adapted to receive material at its base and carry it up to the delivery chute, substantially as described.

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

JAMES M. DODGE.

Witnesses:

RICHARD W. YERKES,
JAMES B. CRAWFORD.