

No. 755,566.

PATENTED MAR. 22, 1904.

J. M. DODGE.
STORAGE APPARATUS.
APPLICATION FILED JUNE 11, 1903.

NO MODEL.

2 SHEETS—SHEET 2.

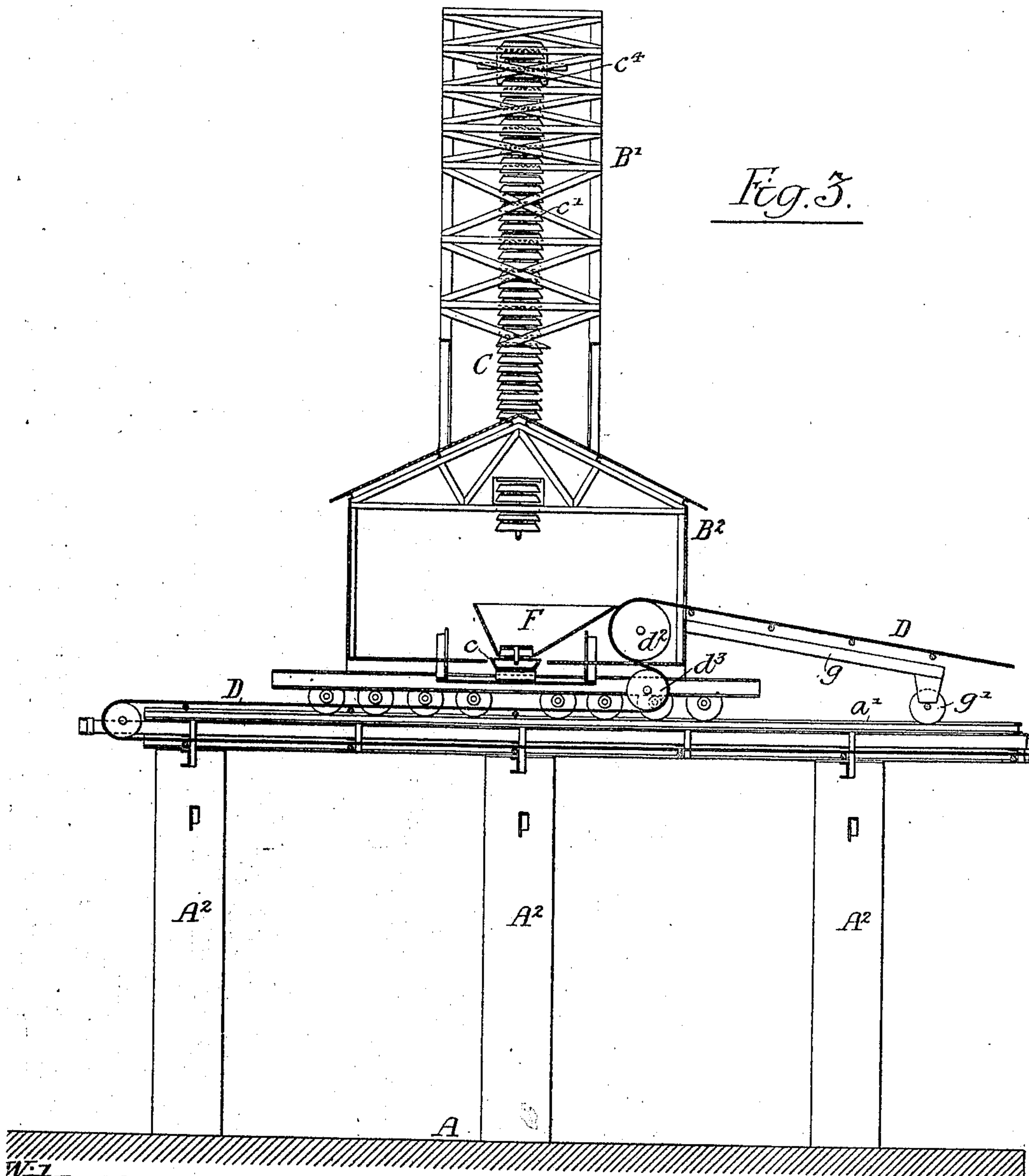


Fig. 3.

Witnesses:-

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Wm. A. Barr.

Inventor:-

James M. Dodge,
by his Attorneys;

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UNITED STATES PATENT OFFICE.

JAMES M. DODGE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE DODGE COAL STORAGE COMPANY, OF NAUGATUCK, CONNECTICUT, A CORPORATION OF CONNECTICUT.

STORAGE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 755,566, dated March 22, 1904.

Original application filed April 30, 1903, Serial No. 155,062. Divided and this application filed June 11, 1903. Serial No. 161,012. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. DODGE, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Storage Apparatus, of which the following is a specification.

My invention relates to certain improvements in apparatus for storing material such as coal and ore in bulk by a movable apparatus, so that the pile can be of any length desired.

My invention is a modification of the device illustrated and claimed in an application for patent filed by me on the 30th day of April, 1903, Serial No. 155,062.

The object of my present invention is to provide an apparatus whereby the material is conveyed to the elevator on the moving structure by means of a belt running parallel with the track on which the structure is mounted. This object I attain in the following manner, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of my improved piling structure, showing the trestle-work in section. Fig. 2 is a plan view, and Fig. 3 is a longitudinal sectional view on the line 3 3, Fig. 1.

A is the piling-floor. At one side of the piling-floor is a wall A', on which is a track a, and some distance from this wall are piers A², supporting the beams a², carrying the rail a'.

B is a frame made in the form of a truss and shaped as clearly shown in Fig. 1. This frame has a series of wheels b b, which are mounted on the tracks a a'. The weight of the structure is sufficient to counterbalance the overhanging extension B' of the frame. The frame is arranged on an incline, and mounted thereon is a conveyer-chute c, over which pass the flights c' of the conveyer C. These flights are attached to an endless chain in the ordinary manner common to flight-conveyers.

The conveyer C passes around sheaves c² c³ at the inner end of the structure and around a sheave c⁴ at the extreme outer end of the structure. Any one of these sheaves may be

driven from an engine or motor in the shelter B² carried by the frame B.

The fixed structure, consisting of the wall and piers, may extend any length desired, according to the length of the piling-floor, and the structure B can be traversed on the rails to any point. In the present instance I have shown a power-shaft e, geared to two shafts e' e² by bevel-gears, which in turn are geared by bevel-wheels to the axles of one set of the traction-wheels; but other means of imparting motion to the structure may be adopted without departing from my invention.

In order to charge the conveyer C with material, I provide an endless-belt conveyer D, which travels at right angles to the conveyer C on the movable structure B, and may be of any length desired. The belt is supported on suitable rollers and guides d d, carried by brackets D', projecting from the piers A² in the present instance, and in order to transfer the material carried by this belt to the conveyer C, I allow the belt to pass around two discharge-wheels d² d³, which are mounted in suitable bearings in the frame carried by the structure B, and I preferably arrange above the carrying-run of the conveyer C a hopper F, which receives the material as it is discharged from the carrying-belt D and feeds it to the conveyer C.

In order to guide the belt D up to the discharge-wheel d², I provide an inclined frame g on one side of the structure B, and this frame has wheels g', which travel on the track a', and carries friction-rollers for supporting the belt. Thus the discharge apparatus for the belt is movable with the structure B, and consequently there is no independent adjustment required when the structure B is traversed from one point to another.

In the present instance I have shown a counterweight I, of concrete or other suitable material, to counterbalance the overhanging portion B' of the structure B.

The conveyer C may discharge the material at the extreme end of the overhanging extension B' or may discharge it at any point de-

sired throughout the length of the said extension. I preferably provide a series of doors in the chute, any one of which can be opened to allow the material to be discharged. An apron may be used in place of the doors, and this apron may be constructed as shown in the patent granted to me on the 17th day of February, 1891, numbered 446,436.

While I have shown an endless-belt conveyer, it will be understood that any equivalent of the belt may be used without departing from my invention.

I claim as my invention—

1. The combination of a track, a structure movable on said track, a discharge-conveyer carried by said structure, an endless-belt conveyer mounted parallel with the track, and means for feeding the conveyer on the moving structure from the belt, said discharge mechanism being mounted on the movable structure, substantially as described.

2. The combination of a piling-floor, a track at one side of the piling-floor, a movable structure mounted on the track and having an extension overhanging the piling-floor, a conveyer on the extension, an endless-belt conveyer mounted parallel with the track, discharge mechanism for said belt conveyer carried by the moving structure, a hopper on the moving structure so situated as to receive mate-

rial as it is discharged from the endless-belt conveyer and to feed it to the conveyer of the moving structure, substantially as described.

3. The combination in a storage structure, of a piling-floor, a wall at one side of the floor, a series of piers projecting from the piling-floor some distance from the wall and at a greater height than the said wall, rails mounted on the wall and on the piers, a movable structure having an extension, the said structure being arranged on an incline and having wheels mounted on the said rails, an endless conveyer on the said moving structure, said conveyer arranged to carry material up the extension and discharge it above the piling-floor, an endless-belt conveyer arranged parallel with the rails, guides for said conveyer carried by the piers, discharge-wheels for the belt conveyer carried by the movable structure, said discharge-wheels being so situated as to discharge the material from the belt into the path of the conveyer of the movable structure, 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:

WILL. A. BARR,

JOS. H. KLEIN.