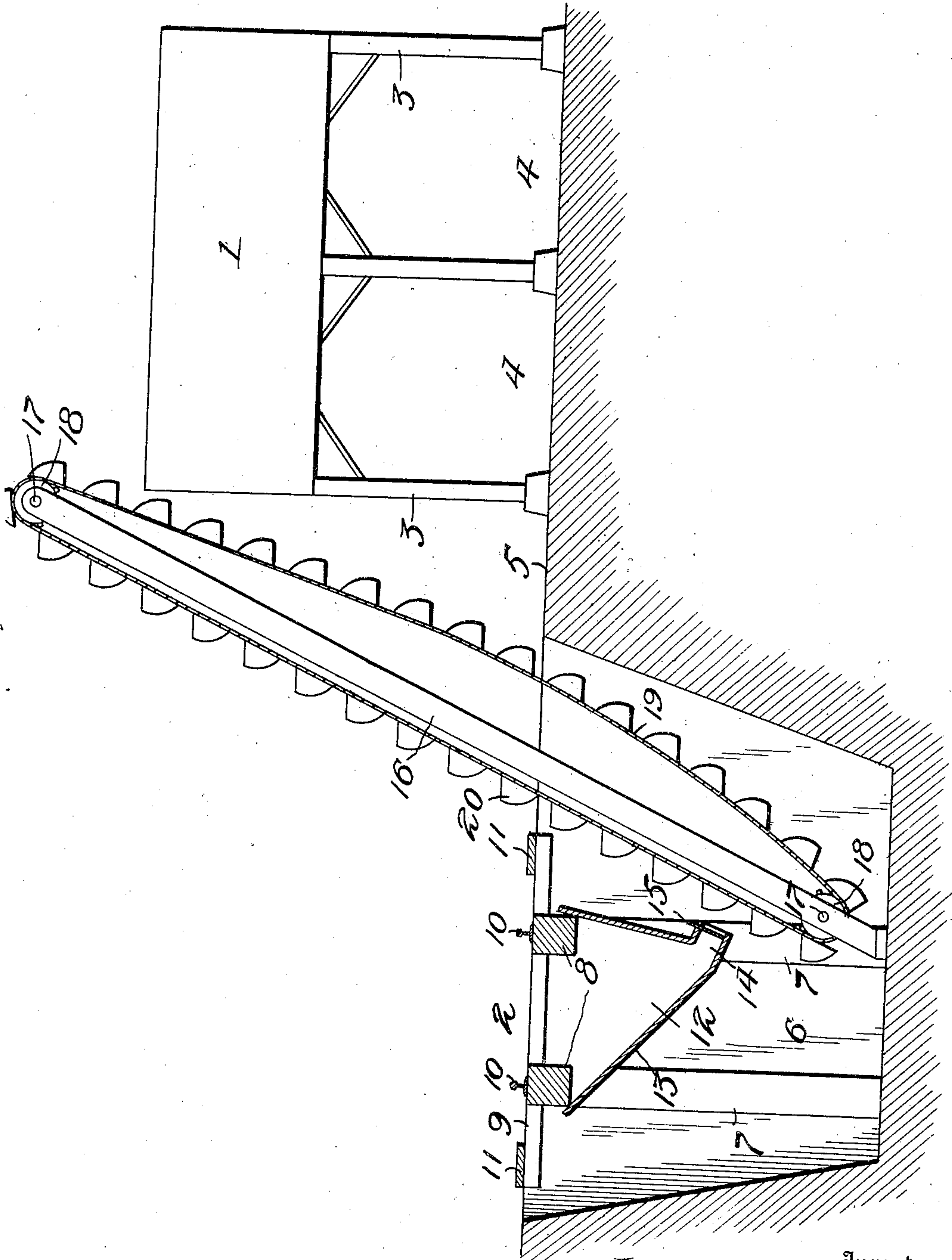


No. 896,568.

PATENTED AUG. 18, 1908.

I. S. McBRIDE.
ELEVATING AND DUMPING APPARATUS.

APPLICATION FILED DEC. 20, 1907.



Witnesses

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ELEVATING AND DUMPING APPARATUS.

No. 896,568.

Specification of Letters Patent.

Patented Aug. 18, 1908.

Application filed December 20, 1907. Serial No. 407,322.

To all whom it may concern:

Be it known that I, IRA S. McBRIDE, a citizen of the United States, residing at Vaughnsville, in the county of Putnam and State of Ohio, have invented new and useful Improvements in Elevating and Dumping Apparatus, of which the following is a specification.

This invention relates to elevating and dumping apparatus designed for delivering crushed stone, coal, grain or other materials from dump-cars or railroad cars to a storage bin or receptacle, from which the material may be dumped into wagons for conveyance to the delivery point.

The object of the invention is to provide a simple, inexpensive and efficient apparatus of this character which will receive the material from bottom or side dumping cars and elevate the same into a bin beneath which the wagons may be driven to receive a load therefrom, and which apparatus may be employed without material change in the structure of the elements whether the railway tracks are arranged above or in the plane of the surface level.

With this and other objects in view, which will appear as the nature of the invention is more fully disclosed, the invention consists of the features of construction, combination and arrangement of parts hereinafter described and claimed, reference being had to the accompanying drawing showing, partly in transverse section and partly in elevation, an elevating and dumping apparatus embodying the invention.

1 in the drawings designates a storage bin or receptacle, arranged at one side of a railway track 2, and supported in an elevated position above the level of the earth's surface upon a framework 3 so as to provide beneath the bin passages or roadways 4 through which the wagons to be loaded may be driven. The bin is provided in practice with suitable discharge hoppers or outlets through which the material therein may be dumped into the wagons or vehicles arranged therebelow.

In the present illustration, the railway track 2, which may lead from a mine, quarry or other source of supply of the material to be elevated and loaded into the wagons, is disposed on a level with the surface 5, and at the point opposite the storage bin or receptacle 1 said track extends over a pit or excavation 6 and is supported above the same by a

suitable framework, including standards or uprights 7, longitudinal beams or stringers 8 and cross ties 9, upon which stringers and ties rails 10 are laid. The cross ties 9 extend beyond the rails at opposite sides of the track and support platforms or running boards 11, upon which the attendants engaged in unloading the cars may pass across the pit and stand during the unloading operation.

Arranged within the pit immediately below the track is a receiving hopper 12, the upper end or mouth of which is so located as to receive the material dumped from the car and passing down between the beams 8. The said hopper or receiving receptacle is supported by the frame or trestle work carrying the rails 10, and its bottom 13 inclines toward one side of the track to conduct the material by gravity to an outlet 14 arranged below one of the beams 8. This outlet is provided with a gate or valve 15 to control the discharge of the crushed stone, coal, grain or other material which is being unloaded from the cars and is to be elevated to the bin.

Supported at its lower end within the pit and extending upwardly at an inclination at one side of the track above the surface level 5 and terminating at a sufficient distance above the bin 1 is a frame 16 carrying at its upper and lower ends shafts 17 supporting sprocket wheels 18 around which pass the link chain sections of an endless conveyer 19, which conveyer is provided with buckets 20 adapted to receive the material discharging from the outlet 14, and, through the operation of said conveyer, dump the same into the bin 1.

In practice, it will be understood that the inclined elevator or conveyer may be operated by hand or power driven mechanism, and that when a car is run upon the track above the pit and dumped the material will discharge into the hopper 12, from which it will pass into the buckets 20 upon the ascending or working stretch of the conveyer, the supply of the material to said buckets being regulated through the medium of the valve 15. The material so conveyed by the elevator into the bin 1 may be stored in the latter and dumped therefrom into suitable wagons or vehicles arranged below the same. After the wagons are loaded, they are driven through the roadways 4 beyond the bin and the material conveyed therein to any desired delivery point.

The construction and arrangement of the parts is such that the hopper 12 may receive material dumped from cars provided with either bottom or side outlets, and the track 2
5 may be arranged in alinement with the surface level 5 or at any suitable elevation thereabove, according to conditions of service, it being merely necessary in adapting the parts for operation when the track is arranged in
10 alinement with or above the surface level to lengthen or shorten the conveyer, as will be readily understood. It will be observed that the construction is such as to enable the apparatus to be installed and operated at a
15 comparatively low cost, and its convenience in the handling of materials of the character specified will be apparent.

Having thus fully described the invention, what is claimed as new is:—

20 1. In an apparatus of the character described, the combination of a bin disposed above the surface level, a pit, a track extending across the pit in line with the surface level, a hopper within the pit below and on
25 a line between the rails of the track and arranged to receive the material dumped from cars upon the track, said hopper being provided with an outlet arranged to discharge laterally beyond the plane of the track, and
30 an inclined conveyer mounted at its lower end within the pit at one side of the track to

receive the material from the hopper, and arranged at its upper end adjacent to the bin for discharging the elevated material therein.

2. In an apparatus of the character de- 35 scribed, the combination of a bin disposed above the surface level and provided with a roadway below the same, a pit, beams extending across the pit and supporting track rails in line with the surface level, a hopper 40 supported by said beam within the pit below and on a line between the rails of the track and arranged to receive the material dumped from cars upon the track, said hopper being provided with an inclined bot- 45 tom having at its lowest point an outlet arranged to discharge laterally beyond the plane of one of the track rails, a gate controlling said outlet, and an inclined conveyer supported at its lower end within the pit and 50 disposed at its upper end adjacent the bin, said conveyer being provided with buckets to receive the material discharging from the hopper outlet and to convey the same to the bin. 55

In testimony whereof I affix my signature in presence of two witnesses.

IRA S. McBRIDE.

Witnesses:

J. I. THOMAS,
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