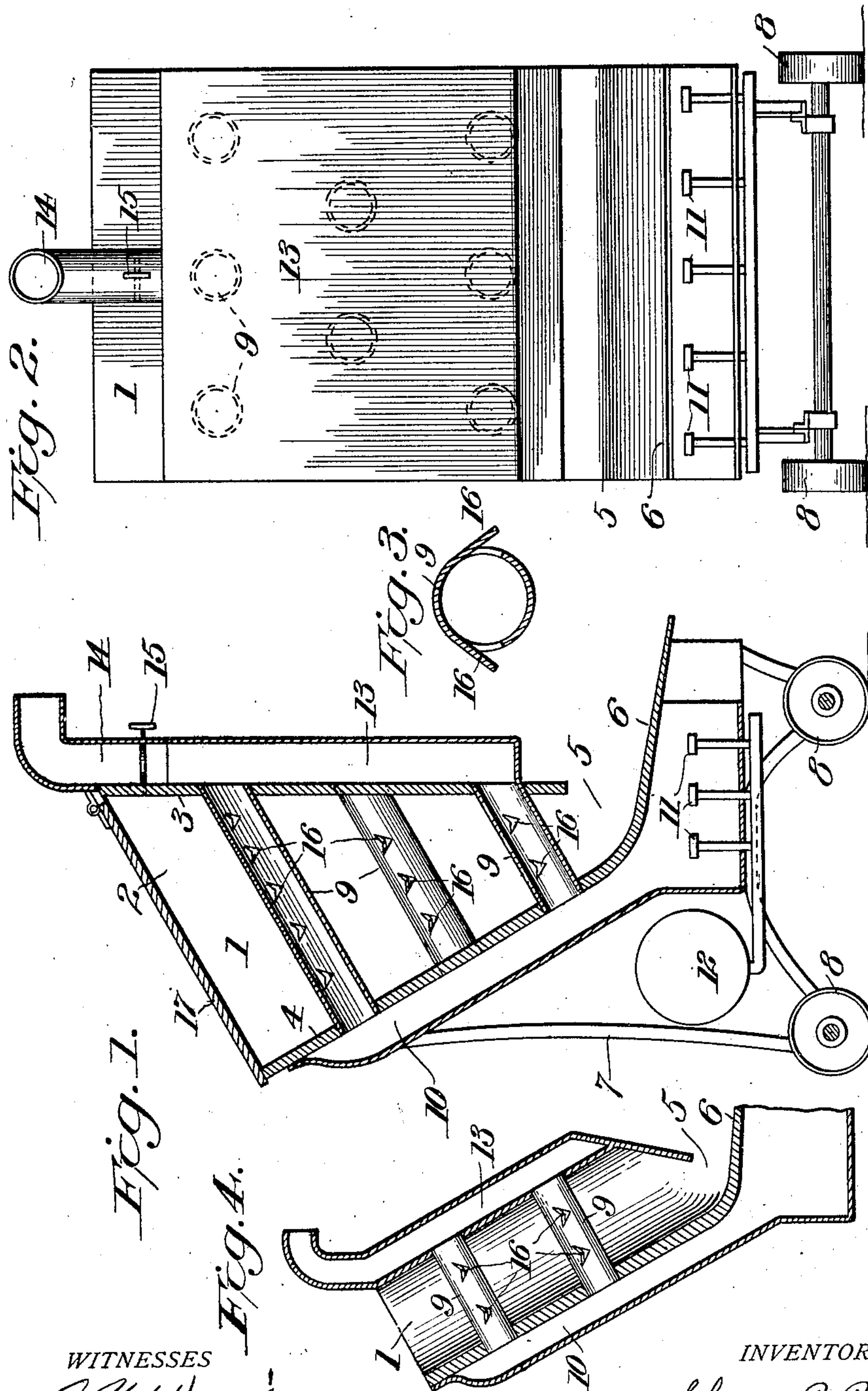


C. P. PRICE.
 DEVICE FOR HEATING BROKEN STONE OR OTHER MINERAL AGGREGATE.
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998,984.

Patented July 25, 1911.



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UNITED STATES PATENT OFFICE.

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Specification of Letters Patent.

Patented July 25, 1911.

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To all whom it may concern:

Be it known that I, CHARLES P. PRICE, a citizen of the United States, residing at Malden, in the county of Middlesex, State of Massachusetts, have invented certain new and useful Improvements in Devices for Heating Broken Stone or other Mineral Aggregate, of which the following is a description, reference being had to the accompanying drawing, and to the letters and figures of reference marked thereon.

The invention relates to new and useful improvements in devices for heating broken stone or other mineral aggregate preparatory to the same being coated with a bituminous material.

An object of the invention is to provide a device in which the broken stone or mineral aggregate may be heated as it is passed through said device.

A further object of the invention is to provide a device of the above character which is portable.

A further object of the invention is to provide a device of the above character in which the broken stone is fed to said device at its upper end and is removed from its lower end after having been heated.

In the drawings which show by way of illustration one embodiment of the invention; Figure 1 is a sectional view centrally through the heating device. Fig. 2 is a front elevational view of the same. Fig. 3 is a sectional view through one of the pipes. Fig. 4 is a sectional view showing a different form of hopper.

In carrying out my invention, I have provided a receptacle 1, which as shown in Figs. 1 to 3, comprises end walls 2, 2, a front wall 3, and a rear wall 4. The front wall 3 of the receptacle is arranged in substantially a vertical position, while the rear wall 4 inclines relative to the front wall, so as to form a substantially narrow discharge opening at the lower end of the receptacle. To further close the discharge opening 5, I have bent the rear wall 4 so as to form a substantially horizontal shelf 6 which extends underneath the front wall 3 and a considerable distance in front of the same. When the receptacle 1 is filled with broken stone or other mineral aggregate, the same will run from the discharge opening on to the shelf 6 and unless the broken stone is removed from the shaft

there will be no further discharge from the receptacle.

The receptacle 1 is mounted on a framework 7 which in turn is supported by wheels 8, 8, so that the heating device may be readily transported from one position to another. The framework 7 and supporting wheels raise the receptacle a sufficient distance above the ground, so that a wheel-barrow or the like may be run underneath the shelf 6 and the broken stone raked from the hopper into said wheel-barrow.

In order that the broken stone may be thoroughly heated in the hopper, I have provided a plurality of pipes 9 which are formed with openings 16 that allow the heated gases to pass freely into the mass of broken stone in the receptacle. Instead of separate openings, a slot may be formed in the pipes. Said pipes are arranged in a staggered relation to each other as shown in Fig. 2. A heating chamber 10 extends along the back of the device and underneath the shelf and said chamber may be heated in any desired way, and as herein shown, I have provided burners 11 which are supplied from a tank 12. A casing 13 extends along the front wall 3 and the pipes 9, open into the casing 13. The receptacle may be closed by a cover 17.

A stack 14 is connected with the casing 13 and is controlled by a suitable damper 15.

The broken stone or other mineral aggregate which is desired to be heated is thrown into the upper end of the receptacle 1, and as it passes down into the receptacle, said stone will be heated by the gases or air issuing from the pipes 9, and also by reason of contact with the heated front and rear walls of the device.

In Figs. 1 and 2, I have shown the receptacle as hopper shaped. I may however, make the receptacle with parallel inclined walls or as shown in Fig. 4 the receptacle may be cylindrical in cross section, the essential feature being the construction of the lower end whereby the stone is held in the receptacle until removed by a shovel, or a rake, or the like, and the heating means for drying the stone.

The cover 17 retains the heat and may be used where the stone is unusually wet or in extreme cold weather.

Having thus particularly described my

invention, what I claim as new and desire to secure by Letters Patent is:—

1. A device for heating mineral aggregate comprising a receptacle having a front wall, a rear wall and a substantially horizontal elongated supporting shelf at the lower end of said receptacle, said shelf projecting to a point at some distance in front of the front wall, and spaced below the same, whereby the material in the receptacle rests on said supporting shelf, and may be readily removed therefrom, and means for supplying a heating medium to the material in the receptacle.

2. A device for heating mineral aggregate comprising a receptacle having a front wall, a rear wall and a substantially horizontal elongated supporting shelf at the lower end of said receptacle, said shelf projecting to a point at some distance in front of the front wall, and spaced below the same, whereby the material in the receptacle rests on said supporting shelf and may be readily removed therefrom, heating tubes extending through said receptacle, and means for supplying a heating medium thereto.

3. A device for heating mineral aggregate including in combination a receptacle having a front vertical wall, a rear inclined wall terminating in a shelf extending underneath the front wall, pipes extending from the rear wall to the front wall, and having a passage leading to said receptacle, a casing extending across the front wall to which said pipes are connected, a stack connected with said casing and means for supplying a heating medium to said pipes.

4. A device for heating mineral aggregate including in combination a receptacle having a front vertical wall, a rear inclined wall terminating in a shelf extending underneath the front wall, pipes extending from the rear wall to the front wall and having passages leading into said receptacles, a heat

chamber extending across the rear wall to which said pipes are connected, a casing extending across the front wall to which said pipes are connected, and a stack connected with said casing, a frame on which said device is mounted, wheels for supporting said frame and means for supplying said chamber with a heating medium.

5. A device for heating mineral aggregate, including in combination a receptacle having a front wall, and a rear wall, said rear wall terminating in a shelf extending underneath the rear edge of the front wall, pipes extending from one wall to another across the receptacle and having passages leading to said receptacle, a casing into which said pipes open, a stack connected to said casing, a heat chamber connected to the other ends of said pipes, said heating chamber extending underneath said shelf, burners located in said chamber and a supply tank for feeding said burners.

6. A device for heating mineral aggregate, including in combination a receptacle having a front wall, and a rear wall, said rear wall terminating in a shelf extending underneath the edge of the front wall, pipes extending from one wall to another across the receptacle and having passages leading to said receptacle, a casing into which said pipes open, a stack connected to said casing, a heat chamber connected to the other ends of said device, said heat chamber extending underneath said shelf, burners located in said chamber, and a supply tank for feeding said burners, a frame on which said hopper is mounted, and wheels for supporting said frame.

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

CHARLES P. PRICE.

Witnesses:

E. H. PARKINS,

E. G. MASON.