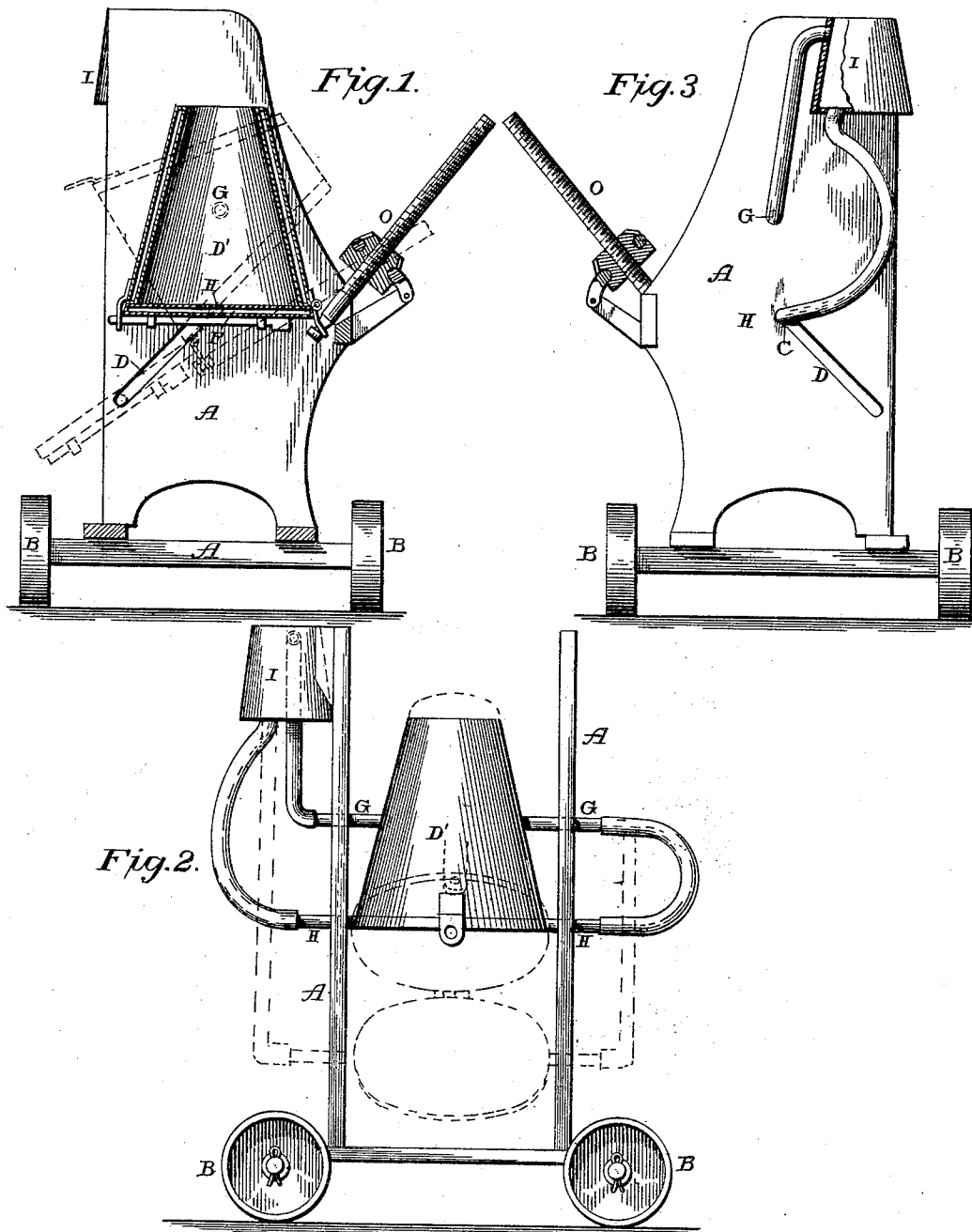


(No Model.)

W. C. VAN HORN.
COKE AND CINDER CONVEYER.

No. 460,226.

Patented Sept. 29, 1891.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM CAMPBELL VAN HORN, OF SOUTH PITTSBURG, TENNESSEE.

COKE AND CINDER CONVEYER.

SPECIFICATION forming part of Letters Patent No. 460,226, dated September 29, 1891.

Application filed April 2, 1891. Serial No. 387,432. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CAMPBELL VAN HORN, of South Pittsburg, in the county of Marion and State of Tennessee, have invented certain new and useful Improvements in Coke and Cinder Conveyers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in coke and cinder conveyers; and it consists in the construction and arrangement of parts which will be fully described hereinafter.

The object of my invention is to provide an apparatus by means of which red-hot coke or cinder, in fluid or solid form, can be conveyed to any desired point and dumped with as little expense and trouble as possible.

Figure 1 is a vertical section of an apparatus which embodies my invention, the conveyer and bottom being shown in solid lines in one position and dotted lines in another. Fig. 2 is a front elevation of the same. Fig. 3 is an end view.

A represents a frame-work of any suitable construction, which is mounted upon the wheels B, so that the frame can be moved readily and easily from one place to another. The frame A may either be of the shape and construction here shown or any other that may be preferred, and through each of the vertical pieces are formed the inclined slots D, each of which slots has an offset or bearing C at its upper end.

Journalled in the two vertical parts of the frame is the conical receiver D', which is made of wrought-iron and has preferably hollow walls, so that a constant circulation of water can be kept up for the purpose of preventing the cinder or other hot substance from adhering to the inner side of the receiver, or, if made of cast-iron, the receiver may be lined with fire-brick or other suitable material. This receiver is made conical, so that its contents will not pack in it and thus make it difficult to empty. The bottom F is loosely hinged to the receiver at one side and is also hollow, so that a constant circulation of water can be kept up. The trunnions G for the

receiver and those H for the bottom extend any desired distance through the vertical portions of the frame and are made hollow, so as to communicate with the interior of the walls of both the bottom and the receiver. These trunnions serve not only as supports for the parts, but as conveyers for water, which is passed through them by means of pipes which extend from the water-tank I, secured to the upper portion of the frame A. The water passes from the bottom of the tank I down to one of the trunnions H, then through the bottom F and the trunnion upon the opposite side, and then up to one of the trunnions G, through the double wall of the receiver, and out through the trunnion upon the opposite side, and then through a pipe back up to the water-tank again. The water in its passage through the bottom, the receiver, and the trunnions becomes heated to such an extent that its expansion causes it to flow back into the tank from which it started. A circulation of water is thus kept up, and not only are the walls of both the receiver and its bottom made to last longer, but the hot material is prevented from clinging to it, as would otherwise be the case. The trunnions H while in the offsets or bearings C hold the bottom F in a closed position; but if the lower portion of the receiver is moved in an outward direction these trunnions are forced from the offset C and slide down the inclined slots B, thus causing the bottom to open and form an inclined guide, down which the material slides to the ground. When the lower portion of the receiver is drawn back, the trunnions move backward up the inclined slots B to the offsets C, where they remain until the receiver is again moved.

In order to cause the receiver D to oscillate or move sufficiently to operate its bottom F, as above described, there is loosely connected to the bottom of the receiver upon one side the endwise-moving screw O, which preferably has no turning movement of its own, and which is or may be operated by means of beveled gear, through one of which the screw passes. When the wheels are caused to revolve, the screw moves either in or out, and thus causes the receiver to partially turn upon its trunnions G for the purpose of either emptying its load or closing the bottom after it

has been opened. Connected to the bottom F is a latch or fastening device of any suitable construction, by means of which the bottom is prevented from accidentally opening and discharging the load prematurely.

By means of an apparatus constructed as here shown and described the hot slag, cinder, and ashes from furnaces may be conveyed any desired distance for the purpose of making roads or other objects.

Having thus described my invention, I claim—

1. A supporting-frame having inclined slots, a receiver journaled in the frame, and a bottom hinged to the receiver and provided with trunnions which enter the said slots, the parts combined to operate substantially as shown.

2. A frame having inclined slots provided with offsets at their upper ends, a tilting receiver journaled in the said frame, and a bottom hinged to the receiver, having trunnions which enter the said slots, the parts combined substantially as described.

3. A supporting-frame having inclined slots, a receiver journaled in the frame, a bottom hinged to the receiver, having trunnions which enter the said slots, and a rod connected to the said receiver for tilting it, all combined to operate in the manner described.

4. A supporting-frame having inclined slots, a receiver having double walls and hollow trunnions journaled in the said frame and connected with the chamber formed by the said double walls, a hollow bottom hinged to the said receiver and having hollow trunnions which enter the said slots and communicate with the said hollow bottom, a water-tank, and suitable pipes connecting the said hollow trunnions and the tank, the parts combined to operate in the manner shown and described.

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

WILLIAM CAMPBELL VAN HORN.

Witnesses

A. E. SHATTUCK,
J. C. SCOTT.