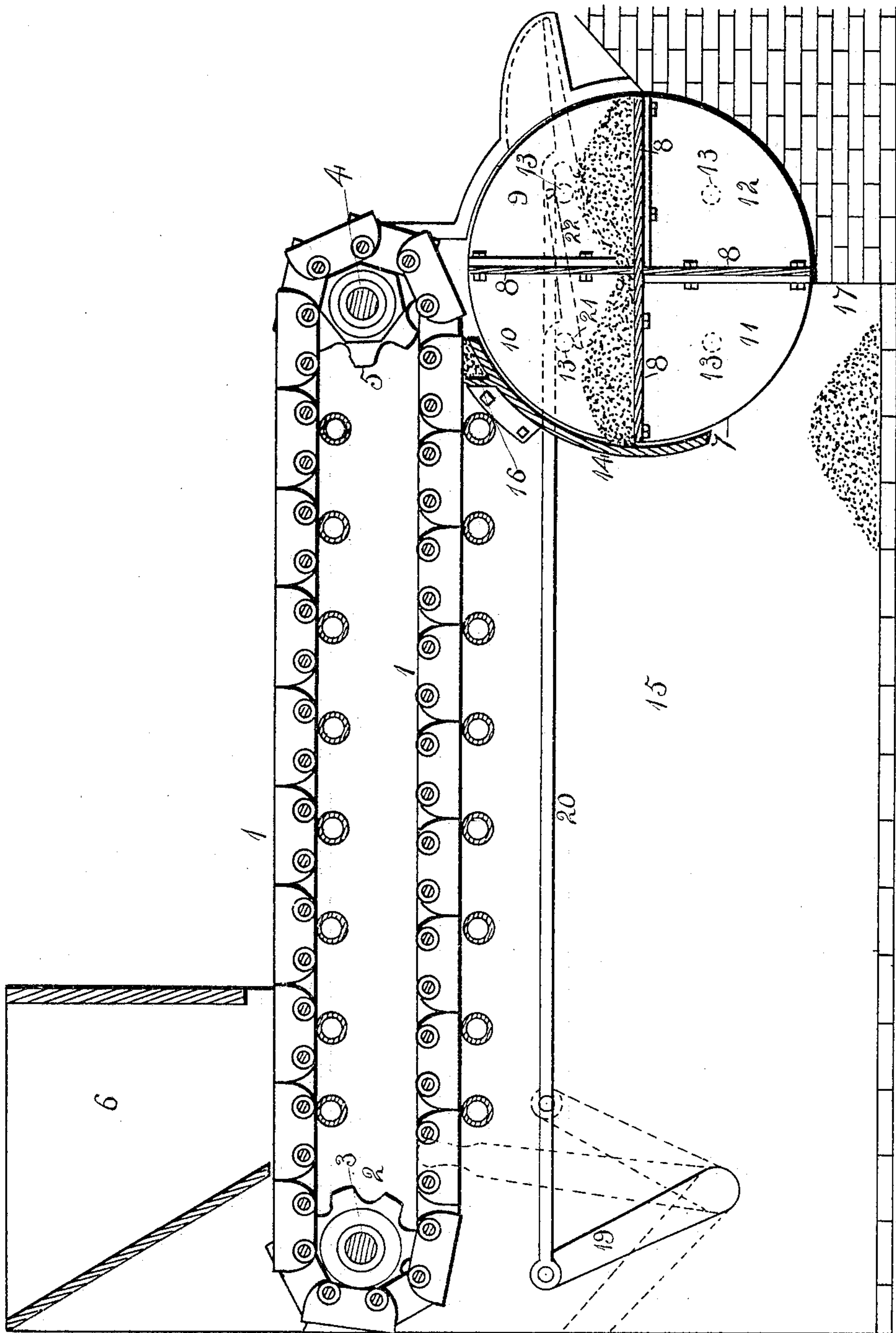


No. 782,214.

PATENTED FEB. 14, 1905.

J. P. BARNES.  
MOVABLE ENDLESS GRATE.  
APPLICATION FILED OCT. 30, 1903.



Witnesses:  
H. H. Schreiber  
E. J. Bebel.

Inventor:  
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att'y.

# UNITED STATES PATENT OFFICE.

JOSEPH P. BARNES, OF ROCKFORD, ILLINOIS, ASSIGNOR TO W. F. & JOHN BARNES COMPANY, OF ROCKFORD, ILLINOIS, A CORPORATION OF ILLINOIS.

## MOVABLE ENDLESS GRATE.

SPECIFICATION forming part of Letters Patent No. 782,214, dated February 14, 1905.

Application filed October 30, 1903. Serial No. 179,249.

*To all whom it may concern:*

Be it known that I, JOSEPH P. BARNES, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Movable Endless Grates, of which the following is a specification.

The object of this invention is to provide a rotatable device by means of which ashes falling from the grate may be transferred to the ash-pit without allowing an inrush of air around the discharge end of the grate from the ash-pit.

In the accompanying drawing is shown a vertical section through the movable grate.

The grate proper is composed of links 1, movable by the sprocket-wheels 2, mounted on a shaft 3, engaging some of the links, and a shaft 4 at the discharge end of the grate-supporting sprocket-wheels 5. A hopper 6 is located over the feed end of the grate. Below the discharge end of the grate is located a drum composed of the heads 7, connected by plates 8, thereby dividing the drum into four compartments or receptacles 9, 10, 11, and 12. From one of the heads extend four studs 13. A plate 14, conforming to the outer face of the receptacles, is supported by the side plates 15 of the frame and has an ash-receptacle 16 at its upper end. The brickwork 17 conforms to the outer surface of the receptacles and is located diametrically opposite the plate 14. A hand-lever 18 has a pivotal connection with one of the side plates of the frame and has a connection with an arm 19 located inside the frame. A rod 20 has a pivotal connection with the free end of the arm 19, and its other end is provided with a hook 21 and an extension 22. By means of the hand-lever 18 the rod 20 is moved in its

lengthwise direction, and its hooked end engaging one of the studs 13 the receptacles can be rotated a quarter of a revolution.

In use the compartment or recess 9 is located beneath the discharge end of the grate, into which ashes from the grate fall. By moving the hand-lever the receptacles are rotated a quarter-turn, carrying the ashes with them and presenting an empty receptacle under the discharge end of the grate. Another quarter-turn of the receptacles will drop the ashes and present a new receptacle under the grate. This operation is repeated each quarter-turn of the receptacles. The curved plate 14 and brick wall 17 inclose two opposite receptacles, leaving one receptacle communicating with the ash-pit and another communicating with the fire-chamber. As the receptacles revolve the partitions thereof, in conjunction with the curved plate 14 and brick wall 17, prevent an inrush of air from the ash-pit into the fire-chamber at the discharge end of the grate. The ashes in the receptacle 16 form a seal and prevent air passing around the upper end of the curved plate 14.

I claim as my invention—

The combination of a movable endless grate, a rotatable drum having a series of receptacles and located at the discharge end of the grate, the drum supporting a series of projections, and a rod having a hook near one end which engages the projections, thereby rotating the drum, the rod having a portion extending beyond the hook and adapted to form a stop to the rotation of the receptacle.

JOSEPH P. BARNES.

Witnesses:

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