

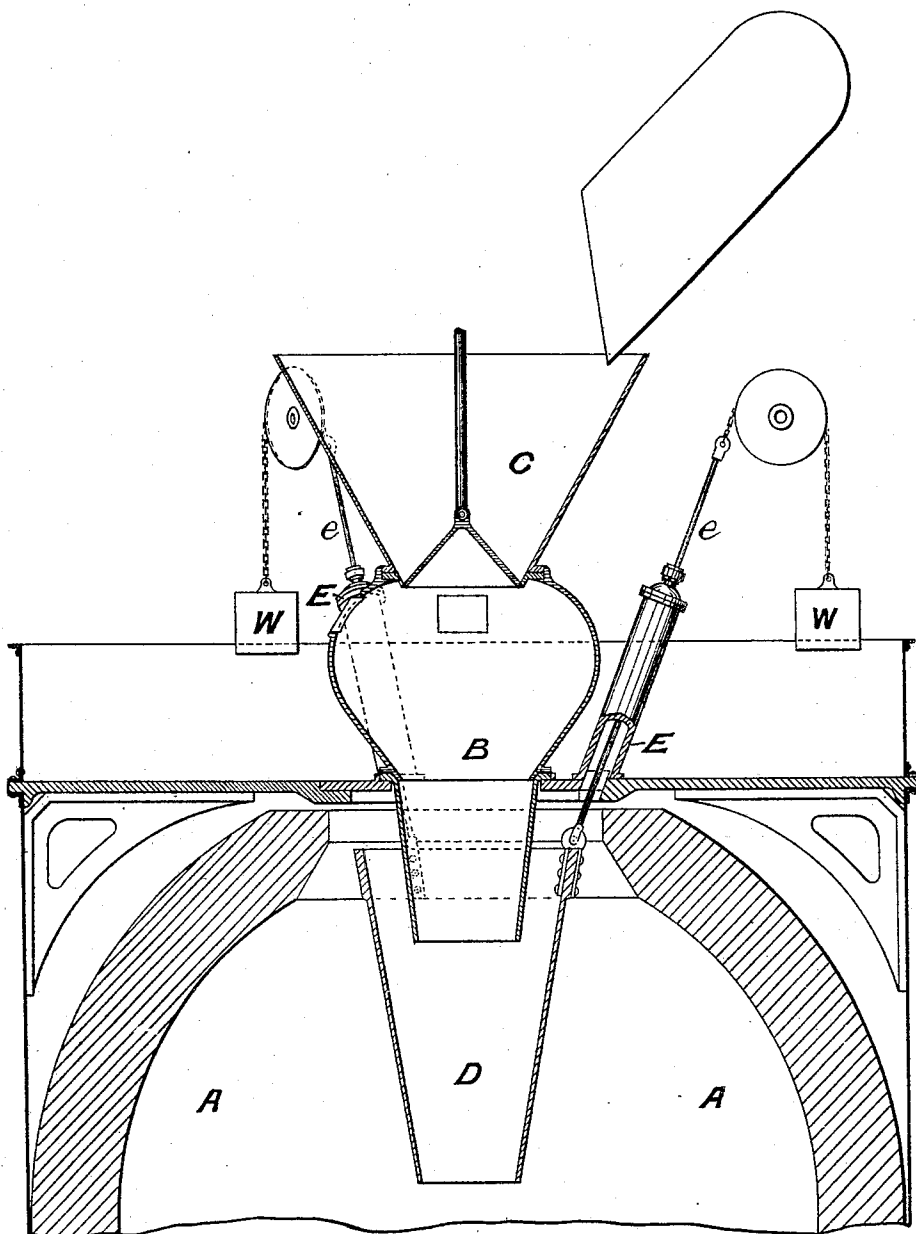
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APPARATUS FOR CHARGING AND DISTRIBUTING THE STOCK IN BLAST FURNACES, &c.

APPLICATION FILED AUG. 5, 1907.

908,594.

Patented Jan. 5, 1909.



WITNESSES.

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UNITED STATES PATENT OFFICE.

WILLIAM CLARK MITCHELL, OF CHESTERFIELD, ENGLAND.

APPARATUS FOR CHARGING AND DISTRIBUTING THE STOCK IN BLAST-FURNACES, &c.

No. 908,594.

Specification of Letters Patent.

Patented Jan. 5, 1909.

Application filed August 5, 1907. Serial No. 387,110.

To all whom it may concern:

Be it known that I, WILLIAM CLARK MITCHELL, citizen of the United States, and resident of Chesterfield, county of Derby, England, have invented certain new and useful Improvements in Apparatus for Charging and Distributing the Stock in Blast-Furnaces, Gas-Producers, and Similar Structures, of which the following is a specification.

10 This invention relates to apparatus for charging and distributing the stock in blast furnaces, gas producers, and other furnaces.

It consists essentially in the application to the mouth of the furnace of a swinging or swiveling chute hopper or funnel inserted therein suspended at a number of points any one of which can be raised or lowered independently of the others to alter the inclination of the appliance and the direction of the discharge.

20 It will be fully described with reference to the accompanying drawings forming part of the specification.

The figure is a sectional elevation of the top of a blast furnace with the invention applied thereto.

25 The blast furnace A, the gas producer or other furnace is of any ordinary construction with a hopper C and feed chute B of any ordinary construction fitted thereto.

30 In the mouth of the furnace A and below the feed chute B a rocking swinging or swiveling chute D is suspended through which the stock is charged to the furnace. It is preferably suspended from three points so that its inclination can be easily altered. Each point of suspension is controlled or operated by mechanical means such as by a pneumatic cylinder E with piston or by an hydraulic or

other motor or by a counterweight and lever, or otherwise so that either point of suspension may be raised or lowered independently to vary or adjust the inclination and the direction of discharge. A counter balance weight W may be connected to the piston rod *e*. Some of the points of suspension may be fixed and only some movable and adjustable.

The swinging chute, hopper or funnel D may be of any shape in cross section, such as circular hexagonal, square, triangular, and preferably tapering.

What I claim as my invention and desire to protect by Letters Patent is:—

1. Apparatus for charging and distributing stock in blast furnaces, gas producers and similar structures, comprising a rocking chute placed in the mouth of the furnace, a plurality of points of suspension for said chute, and means attached to each point of suspension for altering the inclination of the chute to distribute the charge in any desired direction substantially as described.

2. In apparatus for charging and distributing stock in blast furnaces and other similar structures the combination with the furnace A the hopper C and chute B of a rocking chute D, a plurality of pneumatic cylinders and pistons E for altering the inclination thereof, the piston rods *e* and the weight W substantially as described.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

WILLIAM CLARK MITCHELL.

Witnesses:

LUTHER J. PARR,
CHAS. N. DANIELS.