A. GOODALL.

APPARATUS FOR QUENCHING, SCREENING, AND LOADING COKE.

APPLICATION FILED APR. 24, 1909.

982,590. Patented Jan. 24, 1911.

Fig. 1

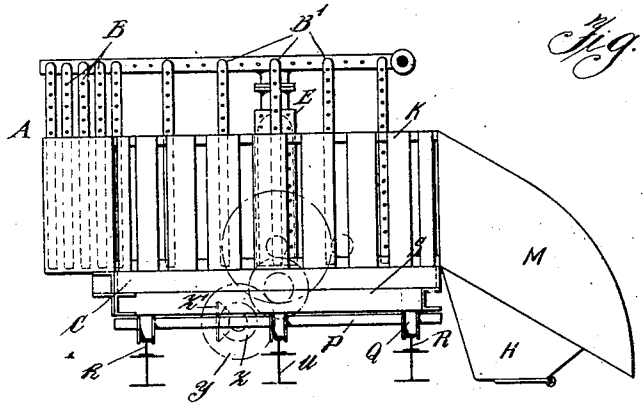
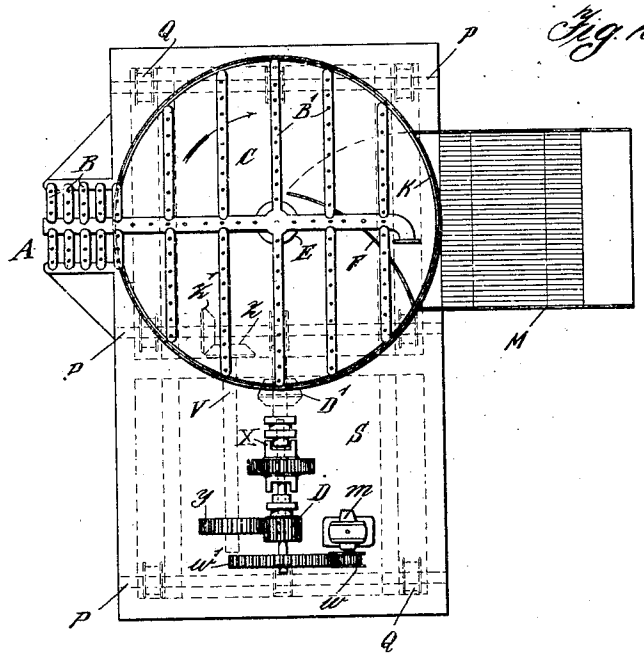


Fig. 2



Witnesses

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UNITED STATES PATENT OFFICE.

ALBERT GOODALL, OF SPENNYMOOR, ENGLAND.

APPARATUS FOR QUENCHING, SCREENING, AND LOADING COKE.

982,590. Specification of Letters Patent. Patented Jan. 24, 1911.

Application filed April 24, 1909. Serial No. 491,983.

To all whom it may concern:

Be it known that I, ALBERT GOODALL, a subject of the King of England, and resident of Spennymoor, county of Durham, England, have invented Improvements in Apparatus for Quenching, Screening, and Loading Coke, of which the following is a specification.

My invention relates to an improved method of quenching, screening and loading coke.

According to the invention the coke is ejected from the coke ovens by means of a pushing machine, or device of ordinary construction, through a water cooling bonnet, on to a horizontal platform which is rotated at a suitable speed. In conjunction with the said rotating plaform I provide means for spraying water on to the coke by means of an arrangement of perforated pipes around the periphery of the rotating platform. I also provide means for discharging the quenched coke on to an inclined screen from which the screened coke is discharged into trucks, the breeze or small coke, falling into a suitable hopper. The whole is mounted on a traveling gauntree as shown.

In order that the invention may be more clearly understood reference is made to the accompanying drawing wherein,

Figure 1 is an elevation and Fig. 2 is a plan of the apparatus.

In putting my invention into practice a bonnet A of any suitable shape and an arrangement of perforated pipes B, Fig. 1 is provided, so that when the coke is ejected from the coke oven and guided through the bonnet it is quenched by water issuing from the said perforated pipes. Both bonnet A and pipes B are mounted upon a frame, the said frame carrying at the same time a sliding platform S, which in turn carries a second platform C adapted to be rotated at a suitable speed. The means for rotating the platform C (in the direction of the arrow) consist of a motor *m*, (Fig. 2) the power of which is transmitted by means of gear wheels w, w^1 and cog-wheel and bevel-wheel D, D^1 respectively, means also being provided to throw said bevel- and cog-wheels out of gear. The latter means consist of a coupling X adapted to engage clutch like projections on said bevel wheels, while one of the bevel wheels D^1 meshes with the beveled edge or rim of the platform C. It will be understood that the revolving table can be operated by any other similar means. The path in which the coke is carried around on the revolving platform is approximately at right angles to that in which the coke is fed on to the said platform, thus immediately bringing a fresh part of the platform in front of the charging opening. The means whereby the platform can be made to slide, consist in shafting P and rollers Q mounted upon the said shafting, the rollers being guided and supported by rails R, Fig. 1, which in turn are mounted and secured upon T shaped beams U. A shaft V, Fig. 2 is furthermore provided and suitably arranged and carries at one end a cog wheel Y, which engages with the wheel D, and at the other end a bevel wheel Z which meshes with a bevel wheel Z^1 on the middle shaft P thereby driving the latter and with it all the rollers. When the whole charge of coke is on the platform, the coke is further quenched by means of perforated pipes B^1 with vertical extensions around the periphery of the platform, and by the perforations through the hollow center column E (Fig. 1). At the side of the platform I arrange furthermore a discharge guide, F, Fig. 2, which is pivoted near the periphery of the rotating platform, so that it can be swung out of the path of the platform while the coke is being cooled, and in this position forms a continuation of the fence formed of side plates K, Figs. 1 and 2, but when the coke is sufficiently cooled, can be swung around so that it extends from the periphery to the center column, as shown in Fig. 2, thus offering an obstruction to the coke, which is thereby guided on to the screen M, Fig. 1, and into truck placed to receive same. The fence consists of a number of vertically disposed side plates K, the latter being conveniently attached to the traveling platform near the periphery of the rotatory platform C. The breeze or small coke falls into hopper H, Fig. 1, which may be discharged in any convenient place.

Having fully described my invention, what I claim and desire to secure by Letters Patent is:—

In apparatus for quenching, screening and loading coke into trucks, the combination of a traveling platform running on rails, a rotating platform C mounted on the traveling platform and rotated by a motor and suitable gearing, said motor and gearing giv-

ing motion to the platform and the rotating platform, a discharge guide F pivoted near the periphery of the rotating platform to guide the coke off on to an inclined screen, a bonnet, a plurality of perforated pipes B and B^1 fixed at the sides of said bonnet and around the periphery of the rotating platform, and a hollow center column forming means for quenching the coke on delivery from the coke ovens, substantially as described and shown and for the purpose set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ALBERT GOODALL.

Witnesses:
WM. H. NIXON,
WM. K. MOORE.