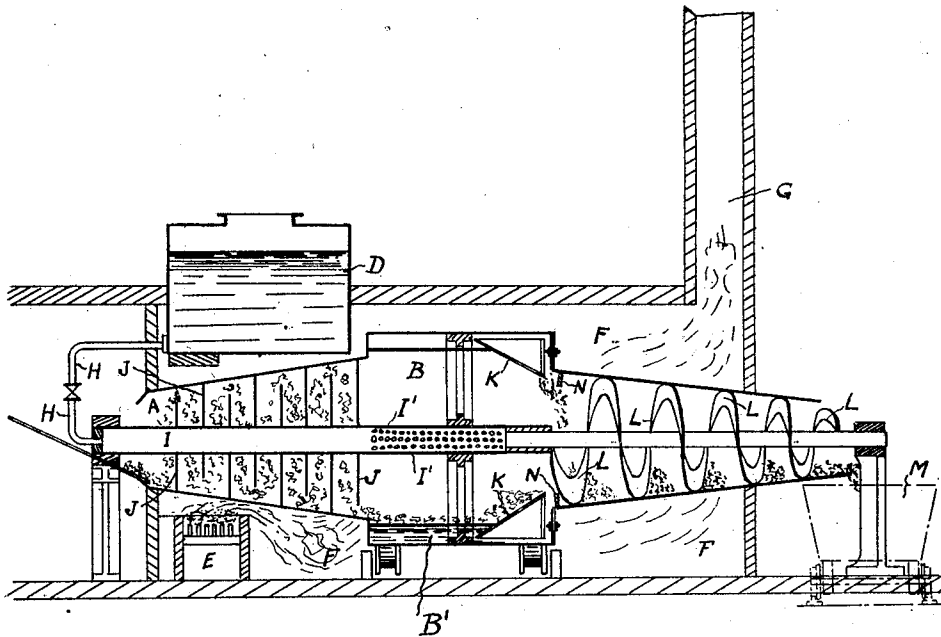


J. JACK.
MACHINE FOR DRYING AND TARRING ROAD METAL.
APPLICATION FILED JUNE 18, 1920.

1,408,512.

Patented Mar. 7, 1922.



Inventor
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By
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UNITED STATES PATENT OFFICE.

JOHN JACK, OF GLASGOW, SCOTLAND.

MACHINE FOR DRYING AND TARRING ROAD METAL.

1,408,512.

Specification of Letters Patent.

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Application filed June 18, 1920. Serial No. 390,009.

(GRANTED UNDER THE PROVISIONS OF THE ACT OF MARCH 3, 1921, 41 STAT. L., 1313.)

To all whom it may concern:

Be it known that I, JOHN JACK, of Lilyvale, Copland Road, Govan, in the county of the city of Glasgow, Scotland, quarry master, have invented certain new and useful Improvements in and Connected with Machines for Drying and Tarring Road Metal, (for which I have filed an application in Great Britain January 24, 1919, Serial No. 1824, Patent No. 133,571,) of which the following is a specification.

My invention relates to machines for drying and tarring road metal, and has for its object to simplify their construction by decreasing the number of parts and rendering them more efficient in practice. I am aware that it has been previously proposed to use a cylinder rotating over a furnace comprising several sections for receiving, drying, heating, tarring and delivering the road metal with suitable perforations and with internal vanes for feeding the road metal through the cylinder, and also a heating drum disposed within a drying drum and surrounded by a mixing drum, the feeding and delivery drums tapering in opposite directions.

According to my invention, I form the revolving casing of a conically-shaped receiving chamber, a cylindrical-shaped tarring chamber, and a conically-shaped delivery chamber, the said chambers being in line with each other, and the taper in the first and last mentioned chambers being in opposite directions, a zig-zag baffle being provided in the receiving chamber. Buckets or lifters are also provided in the tarring chamber and a screw conveyer in the delivery chamber for conveying and delivering the material after final treatment.

In order that my invention may be properly understood and readily carried into effect, I have hereunto appended an explanatory sheet of drawings representing the machine embodying my invention in longitudinal section.

The revolving casing is represented by A, B and C, A indicating the receiving conical chamber, B the central cylindrical chamber and C the delivery chamber which latter may be connected to the central portion by bolts. Immediately over the receiving portion is the tar tank or reservoir D and below it the furnace E while the flues F pass around the revolving casing and the pro-

ducts of combustion are carried to the vent or uptake G. A pipe H leading from the tank or reservoir D conveys the tar into the interior of the hollow revolving shaft I. The revolving shaft I is perforated at that portion thereof within the said central cylindrical casing B and the tar percolates through holes I¹.

Within the interior of the revolving chamber A of the revolving casing, is mounted the baffle arrangement J composed of a number of plates disposed in zig-zag formation and connected to the inner wall of said casing. The said baffle arrangement may conveniently be in the form of a helix carrying the stones along during the rotation of the revolving casing and dropping them into the central chamber B where they receive a coating of tar which percolates and drips through the holes I¹ formed around the wall of the hollow revolving shaft preparatory to being lifted up by the buckets or lifters K which are raised with the revolving of the casing and deposited into the delivery chamber C of said revolving casing on reaching which the screw conveyer L in its rotation moves the material forward and delivers it into the receptacle M, shown in dotted lines. The delivery part of the casing C is of conical formation or tapered so that should any of the tar get into it during the conveyance of the material the tar flows down the incline and finds its way back again into the tar well formed in the central cylindrical chamber B. Any superfluity of tar on the metal during the rotation of the revolving casing is prevented from getting into the delivery chamber by the baffle N the tar striking against the baffle and again dropping into the well. The improvements with a slight variation may be adapted to a portable machine carried upon wheels.

Claims—

1. A machine for drying and tarring road metal, comprising a revolvably mounted casing having a frusto-conical receiving chamber at one end, an intermediate cylindrical tarring chamber, and a frusto-conical delivery chamber at the opposite end, said chambers being in line with one another, said intermediate chamber being of greater diameter than the greatest diameter of the receiving and delivering chambers and forming a tar well, and said receiving and

delivering chambers tapering in opposite directions and arranged with their smaller ends outermost, so that the flow of tar is facilitated through the receiving chamber to the intermediate chamber and is prevented from the intermediate chamber through the delivery chamber, zig-zag baffle plates arranged in the receiving chamber, buckets or lifters in the tarring chamber, and a screw conveyer in the delivery chamber to convey and deliver the material after final treatment.

2. A machine for drying and tarring road metal, comprising a revolubly mounted casing having a frusto-conical receiving chamber at one end, an intermediate cylindrical tarring chamber, and a frusto-conical delivery chamber at the opposite end, said chambers being in line with one another, said intermediate chamber being of greater diameter than the greatest diameter of the receiving and delivering chambers and form-

ing a tar well, and said receiving and delivering chambers tapering in opposite directions, and arranged with their smaller ends outermost, so that the flow of tar is facilitated through the receiving chamber to the intermediate chamber and is prevented from the intermediate chamber through the delivery chamber, zig-zag baffle plates arranged in the receiving chamber, buckets or lifters in the tarring chamber, a screw conveyer in the delivery chamber to convey and deliver the material after final treatment, and a baffle in the larger end of the delivery chamber to prevent tar from getting into such chamber.

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

JOHN JACK.

Witnesses:

JOHN LIDDLE,
JOHN TRAIN LIDDLE.