

No. 894,859.

W. C. SOUTHGATE.

PATENTED AUG. 4, 1908.

MACHINE FOR TARRING AND SANDING THE SURFACE OF STREETS.

APPLICATION FILED OCT. 10, 1907.

2 SHEETS—SHEET 1.

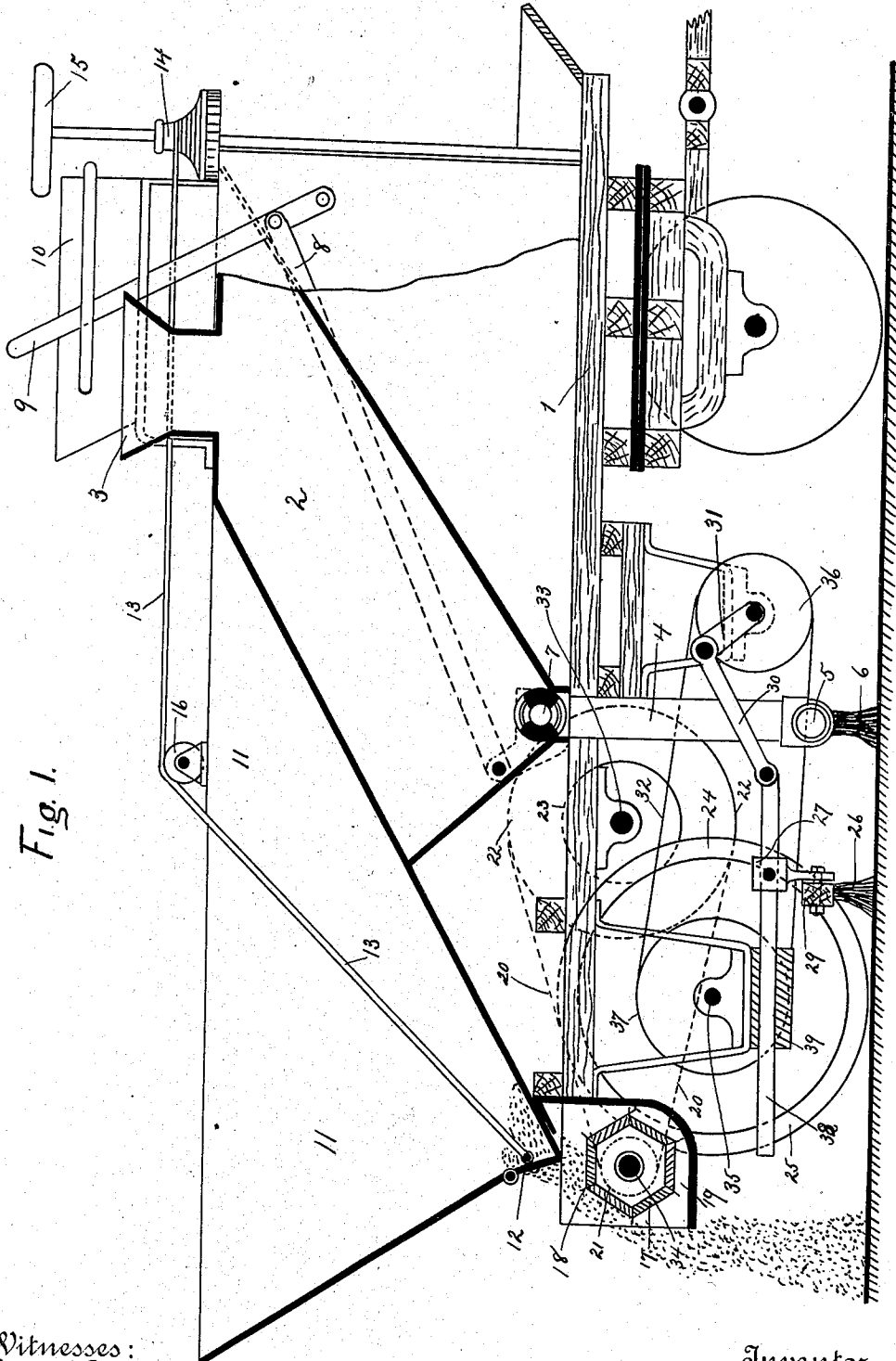


Fig. 1.

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2 SHEETS—SHEET 2.

Fig. 4

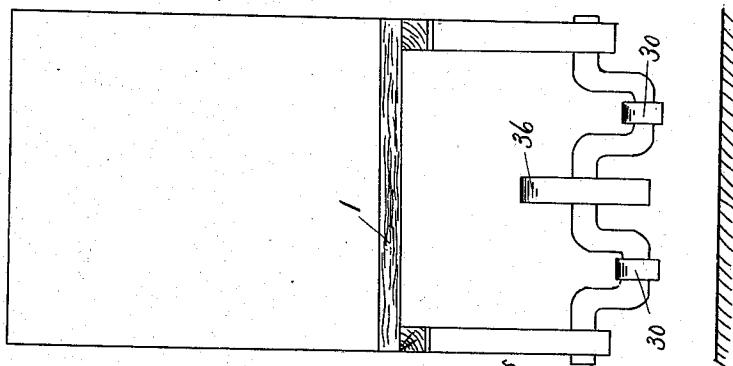


Fig. 3.

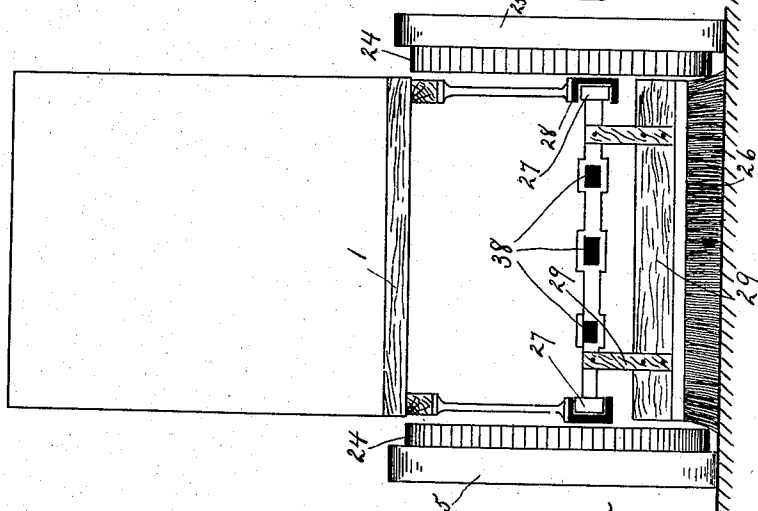
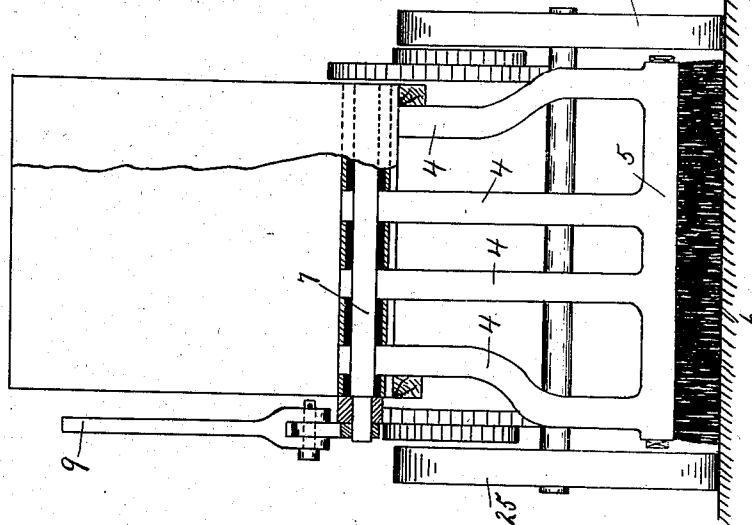


Fig. 2.



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MACHINE FOR TARRING AND SANDING THE SURFACE OF STREETS.

No. 894,859.

Specification of Letters Patent.

Patented Aug. 4, 1908.

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To all whom it may concern:

Be it known that I, WILLIAM CHARLES SOUTHGATE, a subject of Great Britain, residing at Dunedin, New Zealand, have invented new and useful Improvements in Machines for Tarring and Sanding the Surface of Streets and the Like, of which the following is a specification.

My invention is for a machine for tarring and sanding the surface of streets and the like, and is illustrated in the accompanying drawings, in which the same numerals of reference indicate similar parts, and Figure 1 is a sectional side elevation of the machine. Fig. 2 is a cross-sectional view illustrating the tar distributing means. Figs. 3 and 4 are cross-sectional views illustrating the brush and brush cranks.

According to my invention there is a four wheeled truck frame (1) adapted to be drawn by suitable motive power. About midway of the truck (1) is mounted a tank (2) for containing the tar, the sides of the tank sloping towards a central outlet fitted with a valve (7) so that the tar may run out readily even when the machine is on an incline. The top of the tar tank (2) is provided with a funnel (3) for filling purposes. A series of vertical pipes (4) are connected at their upper ends to the outlet valve (7) of the tar tank (2) and at their lower ends to a horizontal pipe (5) which extends transversely of the machine the desired width a short distance above the ground, and which has its under surface perforated with a number of holes to allow of the exit of the tar (6), which flows from the tar tank (2) down through the pipes (4). The valve (7) controlling the flow of the tar from the tank (2) is operated by a connecting rod (8) and hand lever (9) mounted convenient to the driver's seat (10). At the rear of the truck, behind the tar tank (2), is mounted a sand hopper (11), the bottom of which is fitted with a flap door (12) pivoted at its upper end, and normally held closed by a cord or chain (13) which passes over a guide pulley (16) and is connected at one end to the flap door (12) and at the other end to a drum (14) fixed on the spindle of a hand-wheel (15) mounted on the machine near the driver's seat (10). By the operation of the hand-wheel (15) the flap (12) may thus be kept closed or allowed to fall open under the weight of the sand to permit the latter to flow out. A spreading roller (17) provided

with a number of parallel rows of teeth (18) is mounted between the cheeks of a trough (19) fitted below the sand hopper (11) so that sand flowing from the hopper falls onto the spreading roller (17) the teeth (18) of which are arranged with spaces between them, and so that the teeth of one row are behind the spaces between the teeth in the previous row. The back of the trough (19) prevents any sand being thrown into the working parts under the machine.

The spreading roller (17) is driven at a high speed by means of chains (20) which pass round small sprocket wheels (21) on the spindle (34) of the spreading roller (17) and larger sprocket wheels (22) on a spindle (33) mounted in a bracket secured under the frame of the machine. The sprocket wheels (22) are driven by means of pinions (23) fixed on the spindle (33) and gearing with pinions (24) fixed on the rear axle (35) of the road wheels (25). Below the truck frame and behind the tar delivery pipe (5) is a reciprocating brush (26) normally touching the street surface and extending across the machine from end to end of the horizontal tar delivery pipe (5). The brush frame (29) carries at its ends blocks (27) and is secured to sliding rods (38) which slide in guides (39) and are reciprocated by connecting rods (30) connected to cranks (31) on a sprocket wheel (36) mounted in a bracket secured under the truck frame. The blocks (27) slide in guides (28) see Fig. 3. The sprocket wheel (36) is driven by a chain (32) from a sprocket wheel (37) on the rear axle (35). The brush is removably secured to the frame (29) so that when the machine is out of operation the brush may be removed.

In operation, the tank (2) having been filled with tar, and the hopper (11) with sand, the haulage power is applied to draw the machine along, and the valve (7) is opened to allow the desired quantity of tar to flow through the pipes (4) (5) on to the surface to be treated. The revolving of the rear wheels of the machine sets in action the gearing before mentioned to operate the brush (26) so as to spread the tar on the surface, and also to revolve the spreading roller (17). The flap door (12) having been allowed to open so that the desired quantity of sand can flow out, the sand falls on to the spreading roller (17) and is thrown out behind the machine over the tar that has been spread by the brush.

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

1. A machine for tarring and sanding the surface of streets and the like, comprising in combination a truck mounted on road wheels, a tar tank and a sand hopper on the truck, means for leading tar from the tar tank and spreading it on the surface to be treated, means for discharging the sand from the sand hopper, and a spreading roller in the path of said sand as described.
2. A machine for tarring and sanding the surface of streets and the like, comprising in combination, a truck mounted on road wheels, a tar tank on the forepart of the truck, a sand hopper behind the tar tank provided with an outlet, a spreading roller at the rear of the truck below the outlet of the sand hopper, pipes for leading tar down from the tar tank and delivering it on the surface to be treated, a reciprocating brush arranged behind the tar delivery pipes, and driving mechanism for said brush and spreading roller, substantially as described.

3. A machine for tarring and sanding the surface of streets and the like, comprising in combination, a truck mounted on road wheels, a tar tank on the forepart of the truck, a sand hopper behind said tar tank, said tar tank and sand hopper being provided with outlets respectively, means for opening and closing said outlets respectively, vertical pipes leading from the outlet of said tar tank to a horizontal perforated pipe extending across under the truck close to the ground level, a reciprocating brush behind said horizontal pipe touching the ground, a spreading roller at the rear of the truck behind said brush and below the outlet of said sand hopper and driving mechanism for said brush and spreading roller substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM CHARLES SOUTHGATE.

Witnesses:

ANDREW JOHN PARK,
JOHN RUTHERFORD PARK.