

No. 715,458.

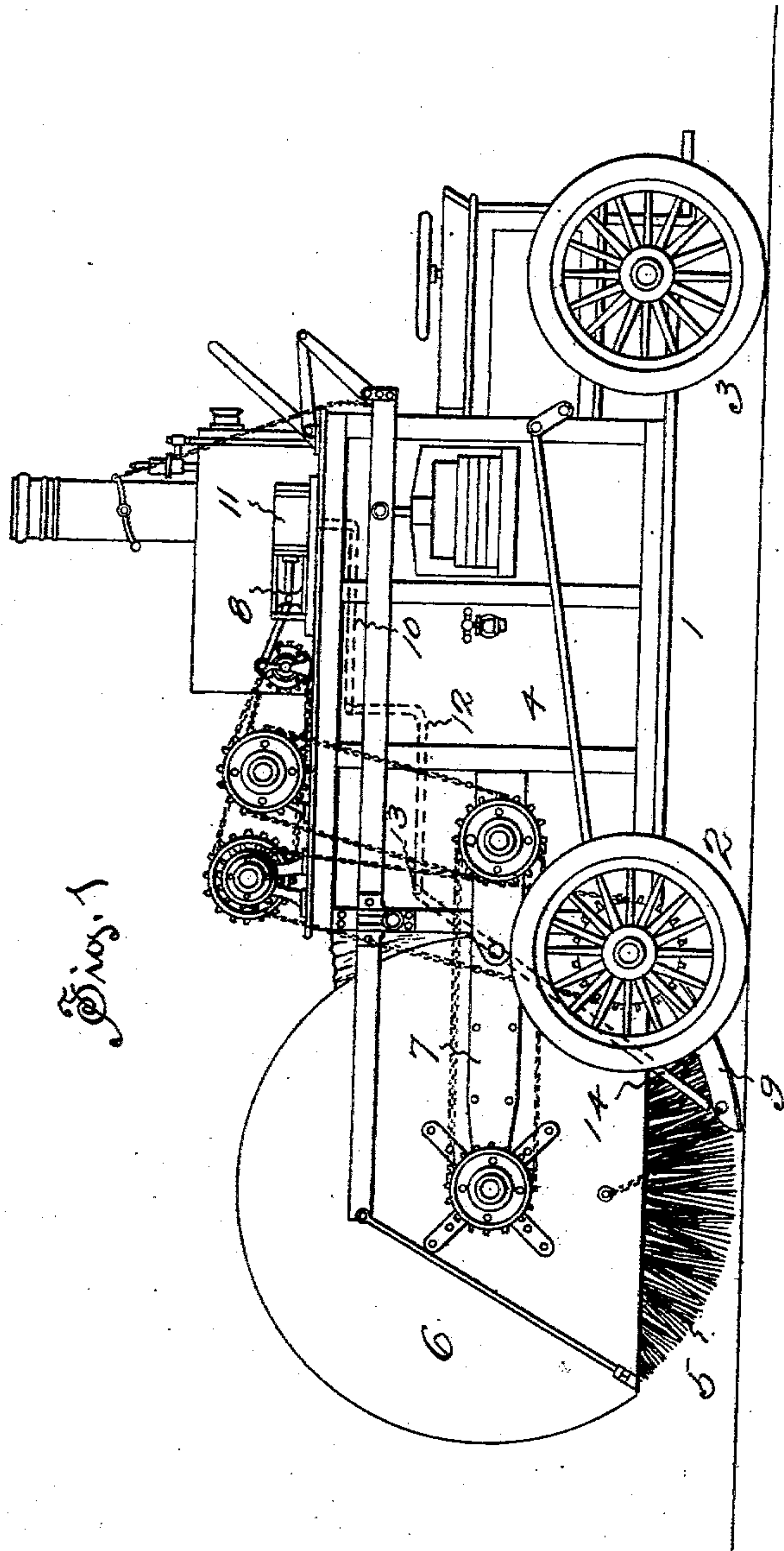
Patented Dec. 9, 1902.

J. T. COLLINS.  
STREET SWEEPER.

(Application filed Mar. 7, 1902.)

(No Model.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2.

Fig. 3

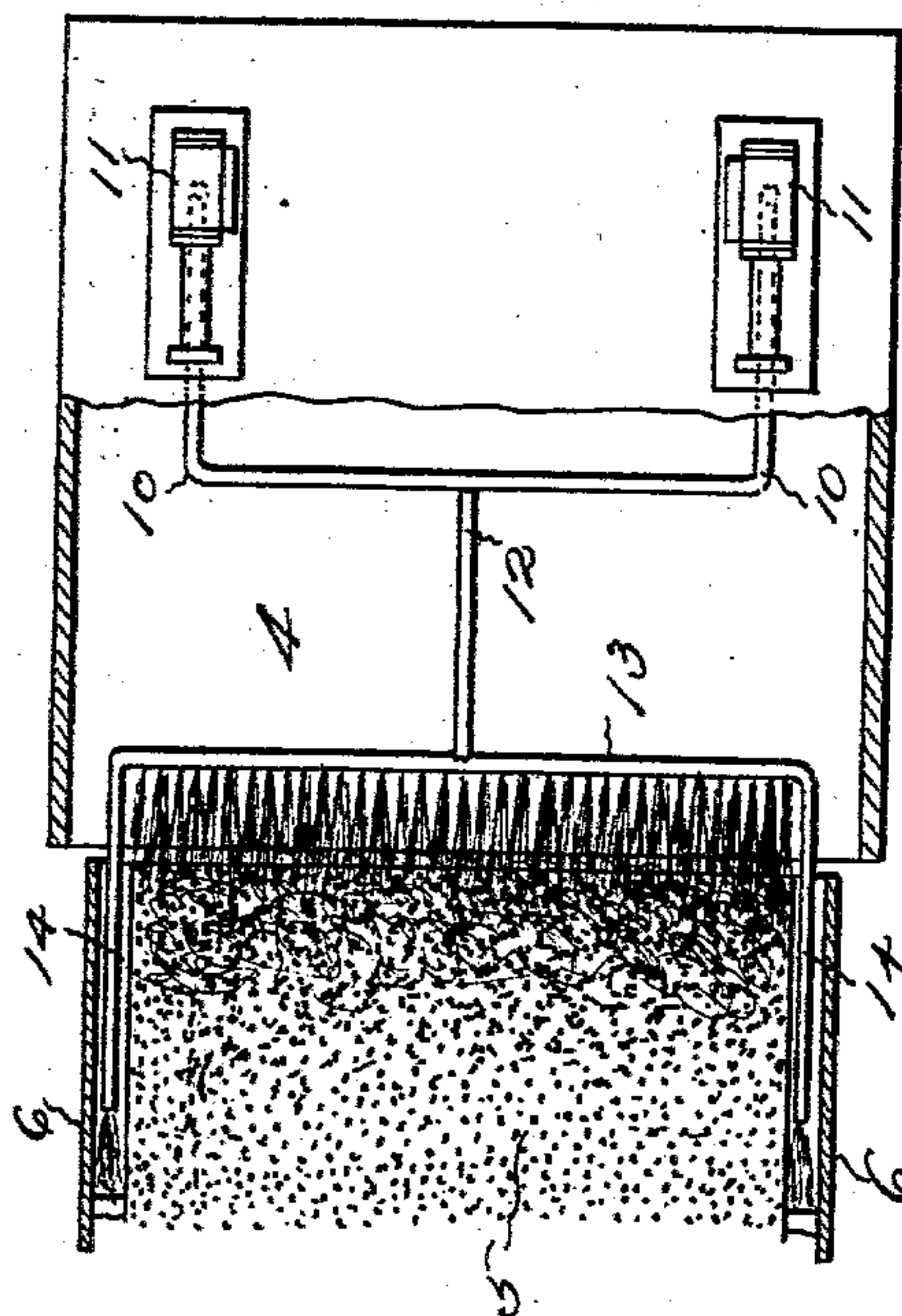
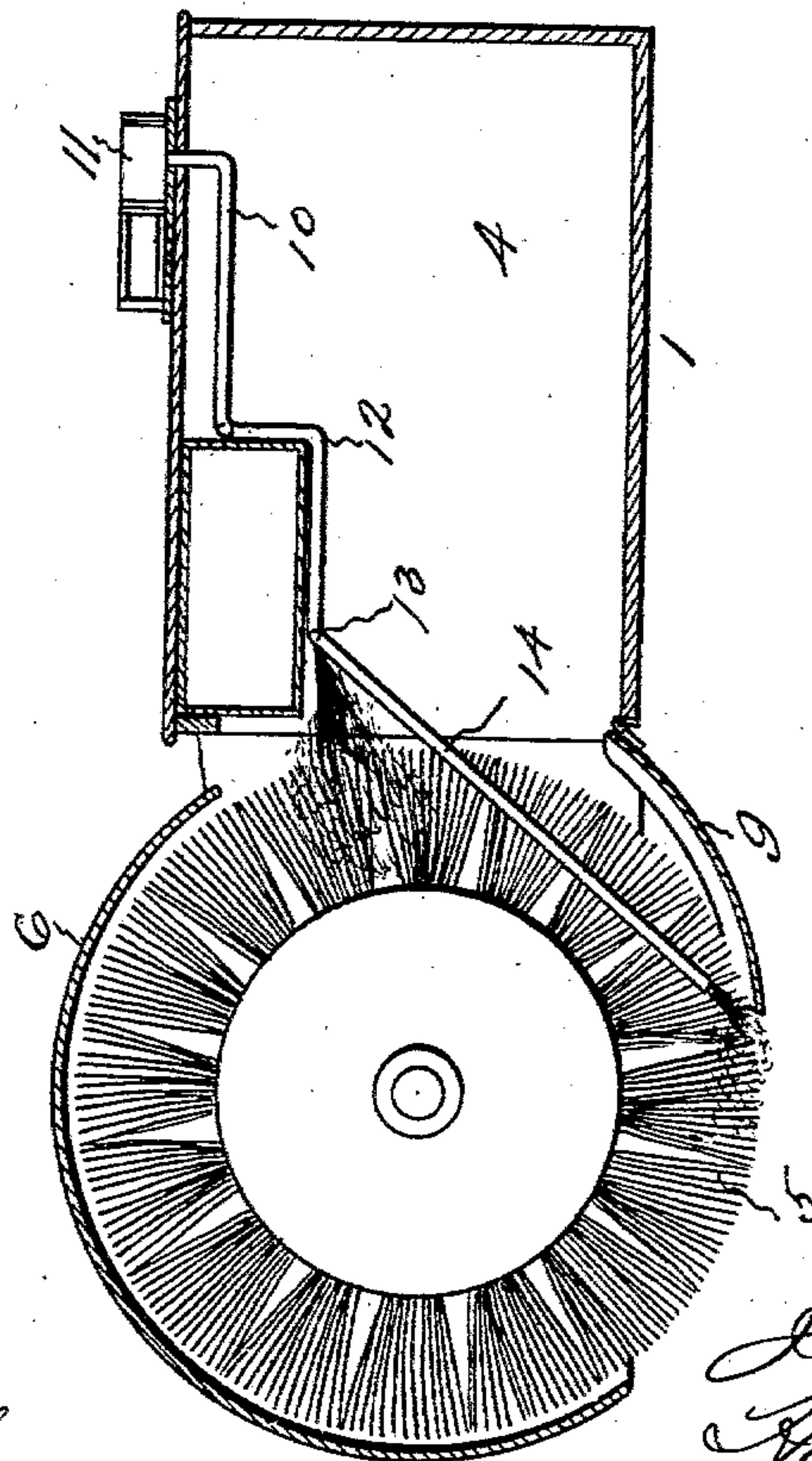


Fig. 2



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# UNITED STATES PATENT OFFICE.

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## STREET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 715,458, dated December 9, 1902.

Application filed March 7, 1902. Serial No. 97,061. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN T. COLLINS, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Street-Sweepers, of which the following is a specification.

This invention relates to a street-sweeper which has a steam-motor for propelling the machine and for rotating the brush.

It is very important that a street-sweeping machine sweep from the street every particle of dirt and refuse, coarse and fine, without raising a disagreeable and unsanitary cloud of dust. The most thorough results are attained by means of a rapidly-rotating brush, but the rapid rotation of the brush ordinarily produces air-currents that raise objectionable clouds of dust.

The object of this invention is to produce an efficient rotary-brush street-sweeper with a brush that can be driven very rapidly, so as to clean up all dirt and refuse, including matter which may be slightly frozen to the pavement, without raising any dust and without throwing off a cloud of steam.

The street-sweeper that is illustrated as embodying the invention has a motor-car provided with an ordinary steering-gear and steam-engine for propelling the car and rotating the brush. In this car is the dirt-receptacle, and attached to the rear by suitable flexible connections is the case containing the rotary brush. Pipes are led backwardly from the exhaust-outlets of the engine-cylinders in such a way that exhaust-steam is discharged from in front of the brush rearwardly onto the brush across the space above the dust-pan between the brush and the dirt-receptacle and also at the sides of the brush, so that the steam forms a screen which prevents dust from rising up in front and following the brush around and moistens that dust which does rise and drives it back onto the brush, so that it will be carried around and by the next revolution deposited as dirt into the pan. The steam discharged in this manner also dampens the brush, so that dust will not fly from it, and at the same time dampens the

pavement without depositing an objectionable amount of water upon it. This moistens the dirt which is picked up and also warms the brush, so that any slightly frozen particle will be softened and picked up.

Figure 1 of the accompanying drawings shows a side elevation of a street-sweeper that embodies the invention with the exhaust-steam connections indicated by broken lines. Fig. 2 shows a longitudinal section of the brush and the dirt-receptacle with the exhaust-steam pipes, and Fig. 3 shows a horizontal section of the same parts.

The motor-car 1 is carried by the driving-wheels 2 and steering-wheels 3 and contains the dirt-receptacle 4. The brush 5 is mounted in the casing 6, that is connected with the car by the jointed arms 7, and is rotated by the engine 8. A dust-pan 9 is hinged to the rear of the car, so as to extend in front of and below the brush. These parts are arranged and operated as illustrated and described in Patent No. 669,684, issued March 12, 1901.

A pipe 10 leads from the exhaust of each cylinder 11 to a pipe 12, which is connected with a pipe 13, that extends transversely of the machine near the rear of the dirt-receptacle and in front of the brush. This pipe 13 is provided with rearward and downward openings, so that steam will discharge from it rearwardly and somewhat downwardly onto the periphery of the brush. From each end of this transverse pipe is a pipe 14, which extends downwardly and rearwardly on the sides of the brush toward the surface of the ground. The ends of these pipes are left open, so as to permit the discharge of steam toward the ground each side of the brush. Steam which is discharged from the transverse horizontal pipe is thrown across the space directly in front of the periphery of the brush, so as to form a screen which cuts off all dust which is carried up by the air-currents produced by the rotation of the brush and moistens that dust, so that the heavier particles will drop down, while the lighter particles will be driven into the brush, to the bristles of which, being moist, these particles will cling. The moist particles thus driven into the brush are car-



ried around and on the next revolution deposited on the dust-pan or thrown into the dirt-receptacle. This sheet of steam not only screens the dust-laden air-currents which follow the periphery of the brush and moistens the dust drawn up by those currents, but also dampens the brush, so that it will to an extent sprinkle the street and lay the dust and also loosen particles which are slightly frozen down. The pipes at the sides of the brush knock down any clouds of dust that are blown out sidewise.

This mechanism is exceedingly simple and cheap to apply to a street-sweeper; but it overcomes a serious annoyance and menace to the health of a community where it is used. It also permits the sweeper to be used in the day-time while there is traffic on the street, for the reason that no clouds of dust and exhaust-steam are raised to frighten horses, annoy citizens, and soil clothing.

I claim as my invention—

1. A street-sweeper having a dirt-receptacle a steam-motor, a rotary brush, and a steam-

discharge pipe connected with the motor and extending transversely in the rear of the dirt-receptacle and in front of the brush and having openings toward the periphery of the brush, whereby steam is discharged across the space immediately in front of the brush onto the periphery of the brush, substantially as specified.

2. A street-sweeper having a dirt-receptacle a steam-motor, a rotary brush, a steam-discharge pipe connected with the motor and extending transversely in the rear of the dirt-receptacle with openings toward the periphery of the brush, and extending downwardly each side of the brush, whereby steam is discharged across the space immediately in front of the brush onto the periphery of the brush, also at the sides of the brush, substantially as specified.

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