J. R. POLLOCK.

DUST COLLECTOR FOR PNEUMATIC STREET SWEEPING MACHINES.

APPLICATION FILED AUG. 26, 1914.

1,155,272.

Patented Sept. 28, 1915.

2 SHEETS—SHEET 1.

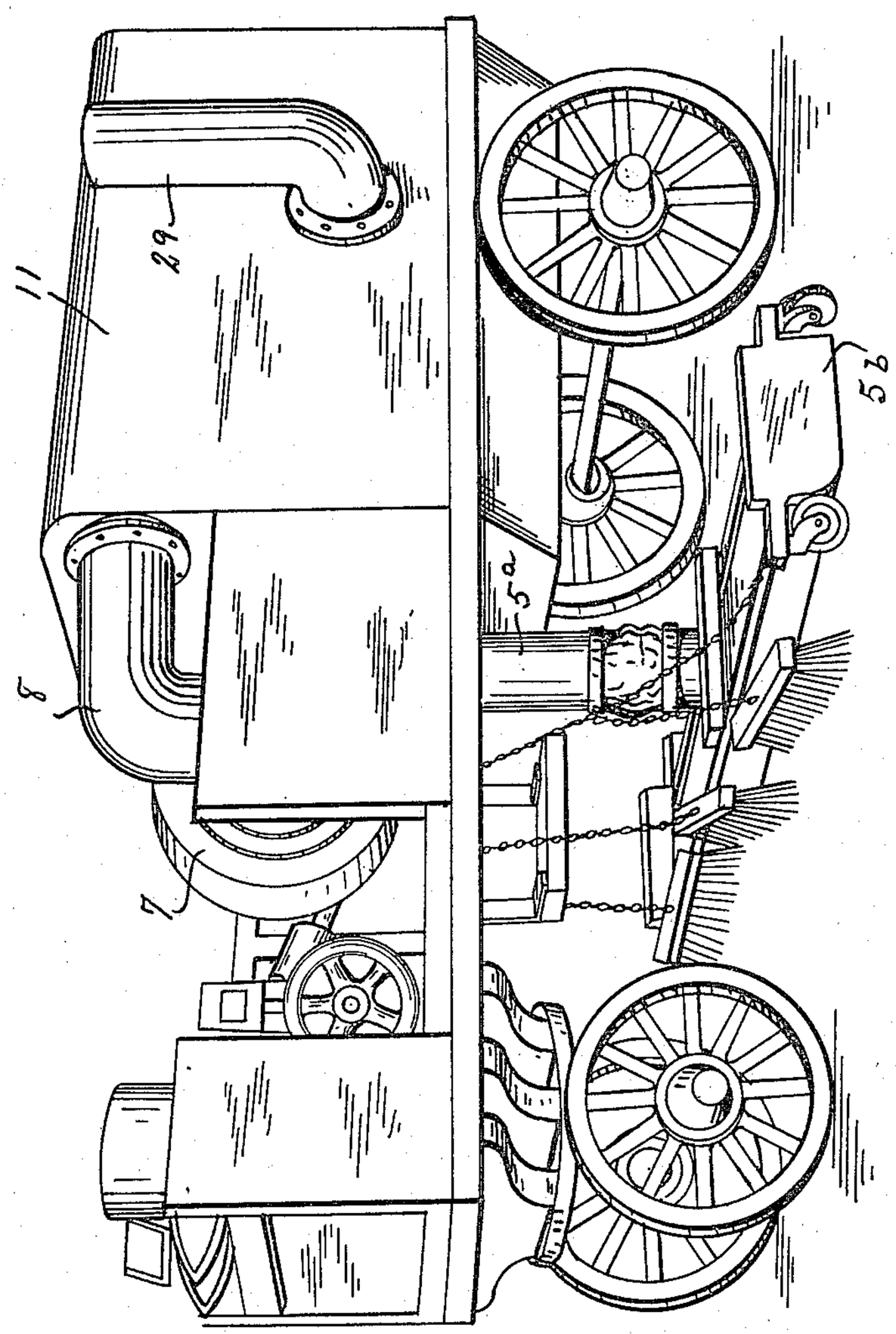


Fig. 1.

WITNESSES.

Frank Waterfield.

O. H. Gadsby

INVENTOR.

JOHN R. POLLOCK.

by O. Darlington

ATTORNEY

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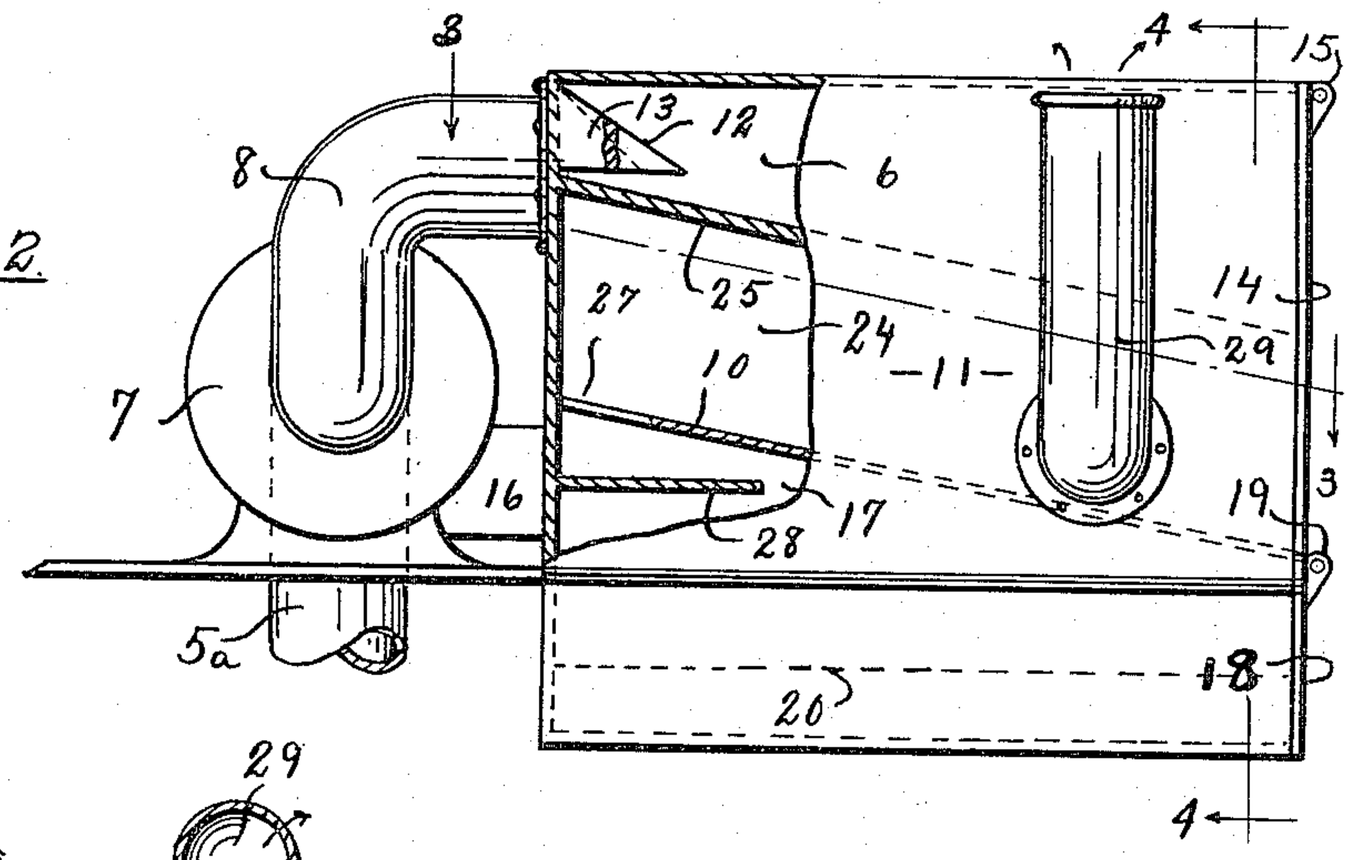
2 SHEETS—SHEET 2.

Fig. 2.



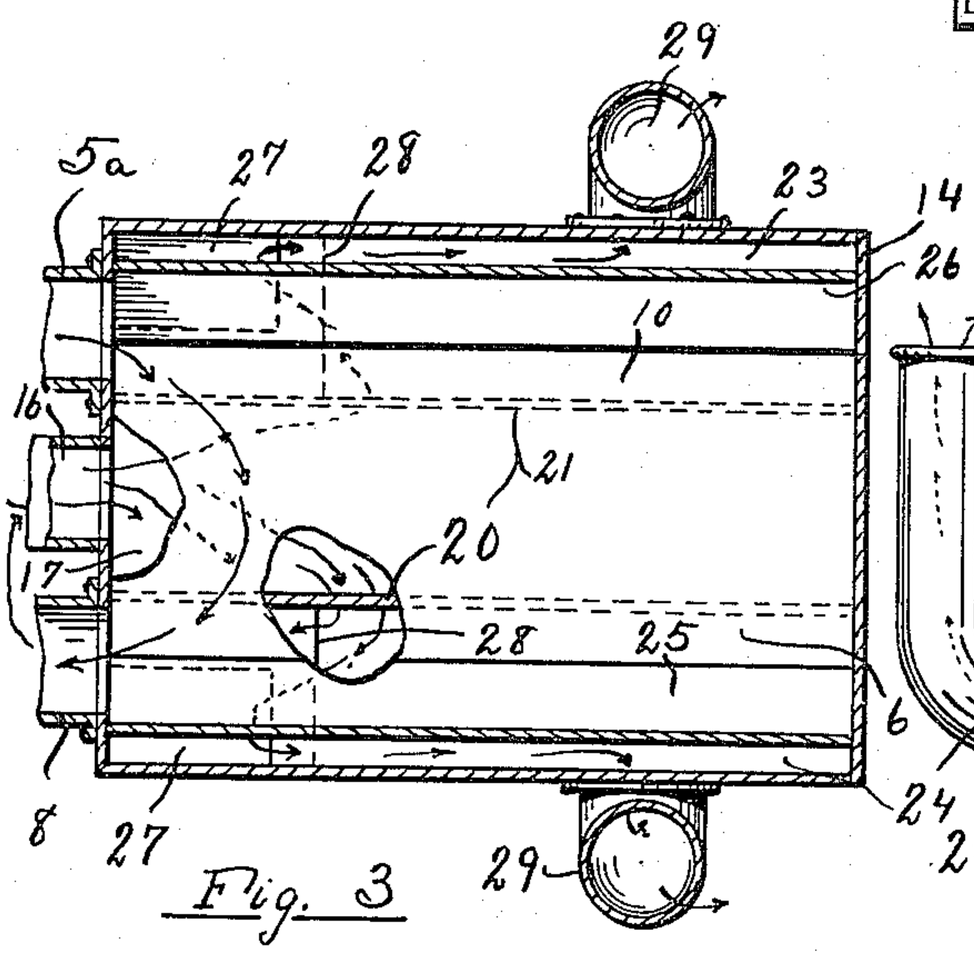
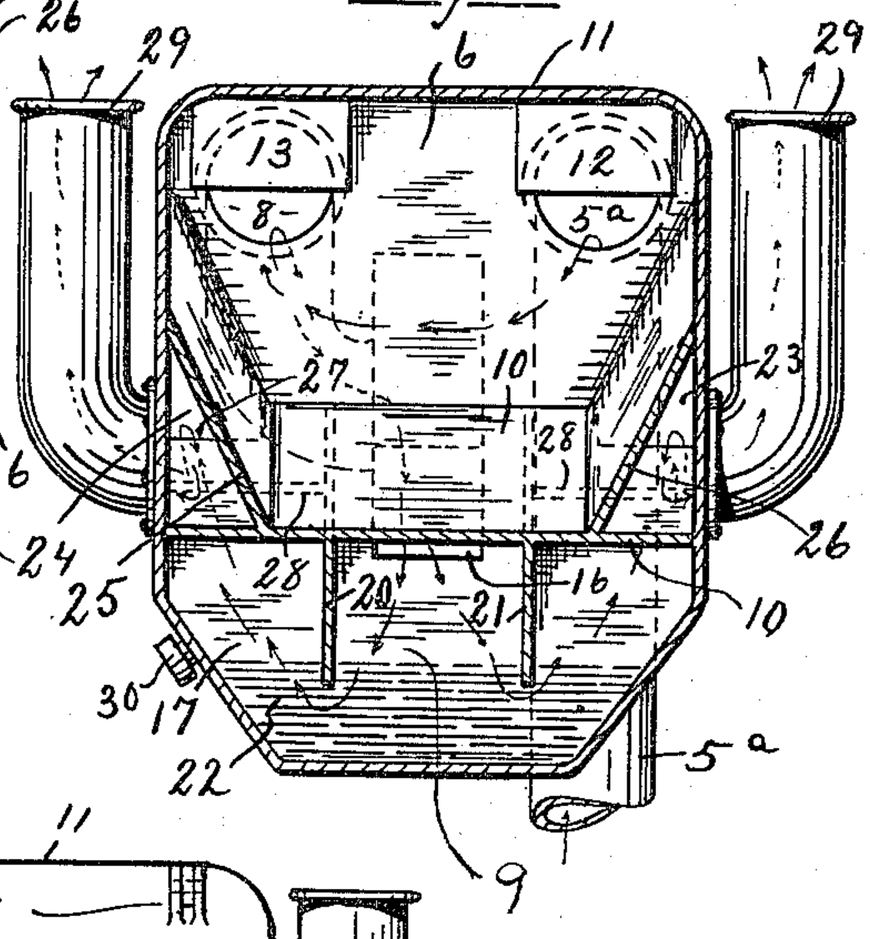




Fig. 3

Fig. 4.



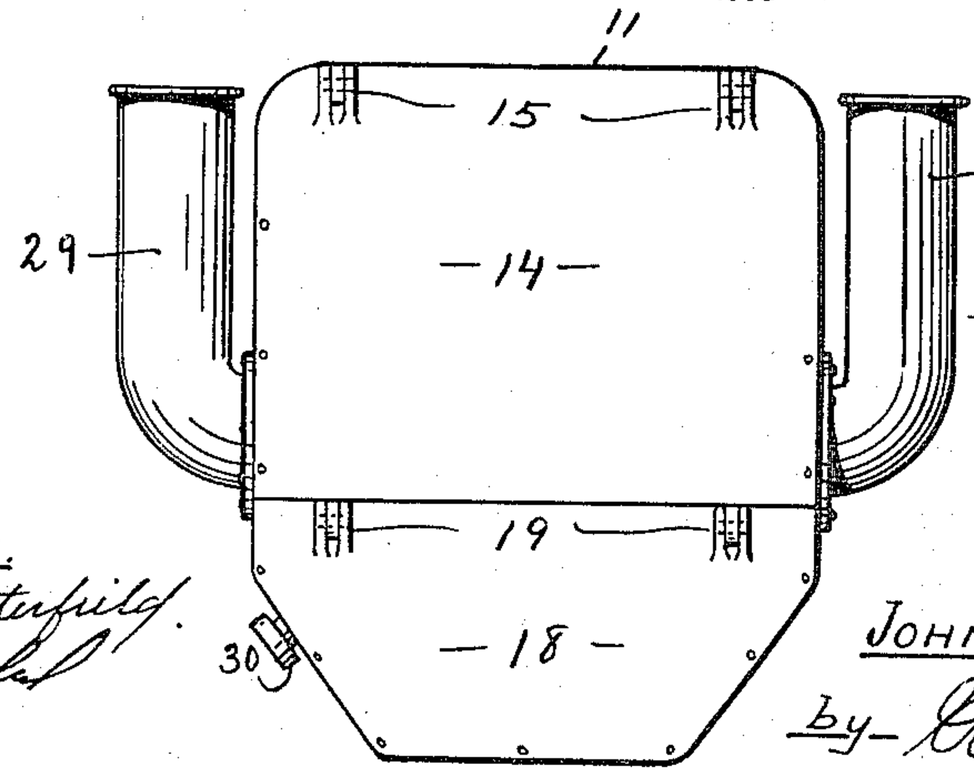




Fig. 5.

WITNESSES.

Frank Waterfield.

A. H. Garfield

INVENTOR

JOHN R. POLLOCK.

by- G. E. Corpham

ATTORNEY.

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

JOHN R. POLLOCK, OF LONG BEACH, CALIFORNIA.

## DUST-COLLECTOR FOR PNEUMATIC STREET-SWEEPING MACHINES.

1,155,272. Specification of Letters Patent. Patented Sept. 28, 1915.

Application filed August 26, 1914. Serial No. 858,619.

*To all whom it may concern:*

Be it known that I, JOHN R. POLLOCK, a citizen of the United States, residing at the city of Long Beach, in the county of Los Angeles and State of California, have invented new and useful Improvements in Dust-Collectors for Pneumatic Street-Sweeping Machines, of which the following is a specification.

My invention relates to an improvement on that certain street sweeping machine for which Letters Patent were issued to me December 14, 1909, No. 943,122 and the object thereof is to remove more of the dust from the air than is possible by the mechanism described in said patent.

In the drawings forming a part of this application only such parts of the machine are illustrated as have been improved. In other respects the machine is as described in said patent.

In the drawings: Figure 1 is a perspective view of my improved machine. Fig. 2 is a side elevation, partly broken away, of the rear portion of the body of the machine. Fig. 3 is a longitudinal horizontal section on the line 3—3 of Fig. 2. Fig. 4 is a vertical cross section on the line 4—4 of Fig. 2. Fig. 5 is a rear end elevation of the air purifying chamber.

In the drawings $5^a$ is the flexible pipe of my former patent which runs from the suction head $5^b$ of the machine and opens into the front end of the dirt chamber 6. 7 is an exhaust fan. The suction port of this fan is connected by pipe 8 with the dirt chamber. These parts except the dirt chamber are situate and operated as described in said patent. Dirt chamber 6 extends to the rear end of the machine and is separated from the purifying chamber 9 by a partition 10 that slopes downwardly and rearwardly to the rear end of and extends across the body 11. A hood 12 with a sloping top is mounted in the dirt chamber over the inlet from pipe $5^a$ and a like hood 13 is mounted in the dirt chamber over the outlet to pipe 8. The sides of these hoods extend preferably about half way down the said inlet and out-let which are at the top and front end of the dirt chamber. The rear end of the dirt chamber is closed when the machine is in operation by a door 14 which is preferably hinged at the top thereof by hinges 15 to the top of the body and is fastened by any appropriate fastenings (not shown). The discharge port of the fan is connected by conduit or pipe 16 with the central portion of the front end of the water chamber 17 which runs to the rear of the machine below the dirt chamber. The rear end of the water chamber is closed by door 18 which is connected at the top by hinges 19 to partition 10. It is suitably secured by fastenings (not shown) when the machine is in use.

The lower portion of the side walls of the water chamber preferably slope inwardly to reduce the size of the chamber as shown in Figs. 3 and 4. Projecting downwardly from partition 10 into the water chamber are vertical deflectors 20 and 21 which extend so close to the bottom of the chamber that when the machine is charged with the required amount of water 22 the lower edge of these deflectors will extend into the water about one inch. Pipe 16 opens into the chamber between these deflectors. Air channels 23 and 24 are formed at the sides of the dirt chamber by partitions 25 and 26 which are connected to the sides of the body and to partition 10 as best shown in Fig. 3. These air channels extend the full length of the body and at their front ends are connected by ports in partition 10 with the water chamber between the sides of the body and the deflectors in said chamber. One of the ports 27 is shown in Fig. 1. Immediately below these ports are baffle shelves, one of which 28 is shown in Fig. 2. These shelves prevent the spray from entering the air channels too freely for good work. At a short distance from the rear end of the body are the air discharge pipes 29 which open out from the air channels and turn upwardly and discharge the air at or near the top of the body.

By this construction it will be observed that the dirt and water chambers are the full length and width of the body thereby giving the dirt a better opportunity to settle and a better opportunity to take the dust out of the air than is provided in my former patent as the dust laden air passes through more than double the quantity of water than in said patent.

It will be understood that the water chamber is air and water tight when the rear door is closed except at ports in the top near the sides and front end. By open-

ing the rear doors of the dirt and water chambers these chambers are easily cleaned. The water chamber is charged with water through a port covered by a cap 30.

Having described my invention what I claim is:—

1. In a pneumatic street sweeping machine means to purify the air of dirt and dust comprising a body having a dirt chamber in the upper portion thereof, said chamber having an inlet port and an outlet port at the front end thereof and a bottom sloping downwardly and rearwardly and a door forming the rear end thereof; air channels at the sides of said dirt chamber; a water chamber below the dirt chamber having a door forming the rear end thereof and ports in the top wall at the front end thereof opening into the air channels; longitudinal deflectors depending from the top wall of said water chamber and projecting into the water when said machine is charged for use; air delivery pipes connected to the air channels near the rear ends of said channels; in combination with means to draw air out of the front end of the dirt chamber and deliver it into the front end of the water chamber between the deflectors.

2. In a pneumatic street sweeping machine, a dirt chamber having a port in the front end thereof; a water chamber below the dirt chamber, said chamber having a door forming the rear end thereof; a connection between said chambers; air channels at the sides of the dirt chamber having ports opening into the front end of the water chamber; discharge pipes connected to said air channels near the rear ends thereof; and deflectors depending from the top wall of the water chamber and projecting downwardly into the water when the machine is ready for use; in combination with means to cause the travel of air through said chambers.

In witness that I claim the foregoing I have hereunto subscribed my name this 27th day of July, 1914.

JOHN R. POLLOCK.

Witnesses:
G. E. HARPHAM,
FRANK WATERFIELD.