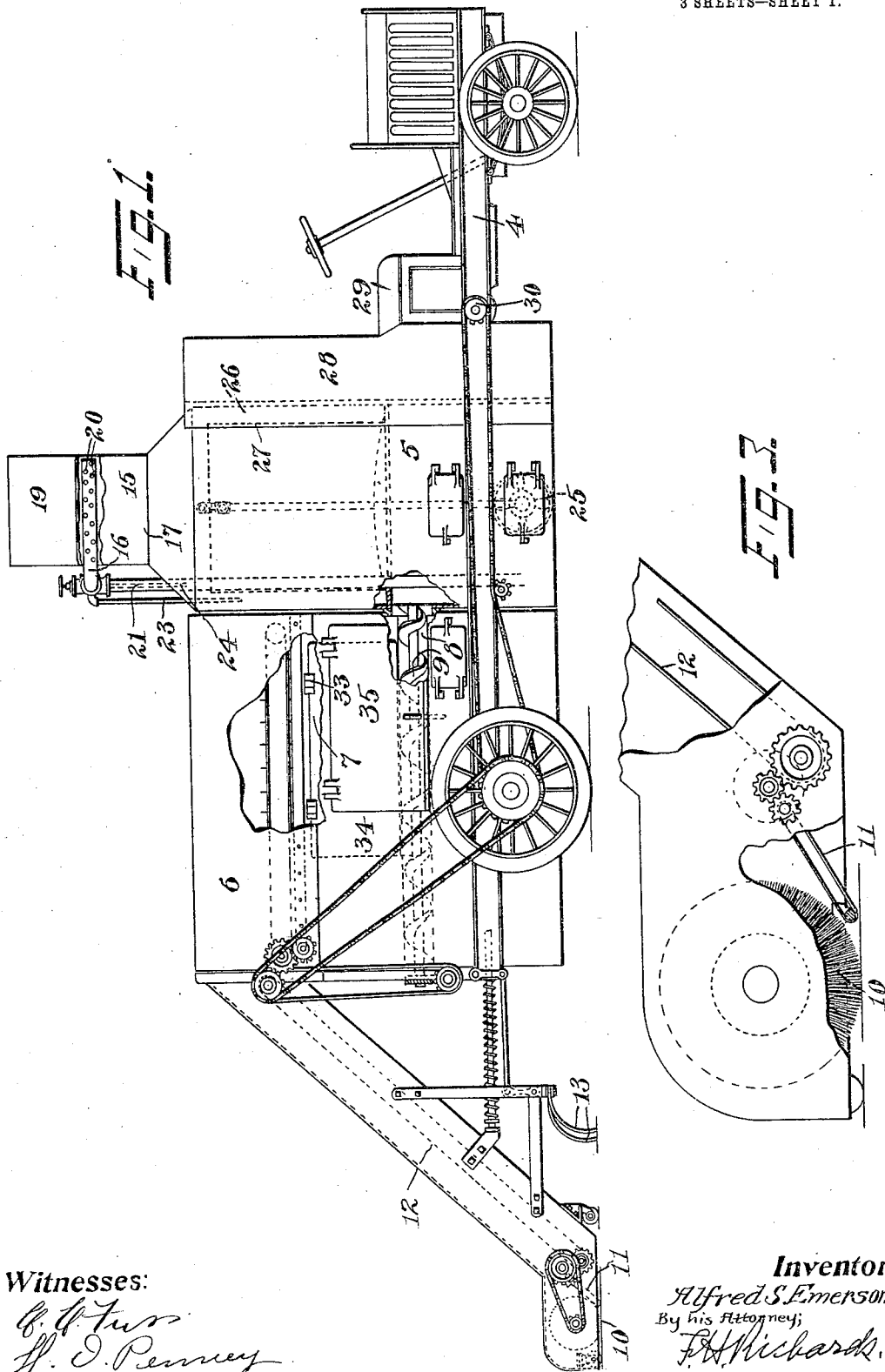


A. S. EMERSON.
CREMATING SWEEPING MACHINE.
APPLICATION FILED JAN. 3, 1908.

931,741.

Patented Aug. 24, 1909.

3 SHEETS—SHEET 1.



Witnesses:

G. L. Tins
H. J. Penney

Inventor.

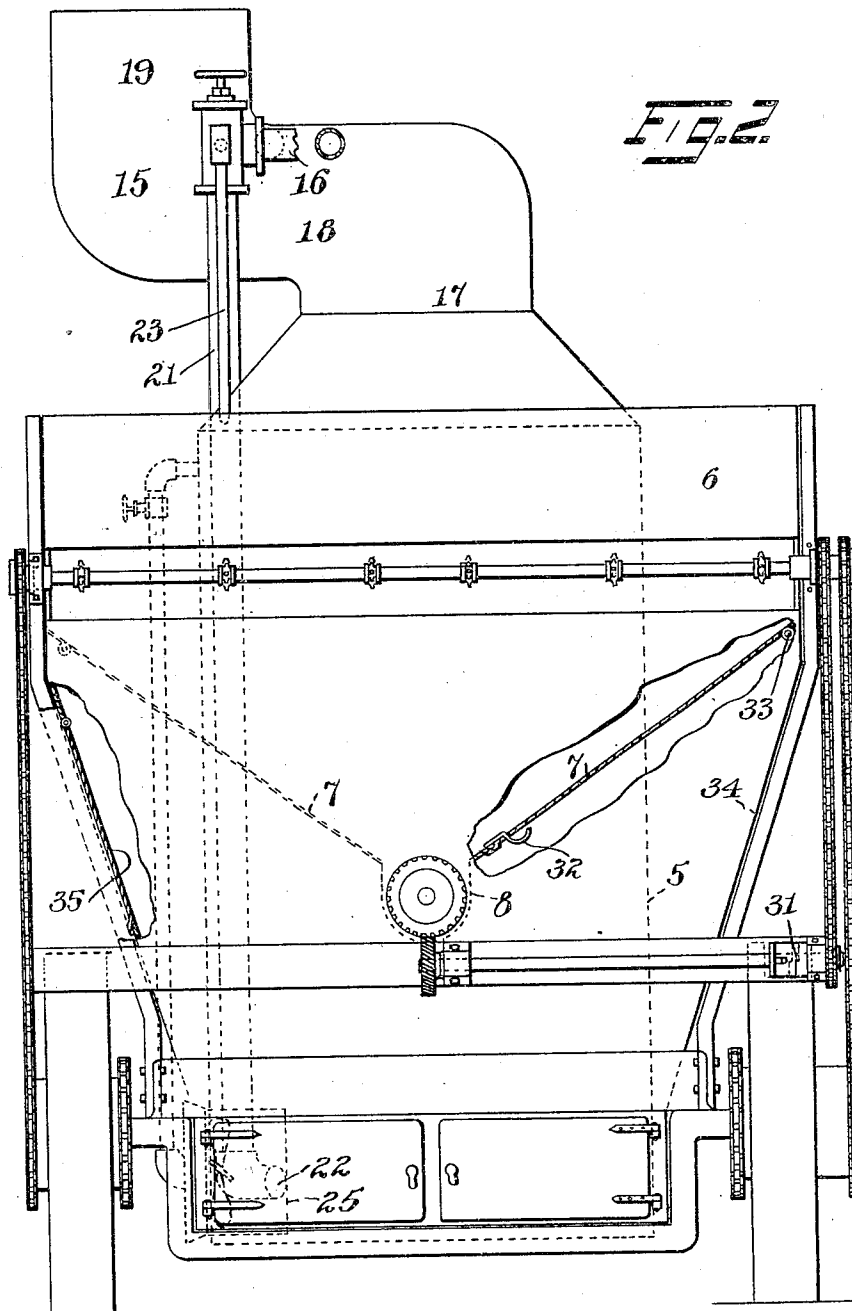
Alfred S. Emerson
By his Attorney;
F. W. Richards

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Witnesses:

G. C. Foss.
H. D. Penney.

Inventor:

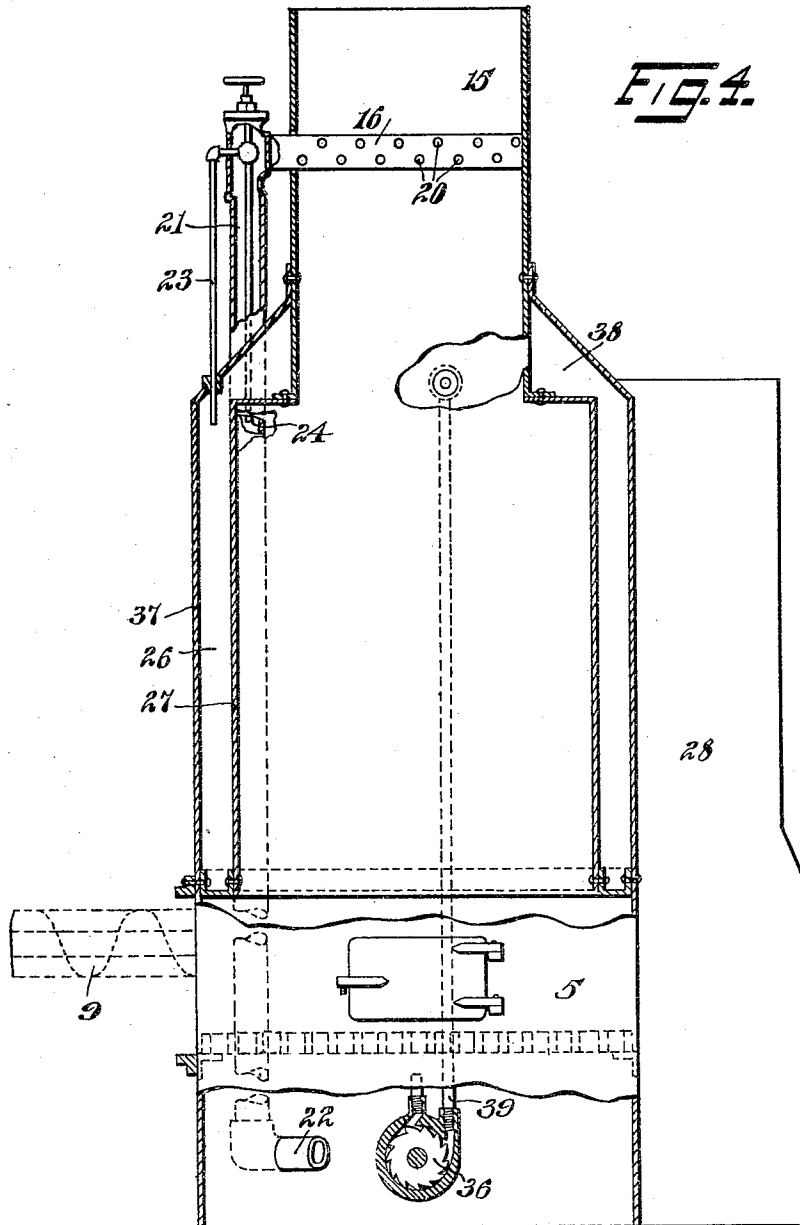
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Witnesses:

G. F. Tins.

H. D. Penney

Inventor:

Alfred S. Emerson,

By his Attorney,

F. H. Richards.

UNITED STATES PATENT OFFICE.

ALFRED S. EMERSON, OF LONDON, ENGLAND.

CREMATING SWEEPING-MACHINE.

931,741.

Specification of Letters Patent.

Patented Aug. 24, 1909.

Application filed January 3, 1908. Serial No. 409,199.

To all whom it may concern:

Be it known that I, ALFRED S. EMERSON, a citizen of the United States, residing in London, England, have invented certain new and useful Improvements in Cremating Sweeping-Machines, of which the following is a specification.

This invention relates to street sweepers and has for an object to provide an improved street sweeper which will dispose of the sweepings by cremation.

In the drawings accompanying and forming a part of this specification Figure 1 is a side elevation of a practicable embodiment of my present improvement. Fig. 2 is an enlarged rear end view of the device as shown in Fig. 1, showing, however, the sweeping device removed. Fig. 3 is an enlarged detail of the sweeping mechanism; and Fig. 4 is partly a longitudinal section and partly an elevation of the furnace on about the scale of Fig. 2.

The various parts of the mechanism are shown mounted upon a framework 4 of the carriage which may be of automobile construction. The cremating furnace 5 will be located preferably forward of the sweepings receptacle 6, which receptacle is shown as of hopper formation, there being a pair of doors 7 which will direct the sweepings into a conveyer channel 8 in which a worm 9 is located. Such worm will advance the sweepings into the fire chamber of the furnace. The sweepings will be gathered up by means of a rotary brush 10 which will throw the sweepings upon an endless belt or apron 11 which is caused to travel and deposit the sweepings upon an endless belt or apron 12. It may here be remarked that the brush 10 does not come in contact with the endless apron 11 but throws the dust and sweepings upon it. This feature, however, is not claimed herein, but is claimed in my copending application, Serial Number 424,691, filed by me under date of April 2nd, 1908. There are also shown herein but claimed in my copending application certain scrapers 13 for preliminary cleaning the surface of the street. The material found upon the street will be loosened by the scrapers, removed from the street by the brush, and thrown upon the apron 11, which will, by its movement, deposit the material upon the apron 12 which will bring the sweepings up into the hopper portion of the receptacle where the floor 7 of the hopper will carry

the sweepings to the worm 9 which will advance them into the fire of the furnace.

Street sweepings are of such a nature that when consumed by fire they will create a great amount of smoke and noxious gases, which, if permitted to escape directly into the atmosphere, would become so objectionable as to prevent the adoption of a cremating street sweeper. To take care of these gases I have provided in the smoke stack 15 a gas collector, and in the present illustration this embodies a pair of pipes 16 which are disposed in such a position that they will intercept the passage of those gases and products of combustion which it is desired to throw back into the fire.

It will be seen that the flue from the furnace has a substantially vertical portion 17, a horizontal portion 18, which is in the nature of an offset toward one side, and a vertical portion 19, and that the pipes 16 are located in the upper part of the transverse portion and are disposed transversely of this portion. It has been found in practice that those gases which are noxious, and the smoke, will travel along the upper part of the transverse portion, whereas the heated air will pursue a different path, and these gases, fumes, and unconsumed matter which is being borne along, will be intercepted by the collector and will pass into the perforations therein and be disposed of. The pipes 16 are connected with a pipe 21 which has an outlet 22 below the fire grate. A steam pipe 23 enters the pipe 21 and has an opening projecting toward the fire or outlet 22 and will act as an injector sucking the gases and fumes down the pipe 21, which fumes together with the supply of air for the fire will be driven through the fire by means of a fan, designated in a general way by 25. Steam for the injector and for driving the motor shown in the conventional manner at 36 for the fan 25 if desired may be furnished by a boiler which may be in the nature of a water jacket 26 surrounding one central flue 27 of the furnace. The wall 37, between which and the flue wall 27 the water space 36 for the water jacket is contained, continues upwardly above the normal water level and affords a steam space 38. The motor 36 will receive steam through a pipe 39 entering such steam space. The pipe 23 also receives its supply of steam from such steam space.

The supply of fuel and water may be lo-

cated in a tank or case 28 which will be convenient to the furnace and will constitute an insulator to the furnace for the driver, who will occupy the seat 29.

5 The various parts of the mechanism may be driven by suitable chain belts from the driving shaft 30 of the motor carried by the car for its self propulsion.

At times the street will become wet, due
10 to shows, etc., which may arise while the apparatus is in use, and in such contingency to prevent the necessity of having to return the machine to the barn idle it may be used as an ordinary street sweeper by disconnect-
15 ing the clutch 31 which drives the worm 9 and by releasing the catches 32 of the door 7 which will then swing on hinges 33 and come against the sides 34 of the receptacle 6. This receptacle may be provided with doors
23 35 at the sides whereby the catches 32 may be operated and when the doors 7 are in their hopper forming position the doors 35 may be employed for shoveling the ashes and refuse of combustion from below the
25 furnace grate into the lower part of the receptacle 6.

Having thus described my invention I claim:

1. The combination with means for sweeping the street, of a receptacle for sweepings, 30 a conveyer channel within said receptacle, a worm working in said conveyer channel, a pair of doors within said receptacle constituting a partition within the same and a hopper for said conveyer channel, and means 35 for holding the doors in their hopper forming position.

2. The combination with means for sweeping the street, of a receptacle for the sweep- 40 ings, a conveyer channel within said receptacle, a conveyer in said channel, and shiftable means within said receptacle forming a hopper for said conveyer channel and adjustable to increase the capacity of the receptacle.

Signed at Nos. 9-15 Murray street, New 45 York, N. Y., this 13th day of December, 1907.

A. S. EMERSON.

Witnesses:

CHAS. L. RUSSELL,
HENRY E. GREENWOOD.