No. 808,352. PATENTED DEC. 26, 1905.

H. DUKE.

STREET CLEANER.

APPLICATION FILED OCT. 27, 1904.

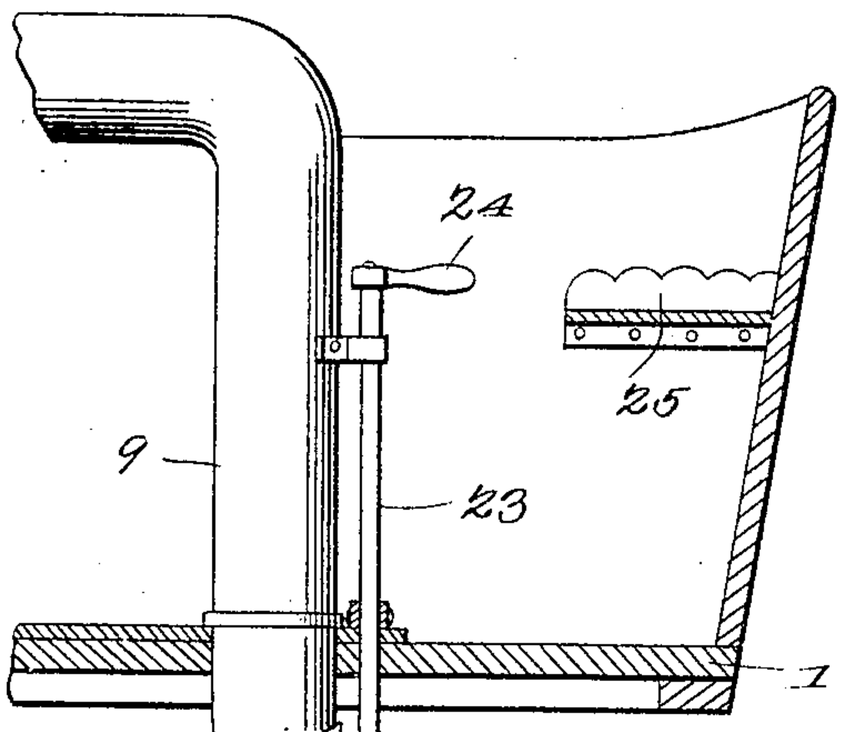
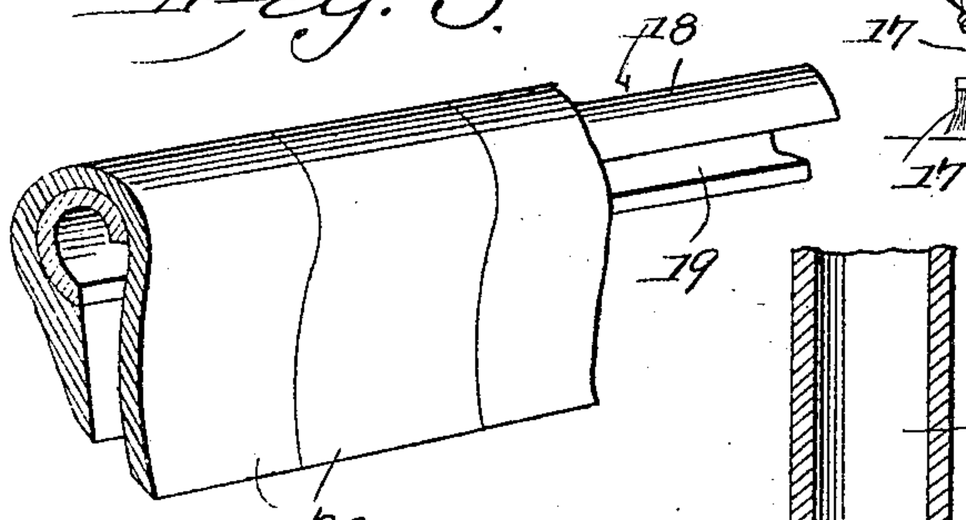


Fig. 1.

Fig. 3.



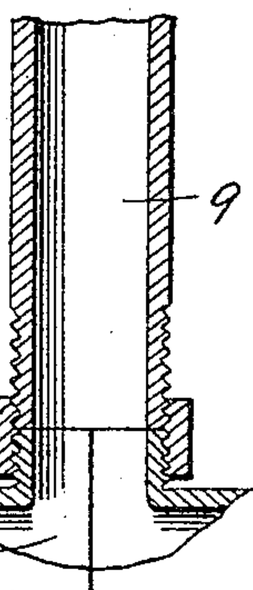
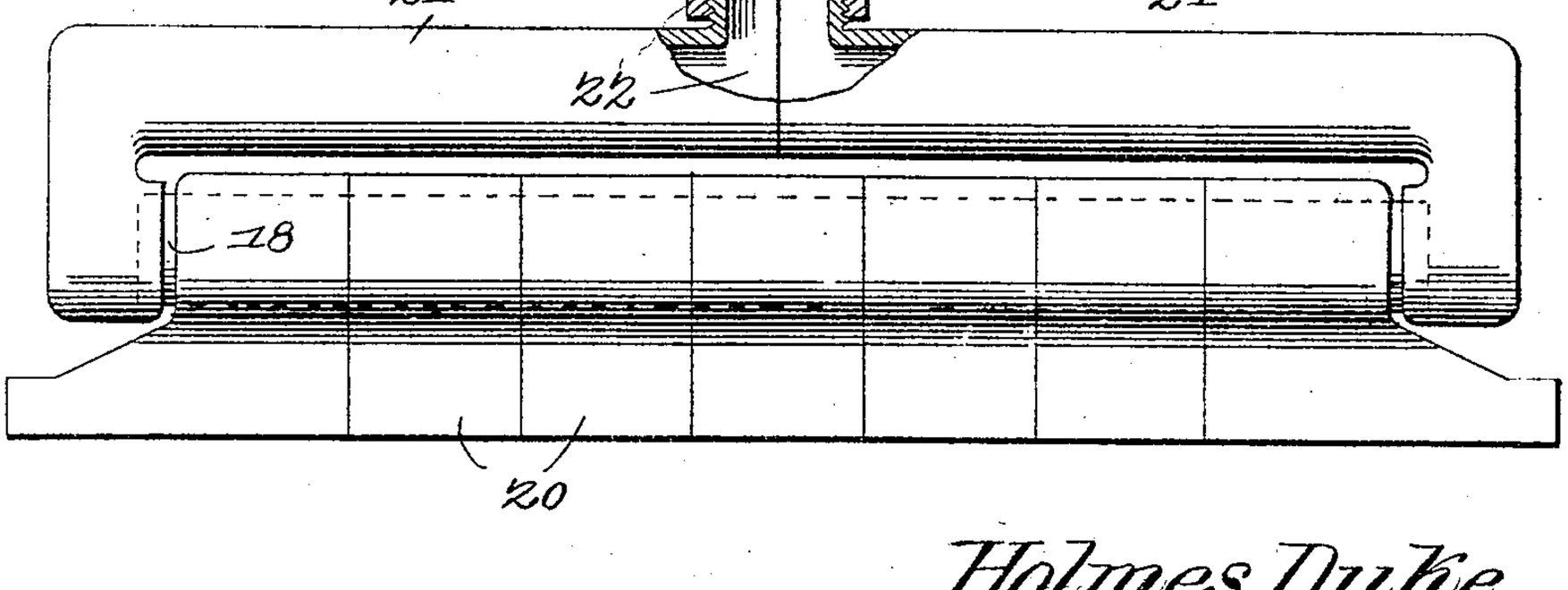


Fig. 2.



Witnesses
E. F. Stewart
Jno. E. Parker

Holmes Duke,
Inventor.
by Chas. Howell & Co.
Attorneys

UNITED STATES PATENT OFFICE.

HOLMES DUKE, OF BEAUMONT, TEXAS.

STREET-CLEANER.

No. 808,352. Specification of Letters Patent. Patented Dec. 26, 1905.

Original application filed July 26, 1904, Serial No. 218,258. Divided and this application filed October 27, 1904. Serial No. 230,251.

To all whom it may concern:

Be it known that I, HOLMES DUKE, a citizen of the United States, residing at Beaumont, in the county of Jefferson and State of Texas, have invented a new and useful Street-Cleaner, of which the following is a specification.

This invention relates to pneumatic sweepers, and while capable of general use for the collection of dust and dirt is intended principally for use in connection with street-cleaners of the general type shown in an application for Letters Patent filed by me on July 26, 1904, Serial No. 218,258, and of which the present application is a division.

The principal object of the invention is to provide a novel form of suction-head so constructed as to permit of ready disconnection of the parts should it be necessary to inspect or repair the same.

A further object of the invention is to provide in connection with the suction-head a dust or dirt disturbing element in the form of a brush or broom so arranged as to leave the dirt in small parallel rows and to so mount the parts that the brush and suction-head may be moved to and fro in a direction transverse of the machine or carrying device during the forward movement of the same.

A still further object of the invention is to provide a novel form of suction-head which will automatically accommodate itself to any uneven or irregular surface to be swept.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a transverse sectional elevation of a suction-head constructed in accordance with the invention. Fig. 2 is an elevation of the same, partly in section. Fig. 3 is a detail perspective view of a number of the parts detached.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The working parts of the apparatus are supported on a suitable platform 1, which may be of any desired construction, the platform serving as a support for a suction-pipe 9, that is connected in any suitable manner to a suction-fan or other similar device.

The suction-pipe 9 is provided with a flexible joint 15 and at its extreme lower end is threaded for the reception of a coupling-sleeve 16, to which is connected the suction inlet-tube. To the under side of the main suction-tube is connected a frame 17, carrying a brush 17′, which rests on the ground.

The suction device proper consists of a cylindrical suction inlet-tube 18, provided throughout its entire length with a longitudinal slit 19, and on this tube is pivoted a number of inlet-nozzles 20, each of which is movable circumferentially of the tube, and the movement of each is independent of the others, so that the lips of the nozzles may follow an uneven path or roadway, and thus suck up the dirt from hollow portions of the pavement. The nozzle members 20 are of any desired width, and the passages formed therein are generally a trifle less in width than the width of the slit 19, so that in all positions assumed by the nozzle members there will be an unobstructed passage for the dirt to the interior of the suction inlet-tube. The opposite ends of the inlet-tube 18 extend into the end portions of the two intermediate tube-sections 21, the ends of the latter bearing against the end nozzle members and serving to hold said members in proper position longitudinally of the tube 18. The main portion of the tubes 21 extend in a direction parallel with the suction inlet-tube 18 to a meeting-point about midway of the length of the tube 18. The sections 21 terminate each in a semicylindrical coupling member 22, that is externally threaded for the reception of the threaded collar 16, so that when the latter is screwed onto the end of the main suction-pipe the two parts of the tube 21 will be firmly united and all of the parts of the suction member will be held together. Should there be any derangement of the parts, it is merely necessary to turn the sleeve until it is free from the coupling members 22, after which all of the parts may be readily detached and examined and repaired, if necessary.

To the lower portion of the main suction-tube is connected a vertical spindle 23, having at its upper end a handle 24, arranged within convenient reach of the operator located on a seat 25, and the operator may move the handle to and fro and in this way

slightly shift the position of the brush and the suction inlet member, so as to facilitate the cleaning operation.

Having thus described the invention, what is claimed is—

1. In a pneumatic cleaning apparatus, a suction-pipe, a suction inlet member, connecting-tubes extending between the two, said connecting-tubes being each provided with a half-coupling, and a coupling-sleeve connecting the end of the suction-pipe to the half-couplings, and serving to hold the parts assembled.

2. The combination with a suction-pipe, having an externally-threaded portion, a threaded coupling-sleeve carried thereby, a suction inlet member having an inlet-mouth for the dirt, connecting-pipes each detachably secured to one end of the suction inlet member, said coupling-pipes having each a semicylindrical coupling member provided with threads for the reception of the threaded sleeve.

3. In pneumatic cleaning apparatus, a suction inlet-pipe having a continuous inlet-slot extending throughout its entire length, and a plurality of independently-movable inlet-nozzles communicating with the slot and free for swinging movement on the pipe.

4. In pneumatic cleaning apparatus, a slotted suction-tube, and a plurality of nozzle members mounted for swinging movement thereon and communicating with the slot, the nozzle-openings extending throughout the complete width of said members.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HOLMES DUKE.

Witnesses:
GUY W. JUNKEN,
A. B. SMITH.