

A. L. FRAME.
VACUUM CLEANER NOZZLE.
APPLICATION FILED DEC. 5, 1912.

1,192,409.

Patented July 25, 1916.

Fig. 1.

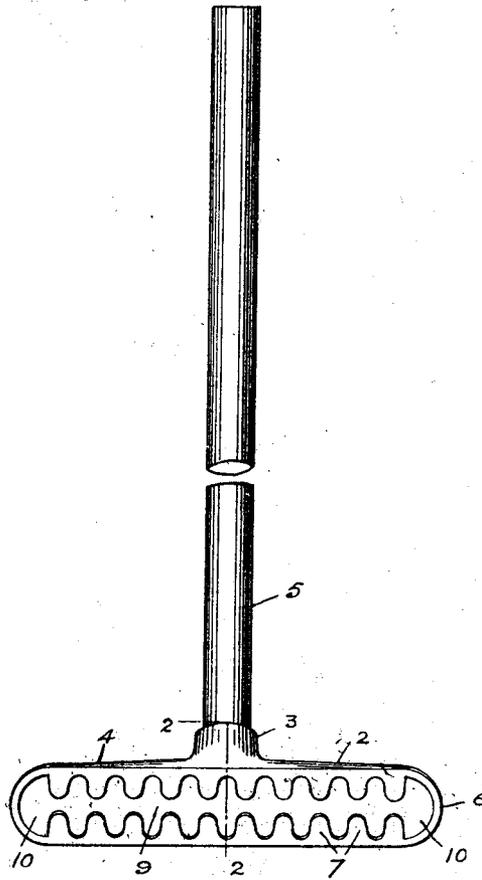
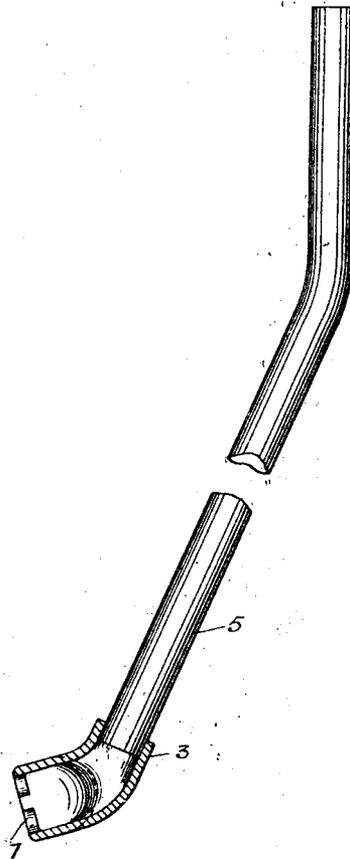


Fig. 2.



Witnesses:
S. M. [unclear]
J. B. McElvaine

Inventor
Abraham L. Frame.
By his Attorneys
[Signature]

UNITED STATES PATENT OFFICE.

ABRAHAM L. FRAME, OF READING, PENNSYLVANIA.

VACUUM-CLEANER NOZZLE.

1,192,409.

Specification of Letters Patent.

Patented July 25, 1916.

Application filed December 5, 1912. Serial No. 735,016.

To all whom it may concern:

Be it known that I, ABRAHAM L. FRAME, a citizen of the United States, residing at Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Vacuum-Cleaner Nozzles, of which the following is a specification.

This invention relates to vacuum cleaner nozzles, the object of the invention being to provide an improved nozzle readily constructed, simple in such construction and easily operated, as well as one which is durable in use and which will also have considerable efficiency in operation.

In the drawings accompanying and forming part of this specification, Figure 1 is a bottom plan view of this improved nozzle; and Fig. 2 is a cross-sectional view taken in line 2-2, Fig. 1.

Similar characters of reference indicate corresponding parts in the figures of the drawings.

This improved nozzle, in the preferred form thereof, comprises a chambered head 2 having a nipple 3 located substantially centrally of the curved wall 4 of the chambered head for the reception of the usual tubular handle 5. The chambered head, which is usually about an inch and a quarter in width, has curved end walls 6, and projecting from its opposite side walls throughout the length of the head and at the bottom of the head in position to contact with the surface to be cleaned is a series of inwardly extending projections 7 located in the present instance one opposite to the other. These projections are shown as of slightly tapered form with curved edges and form at opposite sides of the head a series of teeth or prongs having curved edges, so that the opening 9 into the chamber will be of an irregular form, being less adjacent to the opposed ends of the prongs than at those points intermediate such prongs, whereby the area of opening into the nozzle is very much larger than would be the case if it were simply a straight slot extending from end to end thereof. At the ends of the nozzle this irregular opening terminates in a pair of approximately semi-circular openings 10.

By reason of the present construction the

area of the inlet opening is materially increased as compared with a single narrow inlet slot, thus providing a larger space for the passage of threads and other debris into the nozzle, while the area of such opening is kept well within proper relation to the amount of vacuum which the machine is capable of producing, thereby materially increasing the efficiency of the nozzle. In other words, while the area of the opening is increased, thereby enabling such opening to cover a larger area of the surface to be cleaned than would be the case with a narrow inlet slot of the same length and of uniform width throughout, such increased area is obtained in such a manner that the suction effect at the nozzle is not impaired.

I claim as my invention:

1. A vacuum cleaner nozzle comprising a chambered head provided in its bottom surface with a single inlet opening having tortuous side walls forming a series of elliptical openings connected by narrower openings of oppositely curved formation.

2. A vacuum cleaner nozzle comprising a chambered head provided in its bottom surface with a single inlet opening having tortuous side walls forming a series of elliptical openings connected by narrower openings of oppositely curved formation, the opening at each end of said nozzle being substantially semi-circular and also connected to its adjacent elliptical opening by one of said narrower openings.

3. A vacuum cleaner nozzle comprising a chambered head having a bottom plate provided midway of its length with an elongated slot having all along its length oppositely extending openings forming a series of inwardly extending projections.

4. A vacuum cleaner nozzle comprising a chambered head having a bottom plate provided midway of its length with an elongated slot having all along its length oppositely extending openings forming a series of inwardly extending projections, said oppositely extending openings forming transverse elliptical openings in said plate.

5. A vacuum cleaner nozzle comprising a chambered head having a bottom plate provided with a series of equally spaced alternate openings and projections forming a pair of tortuous side walls with the pro-

jections spaced apart midway of the length
of the nozzle thereby to form an elongated
slot of relatively narrow dimensions be-
tween the ends of opposite projections and
5 of relatively wide dimensions at each side
of such projections.

Signed at Reading, Pennsylvania, this
30th day of November, 1912.

ABRAHAM L. FRAME.

Witnesses:

H. F. KANTNER,
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