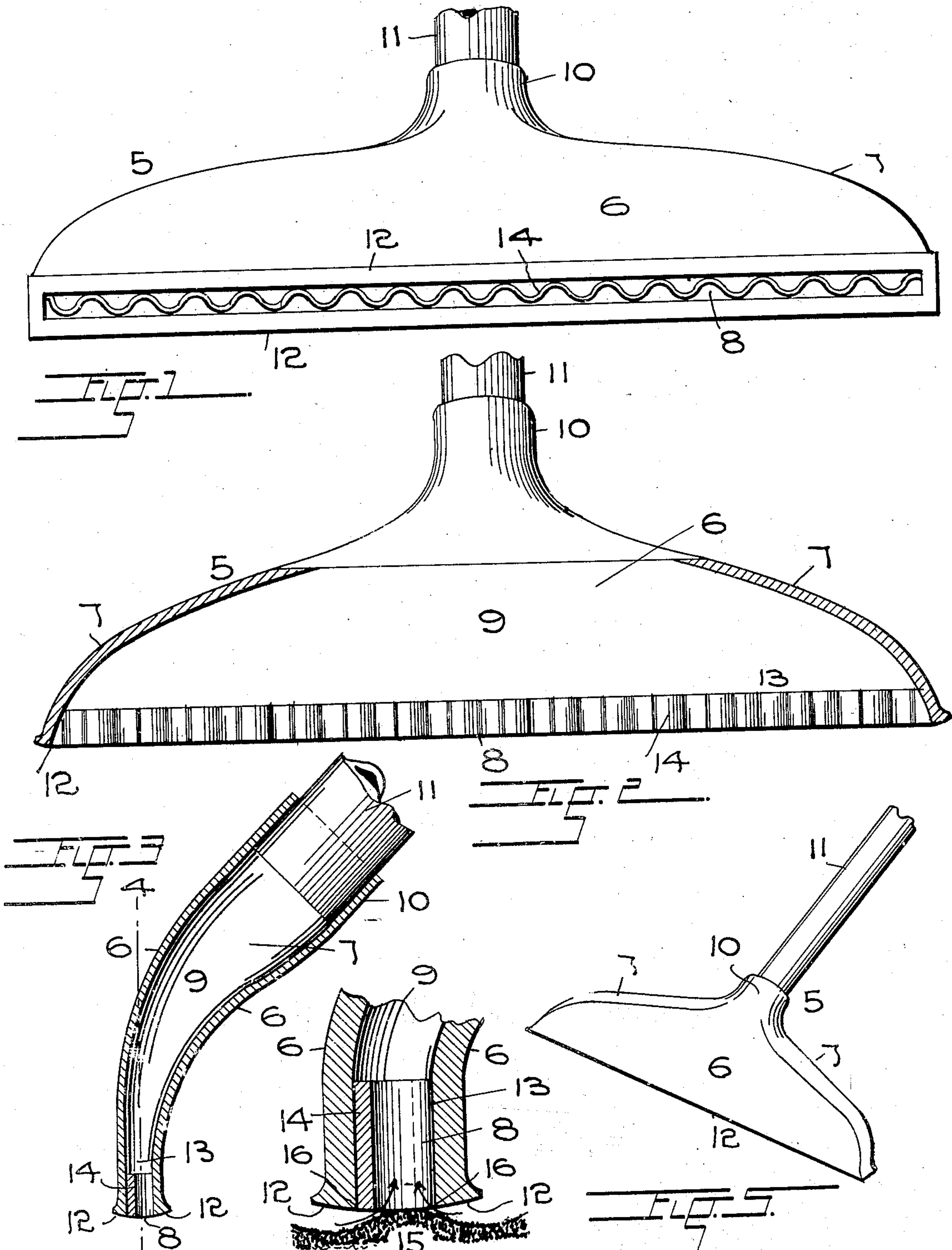


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PATENTED JUNE 16, 1908.

A. W. KINDEL.
NOZZLE FOR PNEUMATIC CLEANING APPARATUS.
APPLICATION FILED SEPT. 28, 1907.



WITNESSES:

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ARTHUR W. KINDEL, OF DENVER, COLORADO.

NOZZLE FOR PNEUMATIC CLEANING APPARATUS.

No. 890,987.

Specification of Letters Patent.

Patented June 16, 1908.

Application filed September 28, 1907. Serial No. 395,033.

To all whom it may concern:

Be it known that I, ARTHUR W. KINDEL, a citizen of the United States of America, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Nozzles for Pneumatic Cleaning Apparatus, of which the following is a specification.

This invention relates to new and useful improvements in nozzles employed in conjunction with pneumatic cleaning apparatus and its object is to provide a device of the class named which, when brought in contact with the carpet or other object to be cleaned, will, by reason of its peculiar construction, cause separation of the nap or pile of the fabric and permit a constant influx of air and which, in consequence, is instrumental in effectively, thoroughly and speedily removing the dust and dirt contained in the substance to which it is applied. I attain this object by the mechanism illustrated in the accompanying drawing in the various views of which like parts are similarly designated and in which

Figure 1—represents an underneath view of the improved nozzle, Fig. 2—a vertical section taken along a line 4—4, Fig. 3. Fig. 3—a transverse section taken through the center of the device, Fig. 4—a cross sectional view of the mouth of the nozzle in position on a carpet, drawn to an exaggerated scale, and Fig. 5—a perspective view of the improved nozzle in operative position.

Referring to the drawings, let the reference character 5 designate the nozzle or hollow head, composed of the upwardly convergent end walls 7 and the curved side walls 6, which as they approach the lower extremity of the device, are drawn together to form a narrow slot like space, the mouth 8 of which opens into the working face of the nozzle and through which the impregnated air is introduced into the suction chamber 9.

A socket or union 10 opening in the chamber 9 at the uppermost portion of the head and in central relation thereto, is designed to

secure the extremity of a tubular handle 11 through which the dust and dirt-laden air is conducted to a conveniently located separator which for obvious reasons is not shown in the drawings.

The mouth 8 of the nozzle, which is of uniform width, is bounded by lips 12 which curve out and upwardly from the edges of the mouth, and the walls of the narrow neck 13 which connects the orifice 8 with the suction chamber, are connected by means of a corrugated strip 14 the lower edge of which extends in a plane with the adjoining edges of the mouth. The strip 14 is composed of a narrow strip of metal and may be secured to the walls of the neck 13 by solder, or other suitable fastening means.

When the mouth of the nozzle is applied to a carpeted floor, as illustrated in Fig. 4 of the drawings in which the reference numeral 15 designates the carpet, the lower edge of the corrugated strip and the adjoining edges of the mouth 8 engage the nap or pile thereof while the lips 12 curve upwardly free from contact therewith. The corrugated strip 14 engaging the nap of the fabric, disentangles and separates the hairs or fibers of which it is composed and agitates and exposes the dust and dirt and thus facilitates its removal. The corrugations of which the strip 14 is composed, prevent the nap of the carpet from entering and consequently obstructing or choking the mouth of the nozzle, while the upturned lips 12, being free from contact with the surface of the carpet insure a free passage of the surrounding air into the suction chamber, when by means of suitable apparatus connected with the handle 11, a vacuum is produced therein. It will thus be observed that by the use of my improved device, all the dirt and dust contained in a carpet or other fabric, may effectively be dislodged and by reason of the continuous, unobstructed flow of air, be speedily and completely drawn into the suction chamber, to be conveyed to the therewith communicating separator.

Having thus described my invention, what I claim is:

1. A nozzle for a pneumatic cleaning device comprising a hollow head having an elongated inlet, and a corrugated strip connecting the walls thereof, in a plane with its lower edges.
2. A nozzle for a pneumatic cleaning device comprising a hollow head having an elongated inlet and lips ranging up and out-

wardly from its edges, and a corrugated strip connecting the walls of the said inlet, in a plane with the said edges.

In testimony whereof I have affixed my signature in presence of two witnesses.

ARTHUR W. KINDEL.

Witnesses:

K. M. STUMP

G. J. ROLLANDET.