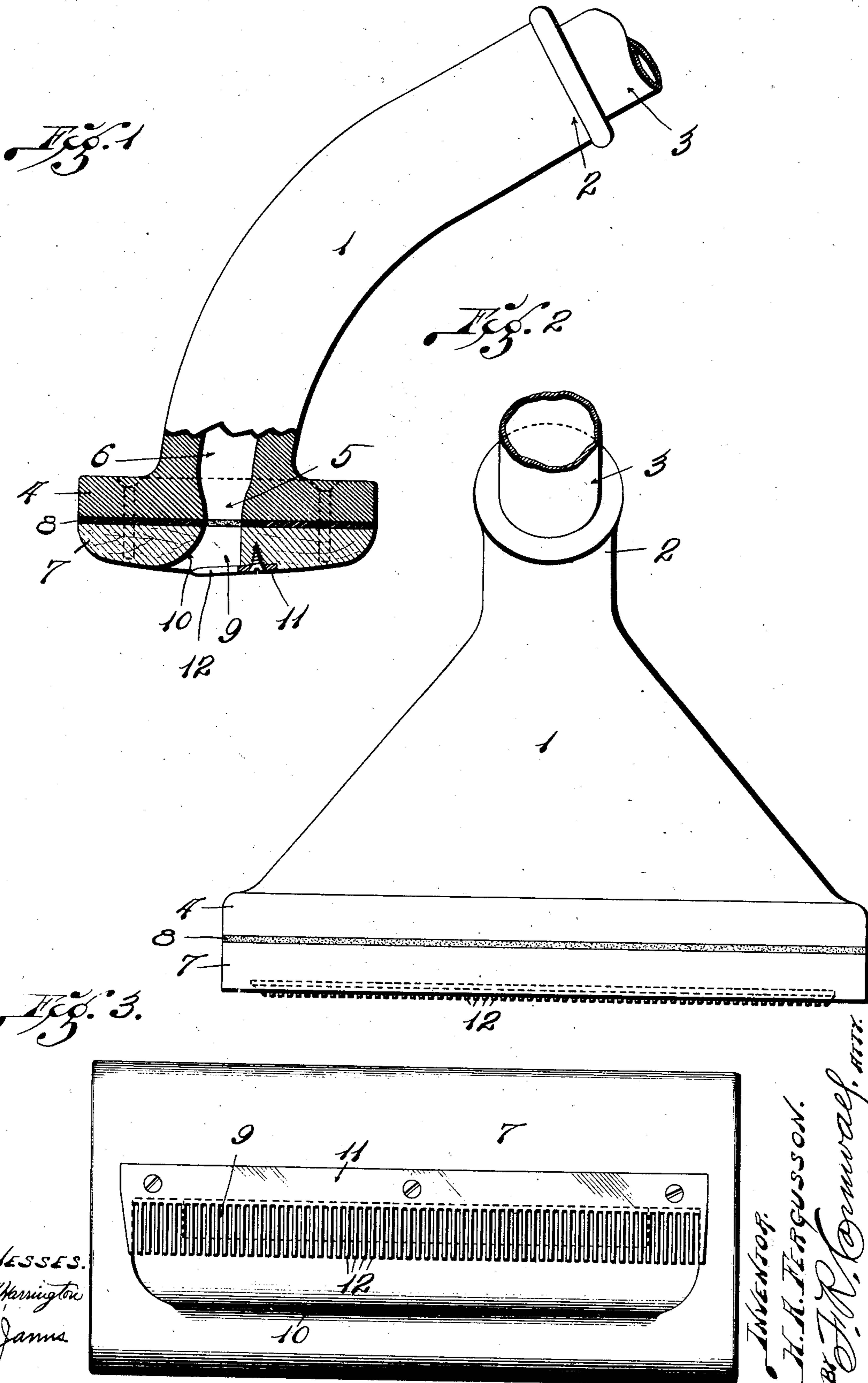


H. A. FERGUSON.  
VACUUM CLEANING TOOL.  
APPLICATION FILED FEB. 14, 1910.

978,869.

Patented Dec. 20, 1910.



WITNESSES.  
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# UNITED STATES PATENT OFFICE.

HENRY A. FERGUSON, OF ST. LOUIS, MISSOURI.

VACUUM CLEANING-TOOL.

978,869.

Specification of Letters Patent.

Patented Dec. 20, 1910.

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*To all whom it may concern:*

Be it known that I, HENRY A. FERGUSON, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Vacuum Cleaning-Tools, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of a vacuum cleaning tool of my improved construction with a portion of said tool shown in section. Fig. 2 is a rear elevation of the tool. Fig. 3 is a view looking against the under side of the tool.

My invention relates to a tool in the form of a suction nozzle particularly intended for use in connection with vacuum or suction cleaning apparatus and which apparatus is used for removing dirt and dust from carpets, rugs, curtains, furniture and the like.

The principal object of my invention is to construct a cleaning tool, which when moved over a carpet or the like will pick up all manner of lint, ravelings, hair and like fibrous material, and which fibrous material will be drawn into and through the tool with the suction of air passing therethrough.

To attain the object above noted I propose to arrange a series of teeth in the form of a comb, which teeth extend partially over the inlet slot of the tool and when said tool is moved over the surface of the carpet said teeth will readily pass through the upper portion of the nap or pile of the carpet, thereby loosening the dirt and dust in said carpet and at the same time picking up ravelings, lint and hair, which objects readily pass from the teeth into and through the tool.

To the above purposes my invention consists in certain novel features of construction and arrangement of parts hereinafter more fully described and claimed.

Referring by numerals to the accompanying drawing 1 designates the body of the tool which is approximately triangular in outline, and provided on its upper end with a socket 2 which receives the tubular handle 3.

Formed on or fixed to the lower end of the body of the tool is a plate 4 through which

is formed a longitudinally disposed slot 5 which communicates with the passage way 6 through the tool 1. Detachably applied to the under side of the plate 4 is a face plate 7, the under face of which is slightly convex in cross section, and interposed between the plates 4 and 7 is a packing strip 8 of rubber, leather or analogous material.

Formed through the plate 7 is a longitudinally disposed slot 9 which coincides with the slot 5, and the wall in front of this slot 9 is curved forward as designated by 10 to meet the convex surface on the under side of said plate 7.

Seated in the base of the plate 7 immediately to the rear of the slot 9 is a plate 11 and formed integral therewith or fixed thereto is a series of teeth 12, which in form resemble the teeth of an ordinary comb, and these teeth project forward so as to occupy a position immediately over the rear portion of the slot 9.

The plate 11 occupies a recess in the face of the plate 7, which arrangement maintains the points of the teeth 12 in the same relative plane with the convex surface of the plate 7, and the bearing surface of the plate 7, at the ends of said plate 11, prevents the points of the teeth of the comb from digging into and tearing the nap of the carpet. The points of the teeth merely ride or comb over the surface of the carpet, or other object being cleaned, and all lint, ravelings, hair or fibrous material on the surface of the carpet will be picked up by the teeth of the comb and pass on to the upper surface of said comb from whence said material will be drawn upwardly into and through the tool 1 by the suction of air between the teeth of the comb.

When the tool is in use the convex under side of the plate 7 is moved over the surface of the carpet, or other object being cleaned, and the points of the teeth comb over the nap or pile of the carpet thereby loosening the dirt or dust in said nap or pile and picking up all lint, hair, ravelings and like fibrous material.

I prefer to arrange the plate 11 and teeth 12 at a slight angle relative to a horizontal plane as shown in Fig. 1, although if desired the teeth can be arranged so as to occupy a horizontal plane.

In the construction of my improved tool I prefer to form the plate 7 of wood or hard

rubber, and to form the comb of metal, and attach said comb to said plate 7, but it will be readily understood that said plate and comb can be formed integral if desired.

5 A vacuum cleaning tool of my improved construction is very simple, can be cheaply produced and provides simple means whereby all lint, ravelings hair and fibrous material can be readily removed from the surface of a carpet or the like.

I claim:—

1. A vacuum cleaning tool comprising a body having an opening through which air and dust is drawn by suction, and a series of teeth occupying a plane substantially at right angles to the direction of the flow of air into the passage way, and which teeth extend partially across the mouth of said opening.

20 2. The combination with a suction nozzle provided with an inlet opening, of a series of teeth projecting partially across the mouth of said opening.

25 3. A vacuum cleaning tool comprising a hollow body in which is formed an inlet slot, and a comb arranged on the under side

of the tool with the teeth of said comb projecting partially across the mouth of the slot.

4. The combination with a suction nozzle in which is formed an opening, of a slotted plate applied to the under side of the nozzle, and the under side of which slotted plate is convex in cross section, and the slot in which plate coincides with the inlet opening and a series of teeth on the plate which project partially across the slot in said plate.

5. The combination with a suction nozzle in which is formed an inlet opening, of a plate applied to the under side of the nozzle in which plate is formed a slot which coincides with the inlet opening in the nozzle, and a comb applied to the face of the plate, the teeth of which comb project partially across the mouth of the slot in said plate.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this 10th day of February, 1910.

HENRY A. FERGUSON.

Witnesses:

M. P. SMITH,

ALMA GEBILART.