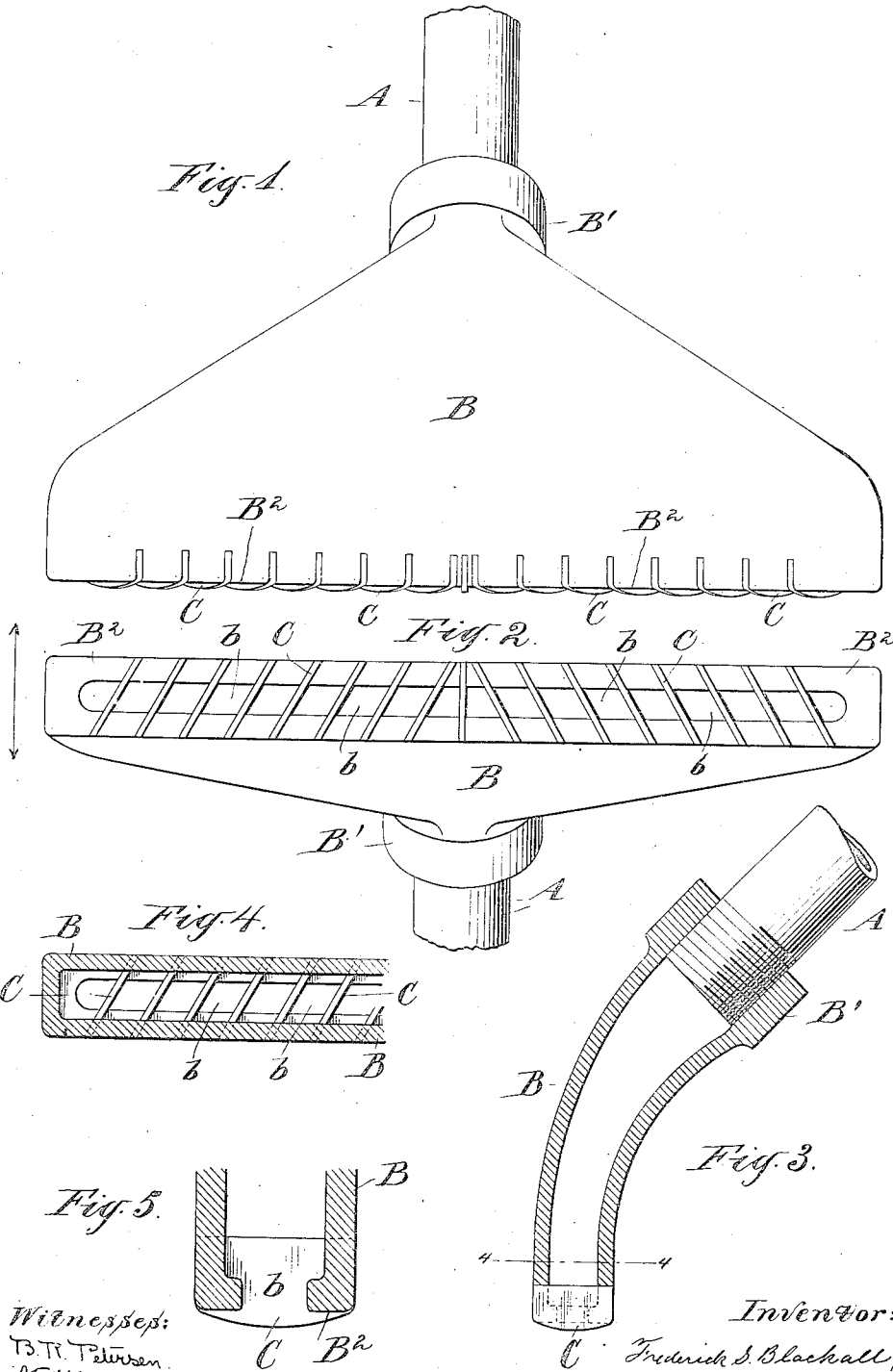


F. S. BLACKALL.
 CLEANER HEAD FOR VACUUM CLEANING APPARATUS.
 APPLICATION FILED AUG. 19, 1908.

930,134.

Patented Aug. 3, 1909.



Witnesses:
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 J. E. Hilmo.

Inventor:
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 by his attorney
 Charles R. Searle.

UNITED STATES PATENT OFFICE.

FREDERICK S. BLACKALL, OF WOODMONT, CONNECTICUT, ASSIGNOR TO BLACKALL AND BALDWIN COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

CLEANER-HEAD FOR VACUUM CLEANING APPARATUS.

No. 930,134.

Specification of Letters Patent.

Patented Aug. 3, 1909.

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To all whom it may concern:

Be it known that I, FREDERICK S. BLACKALL, a citizen of the United States, residing at Woodmont, in the county of New Haven and State of Connecticut, have invented a certain new and useful Improvement in Cleaner-Heads for Vacuum Cleaning Apparatus, of which the following is a specification.

The invention relates to cleaner heads or suction nozzles for receiving dust from carpets, rugs and other articles, in vacuum cleaning operations, and the object of the invention is to provide a head adapted to agitate the surface over which it is passed and by disturbing the nap or pile to loosen the dust therein and facilitate its removal.

The invention consists in certain novel features and details of construction and arrangement by which the above object is attained, to be hereinafter described.

The accompanying drawings form a part of this specification and show an approved form of the invention.

Figure 1 is a front view of a head constructed in accordance with the invention. Fig. 2 is a corresponding view of the under face. Fig. 3 is a central vertical transverse section. Fig. 4 is a horizontal section of a portion, on the line 4—4 in Fig. 3. Fig. 5 is a transverse vertical section showing a portion on a larger scale.

Similar letters of reference indicate the same parts in all the figures.

A is a tube designed to be connected by a flexible hose, not shown, to a chamber in which a partial vacuum is maintained and which may be understood to be part of any approved form of air-suction device, usually termed vacuum cleaning apparatus.

The heads may be of various shapes adapted for service under various conditions; the form shown is constructed for removing dust from floor-coverings as carpets and the like by being moved thereon with its open lower face in contact with the surface thereof, and comprises a hollow body B of triangular shape, curved slightly toward the rear and terminating at the apex in a screw-threaded boss B¹ in which the pipe A is screwed. The long narrow under face B² is open to admit dust to the hollow interior and is rounded at the front and rear edges to allow the head

to be moved freely upon the surface to be cleaned.

In order to loosen the dust the lower face is provided with a number of bridges or partitions C extending across the opening in the lower face B² and projecting slightly below the latter. The bridges are preferably in the form of low partitions, as shown, dividing the long opening or slot in the under face into a plurality of small orifices *b*, and are slightly curved from front to rear on their working edges. The function of the bridges is to disturb the pile as the head is moved in contact with the carpet and thus free the dust which is immediately drawn through the orifices *b* and delivered to the dust-chamber, not shown.

The bridges may be disposed in any desired manner, but assuming the direction of movement of the head to be generally transverse to the longitudinal under face, it is preferable to set the bridges or partitions diagonally across such face so that in moving upon the pile the latter is momentarily forced down and again released, the agitation thus produced liberating the dust.

To avoid a disposition of the head to run to one side by reason of the engagement of the partitions with the pile, as is the case when all the partitions are inclined in the same direction, it is preferable to incline a portion in one direction and the remainder in the opposite direction. As shown in the drawings the partitions are in two oppositely inclined series with the larger central opening thus produced divided into two by a central transverse partition.

The partitions or bridges may be cast integrally with the head but should be of sufficient hardness to resist the wear to which they are subjected in service, and to reduce the weight of the head it is preferably of aluminum while the bridges are independently formed, as illustrated in the drawings, and are plates of steel or other wear-resisting material secured in slits or kerfs produced in the lower portion of the head.

Modifications may be made in the forms and proportions without departing from the invention. Any number of bridges may be employed and they may be shaped and arranged as experience or conditions of service may dictate.

I claim:—

1. In a cleaner-head, a hollow body having a long narrow slot in its under face, and a series of partitions extending diagonally across
5 said slot and projecting below said face.

2. In a cleaner-head, a hollow body having a series of openings in its under face, and partitions between said openings, said partitions projecting below said face and arranged
10 diagonally to the direction of travel of said head, a portion of said partitions inclined in one direction and the others in an opposite direction.

3. In a cleaner-head, a hollow body having
15 an open slot in its lower face, and a series of partitions secured in the walls of said slot

and extending diagonally across the latter and projecting below said lower face.

4. In a cleaner-head, a hollow body, and partitions of wear resisting material extend- 20 ing across the acting face of said body diagonally to the direction of travel of the head, the said partitions projecting below the said acting face of the head and having curved lower edges. 25

In testimony that I claim the invention above set forth I affix my signature, in presence of two witnesses.

FREDERICK S. BLACKALL.

Witnesses:

M. F. THAYER,

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