

J. A. GRAHAM.
Carpet-Cleaner.

No. 197,265.

Patented Nov. 20, 1877.

Fig. 1

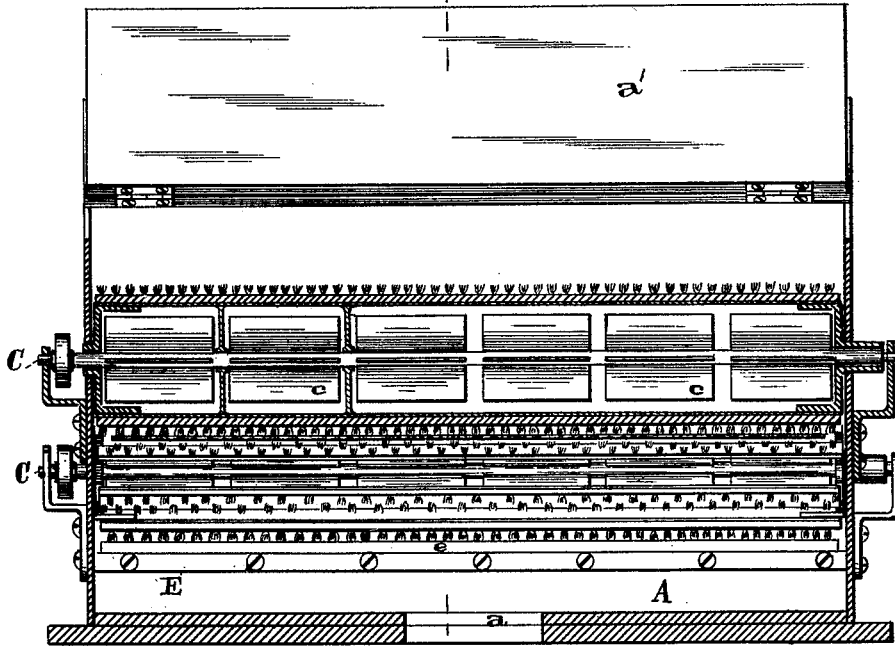
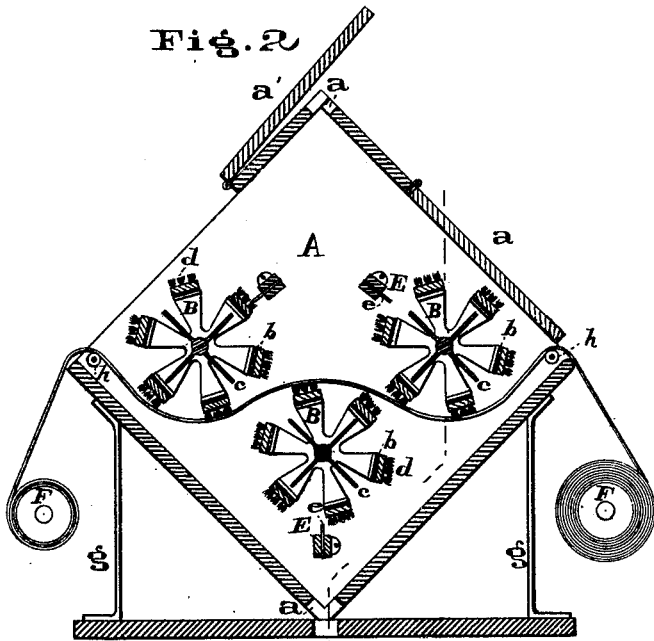


Fig. 2



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JESSE A. GRAHAM, OF CINCINNATI, OHIO, ASSIGNOR TO JOSEPH W. WAYNE, OF SAME PLACE.

IMPROVEMENT IN CARPET-CLEANERS.

Specification forming part of Letters Patent No. 197,265, dated November 20, 1877; application filed May 24, 1877.

To all whom it may concern:

Be it known that I, JESSE A. GRAHAM, of the city of Cincinnati, county of Hamilton and State of Ohio, have invented a new and useful Improvement in Machines for Cleaning Carpets, which improvement is fully set forth in the following specification and accompanying drawings.

The object of this invention is an improved machine for cleaning carpets; and it consists, first, in elastic strips placed parallel with a revolving drum, so that the brushes will come in contact with the strips as the drum revolves, and the brushes will be thus cleared of dust; second, of a fan placed within said drum to revolve at a different degree of speed from the drum, or in the opposite direction, to expel the dust which has been loosened from the carpet by the action of the brushes; third, the combination of a chamber having suitable exhaust-flues, within which is arranged revolving brush-drums to beat and brush the carpet at the same time, with brush-cleaners parallel with the drum, and fans revolving within the drums, by which arrangement the carpet is cleaned without causing dust in the work-room.

In the drawings, Figure 1 is a longitudinal vertical section taken through one of the revolving drums and fans, the cover of the chamber being shown raised to show the fan and drums. Fig. 2 is a central vertical transverse section of the machine.

A is the chamber, having flues *a a* and doors *a'*. B is the brush-drum, which is composed of brace-pieces sleeved over the shaft of the fan, and connected by longitudinal strips *b*, to which strips are secured the brushes *d*.

C represents the fan-shafts, to which are connected the blades *c*, the whole fitted to revolve within the skeleton drum, the driving-pulleys for the drum and fan-shaft being upon opposite ends of the chamber, to permit an independent movement of the drums and fans. E is the brush-cleaner, which consists of the elastic strip *e*, clamped between two rigid strips extending through the chamber parallel with the revolving brushes, and secured to the chamber ends.

F represents rolls, around one of which the carpet is wound as it is unwound from the other, as it is fed through the machine to be

cleaned. To each of these rolls is secured a strong piece of canvas the width of the roll to which the carpet is secured. At two of its edges, *g*, are braces for supporting the chamber in position. *h h* are friction-rolls.

The operation of the machine is as follows: One edge of the carpet is secured to the canvas upon one of the rolls F, and wound around it. The canvas from the opposite roll F is then passed through the machine between the upper and lower drums, and secured to the other edge of the carpet. The carpet is then stretched until the requisite degree of tension is attained. The degree of tension required depends upon the texture of the carpet. The machine is then started. The carpet is drawn through by one of the rolls F, while upon the opposite roll is a brake to keep the carpet at a proper tension. This operation is continued until the entire carpet has passed the brushes, when, by suitable coupling devices, the roll F from which the carpet has just been unwound is changed to a feed-roll, and the brake changed to the roll F upon the opposite side of the machine. The revolutions of the drums and fans are also reversed, thus brushing the opposite side of the nap. These operations are to be continued until the carpet is perfectly cleaned.

I claim—

1. A revolving drum, having the brushes arranged thereon, as described, in combination with the brush-cleaner parallel with said drum, for the purpose specified.

2. The revolving brush-drum, in combination with a fan adapted to revolve within said drum, substantially as described.

3. The combination, in a carpet-cleaning machine, of a closed chamber, having suitable exhaust-flues, within which chamber the cleaning is performed, with the cleaning mechanism, consisting of revolving brush-drums, the revolving fans within said drums, and the brush-cleaners located parallel with the drums and in the path of the brushes as they revolve, the whole being constructed and arranged to operate in the manner specified.

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Witnesses:

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