

No. 676,460.

Patented June 18, 1901.

G. A. COWGILL.
CARPET CLEANER.

(Application filed June 9, 1900.)

(No Model.)

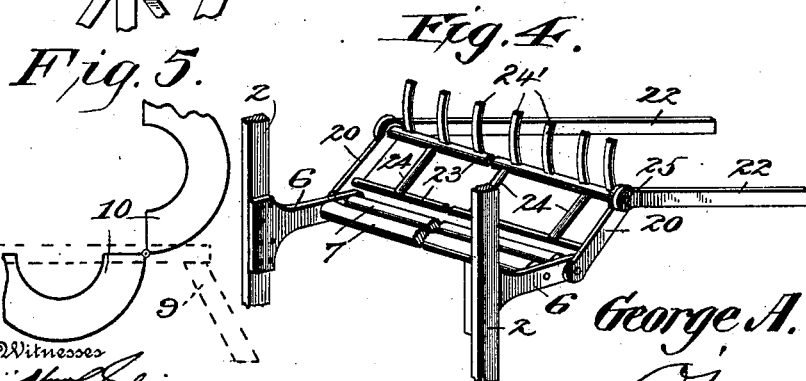
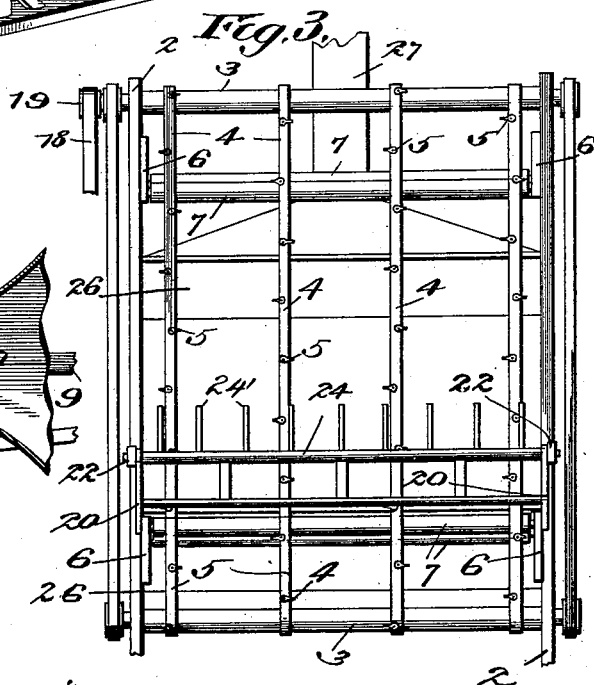
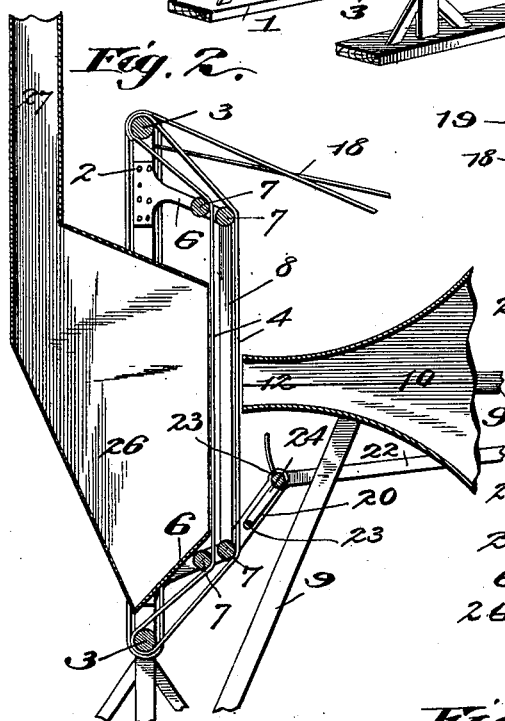
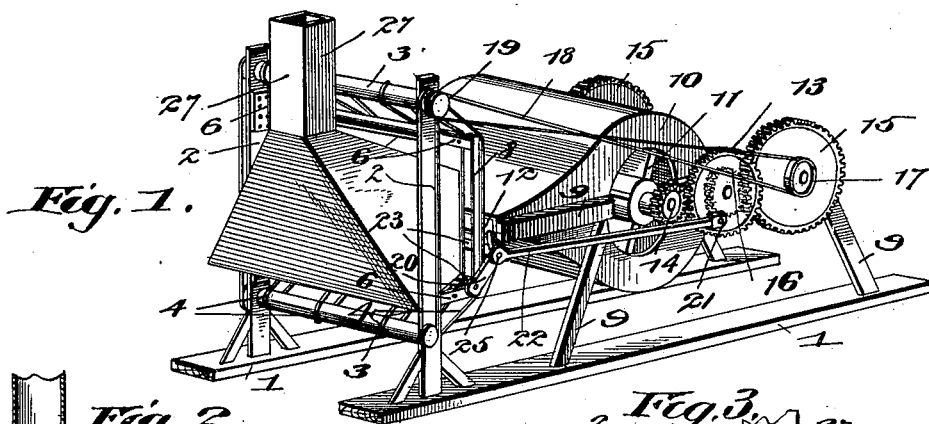


Fig. 5.

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UNITED STATES PATENT OFFICE.

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CARPET-CLEANER.

SPECIFICATION forming part of Letters Patent No. 676,460, dated June 18, 1901.

Application filed June 9, 1900. Serial No. 19,748. (No model.)

To all whom it may concern:

Be it known that I, GEORGE ANDREW COWGILL, a citizen of the United States, residing at Euphemia, in the county of Preble and State of Ohio, have invented a new and useful Carpet-Cleaner, of which the following is a specification.

My invention relates to carpet-cleaners, and has for its object to produce a device of this kind which will be simple, durable, and efficient and which can be operated by hand or machine power, as desired; and it consists in the improved construction and novel arrangement of parts of the same, as will be hereinafter more fully set forth.

In the accompanying drawings, in which the same reference-numerals indicate corresponding parts in each of the views in which they occur, Figure 1 is a perspective view of my improved carpet-cleaner. Fig. 2 is a sectional view through the carpet-supporting mechanism, the mouth of the blower, and the dust-escape. Fig. 3 is a plan view of one means of supporting the carpet. Fig. 4 is an enlarged detail view of the beater. Fig. 5 is a broken detail view.

My improved carpet-cleaner consists of a carpet supporting and beating apparatus, and a blower for removing the dust from the carpet and forcing it up through a dust-escape. I prefer to secure the carpet-supporter and the blower upon a base 1 and secure the dust-escape to the frame of the carpet-supporter. The carpet-supporting frame is preferably formed from two uprights or standards 2, which may be of any suitable height and arranged at such distances apart as to receive the carpet to be operated upon. Two shafts or rollers 3 are journaled at suitable distances apart in said standards and may be provided with belts 4, provided with hooks 5 for securing the carpet thereon, or the carpet may be formed into a belt and passed directly over the rollers without the interposition of the hook-belts. If desired, two brackets 6 can be secured to the standards adjacent to the rollers and have their outer ends provided with two pairs of rollers 7, over which the carpet or the belts may be passed in traveling from the upper to the lower rollers 3 between the standards. The rollers 7 are jour-

naled at such distances apart as to hold the two thicknesses of carpet apart, and thereby prevent their rubbing against and wearing each other as they are moved up and down by said rollers. A suitable brace 8 may be secured to the end of the brackets at the top and bottom for the purpose of adding strength and rigidity thereto.

The blowing mechanism is supported upon a frame 9, which is also secured to the base 1 in any suitable manner, and is provided with a drum or casing 10, within which is journaled a suitable fan 11. The portion of the drum adjacent to the standards is elongated to provide a suitable mouth or opening 12, which extends entirely across the width of carpet being cleaned. The top of the drum is preferably hinged to the lower portion, so that it may be turned up into the position shown in Fig. 5 for the purpose of getting access to the interior for any reason. The fan is driven by means of a gear-wheel 13, which meshes with a pinion 14 on one end of the fan-shaft, said shaft being rotated by means of a crank-wheel 15, which engages with a pinion 16 on the shaft of the wheel 13. The shaft of the crank-wheel preferably extends entirely across the frame to the rear of the drum; but the shaft of the gear-wheel 13 is journaled in the frame at one side of the drum. The shaft of the crank-wheel is provided with a pulley 17, from which a belt 18 runs over a pulley 19 at the end of the upper roller 3 and slowly moves the carpet in front of the mouth of the drum.

The beater for the carpet comprises a frame having end bars 20, connected by side bars 23, which are braced by cross-pieces 24. The end bars 20 of the frame are pivoted at one end to bracket 6 and at their opposite end to pitman 22 by means of pins or bolts 25. The opposite ends of the pitman are connected with wheels 13 by means of wrist-pins 21. The upper bar 23 of the beater-frame carries a plurality of fingers 24'. Supplementary beaters may project from the outer cross-bar 23 to engage with the carpet.

Secured between the standards in any suitable manner is the lower end of a dust-escape 26, the entrance or mouth of which is substantially funnel-shaped and extends en-

tirely across the distance occupied by the carpet and is adapted to receive a blast of air from the support and carry it through a suitable pipe or conduit 27 to any suitable chimney or point of egress. In many places the dust-escape may be dispensed with, although I prefer to use it in closed rooms to carry off the vast amount of dirt that is loosened from the carpet and carried into the air by the action of the fan. If desired, the beater may be provided with widths or flexible pieces of metal, which will be brought into contact with the carpet as the free side of the beater is moved back and forth by the pitman.

In using my improved carpet-cleaner the carpet is passed over the rollers in the supporting-frame by securing its ends together or by fastening it upon the hooks on the bolts over the rollers. The fan is then put in motion, which will also cause the beaters to be thrown violently into contact with the outer fold or thickness of the carpet below the mouth of the drum. The continued operation of the fan and beater will loosen the dirt from the carpet and carry it off in the current of air into the dust-escape and at the same time will cause the different portions of the carpet to pass successively under the influence of the beater and the fan.

One man can operate the machine while another one is getting the carpet ready for operation and be attending to other duties, thereby enabling two persons to thoroughly and effectively cleanse a great deal of carpet in a given length of time.

Although I have shown what I consider the most desirable form for my carpet-cleaner, I reserve to myself the right to make such changes and alterations as will come within the scope of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a carpet-cleaner, the combination, with a carpet-support comprising two standards, forwardly-extending brackets connected therewith, rollers journaled in the standards, rollers journaled in the outer ends of the brackets for the reception of the carpet, a drum in front of the standards provided with a mouth which extends therebetween, a fan within the drum, a beater pivotally secured to the lower brackets, mechanism for operating the fan and the beater and provided with a pulley, and a belt from said pulley to one of the rollers between the standards, substantially as described.

2. In a carpet-cleaner, the combination with a carpet-support, of a drum adjacent thereto, provided with a mouth, a fan in said drum, a beater positioned below the mouth of the drum and comprising a frame pivotally mounted at one end and carrying a plurality of fingers, a train of gearing for operating the fan, and a pitman from the beater to the train of gearing, substantially as described.

3. In a carpet-cleaner, the combination, with a carpet-support, comprising standards and rollers journaled therein, belts upon the rollers provided with hooks, a drum provided with a mouth adjacent to the standards, a fan within the drum, a beater below the mouth of the drum, a train of gearing for operating the fan, and provided with a wrist-pin and a pulley, a pitman connecting the beater with the wrist-pin, and a belt from the pulley to one of the rollers for operating the hooked belts, substantially as described.

4. In a carpet-cleaner the combination, with a frame, of a drum supported thereby, and provided with a mouth, of a fan within the drum, the shaft of which is journaled in the frame and one end is provided with a pinion, of a gear-wheel journaled at the side of the drum and in engagement with the pinion, the shaft of said wheel being provided with a pinion, a crank-wheel in engagement with said pinion, the shaft of which extends across the frame and is journaled therein to the rear of the casing, a pulley on said shaft, a carpet-support adjacent to the mouth of the drum and provided with a series of rollers, one of which is provided with a pulley, a belt from the pulley of the crank-shaft to the pulley of said roller, and a beater below the mouth of the drum and connected with the gearing for operating the fan-shaft, substantially as described.

5. In a carpet-cleaner, the combination, with two standards, of rollers journaled therein, brackets projecting from one side of said standards and provided with rollers, a drum adjacent to said standards and brackets, a fan within the drum, a beater below the drum, means for simultaneously operating the said fan, the beater and the rollers, and a dust-escape, the mouth of which is funnel-shaped and is secured between said standards to the rear of said brackets, substantially as described.

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