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PATENTED JUNE 26, 1906.

J. L. CHESNUTT.

PNEUMATIC CARPET CLEANER.

APPLICATION FILED JAN. 2, 1903. RENEWED NOV. 29, 1905.

2 SHEETS—SHEET 1.

Fig. 1

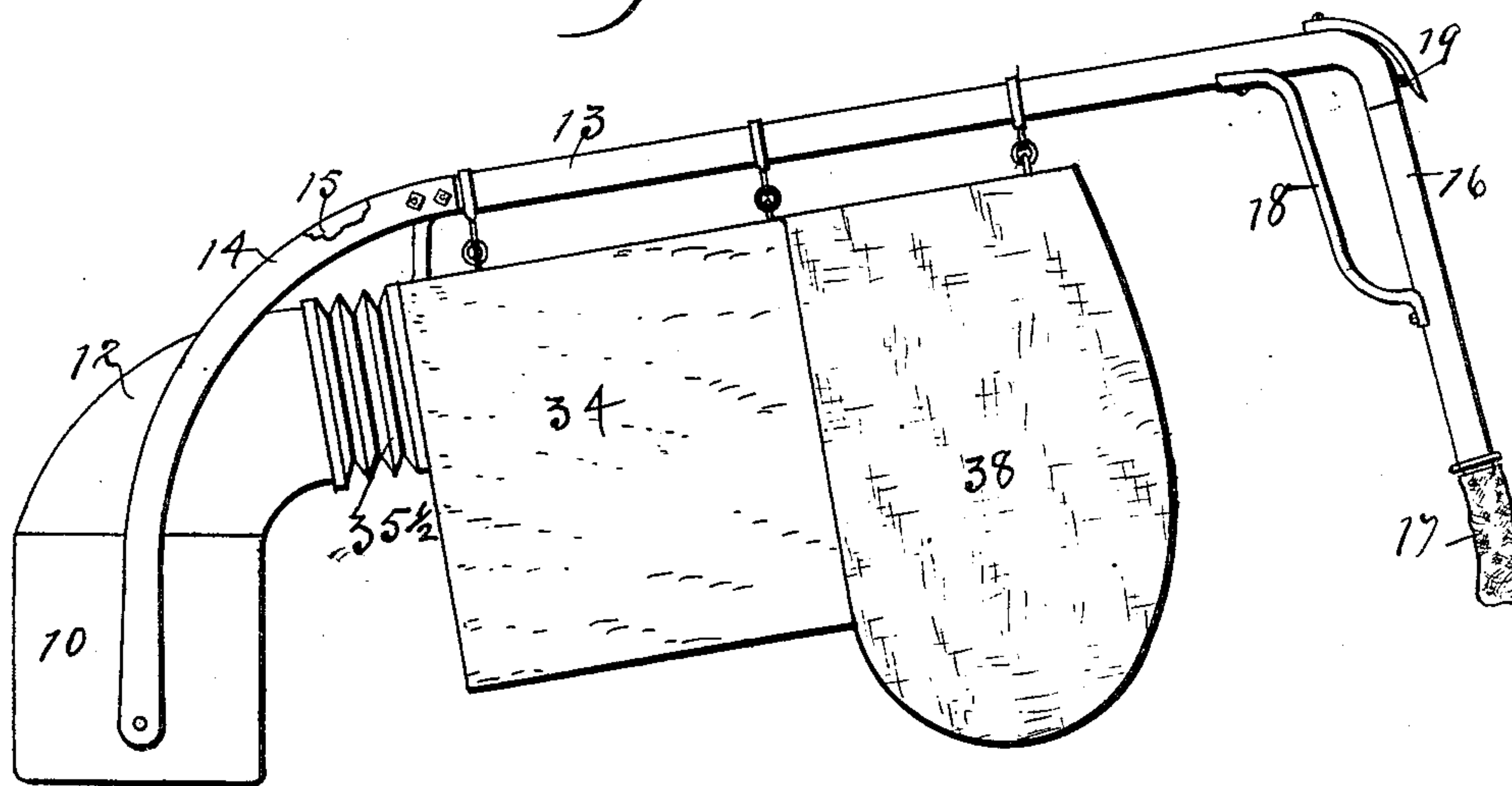
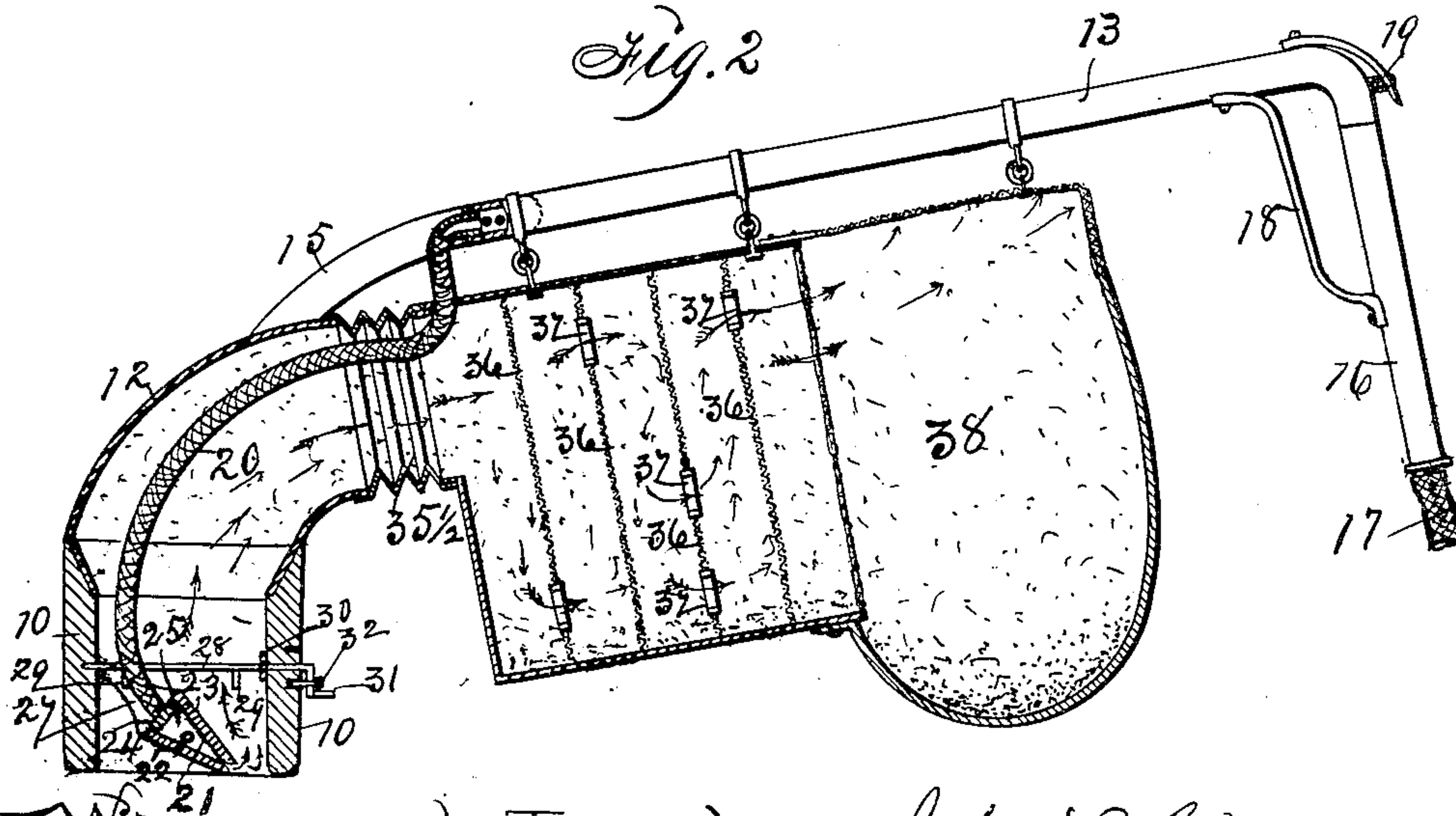


Fig. 2



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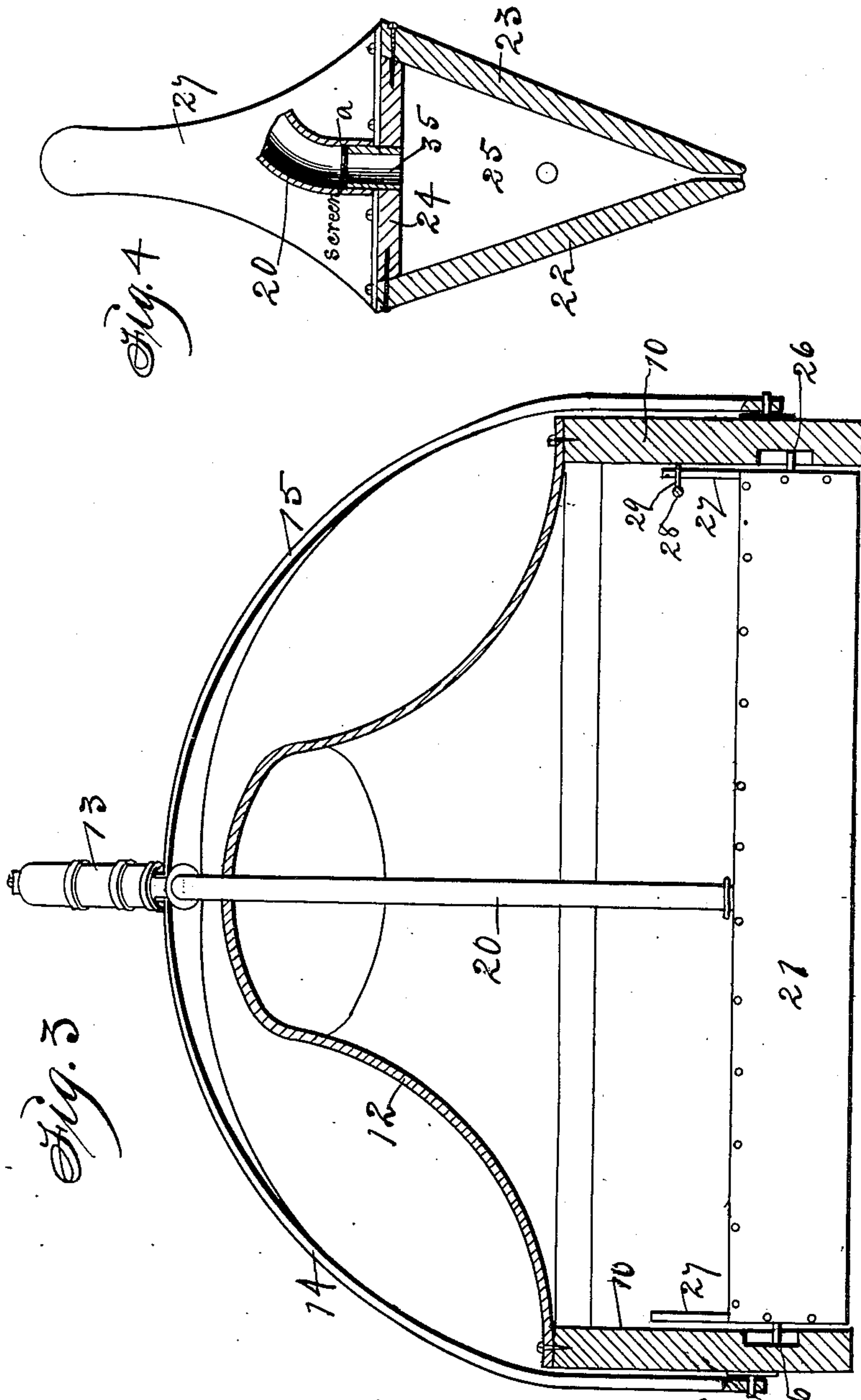
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Witnesses: { Inventor: John L. Chesnutt.
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UNITED STATES PATENT OFFICE.

JOHN LOUCIEN CHESNUTT, OF CHICAGO, ILLINOIS, ASSIGNOR TO
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PNEUMATIC CARPET-CLEANER.

No. 824,683.

Specification of Letters Patent.

Patented June 26, 1906.

Application filed January 2, 1903. Renewed November 29, 1905. Serial No. 289,666.

To all whom it may concern:

Be it known that I, JOHN LOUCIEN CHESNUTT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful
5 Pneumatic Carpet-Cleaner, of which the following is a specification.

My object is to provide a pneumatic carpet-renovator adapted to be manually
10 moved back and forth over the surface of a carpet on a floor for removing dust therefrom into a detachable receptacle specially adapted for separating dust from the current of air by which it is taken from the carpet
15 and conveyed into the receptacle.

My invention consists in the construction, arrangement, and combination of elements and subcombinations, as hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in
20 which—

Figure 1 is a side view of the complete machine ready for practical use. Fig. 2 is a vertical longitudinal sectional view that shows
25 the construction of the interior operative parts and their positions relative to each other and the case with which they are combined. It also shows means for retaining an air-distributor stationary in the case. Fig. 3
30 is a transverse sectional view that shows the manner of connecting a reversible self-adjusting air-distributor with the sides of the case and provided with means for retaining the air-distributor at proper angles relative
35 to the case and the surface of the carpet over which it is to pass backward and forward alternately. It also shows the manner of pivotally connecting the case with a handle, as required to allow the case to adjust itself to
40 an uneven surface over which it may be moved. Fig. 4 is an enlarged transverse sectional view of the air-distributor adapted to be adjustably mounted in the case and connected with the tubular handle that is
45 pivoted to the case.

The numeral 10 designates an open-bottomed metal case, preferably about three (3) inches wide and nine (9) inches long. It has a curved tubular extension 12 fixed to its
50 top. A tubular handle and air-conveyer 13 has curved solid branches 14 and 15 pivoted to the lower portions of the ends of the case 10, and at its free end it is provided with a tube 16, adapted for attaching a flexible tube

17 thereto for connecting the handle and machine with a reservoir in which compressed
55 air is stored. A brace 18, fixed to said tube and the handle in combination with the tube, produces a handhold for the operator, and a spring-actuated valve 19 in the upper end of
60 the tube is adapted to be operated by a person's thumb as required to open and close communication between an air-reservoir and the machine. The handle thus connected
65 with the case can be held at any angle as required to suit operators of different size and also as required to be lowered, so the case can be pushed in and out under seats in
70 churches. A flexible tube 20 is fixed to the end of the tubular handle 13 and extended down through the tubular extension 12 into the case 10 and connected with an air-distributor 21, that is triangular in cross-section, as shown in Fig. 4, composed of two
75 side plates 22 and 23, a top plate 24, and end pieces 25, fitted and fixed together by means of screws, as shown, or in any suitable way. The lower edges of the side plates 22 and 23
80 are beveled and do not contact with each other, so there will be an open space between them through which air can be forced into the meshes of a carpet, as required for cleaning the carpet.

Journals 26 are fixed to the end pieces 25 of the air-distributor 21 and fitted in vertical
85 grooves in the inside faces of the ends of the case 10, as shown in Fig. 3, or in any suitable way that will allow the air-distributor to rise and fall and to be self-adjusting, so that it will be automatically reversed in inclination
90 relative to the case and the carpet over which the machine is moved back and forth by means of the handle 13, pivoted to the case.

To the ends of the air-distributor 21 are fixed arms 27 to project upward in such
95 a manner that they will engage the side walls of the case 10, as shown in Fig. 3, and as required to restrict the vibratory motions of the air-distributor whenever it is reversed.

A rotatable bar 28 is mounted in bearings
100 formed in the sides of the case 10 and provided with fixed stops 29, as shown in Fig. 2, or in any suitable way in such a manner that by turning the bar the stops will project upward in contact with the arms 27, as shown
105 in Fig. 3, to retain the reversible air-distributor stationary in the case 10 whenever desired. A reverse motion of the bar 28 turns

the stop 29 downward and allows the inclination of the air-distributor 21 to be reversed. A collar 30, fixed to the bar, prevents longitudinal movement of the bar, and a crank 31 or other suitable device on the end of the bar outside of the case serves as a means for turning the bar as required to lock and unlock the reversible air-distributor. A pin 32, extended through the crank to enter perforations in the case, or other suitable means may be used for retaining the rotatable bar stationary as required to lock the air-distributor in a fixed position within the case.

The lower end of the flexible tube 20 is fixed to a rigid tube 35 at the top and center of the air-distributor, as shown in Fig. 4, or in any suitable way as required for forcing air into and through the air-distributor. A screen *a*, preferably made of woven wire, is fitted on the end of the fixed tube 35 to prevent any foreign matter from entering and clogging the air-distributor.

A receptacle 34 for separating dust from the air is composed of flexible material and detachably suspended from the handle 13 by means of hooks and eyes, as shown in Fig. 1, or in any suitable way and detachably connected with the top of the sheet-metal extension 12 at the top of the case 10 by means of a flexible and expansible section 35½, formed like a bellows, in such a manner that the receptacle 34 will have free back-and-forth motion as well as lateral swinging motion when the machine is in operation and also in such a manner that the separator can be readily detached as required for carrying the collected dust away thereon and emptied.

A plurality of vertical partitions 36, preferably made of fine wire and adapted to serve as screens for separating dust from the air that is forced through them, are fixed in the receptacle and provided with openings 37, that are not in alinement with each other, so that the course of the wind through them will be serpentine, as indicated by bent arrows, and the dirt and dust arrested and separated from the wind by the partitions 36 will drop into the bottom of the receptacle, as indicated by dotted lines in Fig. 2.

At the rear end of the receptacle 34 a flexible bag 38 is attached, and its upper portion consists of fine wire screening or other suitable material adapted to allow air to escape and its lower portion made of canvas or other suitable material adapted to retain dust that settles and separates from the volume of wind that enters the bag.

In the practical use of my invention when operated upon a carpet on a floor and the air-distributor is not locked in a fixed position it will assume the position shown in Fig. 2, and air forced through the handle 13 and tube 20 into the distributor will be ejected at its bottom and injected into the fabric of the carpet, as required, to force dirt and dust

therefrom and into the case and from thence upward and into the receptacle 34 and bag 38 as the wind rises and passes rearward and spreads and escapes through meshes in the bag. When the air-distributor is not locked, it will be automatically reversed in position in the case at each forward and backward movement of the machine.

Having thus described the purpose, construction, and function of each element and subcombination of my invention and their arrangement and combination, the practical operation and utility of the machine will be readily understood by persons familiar with the art to which it pertains.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a pneumatic carpet-cleaner, an open-bottomed case having vertical grooves in the inside faces of its ends and an air-distributor having fixed journals on its ends adapted to traverse said grooves to change the inclination of the air-distributor, combined to operate as set forth for the purposes stated.

2. In a pneumatic carpet-cleaner, an open-bottomed case having vertical grooves in the inside faces of its ends and an air-distributor having fixed journals on its ends adapted to traverse said grooves to change the inclination of the air-distributor and means for locking the air-distributor in a fixed position, combined to operate as set forth for the purposes stated.

3. In a pneumatic carpet-cleaner, an air-distributor, that is narrow at its bottom and open for ejecting air from its bottom and provided with journals on its ends for pivotally connecting it with a case and provided with fixed arms projecting upward from its ends, in combination with an open-bottomed case having grooves for bearings for said journals, for the purposes stated.

4. In a pneumatic carpet-cleaner, an air-distributor provided with journals on its ends and fixed arms projecting upward at its end portions, an open-bottomed case having grooves for bearings for said journals, a rotatable bar extended through the case and provided with stops projecting at right angles from the bar, and means for retaining said bar stationary to lock the pivoted air-distributor, arranged and combined to operate in the manner set forth, for the purposes stated.

5. In a pneumatic carpet-cleaner, an open-bottomed case having vertical slots in the inside faces of its ends and an air-distributor having fixed journals on its ends adapted to traverse said grooves to change the inclination of the air-distributor, a flexible tube connected with the upper and central portion of the air-distributor, a rigid tubular handle having branches at its lower end pivotally connected with the case and the upper end of the flexible tube connected with the lower

end of the handle and means for admitting air in the free end of the rigid handle; combined to operate as set forth for the purposes stated.

5 6. In a pneumatic carpet-cleaner, an open-bottomed case and an oscillating air-distributor adjustably connected with the inside faces of the ends of the case, a curved extension fixed to the top of the case and a receptacle for wind and dust detachably connected
10 with the top of the extension, a flexible tube fixed to the air-distributor, a rigid tubular handle fixed to the upper end of the flexible tube and provided with forked branches piv-
15 oted to the case, arranged and combined to operate in the manner set forth for the purposes stated.

20 7. In a pneumatic carpet-cleaner, an open-bottomed case, a curved extension at the top of the case, a rigid tubular handle having forked branches at its lower end pivoted to the case, a valve for admitting air at the free end of the handle, a flexible tube fixed to the tubular rigid handle, and with an air-dis-
25 tributer, an air-distributor in the case, a re-

ceptacle for wind and dust detachably connected with the said extension and provided with partitions for separating the dust from the wind and gathering the dust in its bot-
tom, arranged and combined to operate in 30 the manner set forth, for the purposes stated.

8. A pneumatic carpet-cleaner, comprising an open-bottomed case having a curved fixed extension at its top, a vibratory air-distributor pivoted in the case, a rigid tubu-
lar handle having forked branches at its 35 lower end pivotally connected with the case, and provided with a valve at its free end, a flexible tube fixed to the rigid tubular handle and to the air-distributor in the case and a re-
40 ceptacle for separating dust from air connected with the rigid handle and the extension at the top of the case, arranged and combined to operate in the manner set forth for the purposes stated.

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Witnesses:

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