

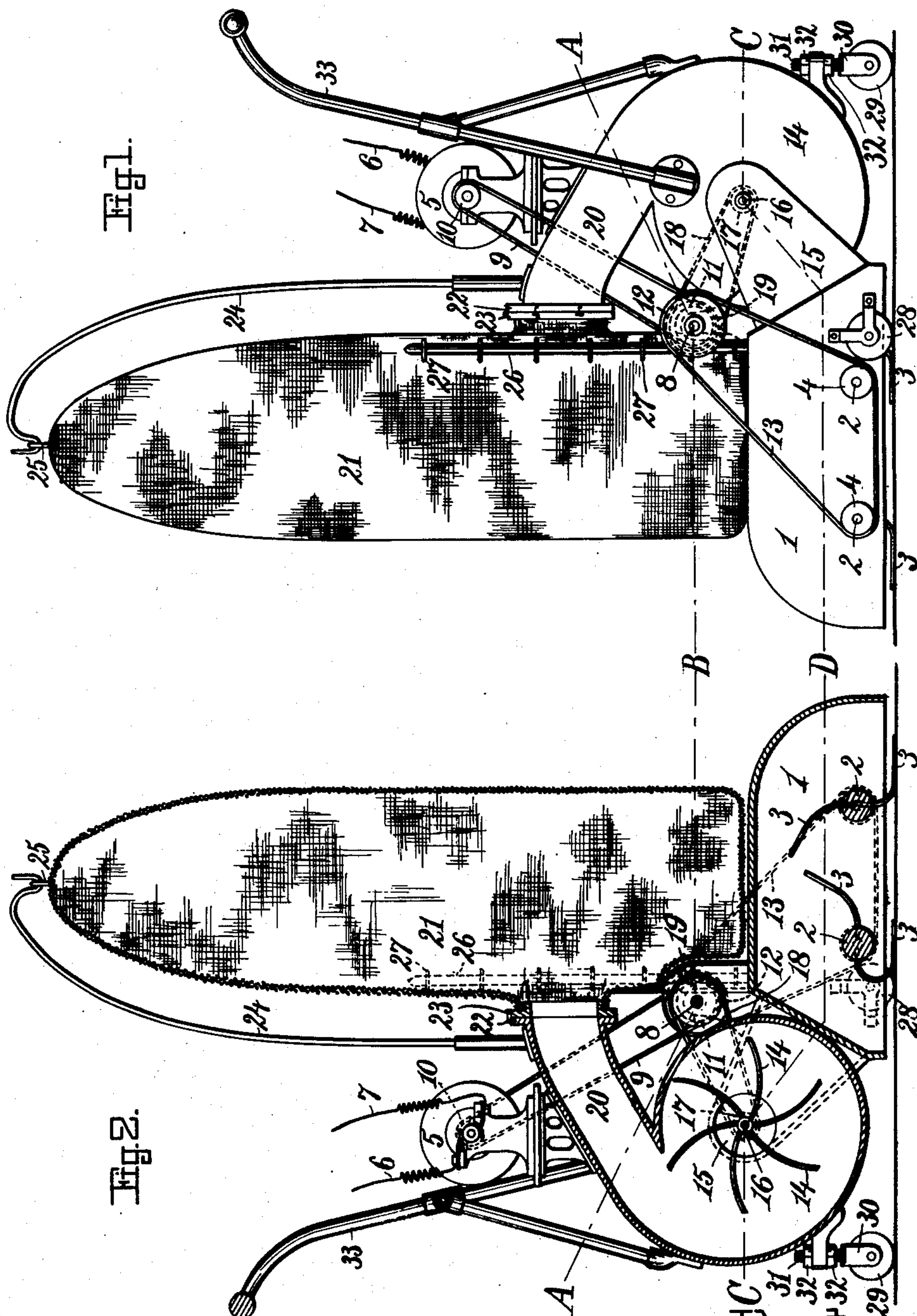
No. 842,385.

PATENTED JAN. 29, 1907.

L. B. COBB.
CARPET CLEANING MACHINE.

APPLICATION FILED JUNE 16, 1904.

2 SHEETS—SHEET 1.



Witnesses
J. W. Ferguson.
C. J. Chadburn.

Inventor
Leander B. Cobb
by
Henry Chadburn
his atty.

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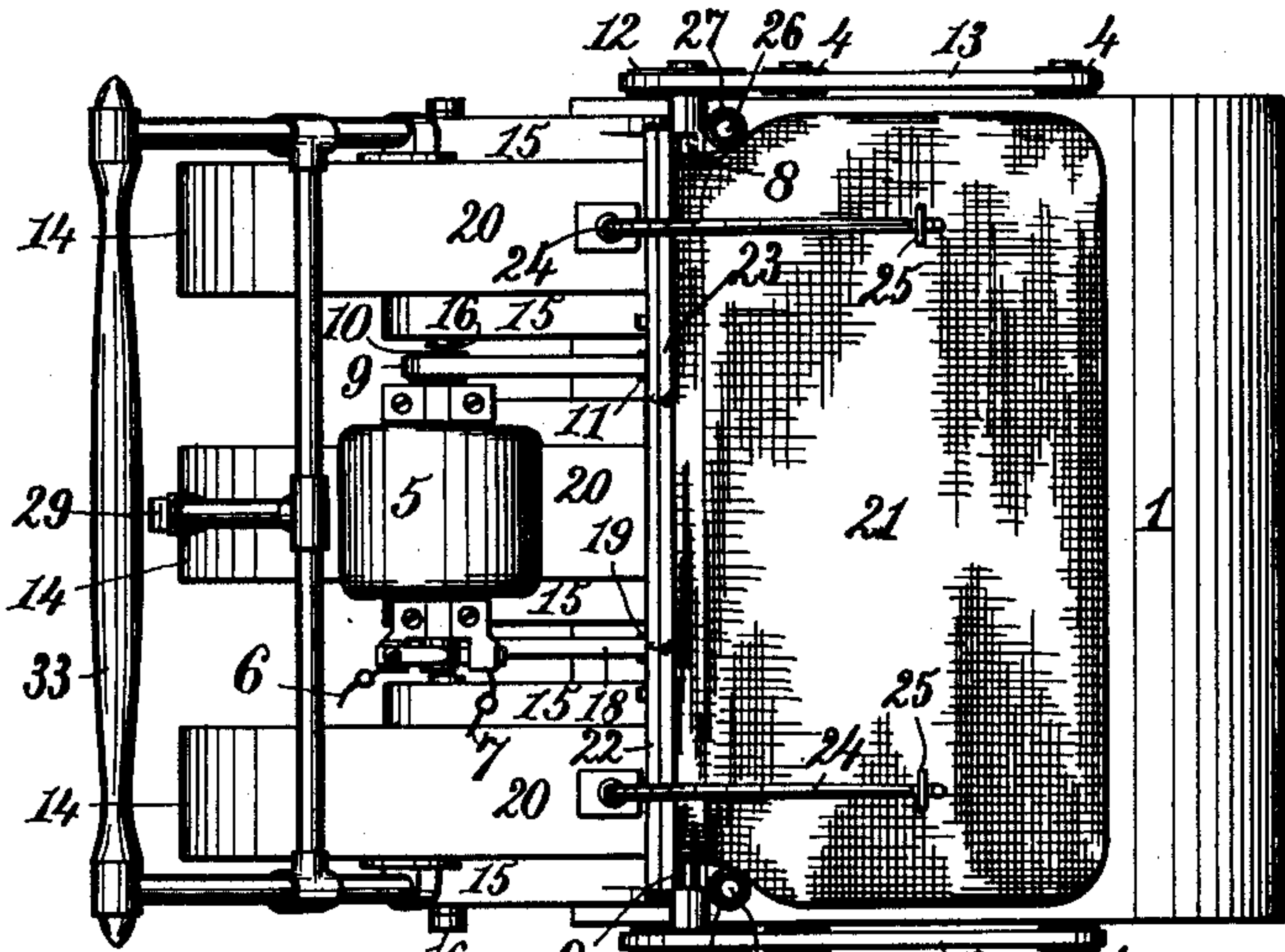


Fig. 3.

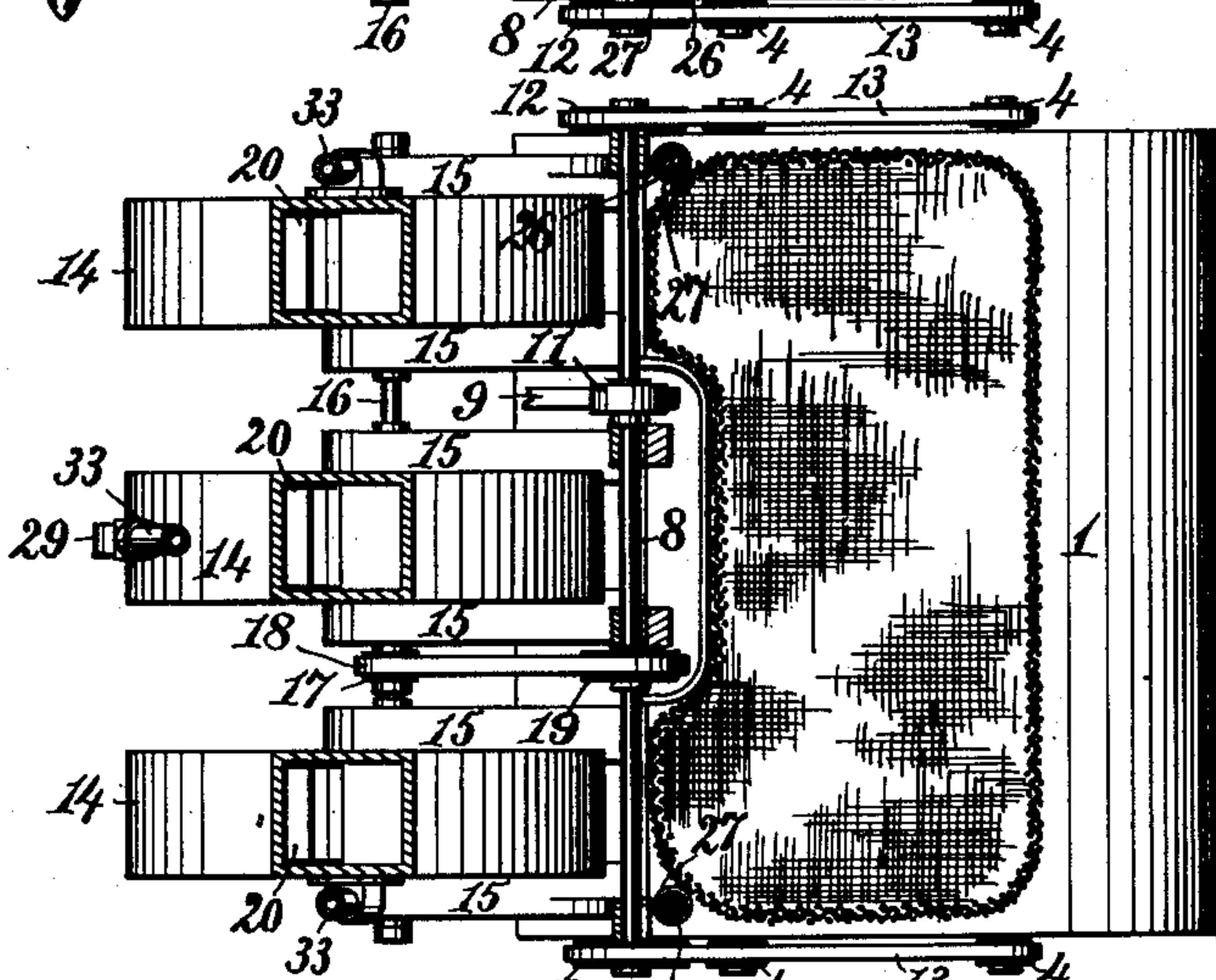


Fig. 4.

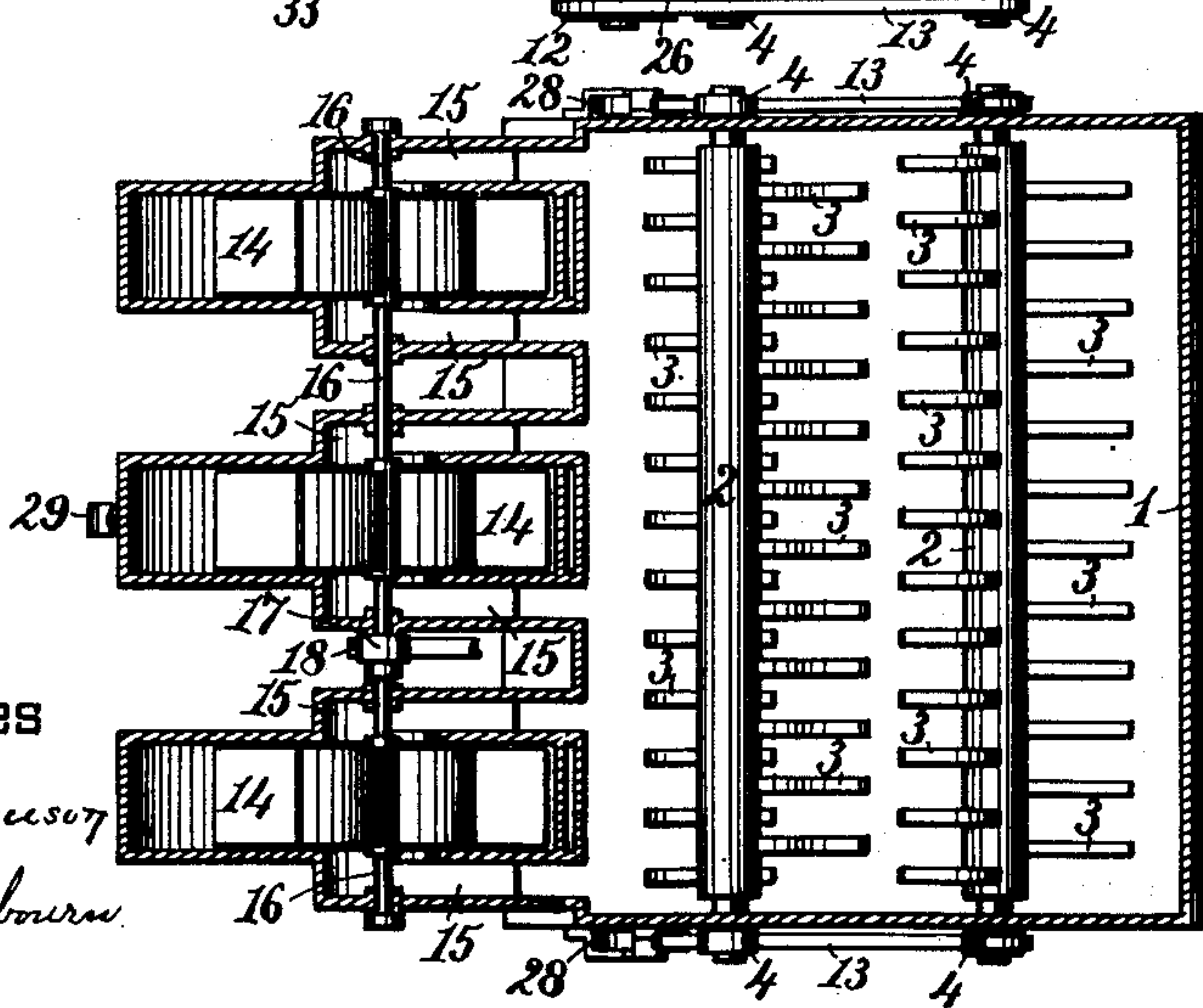


Fig. 5.

Witnesses
J. W. Ferguson
C. J. Chadbourne

Inventor
Lester B. Cobb
by
Henry Chadbourne
his atty.

UNITED STATES PATENT OFFICE.

LEANDER B. COBB, OF STONEHAM, MASSACHUSETTS, ASSIGNOR TO AMERICAN CARPET BEATER COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

CARPET-CLEANING MACHINE.

No. 842,385.

Specification of Letters Patent.

Patented Jan. 29, 1907.

Application filed June 16, 1904. Serial No. 212,876.

To all whom it may concern:

Be it known that I, LEANDER B. COBB, of Stoneham, in the county of Middlesex and State of Massachusetts, have invented certain
5 new and useful Improvements in Carpet-Cleaning Machines, of which the following is a specification.

This invention relates to improvements in carpet-cleaning machines, and more especially in that class of cleaning-machines
10 whereby the carpet is cleaned while it is upon the floor.

The invention has for its objects to provide a machine by which the carpet may be
15 perfectly and thoroughly cleansed.

The invention consists of the novel construction, arrangement, and combination of parts, substantially as hereinafter described and particularly set forth in the claims, and
20 it is carried out substantially as illustrated on the accompanying sheets of drawings, which form an essential part of this specification, and whereon like characters of reference refer to like parts wherever they occur on the
25 different parts thereof.

On the drawings, Figure 1 represents a side elevation of my improved machine. Fig. 2 represents a longitudinal vertical section of the machine. Fig. 3 represents a
30 plan view of the machine. Fig. 4 represents a cross-section on the horizontal lines A B shown in Figs. 1 and 2. Fig. 5 represents a cross-section on the horizontal lines C D shown in Figs. 1 and 2.

35 The machine has a casing 1, which has its under side made open for a purpose to be understood by the complete description hereinafter contained. Within bearings in the casing are mounted rotating beaters, consisting of a drum or spindle 2, upon which
40 are attached a number or series of flexible straps or cords 3, and which are caused by the action of the rapidly-rotating drum 2 to strike against the surface of the carpet and
45 thereby beat the dust and dirt from the carpet. The drums or spindles 2 extend through the casing to the outside of the same where they are provided with sprocket-wheels or pulleys 4 or with other equivalent
50 devices whereby a rotary motion may be imparted to the beaters. On the drawings I have illustrated the machine as being pro-

vided with two of the above-described rotary beaters.

A motor 5, which is preferably an electric
55 motor, is mounted upon the machine in the most convenient position thereon, and said motor is supplied with a current of electricity from any source of electricity by means of the
60 feed-wires 6 and 7 or by any other means. A rotary motion is imparted to a counter-shaft 8 on the machine through the medium of a belt or chain 9, and the respective
65 sprocket-wheels or pulleys 10 and 11 on the motor and on the counter-shaft.

The counter-shaft 8 is provided with one
70 or more sprocket-wheels or pulleys 12, which carry belts or chains 13, which are also carried by the sprocket wheels or chains on the
75 beater-drums or spindles, and by which a rotary motion is imparted to said beaters from the counter-shaft. Each beater-drum or
80 spindle may be driven by a separate belt or chain or all of the beaters may be driven by the same belt or chain, and I have illustrated
85 the beater-drums as all being driven by the same belt or chain.

Exhaust-fans 14 are mounted upon the machine and have their inlet-passages 15
80 communicating with the interior of the casing 1. The driving-shaft which rotates the several exhaust-fans has a sprocket wheel or pulley 17 mounted upon it, which pulley carries a chain or belt 18, the opposite end of the
85 chain or belt being carried by a sprocket wheel or pulley 19 firmly mounted upon the counter-shaft 8.

The discharge portions or passages 20 of the several fans are in open communication with the interior of a bag or receptacle 21,
90 which is made in whole or in part of fabric similar to and preferably from cotton cloth. When several fans are used on the machine, the open communication between all the
95 discharges and the bag 21 is made by the insertion of a frame which extends across the discharges of all of the fans. This frame is made in two parts, the portion 22 being permanently attached to the discharges of the
100 fans and the portions 23 being permanently attached to the bag. These two portions of the frame are provided with means whereby they may be easily connected to each other or as easily disconnected, and by this means

the bag and its attached portion of the frame may be easily substituted by another bag and attached portion of the frame. In order to hold the bag in proper position upon the machine, I provide the machine with supports 24, which are preferably provided with hooks at their ends to receive the rings or loops 25 on the bags, and by this means the bag is held in proper place.

The force of the air from the fans entering the bag may have a tendency to move the lower end of the bag outward in the direction in which the air is being forced, and in order to prevent this movement of the bag I provide the machine with posts or standards 26, which are rigidly attached to the machine and receive rings 27, secured to the bag in the proper places to hold the bag against any tendency to be moved outward by the air.

The casing 1 is provided with wheels 28, which are preferably secured near one end of the same, as shown on the drawings, but on opposite sides thereof. These wheels are firmly secured to the casing and in such a position that they cause the casing to be raised slightly from the surface of the floor or the carpet upon which the wheels rest. The machine is also provided with a wheel 29, which is mounted within a holder 30, made adjustable up and down by means of the screw-threaded spindle 31 and the nuts 32 on said spindle, or in any other common and well-known manner. The wheels 28 and 29 are so located in relation to each other and to the casing that when the wheel 29 is adjusted up or down it will cause an adjustment of the opposite side of the casing to where the wheel 29 is located toward and from the floor, and by this means the open under side of the casing may be raised more or less from the carpet, so as to give a more or less free access of the air from the room into the casing through its open under side.

The wheels 28 and 29 form means whereby the machine may be moved from place to place upon the floor or carpet, and when said wheels are placed in the positions shown on the drawings, or out of the range of the open under side of the casing, they allow the carpet to be raised from the floor by the action of the air flowing into said casing around the lower edge of the same. This tendency to raise the carpet, in connection with the action of the beaters tending to force the carpet downward, will have the effect of vibrating the carpet, allowing the dust and dirt to be drawn by movement of the fans 14 up from the carpet as the dirt and dust is beaten out by the beaters.

The operation of the machine is substantially as follows: A current of electricity having been supplied to the motor will cause the continuous rotation of its armature-shaft and by means of the belted connection between

said armature-shaft and the counter-shaft 65 will cause a continuous rotation of the counter-shaft, which, through the belted connections between the counter-shaft and the fan-shaft and beater-spindles, will cause a continuous rotation of the fan-shaft and the beater-spindles. The rotation of the beater-spindles will cause the flexible beaters to beat the carpet and the rotation of the fan-shaft will cause the rapid rotation of the fans and air to be drawn thereby into the casing through the space between the lower edge thereof and the carpet and at the same time will exhaust the dust-laden air from the interior of the casing through the fan-casing and force this dust-laden air into the interior of the attached bag, where the heavy particles will drop to the bottom of the bag and the air will escape through the meshes of the fabric from which the bag is made, leaving the dust within the bag. The heavy particles and any dust and dirt which does not stick to the sides of the bag will drop to the bottom of the bag free of the entrance which forms the communication between the bag and the discharge-passages from the fans. The machine is kept in motion and is moved from place to place upon the carpet until the entire carpet is beaten and the dust and dirt from the same is collected within the bag, either at the bottom of the bag or against the sides of the same. If the accumulation of the dust and dirt within the bag is sufficient to interfere with the proper working of the machine by an improper filtration of the dust-laden air thereby, said bag may be removed from the machine and another bag may be substituted therefor, if so desired, or the accumulation of dust and dirt may be removed from the bag and the same bag be again placed in position upon the machine.

Any suitable handle 33 may be attached to the machine to assist in moving the machine from place to place, and I have shown the handle upon the drawings as being formed mostly from pipes or tubes, as such a construction would be both light and strong.

Having thus fully described the nature, construction, and the operation of my invention, I wish to secure by Letters Patent and to claim—

1. A carpet-cleaning machine comprising a casing having an open under side in combination with a plurality of flexible rotating beaters within the casing, secondary casings having open communication with the interior of the casing and having openings in their upper ends, a fan within each secondary casing, arms extending upward from the outer secondary casings, a bag supported by the arms and extending below the openings in the upper ends of the secondary casings but having open communication with the openings in the secondary casing, and means for

detaching the bag from the openings in the secondary casings, substantially as shown and described.

2. In a carpet-cleaning machine, a casing having an open under side, shafts carried by the casing, two series of flexible beaters upon each shaft, the straps of one series of beaters on each shaft being alternately arranged with the straps of the other series of beaters on the same shaft, wheels 28 and 29 for the casing, means for raising or lowering wheel 29 to adjust the casing and its beaters in contact with the floor, and means for withdrawing dirt and dust from the casing, substantially as shown and described.

3. In a carpet-cleaning machine, a casing having an open under side, rotating shafts carried by the casing, two series of flexible beaters upon each shaft within the casing, the straps of one series of beaters on each

shaft being alternately arranged with the straps of the other series of beaters on the same shaft, a secondary casing having open communication with the interior of the casing and provided with an opening in its upper end, a fan within the secondary casing, a bag carried by, detachably attached to, and communicating with the interior of the secondary casing for holding the dirt withdrawn from the beaters, a motor, and means connecting the motor, beaters and fans for withdrawing dirt and dust from the casing and its beaters and carrying the same upward into the bag, substantially as shown and described.

In testimony whereof I have affixed my signature in presence of two witnesses.

LEANDER B. COBB.

Witnesses:

HENRY CHADBURN,
JOS. W. FERGUSON.