

(No Model.)

2 Sheets—Sheet 1.

A. F. GUE.
CARPET CLEANER.

No. 601,711.

Patented Apr. 5, 1898.

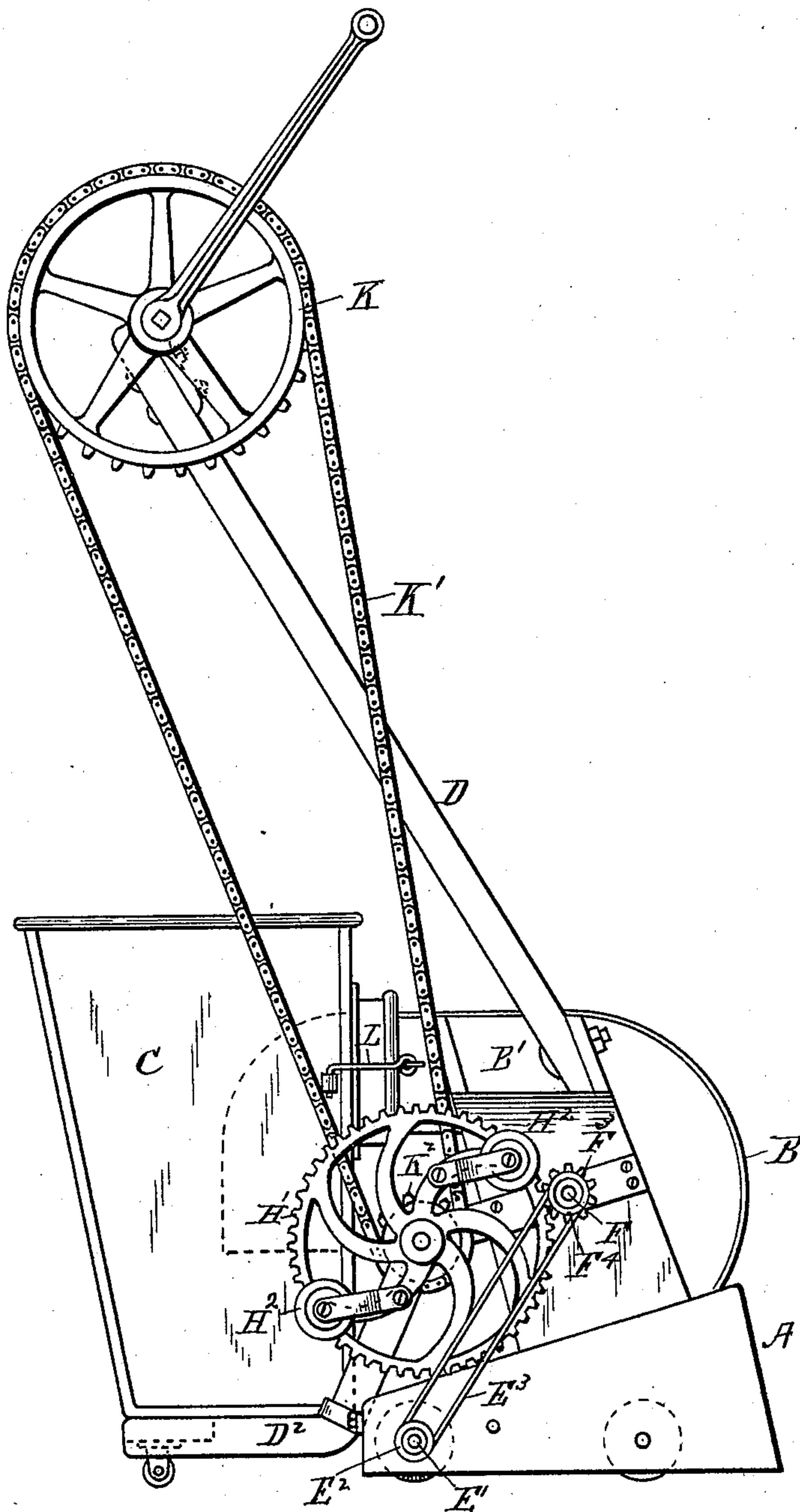


FIG. 1.

WITNESSES

Frank S. Parker
Edward S. Day

INVENTOR

Albert F. Gue

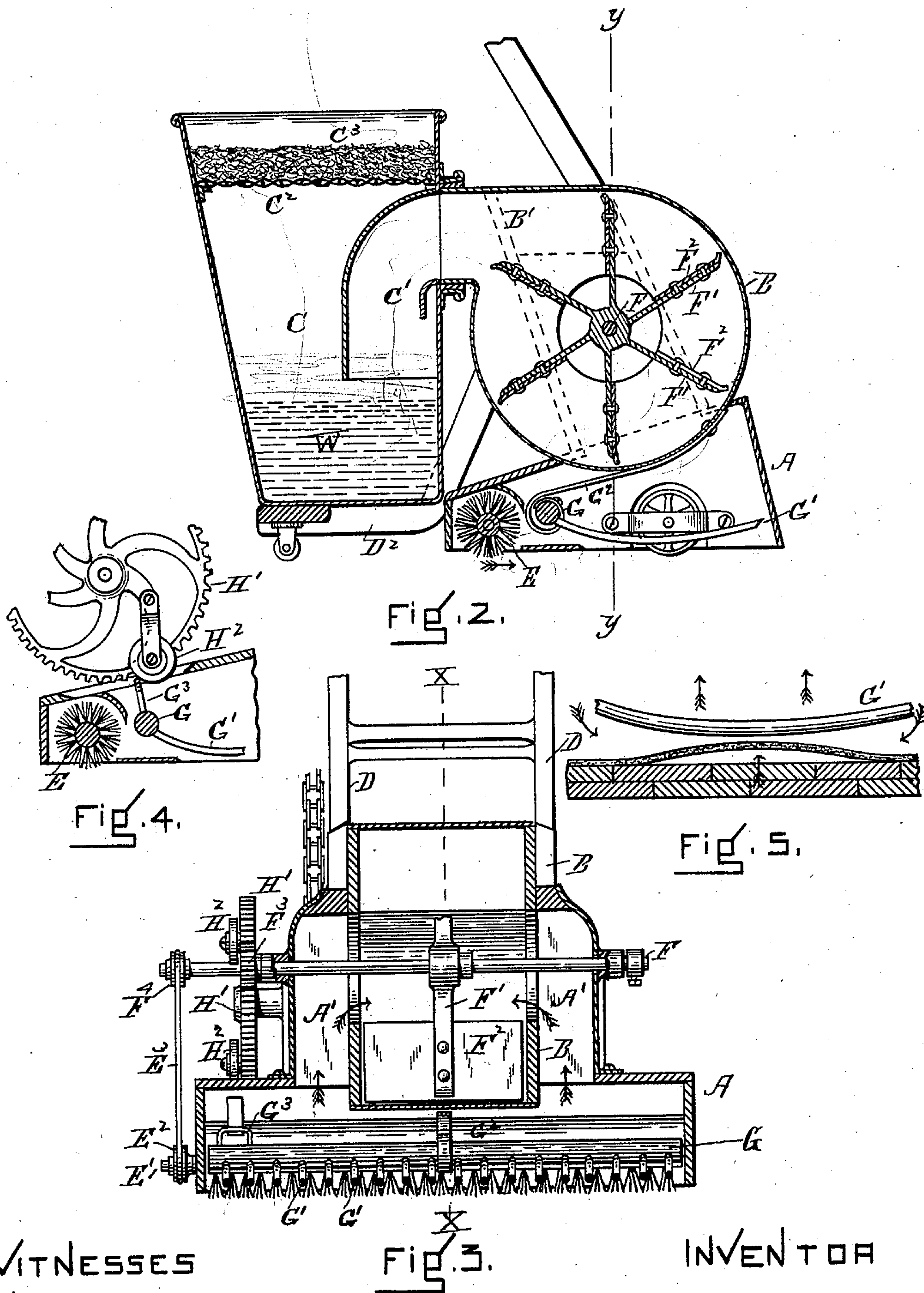
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Frank G. Parker.

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INVENTOR

Albert F. Gue

UNITED STATES PATENT OFFICE.

ALBERT F. GUE, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE
GUE-BONNER COMPANY, OF SAME PLACE.

CARPET-CLEANER.

SPECIFICATION forming part of Letters Patent No. 601,711, dated April 5, 1898.

Application filed October 8, 1897. Serial No. 654,555. (No model.)

To all whom it may concern:

Be it known that I, ALBERT F. GUE, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Carpet-Cleaners, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to a device for cleaning carpets without removing by the combined action of beaters and a blast of air which passes upward from the floor and through the carpets, taking with it all dust and dirt; and it consists in combining in a movable box or case a set of beaters and mechanism for operating the same, and an exhaust device by which a vacuum is produced of a sufficient degree to cause the carpet to be lifted from the floor, so as to receive the blows of the beaters while not resting on the floor, the same mechanism that produces the vacuum incidentally producing a blast of air that takes all of the freed dust and dirt and carries it over into a water-chamber the outlet of which is through air-filtering screens.

My mechanism is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my machine entire. Fig. 2 is a vertical section showing the working parts of the machine, taken on line $x x$ of Fig. 3. Fig. 3 is a vertical section taken on line $y y$ of Fig. 2. Fig. 4 shows the parts that serve to operate the beaters. Fig. 5 is intended to illustrate the mode of action by which the cleaning is effected.

The base or lower case of my machine is indicated by A and contains the beaters $G' G'$ and a rotating brush E. The beaters are attached to a rocker-shaft G and are forced downward by a flat spring G^2 . The beaters are lifted by the following-described means:

G^3 , Figs. 3 and 4, is a short arm extending from the rocker-shaft G. This arm is acted upon by the striking-wheels $H^2 H^2$, which are affixed to the gear-wheel H' . As the said gear-wheel H' rotates it brings the striking-wheels $H^2 H^2$ into contact with the short arm G^3 and violently depresses it and quickly passes over it, so that the reaction caused by the spring G^2 throws the beaters forcibly down against the carpet, hitting it with great force and abruptness.

The rotating brush E has a shaft E' , upon which a pulley E^2 is mounted, and is driven by a belt E^3 from the pulley F^4 on the blower-shaft F.

The blower is mounted on the shaft F and has a casing B. The blower has arms $F' F'$ and fans F^2 , and is adapted to exhaust air from the lower casing A through the ducts $A' A'$, which, as shown, lead from the lower part of A to the center of the blower. The fans $F^2 F^2$ throw the air outward and cause a vacuum under the beaters and under the carpet, so as to lift the carpet from the floor, the pressure of the air from the outside being sufficient (under the vacuum produced by my machine) to do this in a very effectual manner.

The blower is driven by the crank sprocket-wheel K, mounted at the top of the frame D, which acts through the chain K' and sprocket-wheel K^2 on the shaft of the gear-wheel H' , the gear-wheel H' transmitting its motion to the pinion F^3 and the shaft F of the blower. The discharge of the air takes place through the flue B' into the chamber C. This chamber C is mounted upon a frame D^2 , as shown in Fig. 1, and is held in place by hooks L and may be readily disconnected when it is desired to empty it. Within the chamber C, I have a deflecting-flue C' , by which the air loaded with dust and dirt, as it comes from the blower, is directed downward, so as to be discharged upon and into the water W, which occupies the lower part of the chamber C. (See Fig. 2.) As the air leaves the water it rises and passes through a screen C^2 and a mass of curled hair or other suitable material C^3 .

The water W, as well as the material at C^3 , may be impregnated with any good disinfectant and, if desirable, may be perfumed.

My machine is mounted upon casters and provided with suitable handles for moving from place to place on the carpet.

The operation of my machine is as follows: It is placed upon that part of the carpet on which it is desirable to commence the work of cleaning. Now by turning the crank the beaters $G' G'$ are set in rapid action. The exhaust device will also act and the rotating brush E will work.

The combined action of the beater, the exhaust-blower, and the brush E will be as follows: The action of the blower will cause a powerful blast of air to pass upward from the carpet. The pressure of the air outside of the casing A will be downward through and under the carpet, as indicated by the arrows, Fig. 5, and then upward, taking the carpet up and holding it above the floor, so that the beaters can give it the most effectual blows. This combined action of the blast of air and the beaters will force all of the dust and dirt up, not only from the carpet, but from the floor. The dust and dirt thus raised is carried through the flues B' and C' into the chamber C and onto the water W. The air after leaving the water passes out through the screens C² C³, the said screens acting to remove any dirt that may remain in the air and at the same time disinfecting it. The brush E serves to take up and force into field of action of the exhaust-blower any dust and dirt that might otherwise collect in the rear part of A.

I claim—

1. In a carpet-cleaner, the combination with the casing, the carpet-beating device and the air-exhaust apparatus, of a water-receptacle having the air-exhaust delivered upon the surface of the water therein, and a moistened screen covering the mouth of said receptacle, whereby the heavier particles of dirt removed from a carpet are held by said water free from further action on the part of the discharging air, and the finer particles of dust are caught by the said screen which is kept constantly moistened by the spray arising from said water as disturbed by said air-blast.

2. In a carpet-cleaner, the combination with the casing, the carpet-beating device and the air-exhaust apparatus, of a water-receptacle having the air-exhaust delivered upon the surface of the water therein, and a layer of curled hair adapted to wholly close the mouth of said receptacle, and to be kept constantly moistened by the spray arising from the water in the receptacle, substantially as and for the purpose set forth.

3. In a carpet-cleaner, the combination with the casing, the carpet-beating device and the air-exhaust apparatus, of a water-receptacle

having the air-exhaust delivered upon the surface of the water therein, a wire screen closing the mouth of said receptacle and a layer of curled hair supported by said wire screen, and adapted to be kept constantly moistened by the spray arising from the agitated water in said receptacle, substantially as and for the purpose set forth.

4. In a carpet-cleaner, the combination of series of carpet-beating arms, a casing snugly containing the same, a fan-casing and fan located centrally upon said beater-casing, ducts leading from the top of said beater-casing and discharging centrally to each side of said fan, means for actuating said fan and beaters, a water-receptacle located immediately behind said fan, and a flue taking the exhaust from said fan and discharging upon the surface of said water, substantially as and for the purpose set forth.

5. In a carpet-cleaner, the combination with the casing, the rocking-shaft and the beater-arms elastically impressed downward, of the rigid arm projecting from said rocker-shaft, the revoluble wheel located above said arm and the striking-wheels linked to said revoluble wheel as set forth, whereby the rotation of the latter wheel is adapted by the forcible impact with said rigid arm of said striking-wheels to actuate said beaters.

6. In a carpet-cleaner, the combination with the beating device and the casing snugly inclosing the same, of the fan located upon said casing and provided with a casing of its own centrally communicating with the said beater-casing, the supporting-arms extending rearwardly from said casing, and the water-receptacle supported upon said arms and means for detachably securing it in communication with said fan, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 28th day of May, A. D. 1897.

ALBERT F. GUE.

Witnesses:

FRANK G. PARKER,
EDWARD S. DAY.