

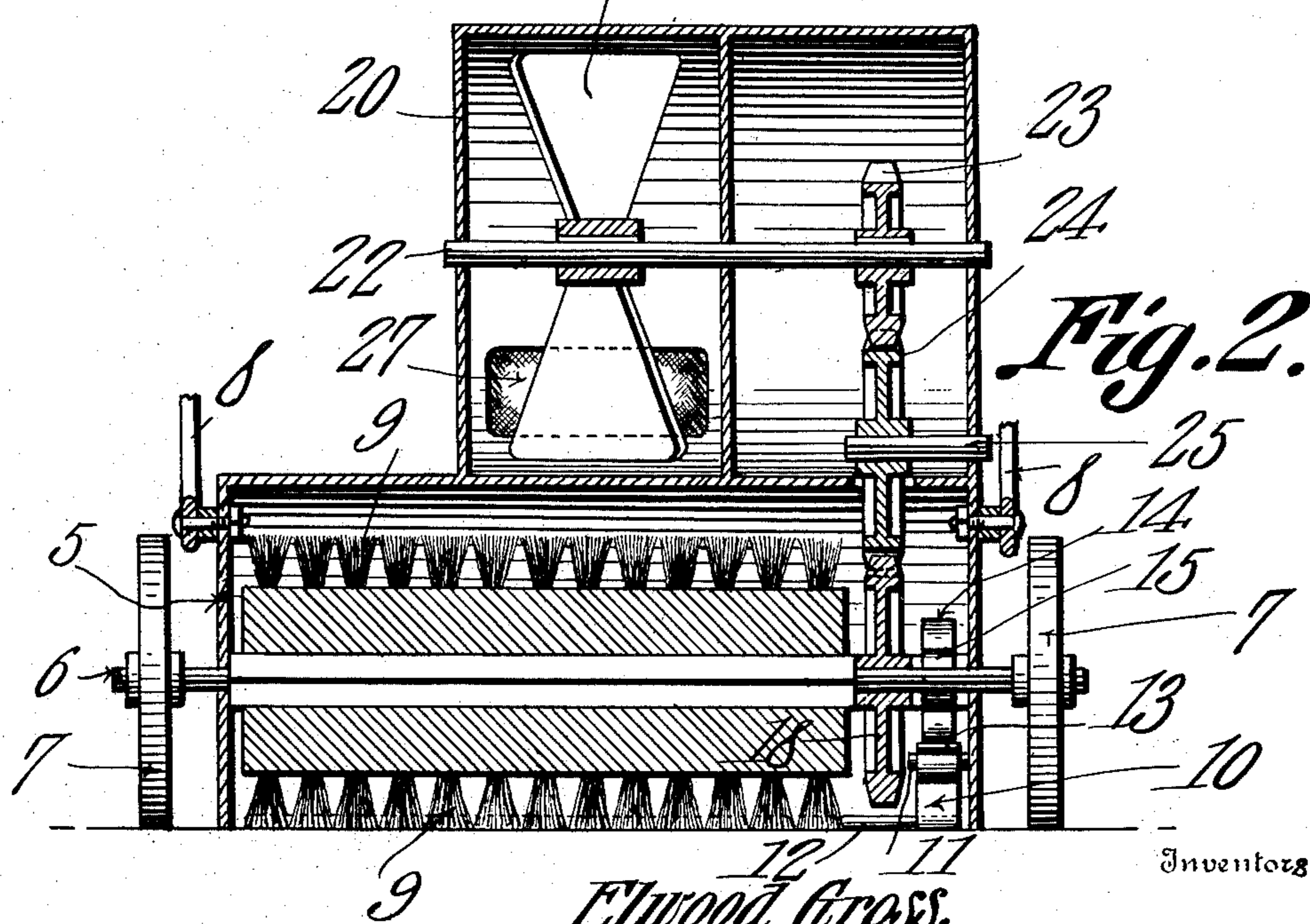
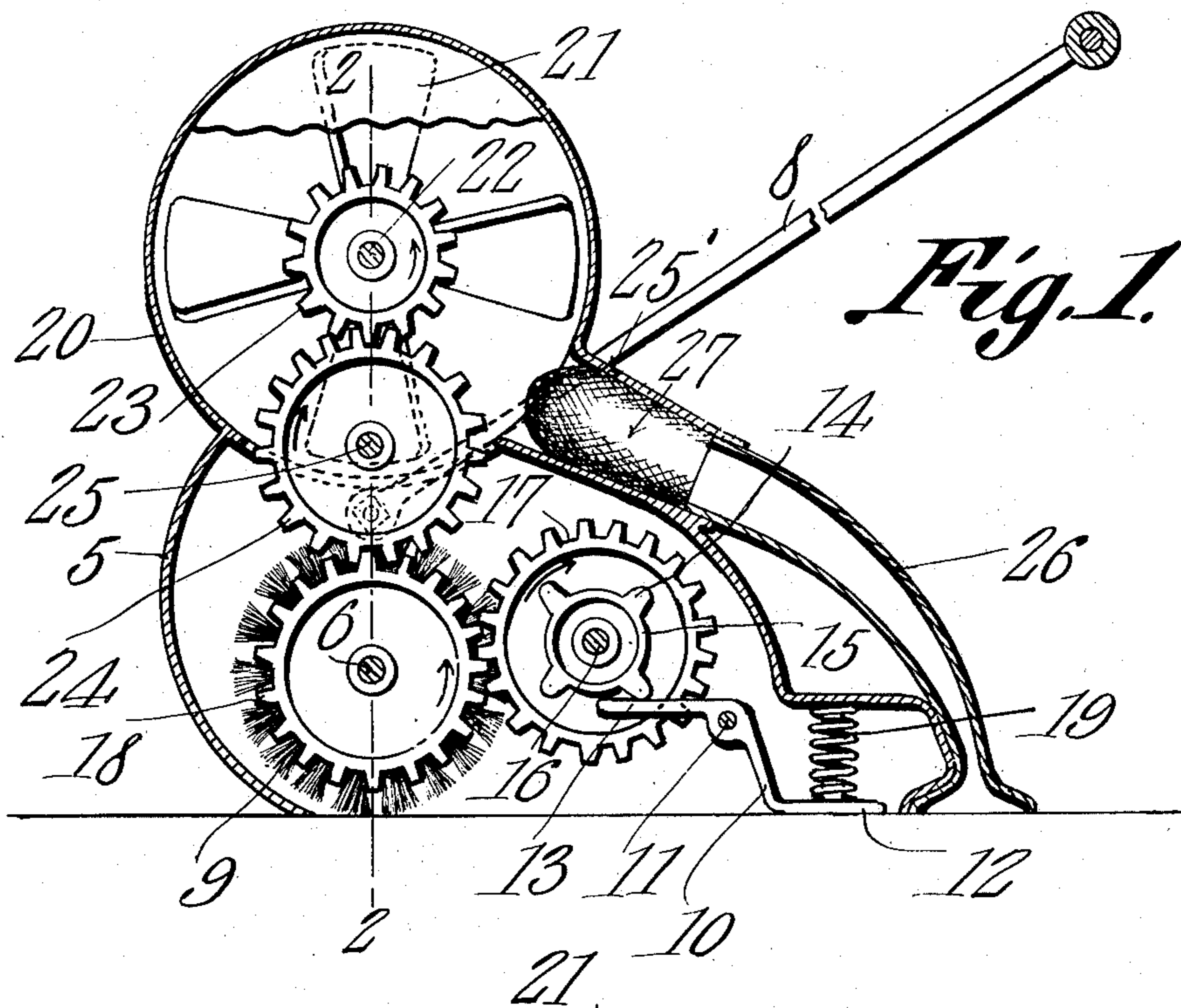
E. & W. E. GROSS & W. FELTER.

PNEUMATIC CLEANER.

APPLICATION FILED MAR. 9, 1910.

976,566.

Patented Nov. 22, 1910.



Witnesses

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# UNITED STATES PATENT OFFICE.

ELWOOD GROSS, WILLIAM E. GROSS, AND WALTER FELTER, OF WEST PITSTON,  
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## PNEUMATIC CLEANER.

976,566.

Specification of Letters Patent. Patented Nov. 22, 1910.

Application filed March 9, 1910. Serial No. 548,140.

*To all whom it may concern:*

Be it known that we, ELWOOD GROSS, WILLIAM E. GROSS, and WALTER FELTER, citizens of the United States, residing at West Pittston, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Pneumatic Cleaner, of which the following is a specification.

This invention has reference to pneumatic cleaners designed for removing dust and dirt from laid carpets, rugs and the like, and it is the object of the invention to provide an improved portable apparatus of this kind which can be easily operated, and which is efficient in operation, the carpet, etc., being thoroughly and expeditiously cleaned.

With these objects in view, the invention consists in a novel construction and arrangement of parts to be hereinafter described and claimed, reference being had to the accompanying drawing, in which drawing,

Figure 1 is a longitudinal section of the apparatus. Fig. 2 is a transverse section on the line 2—2 of Fig. 1.

Referring to the drawing, 5 denotes the casing inclosing the working parts of the apparatus. At the front end, and near the bottom thereof, the casing carries a transverse shaft or axle 6 on which are mounted ground wheels 7, said wheels being fast on the shaft so as to impart a rotary motion thereto when the casing is pushed across the floor, which is done by means of handles 8 connected to the sides of the casing, and extending rearwardly therefrom. On the shaft 6 is mounted a cylindrical brush 9, which is fast on said shaft and turns therewith when it is in motion. Behind the brush 9 is located a beater comprising an arm 10 pivoted on a transverse shaft 11 carried by the side walls of the casing. One end of the arm has a horizontal bend 12 which comes squarely down against the parts to be cleaned. The other end of the arm has a horizontal bend 13 which extends into the path of tappets 14 on a wheel 15 mounted on a transverse shaft 16 extending between, and carried by the side walls of the casing. On the tappet shaft 16 is a gear wheel 17 which is in mesh with a gear wheel 18 fast on the shaft 6, whereby the motion of the latter shaft is transmitted to the tappet

wheel shaft to actuate the beater. Between the part 12 of the beater and the top portion of the casing, is interposed a coiled spring 19. When the tappets 14 engage the portion 13 of the beater, the part 12 swings upwardly, and compresses the spring 19, and when the tappets clear said part 13, the spring forces the part 12 of the beater downwardly against the surface of the parts to be cleaned, and a sharp blow is delivered thereto. A number of tappets are provided in order that the blows may be delivered in quick succession.

The top of the casing 5 carries a fan casing 20 in which is mounted a rotary fan, the blades of which are indicated at 21, said blades being carried by a shaft 22 mounted in the end walls of the fan casing. On the fan shaft is a pinion 23 which is in mesh with a gear wheel 24 carried by a shaft 25 supported in one of the end walls of the casing, said gear wheel 24 being in mesh with the gear wheel 18, whereby the motion of the shaft 6 is transmitted to the fan shaft, and the fan is therefore operated when the apparatus is in motion.

In the rear portion of the fan casing 20, near its lower end, is an inlet comprising a short tube 25' to which a suction nozzle 26 is removably connected by means of an ordinary slip joint. The mouth of the nozzle is located behind the beater, and extends close to the floor. Within the tube 25' is mounted a bag 27 in which the dust collects, and from which it may be removed upon taking off the suction nozzle.

In operation, the apparatus is pushed across the carpet, rug or other part to be cleaned. The motion imparted to the shaft 6 by the ground wheels 7 is transmitted by the herein described gearing to the tappet wheel shaft and the fan shaft, so that the beater and the fan will be in operation when the apparatus is in motion, the brush 9 being also rotated. The casing 5 extends close to the floor, so that the escape of dust therefrom is prevented. The carpet, rug or other part is thoroughly cleaned by the beater and the brush, and all dust and dirt is sucked up by the nozzle 26, and passes into the bag 27 which, when full, may be removed and emptied upon slipping the nozzle off the tube 25. The apparatus is easily operated,

and is entirely automatic in operation, it requiring no attention other than pushing it across the floor.

What is claimed is:

- 5 1. A cleaner comprising a casing, supporting wheels carrying said casing, a shaft on which the wheels are mounted, a brush on said shaft, a beater located behind the brush, a tappet wheel for operating the beater, a  
10 shaft carrying said tappet wheel, a gearing between the tappet wheel shaft and the first mentioned shaft, a fan casing mounted on the aforesaid casing, a fan driven from the first mentioned shaft, and a suction nozzle  
15 connected to the fan casing, and having its mouth located behind the beater.
2. A cleaner comprising a casing mounted on wheels, a shaft carried by the casing and driven by the wheels, a brush on the shaft,  
20 said brush being located in the casing, a beater working in the casing behind the

brush, a tappet wheel for operating the beater, a shaft carrying the tappet wheel, said shaft being operatively connected to the first mentioned shaft, a fan casing carried 25 by the aforesaid casing, a fan mounted in the fan casing, and driven from the first mentioned shaft, a tube extending from the fan casing, a receptacle mounted in the tube, and a suction nozzle removably connected to 30 the tube, the mouth of said nozzle being located behind the beater.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

ELWOOD GROSS.  
WILLIAM E. GROSS.  
WALTER FELTER.

Witnesses:

EDWARD BARRETT,  
M. B. SCHNERR.