F. KENNEY.

VACUUM CLEANER.

APPLICATION FILED DEC. 14, 1910.

1,002,521. Patented Sept. 5, 1911.

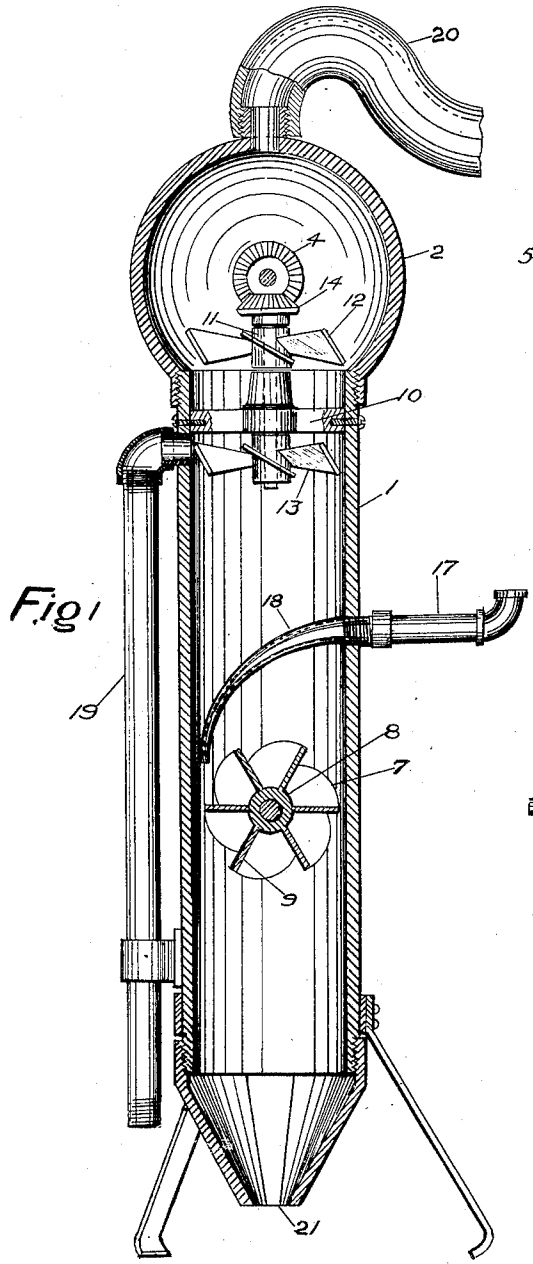

Fig 1

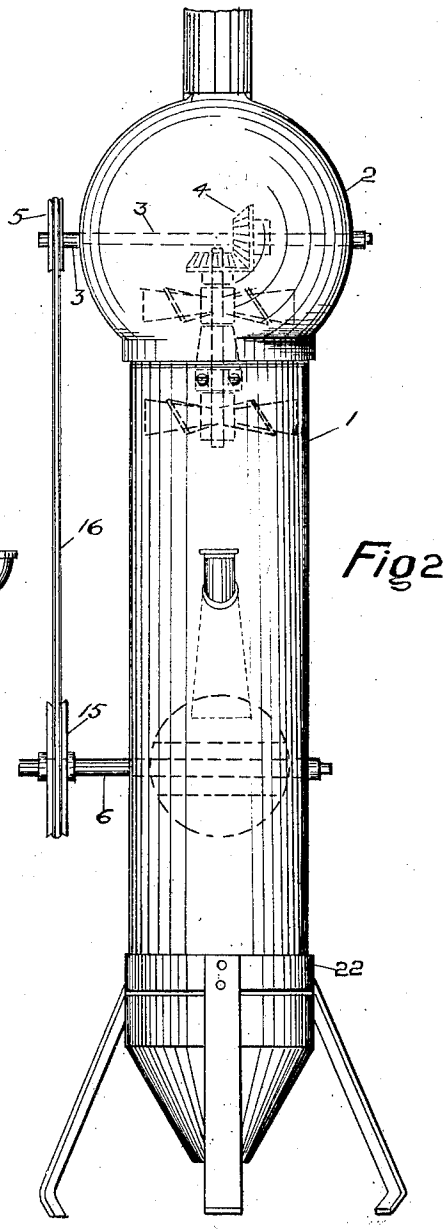

Fig 2

Witnesses.
J. H. Morton
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UNITED STATES PATENT OFFICE.

FRANK KENNEY, OF PORTLAND, OREGON, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO P. M. VUCASH, AUGUST DONNERBERG, F. S. RIEDER, A. L. MACKINTOSH, C. T. LILLARD, SAM MOTHERSHEAD, C. A. BEDELL, AND W. C. CECIL, ALL OF PORTLAND, OREGON.

VACUUM-CLEANER.

1,002,521. Specification of Letters Patent. Patented Sept. 5, 1911.

Application filed December 14, 1910. Serial No. 597,201.

To all whom it may concern:

Be it known that I, FRANK KENNEY, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Vacuum-Cleaners, of which the following is a specification.

This invention relates to improvements in vacuum cleaners, and has for its objects to provide a cleaner, which is inexpensive in construction, convenient in operation and which is effective in removing dust from rough surfaces and from the most delicate fabrics. I attain these objects by the mechanism illustrated in the accompanying drawing, in which—

Figure 1, is a sectional elevation of my improved cleaner. Fig. 2, is a side elevation of Fig. 1.

Similar characters refer to similar parts throughout the several views.

In the drawing 1 is the body of the cleaner, surmounted by the vacuum chamber 2, which is attached by the usual screw-thread attachment. Across the central portion of the chamber 2 is the shaft 3, mounted to rotate on bearings formed in the casing, and having secured on its interior portion, the bevel gear 4; and to the external portion is attached the pulley 5. At the lower part of the body portion, is a similar cross shaft 6, having similar mountings and having formed thereon, the motor 7, consisting of the sleeve 8 on which are formed the spiral vanes 9, made to conform to the interior of the body 1, so that they may rotate on the shaft 6 without striking the side walls, though the vanes will have only slightly less area in cross section than that of the body.

Formed at the upper end of the body 1 is a transverse bar 10, secured in the casing, to form a support for the vertical shaft 11, on which are fixed the fans 12 and 13. At the upper end of said shaft 11, is secured the bevel gear 14 meshing with the correspondingly formed bevel gear wheel 4.

Upon the exterior portion of the shaft 6, is secured a pulley 15, placed in alinement with pulley 5 and adapted to receive the belt 16 for driving the latter pulley whereby the bevel gearing is set into operation, for driving the fans 12 and 13.

In the side of the body 1, above the motor 7 is attached the water pipe 17, which is connected with a water supply, whereby the water is delivered, as desired, upon the motor, as indicated at 18. The water falling upon the motor, at one side as shown in the drawing, sets the shaft 6 into operation, which motion is transmitted through the pulleys and gearing to the fans. When the water falls upon the motor it is broken into sprays and so dispersed about the interior of the cleaner as to fill the entire space and drive the air before it through the outlet 21. Should this action be insufficient to form the desired vacuum, an auxiliary device is provided in the shape of the fan 12, to which may also be added another fan 13, if it should be found necessary. The air in the chamber 2 is driven by the fans, along with the water, through the outlet 21; and also through the exit tube 19; and the vacuum thereby produced causes a powerful suction through the tube 20.

The cleaner is provided with a support 22 secured in any convenient manner, upon which it rests in an upright position.

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

1. In a vacuum cleaner, an upright cylinder having a conical lower end provided with a central aperture and an enlarged upper portion having an inlet opening in its upper side,—a transverse shaft journaled to bear in the cylinder and carrying a motor the vanes of which extend across the interior of the cylinder,—a transverse bar mounted in the upper portion of the cylinder and carrying a vertical shaft upon which is secured a fan and having at its upper end a gear wheel,—a transverse shaft journaled to bear in said enlarged upper portion and carrying a gear-wheel meshing with that of the vertical shaft,—a conduit entering the cylinder at an intermediate point for conducting a stream of water upon the motor,—and means for operatively connecting said transverse shafts for operating said fan.

2. In a vacuum cleaner, an upright cylinder having a conical lower end provided with a central aperture and an enlarged upper portion having an inlet opening at its upper side,—a transverse shaft journaled to bear in the cylinder, carrying a motor the

vanes of which extend across the interior thereof,—a transverse bar mounted in the upper portion of the cylinder carrying a vertical shaft upon which is secured a plurality of fans, and having at its upper end a gear-wheel,—a transverse shaft journaled to bear in said enlarged upper portion and carrying a gear-wheel meshing with that of the vertical shaft,—an exhaust tube leading from the cylinder at a point opposite the fans and extending to the bottom thereof,—a conduit entering the cylinder at an intermediate point for conducting a stream of water upon the motor,—means for operatively connecting the transverse shafts for operating said fans,—and means for maintaining the cleaner in an upright position.

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

FRANK KENNEY.

Witnesses:
C. B. MARTIN,
E. KOCH.