June 27, 1939. F. L. HENNEFER 2,163,788

ERASER CLEANER

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Fig. 1

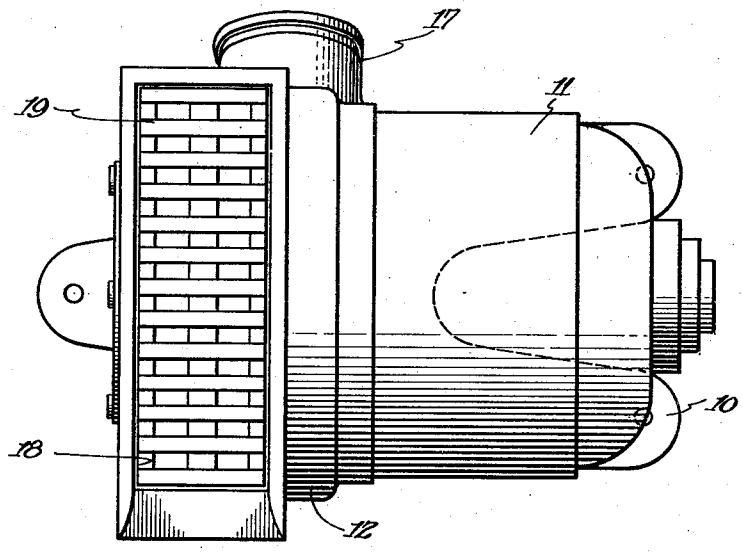
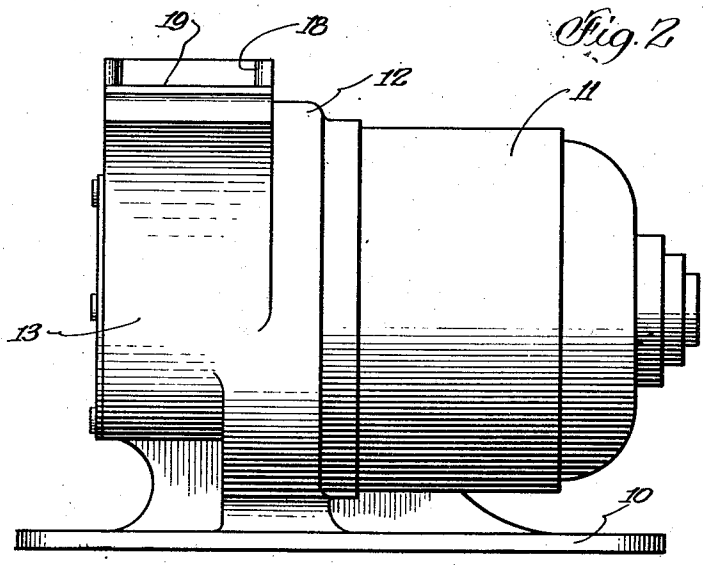


Fig. 2



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Fig. 3

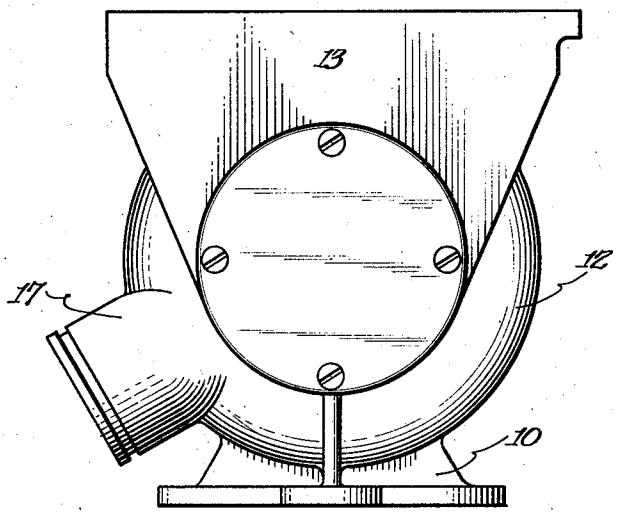


Fig. 4

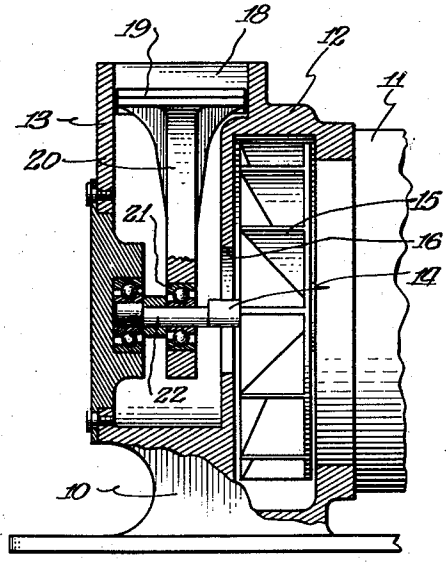
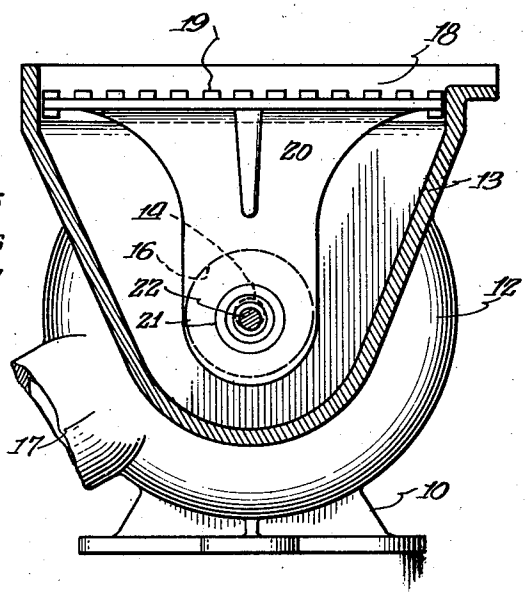


Fig. 5



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UNITED STATES PATENT OFFICE

2,163,788

ERASER CLEANER

Fred L. Hennefer, Salt Lake City, Utah

Application July 22, 1936, Serial No. 91,843

1 Claim. (Cl. 15—12)

The invention relates to improvements in cleaners especially adapted for use in cleaning blackboard erasers, the primary object of the invention being the provision of a simple apparatus of the character indicated which is capable of economical production and highly efficient in use.

Other objects will appear hereinafter.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanyiug drawings forming a part of this specification, and in which

Fig. 1 is a top plan view of an eraser cleaner embodying the invention;

Fig. 2 a side view of the same;

Fig. 3 an end view of the same;

Fig. 4 a partial longitudinal section of the same; and

Fig. 5 a transverse section of the same.

The embodiment of the invention illustrated in the drawings comprises an enclosing casing mounted upon a suitable base 10, said casing being provided in one end with a motor chamber 11 adapted and arranged to contain and enclose an electric motor of any usual or conventional design and construction. A fan chamber 12 is arranged adjacent the inner end of the motor chamber 11 and a cleaning chamber 13 is arranged adjacent the fan chamber 12 as shown. The shaft 14 of the electric motor is extended from the motor chamber 11 substantially centrally through the chambers 12 and 13 as shown.

An exhaust fan 15 is mounted as shown on the motor shaft 14 and is arranged and adapted to withdraw or exhaust air from the chamber 13 through the central opening 16 and discharge said air through the discharge spout 17, which is adapted and arranged to receive and support the mouth of a dust bag, as will be readily understood.

The cleaning chamber 13 is made upwardly flaring in form, as best shown in Figs. 4 and 5, and is provided with a rectangular opening 18 at its top in which a foraminated rectangular cleaning element 19 is arranged to reciprocate. As will be noted, the opening 18 is provided at one end with a depression and an outwardly extending supporting lip, best shown in Fig. 5, adapted and arranged to support an eraser or the like in position for cleaning. The cleaning element 19 is in the form of a grid consisting of spaced transverse and longitudinal bars or slats as shown, so as to permit of the free entry of air and dust to the cleaning chamber 13. The cleaning element 19 is connected by an integral arm or support 20 with the motor shaft 14 through the medium of a ball bearing 21 riding upon an eccentric crank pin 22 formed integrally in the motor shaft 14, and whereby the cleaning element 19 will be caused to reciprocate rapidly as the motor shaft 14 rotates.

In use and in operation, the cleaning element 19 is rapidly reciprocated by operation of the electric motor which also serves to rotate the fan 15. An eraser to be cleaned is then manually placed in opening 18 on the rest and thus applied to the cleaning element 19 through the opening 18 in such manner that the face of the eraser will be rapidly struck and beaten by the action of the cleaning element 19, thereby loosening the blackboard dust contained therein. At the same time, the fan 15 operates to draw a strong draft of air through and around the eraser, though chamber 13, opening 16, fan chamber 12, and discharging the same through the spout 17 into the dust bag connected therewith. In this way, blackboard erasers, such as are used in schools and similar institutions, may be rapidly and efficiently cleaned and prepared for re-use. The specific form and arrangement of parts disclosed is a simple and efficient one for the purpose.

While I have illustrated and described the preferred form of invention for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details disclosed but desire to avail myself of such variations and modifications as fall within the scope of the appended claim.

I claim:

A cleaner comprising a casing having a motor chamber in one end thereof; a fan chamber adjacent the inner end of said motor chamber and having an air discharge spout arranged for the attachment of a dust bag; a cleaning chamber adjacent said fan chamber in open communication therewith, the top of said cleaning chamber having walls forming a rectangular opening one wall of which is depressed to form and a laterally extending supporting lip to constitute a rest for an object to be cleaned; a foraminated rectangular cleaning element arranged in said cleaning chamber below said rest and reciprocating therein to strike said object a blow to release dust therefrom; a motor shaft extending from the motor chamber through said fan chamber and said cleaning chamber; an exhaust fan on said motor shaft in said fan chamber and arranged to exhaust air from said cleaning chamber through said dust bag spout; an eccentric on said motor shaft in said cleaning chamber; and an operative connection between said eccentric and said cleaning element.

FRED L. HENNEFER.