

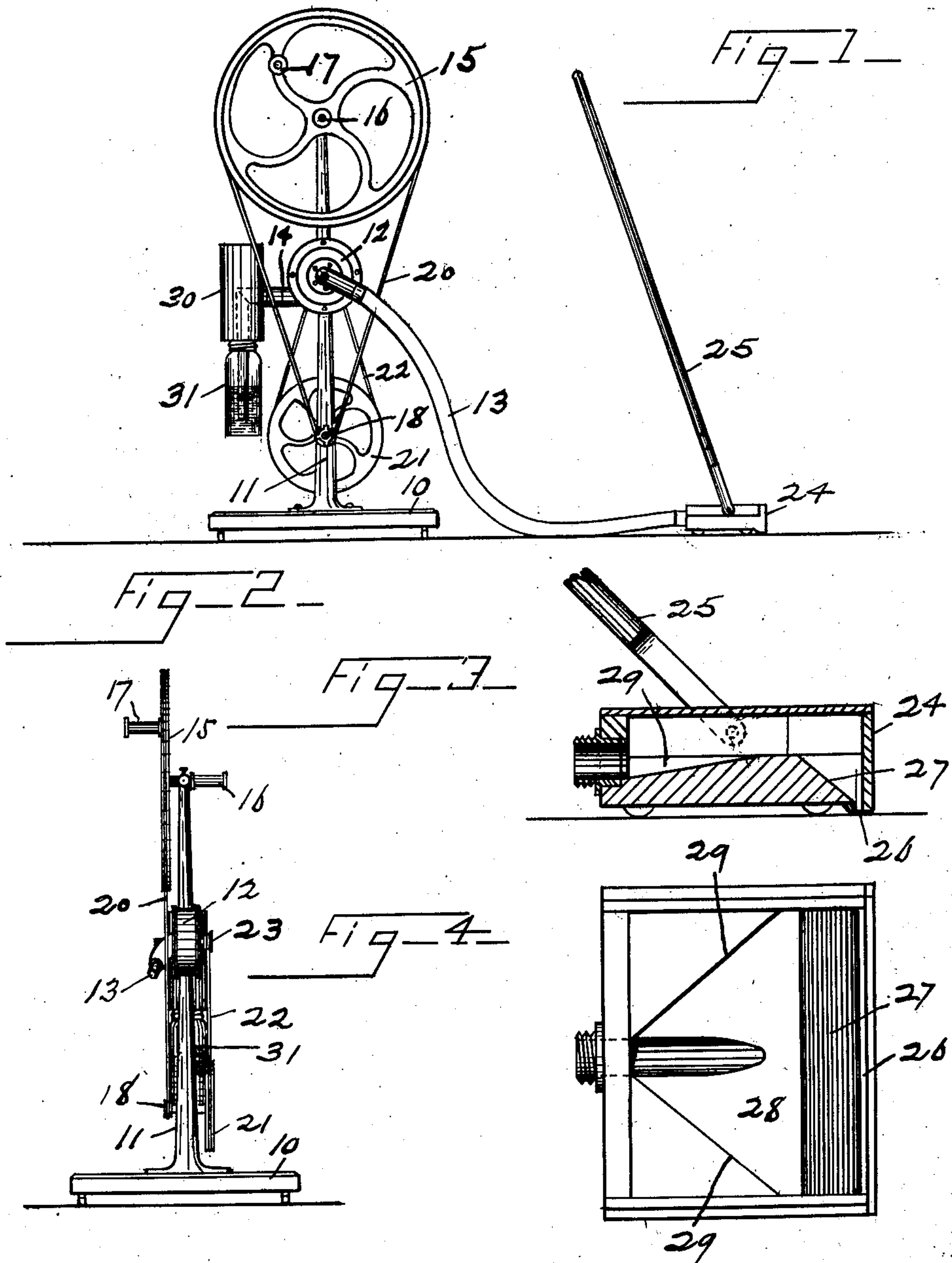
No. 862,369.

PATENTED AUG. 6, 1907.

F. W. AGAN.
DUST COLLECTING MACHINE.

APPLICATION FILED AUG. 23, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

Frank C. Palmer.
Madeline W. Ritchie.

INVENTOR

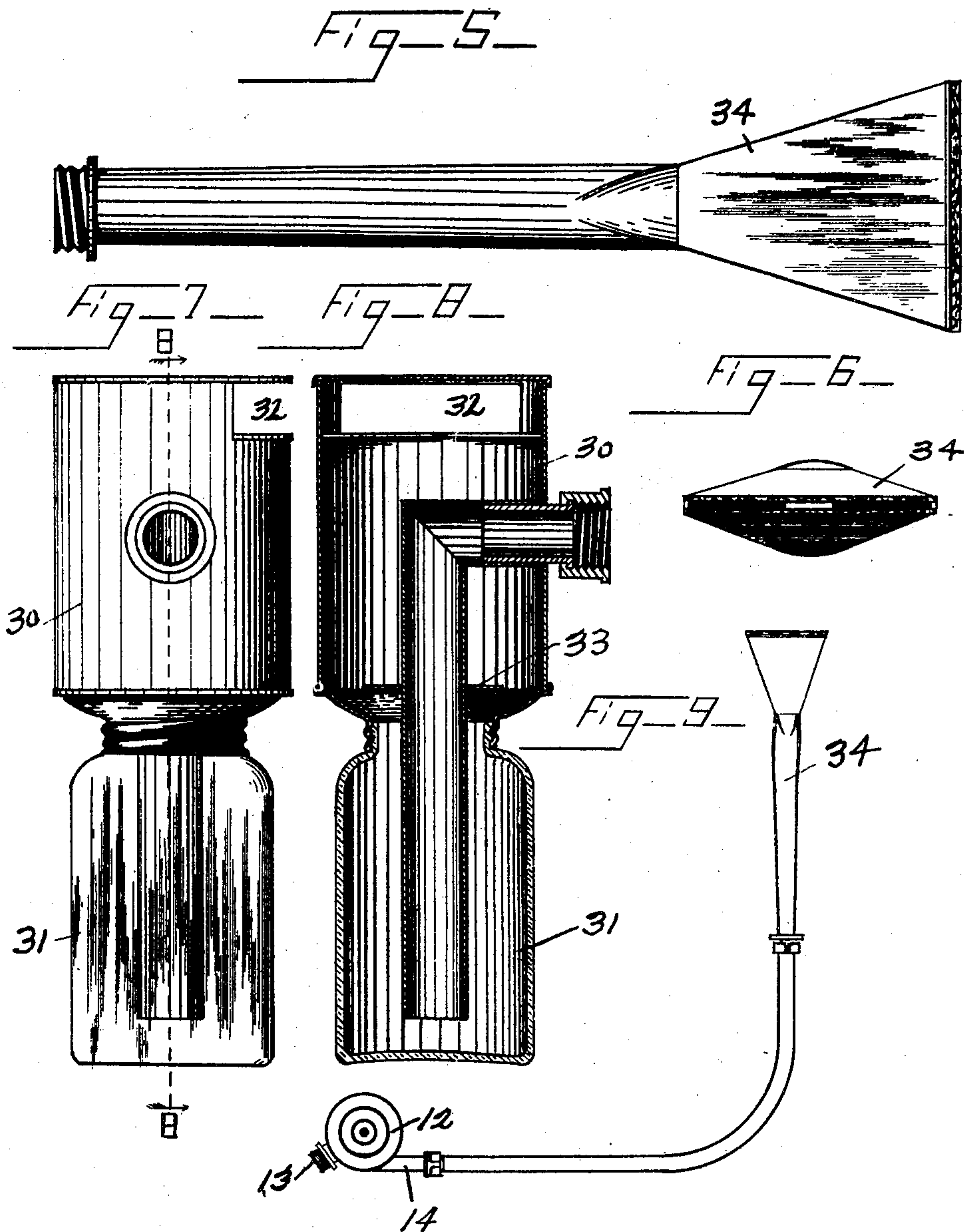
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UNITED STATES PATENT OFFICE.

FRANK W. AGAN, OF LUDLOW, VERMONT.

DUST-COLLECTING MACHINE.

No. 862,369.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed August 23, 1906. Serial No. 331,746.

To all whom it may concern:

Be it known that I, FRANK W. AGAN, a citizen of the United States, residing at Ludlow, in the county of Windsor and State of Vermont, have invented certain new and useful Improvements in Dust-Collecting Machines, of which the following is a specification, reference being had to the accompanying sheet of drawings.

This invention has for its particular object the provision of simple, and reasonably cheap, means for collecting dust, lint &c, and for depositing the same in a tank of water or other liquid.

Briefly described my said invention comprises a suction device for collecting the dust, in combination with a pipe that terminates in a tank of liquid. Incidentally, various details of construction have been improved, notably a portable suction throat for traversing a floor or carpet and a protective shield or deflector plate for preventing the escape of the liquid from the dust receptacle when the machine is in operation.

In order to explain my said invention clearly I have provided the annexed drawings, in which

Figure 1 is a front side elevation of a machine embodying my present improvements and Fig. 2 is a view of the same, as seen from the right hand side and with the exhaust pipe removed. Fig. 3 is a relatively enlarged view of the suction box 24 in central, vertical, section and Fig. 4 is a plan view of said box with its top removed. Fig. 5 is a detached side view of a modified form of suction box and Fig. 6 is an end view of the same showing particularly the suction throat. Fig. 7 is a side elevation of the dust receptacle and in Fig. 8 I have shown a central, vertical section of the same, taken on the line 8—8 of said Fig. 7. In Fig. 9 I have illustrated the modified form of suction box as it would appear when in use.

Referring to the annexed drawings the numeral 10 indicates a portable base having mounted thereon a substantial upright 11 which has secured thereto a fan blower 12 of any approved type. Leading into said blower is a suction or exhaust pipe 13 and leading outward from the blower is a pipe 14.

The reference numeral 15 denotes a wheel or score-pulley that is mounted so as to revolve on a stud 16 secured to the upright 11, the wheel being operated by means of a handle 17; the other end of said stud 16 being extended to provide a convenient form of handle by means of which the complete machine may be steadied by the operator while he turns the wheel 15.

In the lower portion of the upright 11 is journaled a shaft 18 having fixed upon one end a pulley or sprocket wheel 19 that is connected by a belt 20 with the wheel 15, and upon the other end of said shaft is fixed a score pulley 21 that is connected by a belt 22 with a similar pulley 23 on the fan shaft of the blower 12. When the wheel 15 is set in revolution the described train of

belting and pulleys causes the fan blower to be revolved at a high rate of speed and thus induces a strong suction current of air in pipe 13 and a corresponding discharge through pipe 14.

Referring now to Fig. 1 it will be seen that I have attached to the otherwise free end of pipe 13 a dust-collecting device formed, as here shown, as a rectangular box 24 which is mounted upon casters in order that it may be moved freely over a floor, carpet or rug, and having also a hinged handle, 25 by means of which the box 24 may be pushed about. The lower front portion of box 24 is formed with a throat opening 26 that connects with the interior of said box and the lower wall, or bottom, of the box is inclined, as at 27 from the throat upwardly. The said bottom then is inclined forwardly and downwardly as at 28, and formed with converging side walls 29 forming a gradually restricted trough that leads into the suction pipe 13. When the apparatus is in operation the dust is sucked up through the throat 26 and passes readily up the incline 27 and thence is guided by the described restricted trough toward and into the suction pipe 13. The said dust is then carried through pipe 13, into and through the fan blower 12 and is discharged through the pipe 14 into a novel form of receptacle here shown as a sheet metal, box-like structure 30 to the lower end of which is screwed a jar 31. The pipe passes into the box 30 and thence downward into the jar 31 (see dotted lines in Fig. 1), the end of the pipe being submerged in water or other liquid with which the jar is filled, or partially filled, so that the dust is finally discharged under water. When the water becomes thick with the dust the jar may be removed, emptied and refilled with clean water.

The box 30 is provided with a lateral opening 32 at its upper portion so that the air introduced into the dust receptacle may find a ready exit and in order to prevent the agitated water from passing upward, I provide a deflector plate 33 immediately over the mouth of the jar. This I find is desirable, if not absolutely necessary, for the reason that when the air and dirt are discharged forcibly into the jar the water is agitated and would be blown out of the jar if it were not for the deflector plate against which the water impinges and then drops back into the jar. Instead of water some suitable disinfecting compound may be used in the receptacle 31, thus making it possible and easy to not only remove all dust from a room but to disinfect and sterilize the same.

Should it be desired to utilize my described apparatus to blow dust from corners and the like obscure places not readily reached by means of the suction box 24 a broad-throated tube 34, such as I have shown in Fig. 5, may be attached to pipe 14, preferably by means of a flexible pipe (see Fig. 9). The strong cur-

rent of air forced through the said tube 34 may then be used to dislodge dust &c., from corners and other contracted places.

Having thus described my invention I claim as new
5 and wish to secure by Letters Patent:—

The herein described dust collecting apparatus, comprising a portable base, a liquid-filled dust receptacle, a blower, a pipe leading from said blower into and supporting the liquid-filled receptacle, an inverted receptacle through

which said pipe passes, means for operating said blower, 10 all carried by said portable base, the adjacent ends of the said inverted receptacle and the liquid-filled receptacle being tapered and detachably united, a suction pipe connected with said blower, a portable suction box connected with said suction pipe, and a handle on said box for manipulating the same. 15

FRANK W. AGAN.

Witnesses:

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