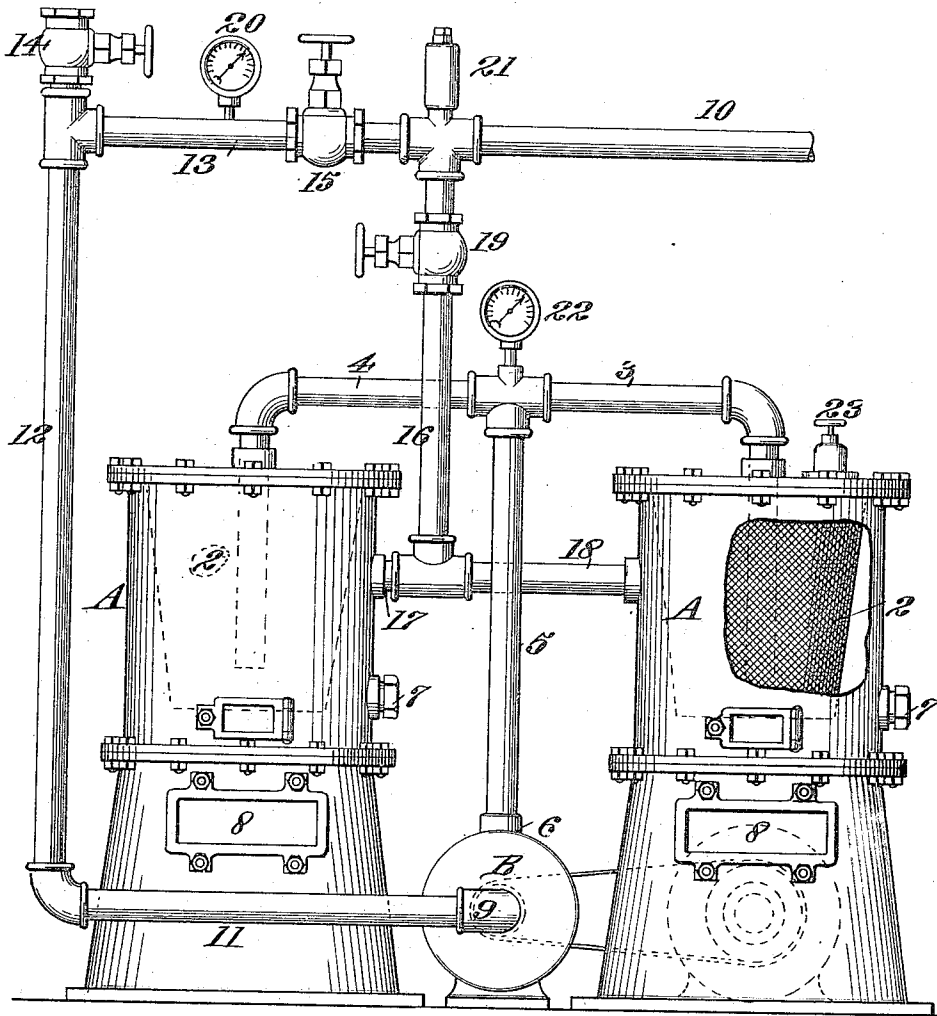


E. L. B. ZIMMER.
 COMBINED VACUUM CLEANER AND BLOWER.
 APPLICATION FILED MAR. 23, 1914.

1,124,573.

Patented Jan. 12, 1915.



WITNESSES:

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ERNEST L. B. ZIMMER, OF OAKLAND, CALIFORNIA.

COMBINED VACUUM-CLEANER AND BLOWER.

1,124,573.

Specification of Letters Patent.

Patented Jan. 12, 1915.

Application filed March 23, 1914. Serial No. 826,634.

To all whom it may concern:

Be it known that I, ERNEST L. B. ZIMMER, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented new and useful Improvements in Combined Vacuum-Cleaners and Blowers, of which the following is a specification.

This invention relates to a combined vacuum cleaner and blower.

The object of the present invention is to provide an apparatus of the class described, which is so constructed and arranged that it may be used either as a vacuum cleaner in a building or for the purpose of supplying compressed air.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawing, in which the figure is a diagrammatic view showing the several parts of the apparatus connected.

Referring to the drawings, A indicates a pair of collecting chambers of suitable construction, in which are mounted dust bags 2 through which the air passes before entering the pump, indicated at B: the upper end of each bag being connected through pipes 3, 4 and 5 with the suction side or inlet port 6 on the pump. The collecting chambers are otherwise provided with inlet valves 7 and doors 8 through which the collected dust may be removed or air admitted to the interior of the collecting chambers A.

The exhaust side of the pump, indicated at 9, is connected with a service pipe 10 through the medium of pipes 11, 12 and 13. Pipe 12 is provided with a valve 14 on its upper end and pipe 13 is similarly provided with a valve 15. The service pipe is also connected with the respective collecting chambers through pipes 16, 17 and 18, and the flow of air through said pipe is regulated by a valve 19, similar to those indicated at 14 and 15. Pipe 13 is otherwise provided with a pressure gage 20 and a pressure relief valve 21. The upper end of pipe 5 is provided with a vacuum gage 22, and one or both of the collecting chambers may be provided with vacuum relief valves as indicated at 23.

The operation will be as follows: If the apparatus is to be used for vacuum cleaning purposes, it is only necessary to close valve 15 and open valves 14 and 19. Air will then

enter through service pipe 10, pipe 13, and through the connected pipes 17 and 18 into the collecting chambers A. The air then passes through the dust bags, on the exterior of which the dust is collected; then passes out through pipes 3 and 4 and pipe 5 into the suction side of the pump and is finally exhausted through port 9, pipes 11 and 12, and valve 14 to a suitable place of discharge, such as the stack or flue of a building. The service pipe 10 may be connected with the piping of the building to which the suction hose and vacuum cleaning tools are connected when it is desired to clean the building. The dust is thus collected on the exterior surfaces of the several bags and falls from here into the bottom of the collecting chambers from where it may be removed through the doors 8.

The provision of valve 23 is simply for safety purposes, that is, to relieve the vacuum in case this becomes too strong. If for any reason it is desired to use the apparatus as a blower or compressor, it is accomplished by first closing valves 14 and 19. Inlet valves 7 or doors 8 are then opened, together with valve 15. The air will then either enter through valves 7 or doors 8, as the case may be, into the interior of the collecting chambers A, then passes through the fabric of the dust bags, pipes 3 and 4 and through pipe 5 into the inlet or suction side of the pump. The air then passes out through the outlet of the pump at 9, pipes 11, 12 and 13 and valve 15. It is then permitted to enter the service pipe 10, which, as before stated, is connected with the main piping of the building, or with any other appliance desired. Valves 14 and 19 being closed prevent the escape of the air through any pipe except through the service pipe 10.

The pressure of the air is indicated by the gage 20, while any excess pressure on the line may be relieved by the relief valve, indicated at 21. The vacuum on the suction side will always be indicated by the gage 22. The air discharging under pressure through the service pipe 10 may be used for any suitable purpose to which compressed air may be applied, such as running auxiliary machinery, sand blasting operations, spraying, etc.

An apparatus constructed and arranged as here shown is especially adapted for use in large office buildings, and the like, as it may be used during certain hours of the

day for cleaning purposes and the remainder of the time for other purposes already specified. The change from one operation to the other is quickly accomplished as it is only
5 necessary to open or close the respective valves. The pump, indicated at B, may be driven from any suitable source of power.

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

A combination vacuum cleaner and blower comprising a collection chamber having an inlet valve carried thereby, a service pipe, valves carried by said pipe, a pipe affording
15 communication between the service pipe and chamber, a pump, suction connections between the pump and chamber, a discharge connection between the service pipe and pump, and a valve for the pump discharge,

whereby when one of the valves of the service pipe and the valve, in the pump discharge are closed, operation of the pump will draw external air through the inlet valve to the collection chamber and discharge connection and thence to a portion of the service pipe, certain of said valves being
25 operable upon closing the inlet valve to cut off communication between the service pipe and discharge connection and to afford communication between the service pipe, and suction connections. 30

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ERNEST L. B. ZIMMER.

Witnesses:

L. M. McDougall,
H. G. Johnston.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."