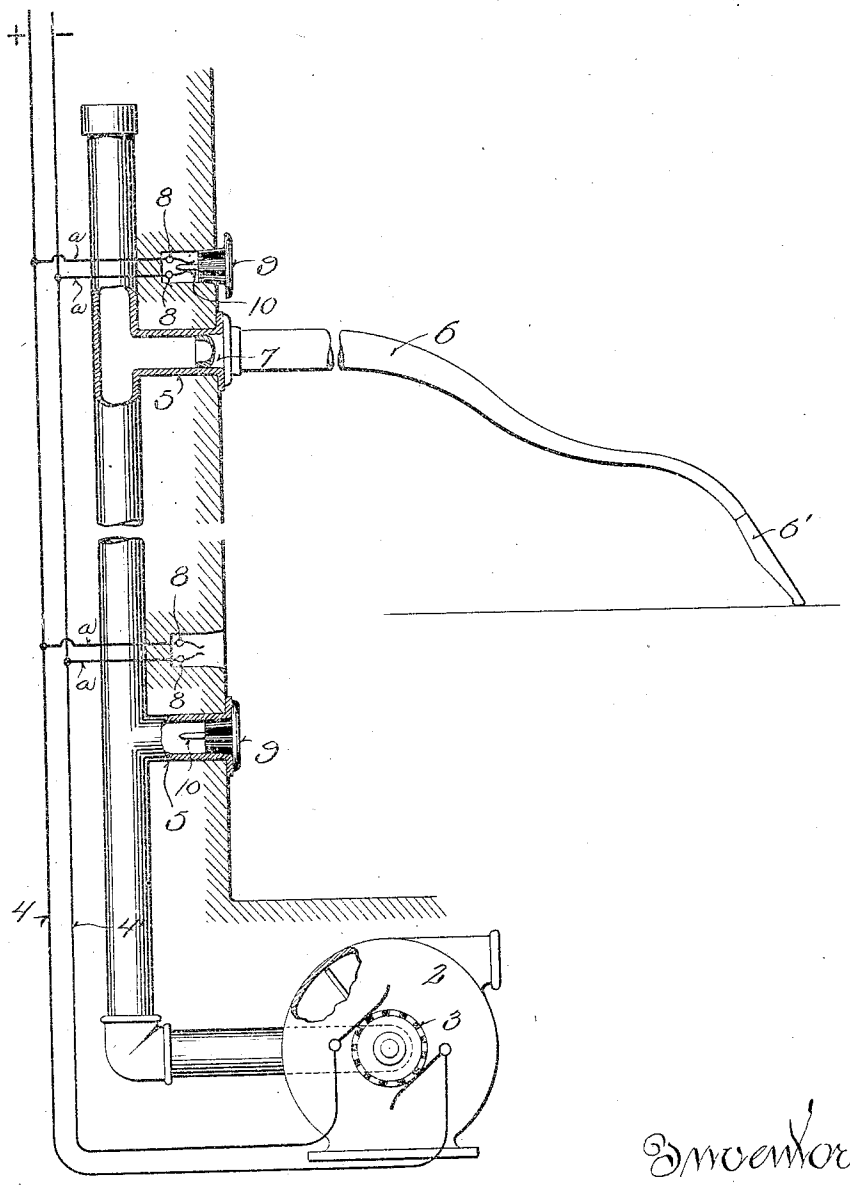
E. F. WEIRICH.

PNEUMATIC CLEANER CONTROLLER.

APPLICATION FILED JAN. 7, 1914.

1,099,680.

Patented June 9, 1914.



Witnesses:
Casaway Young
May Downey

Inventor:
Edgar F. Weirich
By Upshur & Young
Attorneys.

UNITED STATES PATENT OFFICE.

EDGAR F. WEIRICH, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF FOUR-FIFTHS TO LOUIS D. MATCHETTE, OF MILWAUKEE, WISCONSIN.

PNEUMATIC-CLEANER CONTROLLER.

1,099,680. Specification of Letters Patent. Patented June 9, 1914.

Application filed January 7, 1914. Serial No. 810,901.

To all whom it may concern:

Be it known that I, EDGAR F. WEIRICH, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Pneumatic-Cleaner Controllers; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention refers to vacuum cleaner apparatus, its object being to provide a simple, economical and effective means for controlling such systems.

In vacuum cleaning systems of the general type to which my invention refers an electric motor-driven vacuum producer is utilized in connection with a stand-pipe which extends to the various floors of a building and is provided at each floor with an intake nozzle whereby a coupling connection is made between said nozzle and the flexible hose of the cleaner tool. The feed wires of the electric motor are also extended through the building in juxtaposition to the stand-pipe nozzles and are provided with a circuit make and break mechanism at a point convenient with relation to the stand-pipe nozzle. The stand-pipe nozzle is also provided with a removable closure plug. In practice it has been found that after the tool has been disconnected from the stand-pipe nozzle, the operator, under ordinary conditions, will close said nozzle by inserting the plug, but will fail to break the circuit by manipulating the make and break mechanism or cut-out switch. Hence the current to the motor is inadvertently supplied and said motor may run for an indefinite time at great expense and inconvenience.

For the purpose of overcoming the above mentioned objectionable feature of the ordinary type of mechanism I provide an interchangeable plug which serves as a closure for the nozzle and also serves as a circuit closing means for the motor and hence in order to start the apparatus after this common plug has been removed from the nozzle the said plug must be inserted as a key to close the circuit make and break mechanism, whereby the vacuum producer is supplied with power. When the operator desires to remove the tool, after completing the work, it is apparent that the nozzle cannot be closed until the plug which has been serving as a circuit closure is inserted in said nozzle and hence by the removal of said plug from one position to the other the current to the motor is cut off. This apparatus will also prevent an operator from closing a stand-pipe nozzle upon one floor having a separate meter without cutting off the supply of current to the motor and thereafter attaching the suction tool to the nozzle of another floor of the building, which floor is provided with a metered current and under these conditions the current for supplying the cleaner would be registered upon the meter below.

With the above objects in view the invention consists in certain peculiarities of construction and combination of parts as hereinafter set forth with reference to the accompanying drawing and subsequently claimed.

The drawing illustrates a diagram view of a vacuum cleaner apparatus embodying the features of my invention.

Referring by characters to the drawing, 1 represents a stand-pipe that communicates with a vacuum producer 2 in the form of a fan, the said vacuum producer being driven by an electric motor 3 which is supplied with current by means of feed wires 4, 4'. The stand-pipe is provided with one of a series of intake nozzles 5 for effecting a coupling connection with a flexible hose 6 of a cleaner tool 6', the said hose being provided with a coupling plug 7 that is adapted to be fitted into any one of the nozzles of the stand-pipe. Within the field of each nozzle there is placed a circuit make and break mechanism 8, which mechanism in this exemplification of my invention is shown in the form of a pair of contact springs normally spaced apart, the same being connected to the feed wire 4 which is interrupted by branch-wires a, a, that connect with the springs. Each stand-pipe nozzle and make and break mechanism is provided with a common plug 9, which plug has projecting therefrom a key stem 10' for engagement with the make and break mechanism 8. As shown at the upper portion of the diagram the cleaner tool is inserted within the nozzle and the common plug which has previously been removed from the nozzle is adjusted to the make and break mechanism, whereby the motor-circuit is closed. Hence the mechanism so arranged is coupled for operation

When the hose coupling 7 of the tool is removed from the plug, the plug 9 being utilized as means for closing the motor circuit is removed from its position and adjusted to the nozzle 5, whereby it forms a closure therefor and thus, in effecting this closure by removal of the plug, the motor circuit is broken, the parts being in the position as shown at the lower portion of the stand-pipe. It is apparent that the apparatus so arranged will effect the desired results, there being no liability for the operator to leave the plug in its adjusted position to the make and break mechanism for the reason that when the tool coupling is removed from the stand-pipe nozzle the noise due to the inflow of air serves as an audible signal to said operator that the nozzle is open and should be closed.

I claim:

1. In a vacuum cleaning system having a motor-driven vacuum producer, electric feed-wires for the motor, a stand-pipe provided with an intake nozzle, and a circuit make and break mechanism for the motor feed wires located within the field of the nozzle; the combination of a plug for the intake nozzle having circuit closing means in connection therewith, the said plug serving either as a closure for the nozzle or circuit make and break mechanism.

2. In a vacuum cleaner system having a motor-driven vacuum producer, electric feed-wires for the motor, a stand-pipe provided with an intake nozzle, and a socketed circuit make and break mechanism for the motor feed wires located adjacent to the nozzle; the combination of an interchangeable plug for the nozzle having a key in connection therewith, the plug being adapted to serve either as a closure for the nozzle or socketed circuit make and break mechanism.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee in the county of Milwaukee and State of Wisconsin in the presence of two witnesses.

EDGAR F. WEIRICH.

Witnesses:
GEO. W. YOUNG,
M. E. DOWNEY.