Nov. 3, 1931. D. O'REILLY ET AL 1,830,129

APPARATUS FOR CLEANING BLACKBOARD ERASERS

Original Filed Feb. 19, 1929 2 Sheets-Sheet 1

Fig. 1.

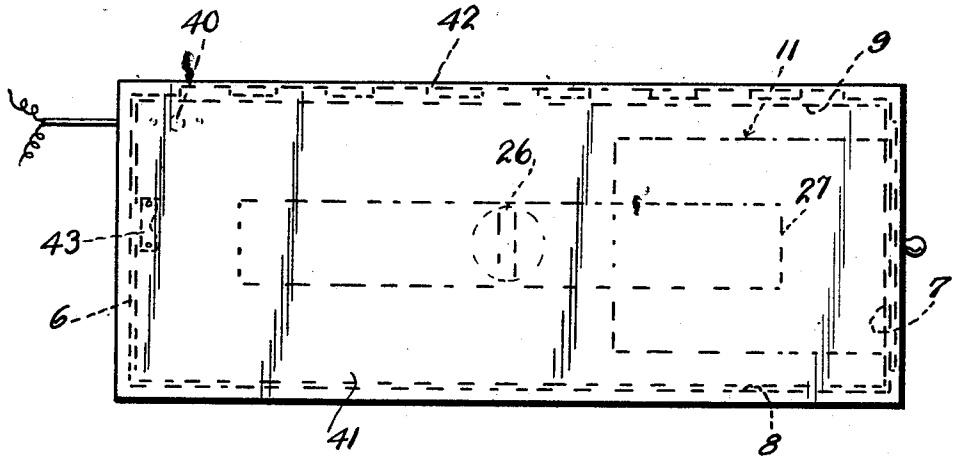
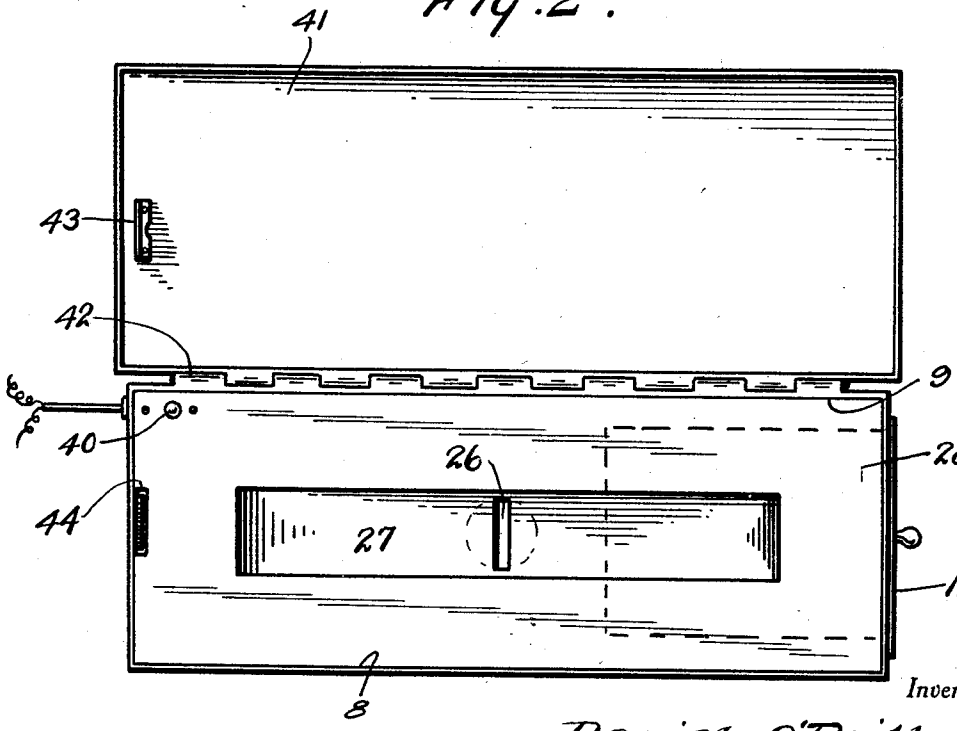


Fig. 2.



Inventors

Daniel O'Reilly

Joseph Howe

By Clarence A. O'Brien

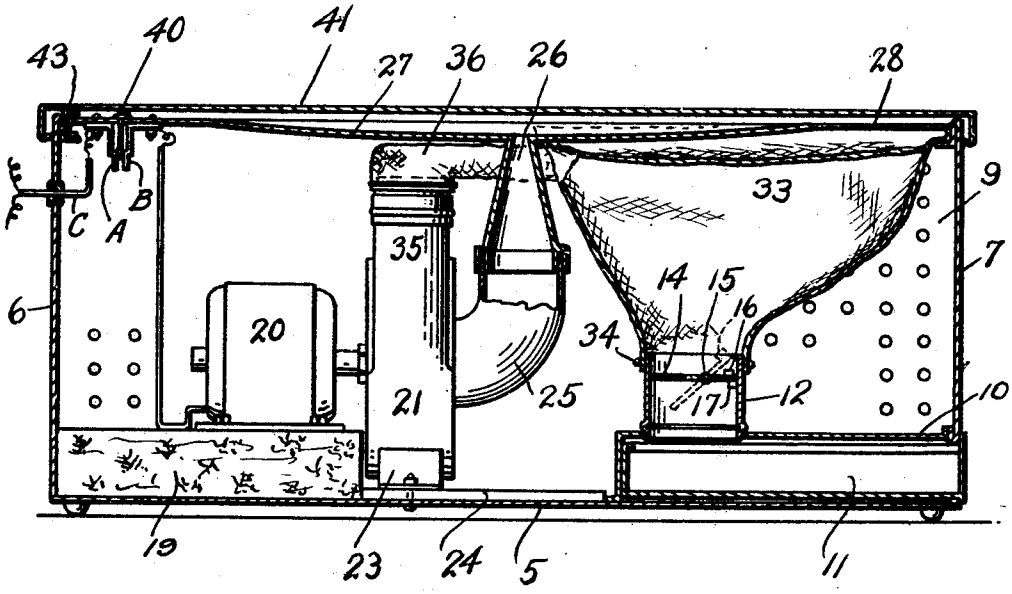
Attorney

Nov. 3, 1931. D. O'REILLY ET AL 1,830,129

APPARATUS FOR CLEANING BLACKBOARD ERASERS

Original Filed Feb. 19, 1929 2 Sheets-Sheet 2

Fig. 3.



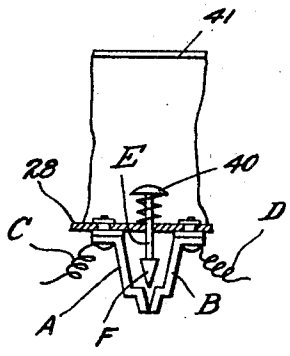
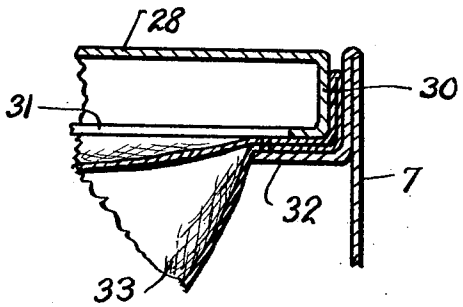


Fig. 5.

Fig. 4.



Inventors

Daniel O'Reilly

Joseph Howe

By Clarence A. O'Brien

Attorney

Patented Nov. 3, 1931 1,830,129

UNITED STATES PATENT OFFICE

DANIEL O'REILLY AND JOSEPH HOWE, OF WATERBURY, CONNECTICUT

APPARATUS FOR CLEANING BLACKBOARD ERASERS

Application filed February 19, 1929, Serial No. 341,133. Renewed September 23, 1931.

The present invention relates to an apparatus for cleaning blackboard erasers and has for its prime object to provide an apparatus of this nature whereby the chalk dust may be efficiently cleaned from erasers without creating dust in the air.

Another very important object of the invention resides in the provision of an apparatus of this nature which is sanitary, strong and durable, simple in its construction, reliable in its operation, compact and convenient in its arrangement of parts, and otherwise well adapted to the purpose for which it is designed.

With the above and numerous other objects in view as will appear as the description proceeds, the invention resides in certain novel features of construction, and in the combination and arrangement of parts as will be hereinafter more fully described and claimed.

In the drawings:

Figure 1 is a top plan view of the apparatus,

Figure 2 is another top plan view showing the cover open,

Figure 3 is a longitudinal vertical section through the apparatus.

Figure 4 is an enlarged detail vertical section taken at one end of the apparatus, showing the manner in which the bag is held in place.

Figure 5 is a detail view showing the cover controlled switch.

Referring to the drawings in detail it will be seen that we provide a casing preferably formed of sheet metal to include a bottom 5, ends 6 and 7, and sides 8 and 9. The walls 6, 7 and 8 are imperforate while the wall 9 is perforated. A drawer housing 10 is constructed in the casing on the bottom 5 extending inwardly from the wall 7 and a drawer 11 is slidable therein being inserted through an opening in the bottom of the wall 7.

A tube 12 rises from the housing 10 and has a pivotally mounted plate valve 14 mounted therein being pivoted off center as at 15 intermediate its ends and having a weight 16 to normally hold the same in a closed position against a stop 17. Thus when a predetermined weight is disposed on top of the valve plate such as chalk dust or the like, said valve plate will tilt to the dotted line position shown in Figure 5 for the purpose of dumping the material collected thereon into the drawer 11.

A block of wood or other insulating material 19 is mounted on the bottom 5 adjacent the wall 6 and supports an electric motor 20 with which is operatively connected a fan 21 supported by a suitable bracket 23 on a block 24 resting on the bottom 5.

An inlet elbow 25 is directed upwardly from the fan 21 and has connected thereto a funnel 26 tapering upwardly and merging into the center of trough 27 formed in a panel 28. This trough 27 is of elongated construction being deepest at its center where it merges into the funnel 26 and gradually growing shallower toward its ends. This panel is provided at its edges with a downturned wall 30 merging into an inturned flange 31 for resting on inwardly directed flange 32 merging from the top edges of the walls of the casing.

A bag of fabric or the like 33 is held in place by the panel 28 between walls 30 and flanges 31 holding the portions of the bag against or on flange 32. An opening in the bottom of the bag receives the upper end of the tube 12 and is anchored thereon by suitable means 34. The outlet branch 35 of the fan 21 has a fabric tube 36 leading therefrom and communicating with the bag 33.

The motor 20 is controlled by a push button switch 40 in the panel 28. As illustrated to advantage in Figure 5 of the drawings, the switch 40 includes a pair of resilient contact arms A and B rigidly secured to the panel 28 and depending therefrom and to which the conductor wires C and D are respectively connected. The wire C is from a suitable source of electric current supply and the wire D goes to the motor 20. A spring controlled headed rod E is mounted for reciprocation through the panel 28 and has a wedge-shaped end portion F on its lower end adapted to be forced between the contacting ends of the arms A and B in a manner to spread same and break the electric circuit to the motor 20. A cover 41 is hinged-

ly mounted as at 42 to the upper edge of the perforated wall 9 and when closed is adapted to engage the rod E of the switch 40 and force the element F between arms A and B for holding the switch open with the motor off. When the cover is open, the spring withdraws the wedge F from between the arms A and B and the switch is closed and the motor 20 is energized.

A stop or rest bracket 43 is mounted on the top or lid 41 and is adapted to project through a slot 44 provided in the panel 28 to abut the flange 32 thereby preventing injury to the push button switch.

From the above detailed description, it will be seen that when the lid or cover is open the fan 21 is in operation so that erasers may be run to and fro in the trough runway 27 in a manner to cause the particles of dust to be loosened from the erasers and to be sucked into the funnel 26, passed through the fan and deposited in the bag 33 through which the air will escape and finally escape through the perforations of the wall 9.

When a predetermined amount of the chalk dust has settled on the trap or plate valve 14 the same will tilt to deposit said dust in the drawer 11. Obviously this drawer 11 should be emptied at certain periods depending, of course, upon how frequently the apparatus is used.

It is thought that the construction, utility and advantages have been disclosed in considerable detail merely for the purposes of exemplification since in actual practice it attains the features enumerated as desirable in the statement of the invention and the above description.

It will be apparent that changes in the details of construction, and in the combination and arrangement of parts may be resorted to without departing from the spirit or scope of the invention as hereinafter claimed or sacrificing any of its advantages.

Having thus described our invention, what we claim as new is:

1. An apparatus of the class described including a casing, a motor operated suction fan in the casing, a funnel connected with the inlet thereof, a panel in the casing and having a trough therein with which the funnel is connected, a bag connected with the exhaust of the suction fan, means for supporting the bag in the casing, a housing in the casing, a drawer slidable in the housing, a tube rising from the housing, said bag being connected with said tube, a trap valve in the tube to be tripped when a predetermined amount of chalk has been deposited thereon.

2. An apparatus of the class described including a casing, a motor operated suction fan in the casing, a funnel connected with the inlet thereof, a panel in the casing and having a trough therein with which the funnel is connected, a bag connected with the exhaust of the suction fan, means for supporting the bag in the casing, a housing in the casing, a drawer slidable in the housing, a tube rising from the housing, said bag being connected with said tube, a trap valve in the tube to be tripped when a predetermined amount of chalk has been deposited thereon, a cover hingedly mounted on the casing, a push button switch for controlling the motor of the fan and mounted in the panel to be actuated to a circuit opening position when the cover is closed.

3. An apparatus of the class described including a casing, a motor operated suction fan in the casing, a funnel connected with the inlet thereof, a panel in the casing and having a trough therein with which the funnel is connected, a bag connected with the exhaust of the suction fan, means for supporting the bag in the casing, a housing in the casing, a drawer slidable in the housing, a tube rising from the housing, said bag being connected with said tube, a trap valve in the tube to be tripped when a predetermined amount of chalk has been deposited thereon, a cover hingedly mounted on the casing, a push button switch for controlling the motor of the fan and mounted in the panel to be actuated to a circuit opening position when the cover is closed, one wall of the casing being perforated.

In testimony whereof we affix our signatures.

DANIEL O'REILLY.
JOSEPH HOWE.