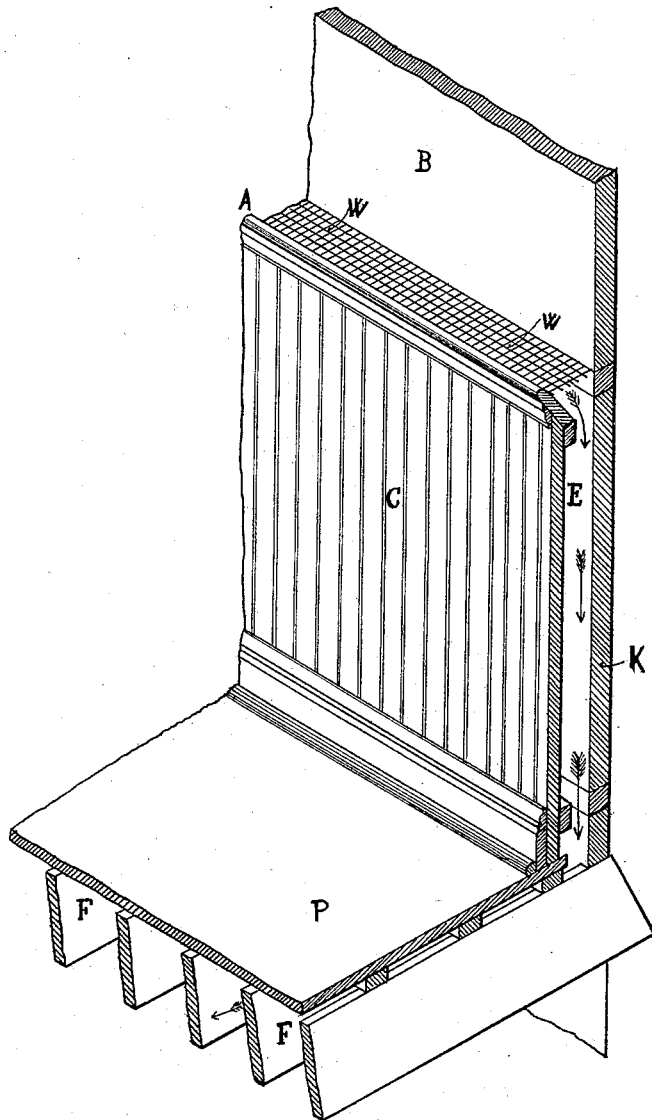


(No Model.)

C. W. BOWRON.
CHALK TROUGH FOR BLACKBOARDS.

No. 417,769.

Patented Dec. 24, 1889.



Witnesses
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CHALK-TROUGH FOR BLACKBOARDS.

SPECIFICATION forming part of Letters Patent No. 417,769, dated December 24, 1889.

Application filed January 24, 1889. Serial No. 297,449. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. BOWRON, a citizen of the United States, residing at Oshkosh, in the county of Winnebago and State of Wisconsin, have invented certain new and useful Improvements in Chalk-Troughs for Blackboards, of which the following is a description.

The object of my invention is to afford a positive escape from the room of the chalk-dust erased from blackboards, and which in the case of ordinary chalk-troughs accumulates in the trough or is diffused about the room and becomes a nuisance.

The principle of my invention consists in carrying away the chalk-dust by means of a current of air passing downward through the chalk-trough and outwardly from the room and into the foul-air ducts, such current being induced by the suction of the ventilating system. In order to accomplish this purpose and render the principle effective, my invention contemplates the construction of a chalk-trough having a wire-netting or perforated diaphragm extending along its length for receiving and retaining the crayons and the erasers, but through which the current of air and chalk-dust may freely pass. The chalk-trough is provided with an aperture below the wire-netting diaphragm opening directly into an air-passage connecting with the ordinary foul-air ducts or ventilating system of the building. By this construction a continuous air-passage is secured through the chalk-trough and into the foul-air channels, and the current of air outwardly from the room, thus created through this continuous passage or connecting-passages by reason of the suction of the ventilating-draft, is calculated to carry off and dispose of the chalk-dust erased from the blackboard.

The principle involved in my invention of carrying the chalk-dust out of the room by means of an outward current of air through the chalk-trough can be applied in various ways, it being only essential to observe that the opening from the chalk-trough into the foul-air or ventilating passages be made below the wire-netting or perforated diaphragm, serving as a receiver for the crayons and erasers.

The figure gives a perspective sectional

view of the chalk-trough and one mode of connecting it with the foul-air ducts so as to create the current of air through it outwardly from the room.

B represents the blackboard.

A is the chalk-trough extending along the lower edge of the blackboard.

W is the wire screen or perforated diaphragm in the chalk-trough, extending the entire length of the trough and serving as a receiver for the crayons and erasers, but allowing the chalk-dust to pass through it.

C is the wainscoting furred off from the wall Z, so as to provide an air-passage E below the trough, directly into which the chalk-trough opens.

P is the floor of the room furred up from the joists P P.

F F are the air-spaces under the floor, connecting with the said passage E.

In this construction it will be seen that the space in the chalk-trough under the screen-diaphragm opens into the air-passage E, and the air-passage E opens into the space under the floor. It is evident that by an opening connecting the space under the floor with the ventilating-shaft or any passages leading to the ventilating system of the building a current of air is induced through the wire-netting W downward through the chalk-trough or its equivalent and along the passage E to the space under the floor, as shown by the arrows.

Where blackboards extend around the room in sections, each section of the trough may be connected with the space under the floor, as shown in the figure, and the space under the floor can open at any given point into the ventilating shaft or passages leading to the ventilating system, thus inducing an outward current of air through all sections of the chalk-trough alike.

While I have shown in the drawing my invention as connected with a ventilating system wherein the air is drawn from the room into the space under the floor, it will be readily understood that I do not limit myself to any particular system of ventilation, it only being necessary, in order to obtain the benefit of my invention, that the chalk-trough be openly connected below the wire-netting diaphragm with the ventilating or foul-air chan-

nels by suitable passages, so that a current of air will be induced by the suction of the ventilating system outwardly from the room and downwardly through the wire-netting or perforated diaphragm of the chalk-trough for the purpose of carrying away the chalk-dust.

What I claim, and desire to secure by Letters Patent, is—

1. The chalk-trough having a perforated diaphragm, in combination with an air-passage opening from said trough below the diaphragm and connecting the trough with the

ventilating system of the building, substantially as set forth.

2. The combination of chalk-trough A, having perforated diaphragm W, with passage E, formed behind the wainscoting and connecting the space in the trough below the diaphragm with the ventilating system of the building, substantially as set forth.

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Witnesses:

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