

W. L. McDOWELL.
Hot Air Register and Evaporator.

No. 206,890.

Patented Aug. 13, 1878.

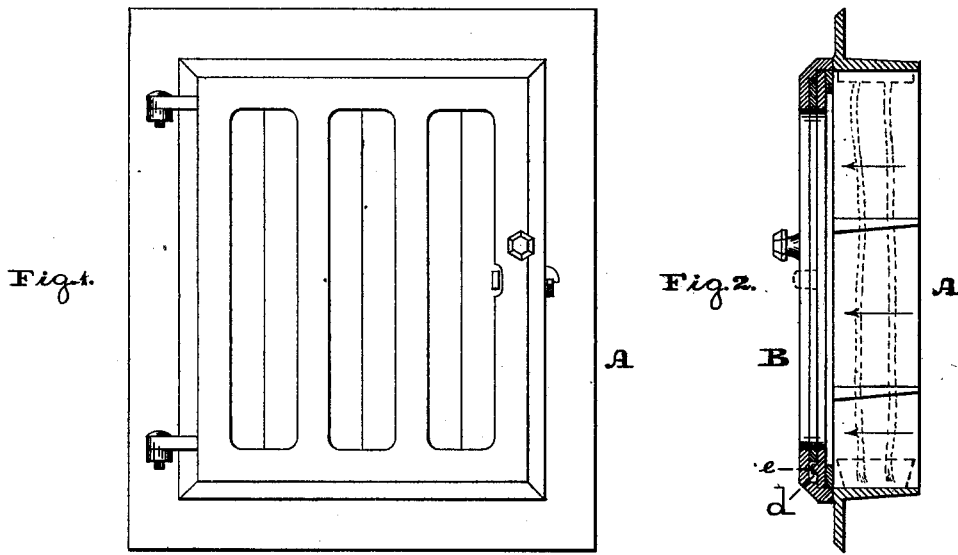


Fig. 3.

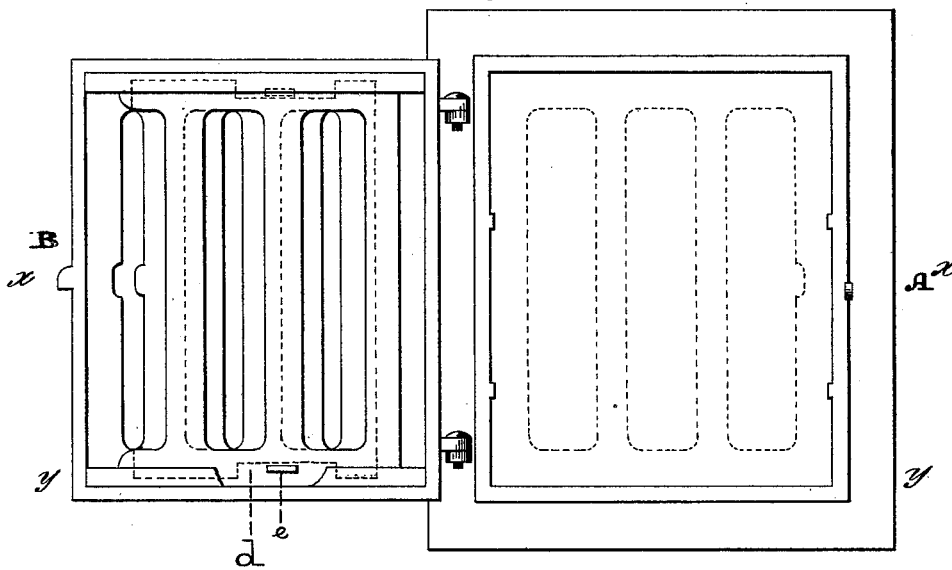
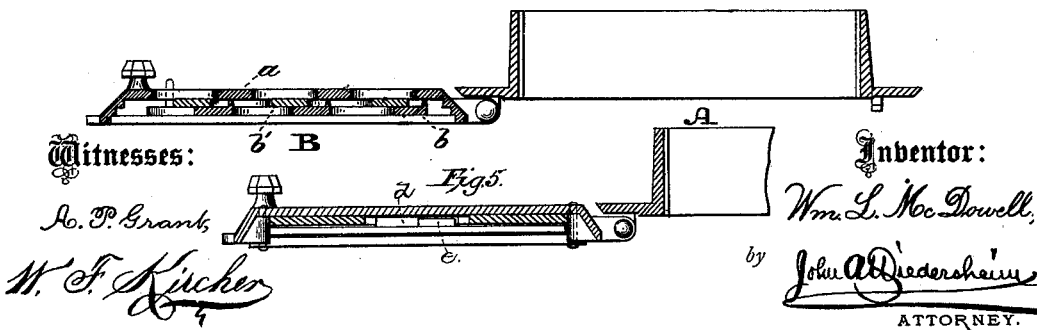


Fig. 4.



UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN HOT-AIR REGISTERS AND EVAPORATORS.

Specification forming part of Letters Patent No. 206,890, dated August 13, 1878; application filed March 14, 1878.

To all whom it may concern:

Be it known that I, WILLIAM L. McDOWELL, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Registers and Evaporators, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a front view of the register embodying my invention. Fig. 2 is a vertical central section of Fig. 1. Fig. 3 is a front view of the register open. Fig. 4 is a horizontal section of Fig. 3 in line *x x*. Fig. 5 is a horizontal section in the line *y y*, Fig. 3.

Similar letters of reference indicate corresponding parts in the several figures.

My invention relates to a register front or door in which the slots in a stationary plate are considerably wider than the divisions between the same, and over which two plates, likewise slotted, are arranged to slide in such manner that by the contact of a lug upon one plate with the corner of a notch in the other the two may successively be brought into operation, and the slots of the stationary plate be either closed by the divisions of the two sliding plates or by a reverse movement. The divisions of the sliding plates may be brought over the divisions of the stationary plate, whereby slots of considerable width and narrow divisions may be successfully employed, thus giving large openings for the passage of heated air when desired.

Referring to the drawings, A represents a box, which is to be set in the wall, floor, or other place adapted for the register. To the outer face of the box is connected the front B of the register, which is made movable, and in the present case is in the form of a hinged door; but it may have lateral or vertical sliding motions, the object being, in either case, the opening of said front, so as to entirely expose the box A and permit access thereinto.

The box provides a chamber or receptacle for an evaporator, or means of evaporation, which may consist of one or more pans or trays of water, suitable pieces or strips of wick, or other absorbent material, dipping into water, a wheel of absorbent material partially rotating in water, and operated by the heat passing out of the register, or other mechan-

ism, to which access will be had by the opening front of the register for application or removal of the evaporator, replenishing of water or absorbent material, and other purposes.

By means of the evaporator the hot air directed into an apartment will pass over or through wet surfaces, and it will be moistened, modified, and improved, as is evident.

Owing to the location of the evaporator or means of evaporation within the space of a register, the objectionable features of exterior evaporations are obviated.

The front of the register consists of a slotted plate, *a*, to which are fitted, in suitable guides, two or more sliding slotted plates, *b' b*, one of which is slotted or notched at top or bottom, or both, as at *d*, into which notch projects a pin or lug, *e*, at the relative portion of the other plate.

When the sliding plates *b' b* are back or in to their full extent the slots of the fixed plate *a* are uncovered, thus providing large outlets for the hot air. By withdrawing the slide *b* until the lug or pin *e* strikes the wall of the slot or notch *d* said slide covers, say, one-half of the width of the slots of the plate *a*, thus decreasing the extent of outlet of hot air. By continuing the movement of the slide *b*, the slide *b'*, owing to the contact of the lug or pin *e* with the wall of the slot or notch *d*, advances with the slide *b*, thus completely closing the openings of the plate *a* and entirely shutting off the heat.

By this construction the openings of the front plate, *a*, are larger than usual in registers of a given or similar size, and the greatest quantity of heat may be discharged from the register, and by successively bringing the slides *b b'* into service the adjustment of the register may be readily and nicely accomplished, it being noticed that it requires the extension of the two slides *b b'* to cover each slot of the plate *a*.

I am aware that sliding doors for stoves have heretofore been made in sliding sections, one operated by the other, and I therefore lay no claim to such invention.

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

1. In a register, the combination, with the

box A and door *a*, having wide slots and narrow divisions between the same, of the sliding plate *b*, having recess *d*, and sliding plate *b'*, having lug *e*, whereby, by the movement of one of the sliding plates, the other will be operated to close, or partly close, the slots, or both sliding plates may be brought under the divisions in the door to leave the slots entirely open, as described.

2. In a register, the combination, with the

box A and door *a*, constructed as set forth, of the sliding plates *b b'*, respectively formed with a lug *e*, and recess *d*, and an inclosed evaporator, substantially as described, and for the purpose set forth.

WILLIAM L. McDOWELL.

Witnesses:

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