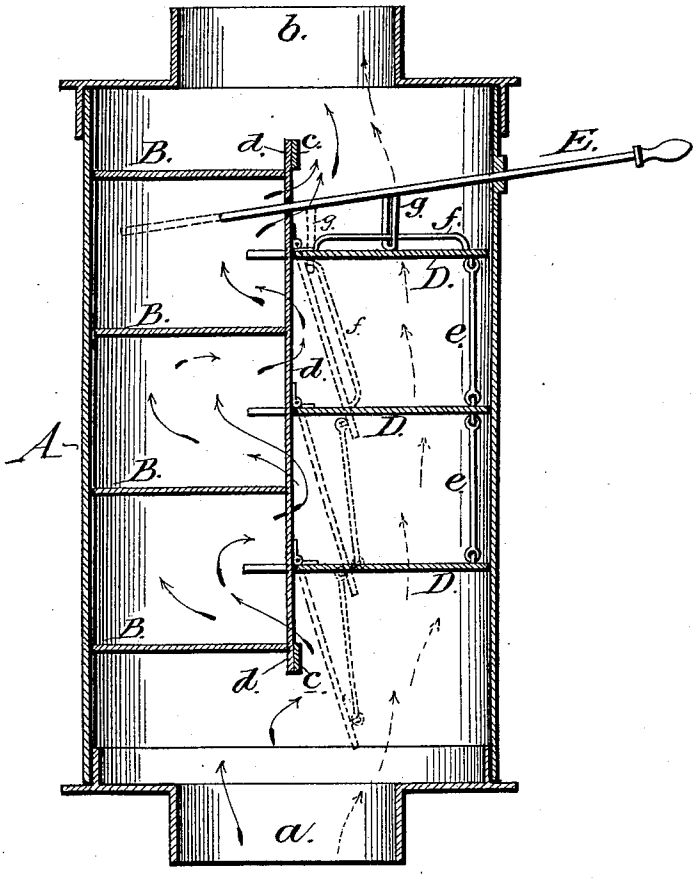
(No Model.)

C. J. & J. P. EVANS.

HEATING DRUM.

No. 390,119. Patented Sept. 25, 1888.



WITNESSES

P. W. Fowler

W. H. Patterson

INVENTOR

Charles J. Evans

Jesse P. Evans

by A. H. Evans & Co

Attorneys

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

CHARLES J. EVANS AND JESSE P. EVANS, OF LAWLER, IOWA.

HEATING-DRUM.

SPECIFICATION forming part of Letters Patent No. 390,119, dated September 25, 1888.

Application filed December 6, 1887. Serial No. 257,111. (No model.)

To all whom it may concern:

Be it known that we, CHARLES J. EVANS and JESSE P. EVANS, citizens of the United States, residing at Lawler, in the county of Chickasaw and State of Iowa, have invented certain new and useful Improvements in Heating-Drums, of which the following is a full and clear description, reference being had to the accompanying drawing, forming part of this specification, in which the figure represents a sectional view of a heating-drum embodying our improvements.

Our invention relates to heating-drums placed in communication with a stove-pipe or other source of heat; and it consists in the improved construction and combination of devices, which we shall hereinafter fully describe and claim.

To enable others skilled in the art to make and use our invention, we will describe the same, and indicate the manner in which it is carried out.

In the said drawing, A represents the drum or cylinder, having the inlet *a* and outlet *b* in communication with the smoke and heat passage of a stove-pipe. Within the upper and lower portion of the drum is secured a transverse bar, *c*, to which is rigidly attached by any suitable means a vertical bar, *d*, located at or near the vertical center of the drum.

To the vertical bar *d* are rigidly secured any desired number of fixed plates, B, and on the vertical bar *d*, at points between these fixed plates, are secured other plates or dampers, D, as shown. These latter plates or dampers D have a pivoted or hinged connection with the central bar, and their outer ends are connected together by means of links *e*, pivoted thereto, so that all of the dampers may move in unison in opening and closing. The upper damper of the series is provided with a rod, *f*, and through the outer casing of the drum is passed, with a downward inclination, a damper-rod, E, provided with a slotted arm or lug, *g*, which engages the bar on the upper damper or plate. The free or inner end of the damper-rod is passed through a perforation or opening in the vertical bar, whereby said rod may have a free movement when operated from the outside.

In operating the rod E the arm or lug *g* serves as a cam to open and close the movable dampers, for it will be observed that when the rod is pushed in the lower end of said arm or lug bears directly against the top surface of the contiguous plate or damper and causes the same and the other dampers connected with it to close upon each other, as shown by dotted lines. In this position most of the products of combustion pass through the drum without obstruction, and therefore may pass to another drum on the same pipe or through the chimney.

When it is desired to temporarily hold the products of combustion within the drum, the operator pulls the damper-rod out, which movement, through the medium of the lug or arm *g* and rod *f*, raises all the dampers to a horizontal position, thereby obstructing the passage of the products of combustion and causing them to pass in an irregular or zig-zag course through the drum and between the fixed and movable plates or dampers, the inner ends of which overlap each other, so as to deflect or guide the escaping products. By thus passing the heat through the drum the outer casing of the latter and the fixed and movable plates are heated, thereby imparting additional heat to the room. When the room has been sufficiently heated, the dampers are opened, as before stated, and the heat permitted to readily pass through the drum.

A simple and convenient means is thus provided for heating the room with the heat which would otherwise be lost by escaping through the chimney into the open air.

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

The drum-casing having an inlet and outlet, a vertical bar fixed within said casing, and a series of fixed plates between said bar and one side of the casing, in combination with a series of plates pivoted or hinged to the vertical bar at points between the fixed plates, links pivotally secured to the outer ends of said movable plates, a rod, *f*, on the upper movable plate, and an inclined rod passing through one side of the casing and the vertical bar, said rod having a slotted arm engaging the rod *f* and upper plate, whereby the series of movable plates are operated, substantially as described.

CHARLES J. EVANS.
JESSE P. EVANS.

Witnesses:
M. J. CLARY,
E. J. CLARY.