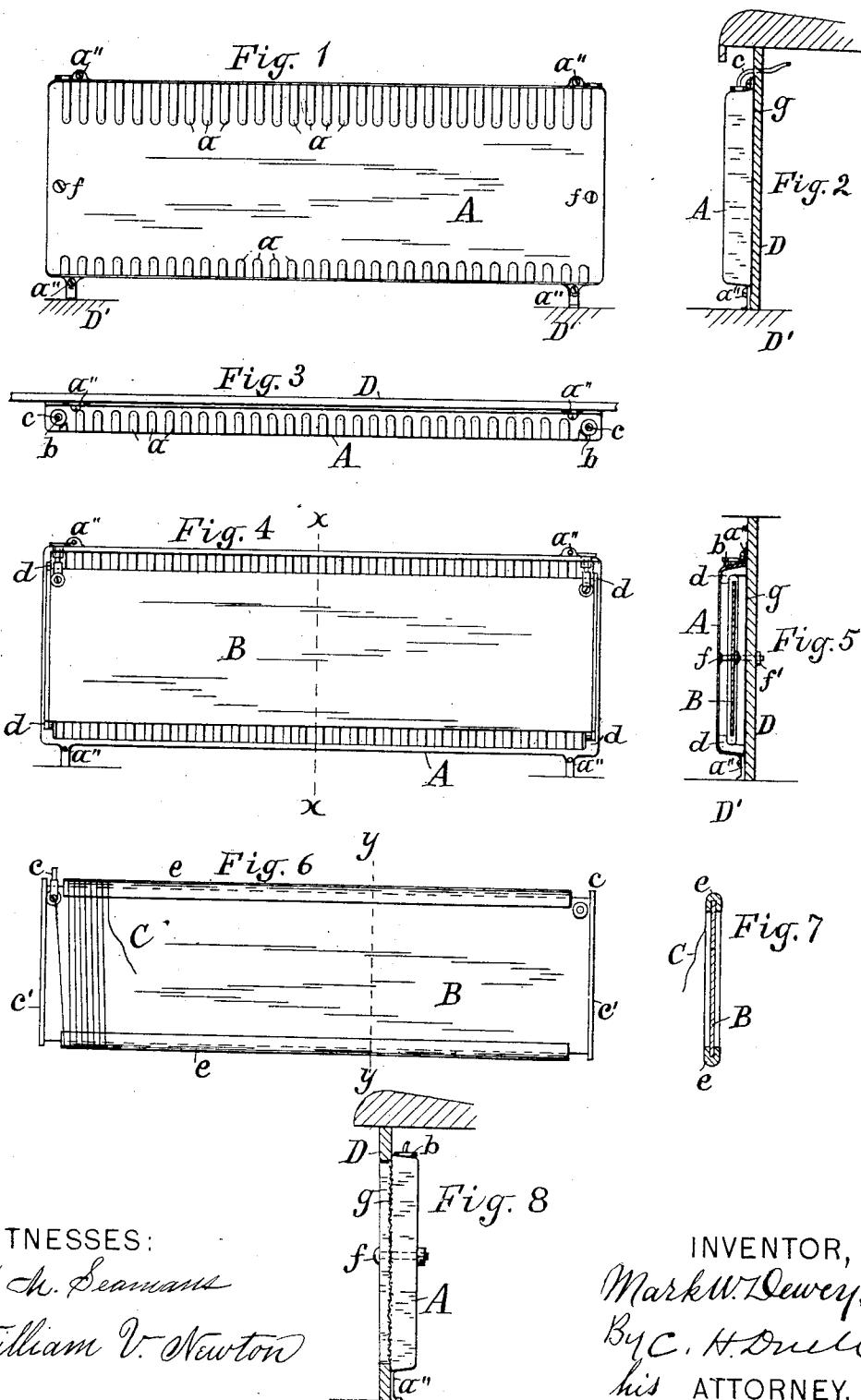


(No Model.)

M. W. DEWEY.
ELECTRIC HEATING APPARATUS.

No. 535,363.

Patented Mar. 12, 1895.



WITNESSES:

H. M. Seamans

William V. Newton

INVENTOR,

Mark W. Dewey,

By C. H. Drull
his ATTORNEY,

UNITED STATES PATENT OFFICE.

MARK W. DEWEY, OF SYRACUSE, NEW YORK, ASSIGNOR TO THE DEWEY
ELECTRIC HEATING COMPANY, OF SAME PLACE.

ELECTRIC HEATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 535,363, dated March 12, 1895.

Application filed March 12, 1894. Serial No. 503,244. (No model.)

To all whom it may concern:

Be it known that I, MARK W. DEWEY, a citizen of the United States, residing at Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Electric Heating Apparatus, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to electric heating apparatus similar to that disclosed in my United States Letters Patent No. 494,291, dated March 28, 1893, and consists in certain improvements in such heating apparatus.

The object of my present invention is to simplify and cheapen electric car heaters and base heaters and to overcome several objections made to them.

In my patent above referred to, the case was made in two parts and was divided vertically and longitudinally through its center and each part of the case had two legs projecting beyond the sides of the case. This was objectionable for the reason that the heater could not be placed close to the paneled board without cutting it, and when the car floor was cleaned, the dirt could not easily be removed around these legs where it accumulated and was often allowed to remain because it took too much time to clean around them. When the dirt was allowed to remain the interior of the car was unsightly and odious.

To this end my invention consists in certain combinations of parts hereinafter described and specifically set forth in the claims.

In the drawings accompanying and forming part of this specification, Figure 1 is a side elevation of my complete heater. Fig. 2 is an end view thereof. Fig. 3 is a top plan view. Fig. 4 is the opposite side elevation with the wall or panel removed. Fig. 5 is a sectional view on line $x-x$ of Fig. 4. Fig. 6 is a side elevation of the support or plate for holding the wire or resistance conductor partly wound therewith. Fig. 7 is a vertical transverse section on line $-y-y-$ of Fig. 6, and Fig. 8 is a view of the heater placed on the inside of the panel.

Referring specifically to the drawings, A represents the case holding and inclosing the

plate or support B for the wire or resistance conductor C wound thereon. This case has preferably a square or rectangular shaped front-side and has its entire end portions, and its top and bottom integral with the side or, in other words, the side, ends, top and bottom are made in one piece. The case has perforations or slots a, a , &c., in its top and bottom and extending preferably to and in its side to allow the air to circulate freely therethrough.

D is the wall or partition, which may be the paneled board beneath the seats in a street car, against and upon which the heater is fastened or secured, and a'', a'' , are projections on the top and bottom of the heater case through which screws or bolts extend to secure the case to the said wall or panel D. The projections a'', a'' on the bottom preferably extend to the floor D', but lie against the wall so that they will not interfere with cleansing the floor. The lower projections serve as guides in placing the heater in position a proper distance above the floor and also help to support it. In the top of the case, at each end thereof is an aperture b with an insulating bushing as porcelain therein for the supply conductors or terminals c to enter. When the case is not made of metal but of some insulating material or is covered with insulating material these bushings will not, of course, be required.

B is the plate or support in the case A around which the resistance conductor C is wound. The plate is supported centrally and longitudinally within the case upon and against shoulders or projections d in each corner of the case. In order to secure the plate or support in position within the case, a bolt f is inserted at each end of the case through the side thereof and through the ends of the support.

The plate or support B is preferably made of metal and provided with porcelain saddles on its edges to insulate the resistance conductor from the plate. The ends of the plate B are provided with pieces or flanges c' extending at right angles to the plate to strengthen it.

The supply conductors c are preferably led through the panel to and through the bushings in the top of the heater case as shown in Fig. 2 of the drawings.

Instead of securing the case to the wall or

partition by the projections a'' , they may be dispensed with, at least those on the top, and the bolts f, f , made long enough to reach through the partition and have nuts f' on their ends as shown in Fig. 5 of the drawings. When it is preferred, the heater may be secured to the opposite side of the partition or paneled board beneath the car seat and the panel removed to allow the heated air to pass into the body of the car freely from the heater as shown in Fig. 8 of the drawings.

A wire screen g or netting may be substituted for the panel, or be placed between the heater case and the partition to cover the aperture.

When the heater is on the front of the paneled board as shown in Figs. 2 and 5, a screen g of tin or zinc may be placed between the heater case and the board D to act as a deflector of heat and to protect the wood.

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

1. An electric heater, comprising a suitable plate or support, a resistance conductor wound on said plate or support, and an inclosing case

provided with exterior fastening devices and with interior supports, curving over the top and bottom of the plate, whereby the heater is supported, with an air space surrounding the same, said case being perforated to allow free circulation of air and open at the back to permit said heater being secured in close proximity to a wall or support.

2. An electric heater, comprising a plate or support, a resistance conductor wound thereon, an inclosing case provided with exterior fastening devices and with interior shoulders curving over the top and bottom and adapted to support the heater centrally, with a surrounding air space, said case being perforated to allow free circulation of air and open at the back to permit said heater being secured in close proximity to a wall or other support, and means securing the heater to the case, substantially as specified.

In testimony whereof I have hereunto signed my name.

MARK W. DEWEY. [L. S.]

Witnesses:

H. M. SEAMANS,

WILLIAM V. NEWTON.