

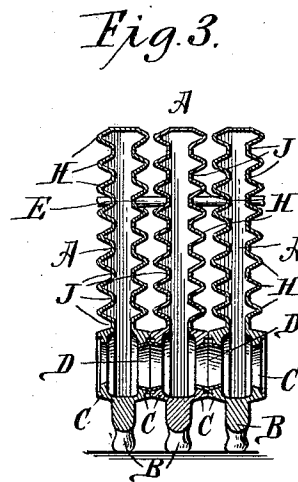
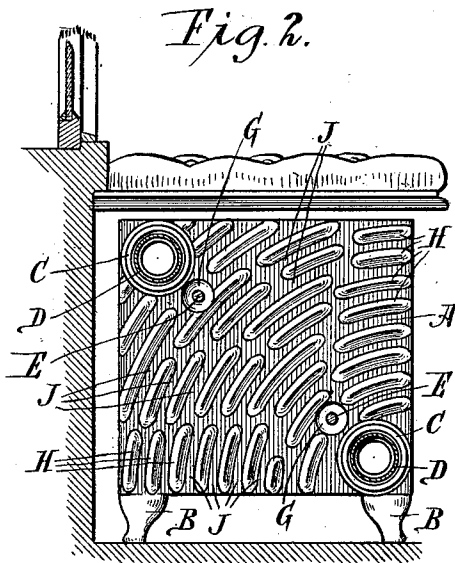
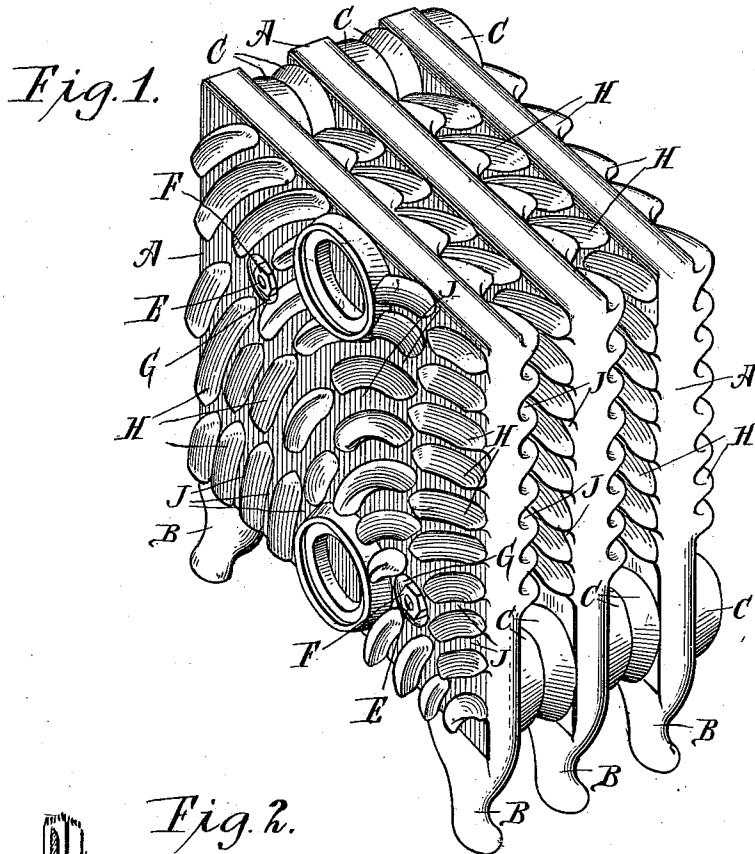
W. C. McKEOWN.

RADIATOR.

APPLICATION FILED JUNE 30, 1910.

1,008,844.

Patented Nov. 14, 1911.



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UNITED STATES PATENT OFFICE.

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RADIATOR.

1,008,844.

Specification of Letters Patent.

Patented Nov. 14, 1911.

Application filed June 30, 1910. Serial No. 569,778.

To all whom it may concern:

Be it known that I, WILLIAM C. McKEOWN, a citizen of the United States, and resident of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Radiators, of which the following is a specification.

My invention relates to improvements in radiators and the leading object of my invention is the provision of an improved form of radiator for insuring the more complete circulation of the heated air throughout the entire room.

A further object of the invention is the provision of an improved radiator especially adapted for use in confined spaces where there are but limited facilities for circulation, such as under a window seat or in like position, which radiator is provided with means for deflecting and dividing the air currents in order that they may more readily pass out into the room.

Another object of the invention is the provision of a radiator so constructed as to provide a maximum surface for radiation of heat, said result being attained through the provision on the main portions of the radiator of a series of hollow projections or offsets in communication with the interior of the radiator, and which shall have said portions so arranged as to be contacted with by the air currents and shall deflect the same into the space to be heated.

To attain the objects of my invention, it comprises a radiator having laterally projecting curved offsets formed thereon and arranged in staggering relation with respect to each other, the invention further residing in the novel features of construction and combination and arrangement of parts substantially as described and as illustrated in the accompanying drawings.

Figure 1 represents a perspective view of a series of radiator sections secured together in operative position and each constructed in accordance with and embodying the principles of my invention. Fig. 2 represents an end elevation of one of my radiators in position below a window seat, and Fig. 3 represents a vertical sectional view taken through a series of my radiator sections.

I have employed the reference character A to designate the main or body portion of each radiator section, said sections A being

provided with supporting legs B and having at the lower front corner and at the diagonally opposite upper rear corner the connecting ports C in which are engaged nipples D, the purpose of which arrangement will be hereinafter disclosed. Passing through and securing said sections together are the brace rods E having nuts F engaged on their ends, said nuts lying flush with the surface of the radiator and being held in recesses G formed therein.

By reference to the drawings it will be seen that the sides of the radiator sections A in place of being plane or straight are provided with a series of curved offset portions or segmental ribs H arranged in zig-zag or staggered position with reference to each other, and said portions H being hollow, will be filled with the hot water or steam in the radiators and thus provide an increased radiation surface for heating the surrounding air. These offset portions or ribs are arranged in upwardly and forwardly extending groups, the ribs being spaced from one another with the ribs of each group staggered with respect to those of the adjacent group or groups. In addition, however, to providing an increased radiation surface said portions H serve as guides to direct the flow of the current of heated air, and as most clearly shown in Fig. 2, the position of the ribs and their curvature is such that air rising at the base in the rear of the radiator will pursue a zig-zag forward and upward course and will pass from the radiator at or near the front thereof in substantially a horizontal plane, thus being directed out into the room and serving to entirely heat the same instead of merely heating the walls and passing up therealong as is the case with the common forms of radiators now in use.

From the foregoing description taken in connection with the drawings the construction and operation of my improved radiator will be readily understood and its advantages fully appreciated and it will be seen that the projections on the adjacent sections being similarly disposed, they include therebetween the practically inclosed spaces or passages J along which the air passes and which direct the air forward, and it will further be observed that the staggered position of the projections serves to break up or divide the various currents to insure

the same coming into contact with and being thoroughly heated by the radiator, this also serving to expedite the circulation around the radiator, since the small portions of air to be heated will both be heated more thoroughly and will circulate with greater rapidity than the large masses which now contact with radiators at their sides. Moreover, by arranging the connecting parts C at diagonally opposite corners, little or no obstruction is offered to the circulation of air between the sections, as is the case in radiators of this type now in use where such connecting parts are arranged centrally at the upper and lower ends of the sections.

Having thus described my invention what I claim is,—

A radiator comprising a plurality of vertical sections arranged side by side, each section being formed with a plurality of groups of upwardly and forwardly extending ribs spaced from one another, the ribs of each group being staggered with respect to the ribs of the adjacent group, causing the circulating currents to pursue a zig-zag course upwardly and forwardly with respect to said radiator sections.

In testimony whereof, I have affixed my signature in the presence of two subscribing witnesses.

WILLIAM C. McKEOWN.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."