(No Model.)

S. E. RHODES.

RADIATOR.

No. 381,955. Patented May 1, 1888.

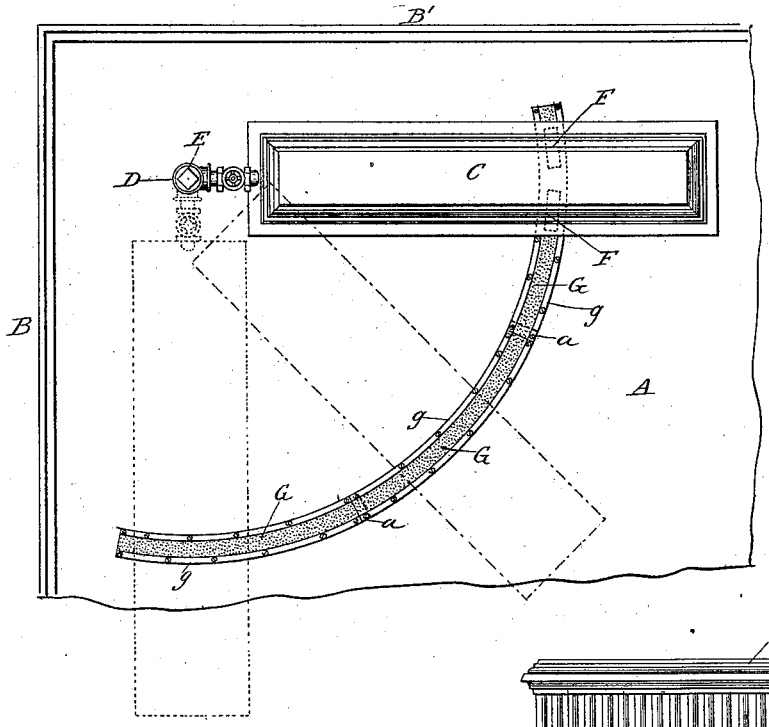

Fig. 1.

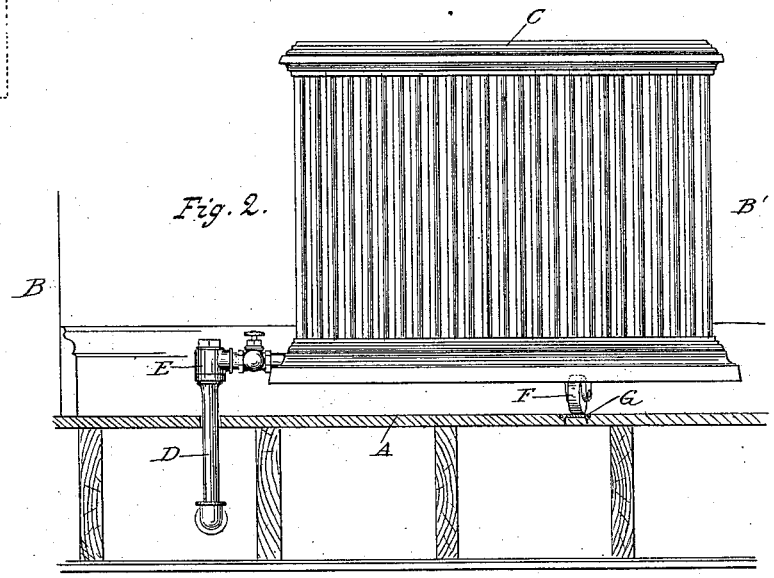

Fig. 2.

Witnesses:
Edmund G. Rawson.
Charles Seward.

Stephen E. Rhodes,
Inventor.
by his Attys
Alex. Bell & Cooke

UNITED STATES PATENT OFFICE.

STEPHEN E. RHODES, OF SARATOGA SPRINGS, NEW YORK, ASSIGNOR OF ONE-HALF TO EDMUND G. RAWSON, OF SAME PLACE.

RADIATOR.

SPECIFICATION forming part of Letters Patent No. 381,955, dated May 1, 1888.

Application filed October 18, 1887. Serial No. 252,708. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN E. RHODES, a citizen of the United States, residing at Saratoga Springs, in the county of Saratoga and State of New York, have invented a new and useful Improvement in Radiators, of which the following is a specification.

My invention relates to radiators which are connected at one end with the stationary steam-supply pipe or water-return pipe, or both, or with a single pipe which serves both as a steam and water pipe, by a swivel or flexible joint connection, and which has at its opposite end a supporting-wheel, one or more; and it consists in a certain improvement on a former invention made by myself, in which a segmental form of way secured to the floor of a room co-operates with the supporting wheel or wheels on the radiator and the swivel-joint or flexible-joint connection between the stationary pipe or pipes and radiator.

The objects of this invention are, first, to provide between a steam-radiator and a stationary pipe, for communicating to the same or leading water therefrom, a swivel or flexible joint, and, second, to provide, in combination with a radiator having a swivel-joint or flexible-joint connection with a stationary pipe for communicating with said radiator, and a wheel or wheels secured to the latter at a distance from said joint, of a fixed way at the floor of the room, which will operate to carry the movable end portion of the radiator steadily and smoothly, and thereby prevent the joint on which the radiator swings being in the least affected when the radiator is being moved or having its parts strained. I attain these objects by the means illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan view of a radiator having a swivel or flexible joint connection with a pipe communicating with said radiator, and supporting-wheels and a way. Fig. 2 is a side elevation of the same.

The same letters of reference refer to like parts throughout the several views.

In the drawings, A represents the floor of a room or apartment. B and B′ are the side walls thereof.

C is the radiator, which can be of any preferred form of construction known to the trade.

D is a stationary pipe for communicating steam to the radiator or leading water from the same, or for both; or two stationary pipes, one for steam and the other for water, can be employed.

E is a swivel or flexible joint connection between said pipe D and the radiator C; and F F are wheels or rollers attached in any suitable manner to the free end portion of said radiator, and preferably at a short distance from said end and toward the middle of length of the radiator, as shown.

I have found that in the movement of the free end of a radiator in either direction from its joint with the stationary pipe D over floors the uneven surfaces of the floor in the line the wheels will run will affect more or less the joint of the parts, and by leverage in some cases will induce a strain on parts of the joint-connection, while in cases where carpet is used on the floor the weight of the radiator will in a short time make indentations, from which the wheels or rollers must rise when the radiator is moved in either direction, and in this rising of the said wheels or rollers the radiator will have its free end lifted to a greater or less distance above the plane of the horizontal line on which the radiator will stand in its normal situation in the room, and this lifting affects the joint on which the radiator swings or turns to a greater or less extent. To obviate these results and remedy these defects, I employ with the radiator provided with the swivel or flexible joint and wheels or rollers a roller-way which will have a uniformly even surface, over which the wheels or rollers will travel in either direction from the general place of standing and on substantially the same horizontal plane, so that at all times the parts of the swivel or flexible connection between the stationary pipe and the radiator will be unaffected and free from strain or vertical leverage while the radiator is being moved or when standing out of its usual place in the apartment. For this purpose I employ the way G, made of any hard and relatively unyielding substance or material, such as iron or steel or bronze or other metal or alloy, or

any suitable composition which will sustain the weight of the radiator and will be unyielding under the weight and be free from liability of wearing rapidly or being indented by the weight on the rollers F. This way can be formed by molding or casting, or be struck up in form by any known manner or means. When made of metal, I prefer to make the way for said rollers with a roughened surface, as illustrated in Fig. 1, and with this way I prefer to make the border portion *g g* of such extension as to adapt it to receive screws (or nails) for attachment to the floor A, so that no screws or nails will be in the line of the track of the rollers F; but when in some cases—as where the wheels or rollers F have a wide face—nicely-fitting screws in countersunk holes in the track of the rollers can be used; yet preference is given to the screws applied to the borders *g g* of this way. When the radiator is of great length and of considerable weight, I would use two or more such ways, with two sets of rollers or wheels, one set being near the center of length of the radiator and the other between it and the free end of the same. In most cases I would make this way in sections of two or more pieces, with a lap-joint at the adjoining or neighboring ends, as indicated at *a* in Fig. 1. In wood-finished floors, where neither carpet, mattings, nor oil-cloth is used, I would let this way into the wood of the floor; but where carpet or the other covering is used on the floor I would place and secure this way on the same, and with the screws securing the same I would draw or sink as far as possible the body of this way into the fabric.

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

1. The combination, with a steam-radiator and a stationary pipe for communicating with said radiator, of a swivel-joint connection at or near one end of the radiator and between it and said pipe, so as to support one end of said radiator and allow the body of the latter to be turned horizontally in either direction, and a support to the opposite end of the same, substantially as and for the purposes set forth.

2. The combination, with a swivel or flexible joint connection, of a radiator which will support one end of the same and allow it to be moved horizontally in either direction, and a supporting wheel or roller, one or more, secured to the free end portion of said radiator, of a segmental way of hard or unyielding material and having a uniformly even roller-track surface, and secured to the floor in line corresponding with the line of track of said wheel or roller, substantially as and for the purposes set forth.

3. The combination, with a radiator which is pivoted or jointed with a stationary pipe, so as to be turned at will in either direction, of a supporting roller or wheel, one or more, secured to said radiator, and the way G, made with a uniformly even surface and of hard or relatively unyielding material, and secured to the floor in the line of the track of said roller, substantially as and for the purposes set forth.

4. The combination, with a radiator which has one end supported by a swivel or flexible joint-connection, so as to be turned or moved at will horizontally in either direction from said joint-connection, and which has its free end supported by wheels or rollers, of a segmental way made of a relatively unyielding material, and secured to the floor of the room on a line corresponding with the line of the track of the said supporting-wheels, substantially as and for the purposes set forth.

STEPHEN E. RHODES.

Witnesses:

ALEX. SELKIRK,

CHARLES SELKIRK.