T. A. STELLER.

ELECTRIC HEATING ATTACHMENT FOR RADIATORS.

APPLICATION FILED SEPT. 11, 1913.

1,124,548. Patented Jan. 12, 1915.

FIG. 1.

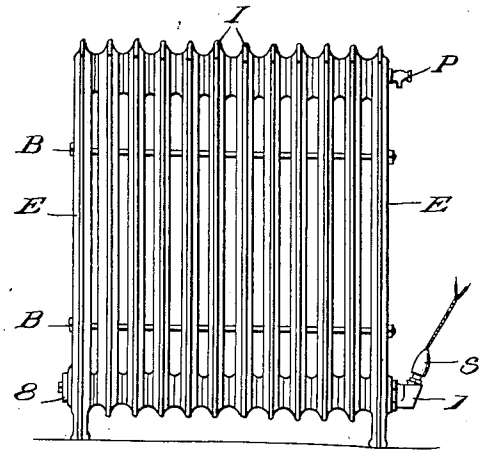
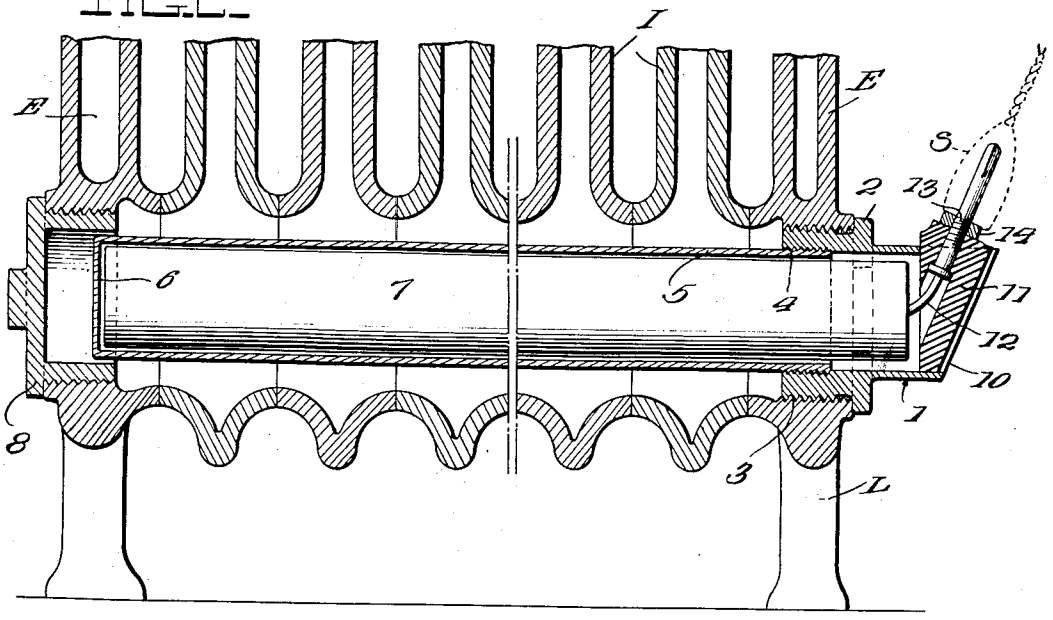


FIG. 2.



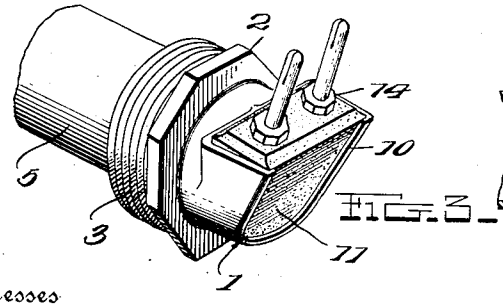


FIG. 3.

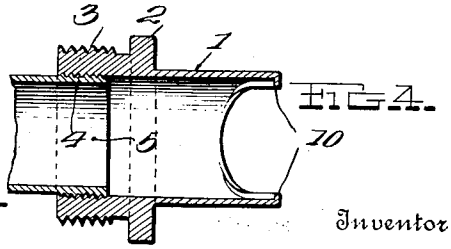


FIG. 4.

Witnesses

J. R. Pierce

C. Munker

Inventor

Theodore A. Steller.

By

H. B. Willson & Co.

Attorneys

UNITED STATES PATENT OFFICE.

THEODORE A. STELLER, OF HOUGHTON, MICHIGAN.

ELECTRIC HEATING ATTACHMENT FOR RADIATORS.

1,124,548. Specification of Letters Patent. Patented Jan. 12, 1915.

Application filed September 11, 1913. Serial No. 789,282.

To all whom it may concern:

Be it known that I, THEODORE A. STELLER, a citizen of the United States, residing at Houghton, in the county of Houghton and State of Michigan, have invented certain new and useful Improvements in Electric Heating Attachments for Radiators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to electric heaters, and more especially to radiators; and the object of the same is to produce an attachment which may be applied to any of the well known types of radiators now in use and employing steam or hot water or hot air.

To this end the invention consists in an attachment whose details are set forth in the following specification and are shown in the drawings wherein—

Figure 1 is a side elevation of a radiator equipped with this attachment; Fig. 2 is an enlarged vertical longitudinal section through the lower portion of a radiator so equipped; Fig. 3 is a perspective detail, and Fig. 4 is a horizontal section through the nipple and the inner end of the shell which contains the heater element.

In the drawings I have illustrated an ordinary hot water radiator comprising inner sections I and end sections E, the latter mounted on legs as usual and all the sections held together by bolts B, but I have shown the piping as disconnected from the radiator and this improved attachment as applied thereto. The gist of the present invention consists in the fact that if it be desired to install electricity as the heating means instead of steam, hot water, or hot air, it is only necessary to remove the pipes which lead to the radiator, close the opening at one end of the base of the same, and insert a nipple in the other end of said base, which nipple carries an ordinary electric heating element that can be bought in the market, and connect the poles of said heater element with a source of electricity. It will be understood of course that if the radiator is a large one, an attachment of this character could be inserted from each end thereof, but I have considered it necessary to show and describe only a single attachment in use.

Coming now to the details of the present invention, the numeral 1 designates a nipple or socket member having a shoulder 2 at about its midlength and inside said shoulder external threads 3 of a size to fit the threads in the end section E of the radiator and internal threads 4 of a size to fit a tubular casing 5 which is by preference closed at its inner end as at 6 and open at its outer end so that a heater element 7 such as may be bought in the open market may be inserted therein. This casing will be nearly as long as the radiator, and the rigid support by the threads 4 within the nipple 1 will hold the casing concentric with the openings throughout all the inner sections I so that its inner end 6 by preference stands near the remote end of the radiator where the end section E will in this case be closed by a plug 8 as best seen in Fig. 2. This plug 8 has the inner portion thereof designed hollow in construction as shown clearly in Fig. 2 of the drawing so that the same may loosely receive therein the inner end of the tubular casing 5 which supports the heating element. This member 8, therefore, performs a double function and may be termed a combined closure plug and supporting bushing. The nipple 1 therefore serves the function of a bushing and its shoulder 2 is by preference made angular on the exterior as shown in Fig. 1. Its exterior threads 3 are of standard pitch so that they engage the female threads within the end section E, the same as the nipple of the water or steam system now commonly employed with radiators. The outer end of this nipple is by preference cut off on an oblique line as shown and flanged as at 10, its upper side being left open for receiving a block 11 of insulating material, provided with suitable holes through which pass the terminals 12 of the heater 7. These terminals are threaded as at 13 to receive nuts 14 which when set up tight will hold the block 11 in place within the outer end of the nipple; and the points of the terminals may be suitably shaped to fit the holes in an electric socket S.

The casing 5 I would make of thin noncorrosive metal, and as above suggested it may be of such length as to reach nearly all

the way across an ordinary radiator or two of these attachments may be employed for a rather wide radiator. The various sections of the latter may be filled or partly filled with water which circulates around the exterior of the casing without coming in contact with the heating element. If steam heat is desired, but little water is used; if water heat is desired the radiator will be nearly filled; and in either case the pet cock P will preferably be left open to permit of expansion and contraction.

This attachment may be applied to radiators now in use in steam or hot water systems or to independent radiators, that is radiators not included in any heating system. The attachment should always be applied to the lower part of the radiator in order to obtain the best results so that the casing of the electric heat unit or element 7 will always be surrounded by water. In applying the device to the radiator now in use, it is only necessary to remove the plugs or pipes, as the case may be, from the lower portion of the radiator and screw in to the one threaded opening the nipple or socket member 1. In the other threaded opening from which a plug or pipe has been removed, is introduced the member 8 which, as stated above, may be termed a combined closure plug and supporting bushing. The electrical connection may then be made in the usual manner.

The device may be made of any length so as to extend a distance into the complete radiator sufficient to properly heat the water therein and it will be understood that if desired two smaller sections may be inserted in opposite ends of the same radiator.

In assembling the different parts of the attachment the casing 5 is screwed into the nipple or socket member 1, the heater element 7 is then inserted in the opposite end of the same and the insulation block 11 is dropped over the terminals 12. The nuts 13 are applied to hold the parts assembled. The casing member 5 is preferably detachably connected with the nipple or socket member 1 so that should it become worn out or should it leak a new one may be readily substituted.

At any time when the heater element becomes defective, it can readily be removed by slipping the socket S off the terminals and unscrewing the nuts 14 and then withdrawing the insulation block 11, after which the terminals may be grasped by hand and the element 7 drawn bodily out of the casing 5 through the open end of the nipple. Thus the particular construction of the latter which affords guides for the insulation block serves the function of holding the heater element removably in place.

I do not wish to be confined to the materials or proportions of parts, nor to exact details except as set forth in the following claim.

What is claimed as new is:

In an electric attachment for radiators, the combination with a body having alining threaded openings at the opposite ends thereof; of a nipple externally threaded for a portion of its length and engaged with a threaded opening at one end of said body, said nipple being open at both ends and having its inner end internally threaded, a tubular casing removably engaged at its one end with the internally threaded end of said nipple and extending to a point within the threaded opening at the opposite end of the body, a heating element carried within said casing and having its terminal projected beyond the outer open end of the nipple, and a combined closure plug and supporting bushing engaged with the threaded opening at the opposite end of the body and loosely receiving therein the free end of said tubular casing.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

THEODORE A. STELLER.

Witnesses:
J. A. GRIESBAUER,
JAMES E. SCHRIDER.