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J. W. STOKER & E. S. JONES.

SANITARY DIRT GUARD FOR HEATING PIPES.

APPLICATION FILED JAN. 22, 1908.

Fig. 1.

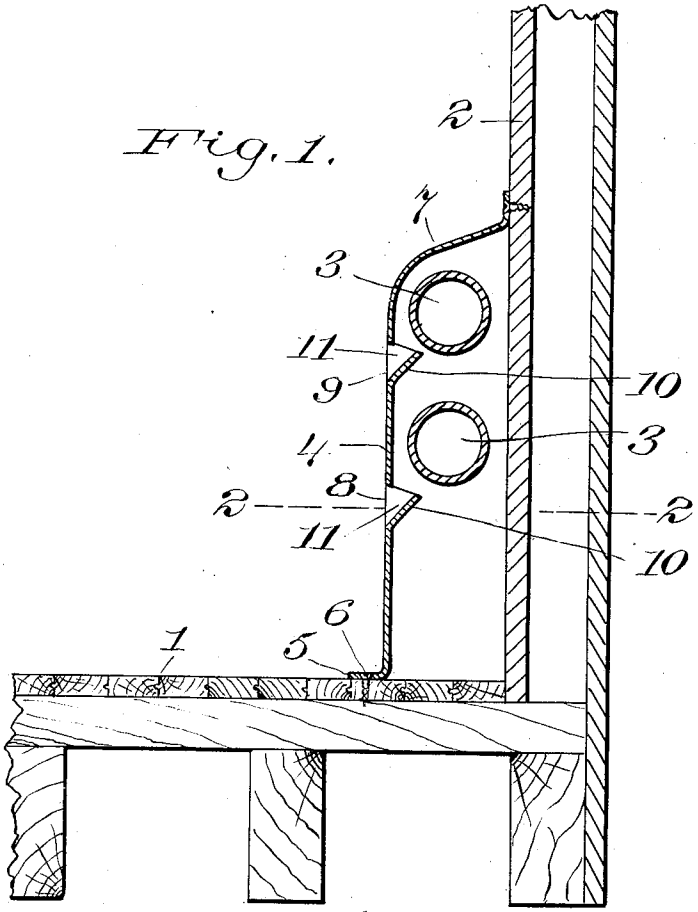


Fig. 2.

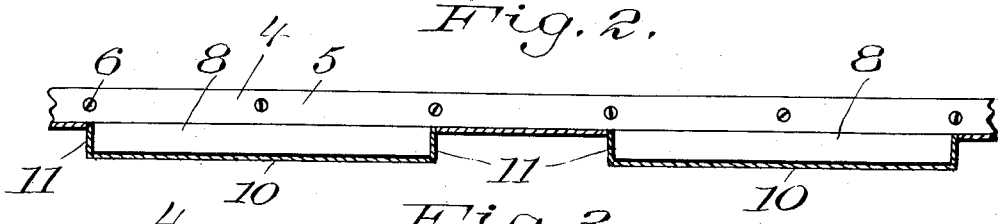
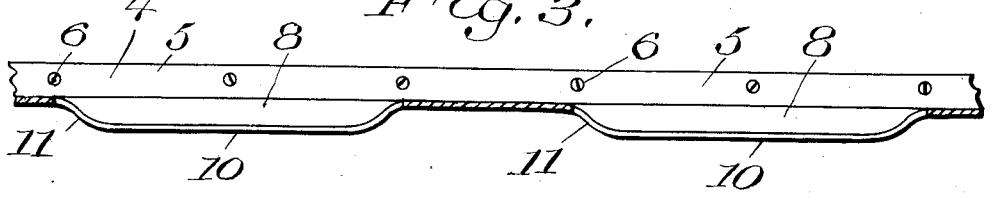


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES W. STOKER, OF NEW YORK, N. Y., AND EDWIN S. JONES, OF BOSTON, MASSACHUSETTS.

SANITARY DIRT-GUARD FOR HEATING-PIPES.

No. 896,420 Specification of Letters Patent. Patented Aug. 18, 1908.

Application filed January 22, 1908. Serial No. 412,076.

To all whom it may concern:

Be it known that we, JAMES W. STOKER and EDWIN S. JONES, citizens of the United States of America, and residents of the borough of Manhattan, city, county, and State of New York, and the city of Boston, county of Suffolk, and State of Massachusetts, respectively, have invented certain new and useful Improvements in Sanitary Dirt-Guards for Heating-Pipes, of which the following is a specification.

Our invention relates to steam heating apparatus and comprises a guard or covering for steam pipes such as are used in heating railroad cars and buildings, which permits the circulation of air, protects persons and objects from contact with the hot steam pipe and under ordinary conditions prevents the admission of dirt or water to the space in which the steam pipes are inclosed.

In the case of railway cars it is customary to heat the same by lines of steam or hot water pipes extending along the side of the car near the floor, below the seats. To prevent the passengers from burning their shoes or clothing which might come in contact with these pipes it is necessary to cover the pipes. In order that the air heated by the pipes may rise, and cooler air flow into contact with the pipes for heating, it is necessary that the covering or guard shall have openings through which the circulating air may pass. The difficulty heretofore has been that these air openings also admitted dirt, and water used in cleaning the car, and that the filth thus admitted to the inclosed space about the steam pipes could not be removed by the car cleaner, thus remaining to breed disease germs and unpleasant odors.

We have invented a continuous sanitary dirt guard for such heating pipes which not only protects the passenger and admits of free circulation of air, but also prevents the admission of dirt or water under all ordinary conditions.

The best form of apparatus embodying our invention at present known to us is illustrated in the accompanying sheet of drawings in which:

Figure 1 is a vertical section of part of a railroad car with our invention applied thereto. Fig. 2 is a horizontal section through the dirt guard on line 2—2 of Fig. 1, and Fig. 3 is a similar section of a modification.

Throughout the drawing similar reference figures indicate like parts.

1 represents the floor and 2 the side wall of a car.

3, 3, etc. represent steam or hot water pipes for heating same.

4 is a shield formed of a light malleable iron casting, or of sheet metal, preferably having the outwardly extending lower lip 5, tangent to the floor to which it may be attached by screws 6, 6, and the inwardly curved upper portion 7, extending over the pipes to the wall 2 of the car. In the face of the shield are a series of horizontal slots, 8 and 9, the lower slot being marked 8. Inside of the shield are inwardly and upwardly inclined lips, 10, 10, connected to the vertical face of the shield at or near the lower edge of the slots 8 and 9, and extending to or about on a level with the upper edge of said slots. The ends of these lips are connected at their ends to the shield by end portions 11, 11, soldered to or cast, or otherwise formed integral with the shield and lips 10, 10.

In the construction shown in Fig. 3, the end pieces are inclined to the shield instead of being at right angles to it. This permits the whole shield, lip and end pieces to be stamped out of a flat sheet of metal.

In operation the parts being assembled as shown in Fig. 1, the shield protects the passenger from contact with the hot pipes. The cold air passes in at the lower slot 8 and the hot air out at the upper slot 9, but any falling dirt, splashing water or other foreign matter thrown about the car strikes the lips 10, 10, and is prevented from getting behind the shield or dirt guard. The shield may be made in sections and in case access to the pipes is desired any section may be removed by taking out the screws 6, 6. Of course other means of attachment for the shield may be used and the form of it varied so long as the horizontal slots and inner guard lips as described are retained to prevent the admission of foreign matter. As shown, the dirt guard presents no sharp angles or recesses in which dirt may collect and from which it can be dislodged with difficulty. Our dirt guard utilizes the "sanitary curve" at all points.

Having described our invention, what we claim is:

1. The combination with the floor and the side wall of a car, and one or more lines of heating pipes running along said side wall

near the floor, of a covering for said pipes comprising a shield provided in its vertical face with a horizontal slot approximately on a level with the lower portion of the pipe system and another slot above the level of the central portion of said system, said shield provided with inwardly and upwardly inclined lips connected to the inner vertical face thereof near the lower edge of each slot and extending to about the level of the upper edge of each slot, and adapted to deliver an inwardly flowing current of air on said pipes.

2. The combination with the floor and the side wall of a car, and one or more lines of heating pipes running along said side wall near the floor, of a covering for said pipes comprising a shield provided in its vertical face with a horizontal slot approximately on a level with the lower portion of the pipe system and another slot above the level of the central portion of said system, said shield provided with inwardly and upwardly inclined lips connected to the inner vertical face thereof near the lower edge of each slot and extending to about the level of the upper edge of each slot, and adapted to deliver an inwardly flowing current of air on said pipes, said shield being also provided with end pieces connecting the ends of said lips with the end edges of the slots.

3. The combination with the floor and the side wall of a car, and one or more lines of heating pipes running along said side wall near the floor, of a covering for said pipes comprising a shield provided in its vertical face with a horizontal slot approximately on a level with the lower portion of the pipe system and another slot above the level of the central portion of said system, said shield provided with inwardly and upwardly inclined lips connected to the inner vertical face thereof near the lower edge of each slot and extending to about the level of the upper edge of each slot, and adapted to deliver an inwardly flowing current of air on said pipes, said shield being curved outwardly at the bottom and adapted to tangential contact with the floor, and also curved inwardly at the top and adapted to connect with the wall above the pipes.

Signed at New York, N. Y., this 13 day of January, 1908.

JAMES W. STOKER.

Witnesses:
ALFRED F. R. ANDERSON,
CHARLES W. HALL.

Signed at Boston, Mass., this seventeenth day of January, 1908.

EDWIN S. JONES.

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