

(No Model.)

E. W. RICE, Jr.
GAS PIPE INSULATING DEVICE.

No. 420,391.

Patented Jan. 28, 1890.

Fig. 1.

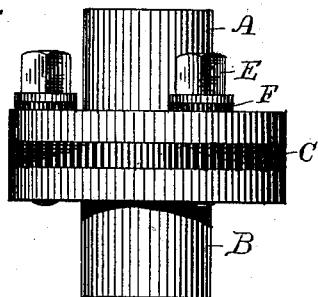


Fig. 2.

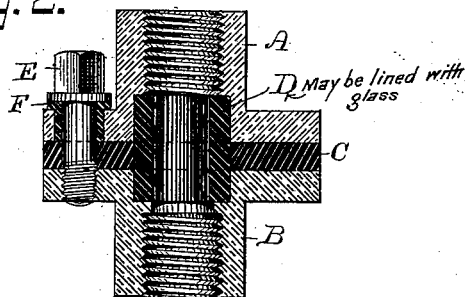


Fig. 3.

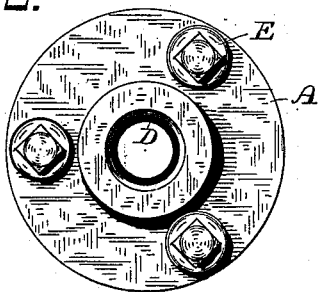
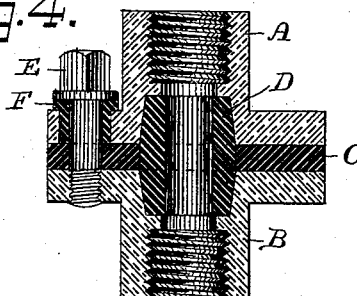


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

EDWIN WILBUR RICE, JR., OF LYNN, MASSACHUSETTS.

GAS-PIPE-INSULATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 420,391, dated January 28, 1890.

Application filed June 2, 1888. Serial No. 275,895. (No model.)

To all whom it may concern:

Be it known that I, EDWIN WILBUR RICE, Jr., a citizen of the United States, and a resident of Lynn, in the county of Essex and State of Massachusetts, have invented a certain new and useful Gas-Pipe-Insulation Device, of which the following is a specification.

My present invention relates to means for insulating gas-fixtures from the earth, in order that electric-light lines may be brought into buildings, and in order that electric-light fixtures may be attached to existing gas-fixtures, without danger of "grounding," and without liability to shock should a person touch such fixtures at the same time that his body is electrically connected to earth.

The object of my invention is to provide a cheap and effective means for insulating one section of pipe formed of conducting material from another section, and also to provide a device that may be readily placed in position without the necessity of skilled supervision.

My invention consists, essentially, in interposing between two sections of conducting-pipe an insulating-section consisting of a tube of insulating material, forming a gas way or passage between the united sections; and extending beyond the insulating-washer interposed between the abutting ends of the sections. It has hitherto been proposed to insulate one section of pipe from another by the interposition of insulating material between the abutting ends of the sections, such insulating material being ordinarily in the form of a thin disk or washer concentric with the bore of the pipe and adapted to electrically separate the conducting parts of the same. I have found that in practice such an arrangement is not effective under all conditions, and that in many cases the deposition of condensations from the air or gas in the pipe will form upon the insulating material a conducting-layer sufficient to establish electrical connection between the two sections of pipe.

The object of my invention is to overcome this objection, which object I attain by the use of an interposed section of pipe or tubing, consisting of insulating material and extending beyond the thin insulating disk or washer concentric with the bore of the pipe and placed between the abutting ends of the sections.

My invention consists, also, in certain details of construction designed to produce a thoroughly gas-tight joint, while at the same time providing a thorough insulation between the two sections of pipe formed of conducting material.

Referring to the accompanying drawings, Figure 1 is a side elevation, and Fig. 2 a vertical central section, through devices embodying my invention. Fig. 3 is a plan of said device, and Fig. 4 is a vertical section through an improved form of the same.

Referring to Figs. 1 and 2, A and B indicate, respectively, two heads or clamping-pieces tapped to receive sections of gas-pipe and to form a union between such sections. The pieces A B are provided with flanges separated by a washer or layer of insulating material C, which may consist of vulcanized fiber or other suitable insulating material. The two heads or sections A B are fastened together by means of bolts or screws E.

F indicates insulating material applied in proper manner to prevent the bolts from electrically connecting the heads or sections A B.

D indicates a tubular section of pipe or passage made of insulating material and elongated to a greater or less extent beyond the joint, as is found necessary in practice. The pipe D constitutes the connecting-section of pipe or passage between the two heads or sections A B or the parts or sections screwing into the latter. The sections of tubing D may be formed of any desired material, and in Fig. 2 is supposed to be made of vulcanized fiber, though any other good non-conductor may be employed. The section of tubing D might have an interior lining of glass. The section D is preferably made somewhat elastic, and so that on compression between the two heads A B a good joint may be formed to prevent the escape of gas.

The preferred form of the tubular section D is indicated in Fig. 4. In this case it is tapered or made convex at its opposite ends, while the sections or clamping-pieces A B are made to fit upon the convex or conical ends, so as to give a wedging action or compression and to make a thoroughly-tight joint. This prevents any possible leakage of gas around the outside of the tubular section, and leaves no vacant space where moisture might be

deposited to form a path for any electric current from one section A to the other B.

What I claim as my invention is—

1. In an insulating device for gas-fixtures, the combination, with two sections or heads A B of gas pipe or passage having flanges insulated from one another at their junctions by a suitable insulating-washer, of an intermediate tube of insulating material surrounded by the washer and forming an elongated gas way or passage between those portions of the gasway consisting of conducting material.

2. The combination, with abutting sections of gas-pipe insulated from one another at their joint by a thin layer of insulating material, of an internal length of insulating-tubing extended to a considerable distance beyond said layer of insulation and to both sides thereof, as and for the purpose described.

3. In an insulating device for gas-pipes, an internal insulating-section of tubing having

beveled or conical ends, in combination with metal clamping-pieces adapted to fit, respectively, upon the said beveled or conical ends, and each provided with a flange separated from the flange of the other by a washer of insulating material, as and for the purpose described.

4. The combination, with the sections of pipe or tubing secured together, of the insulating washer or material interposed at their point of abutment, so as to insulate them from one another, and an internal tube of insulating material, slightly elastic, with whose opposite ends said sections respectively engage.

Signed at Lynn, in the county of Essex and State of Massachusetts, this 29th day of May, A. D. 1888.

E. WILBUR RICE, JR.

Witnesses:

A. W. DICK,
WM. D. POOL.