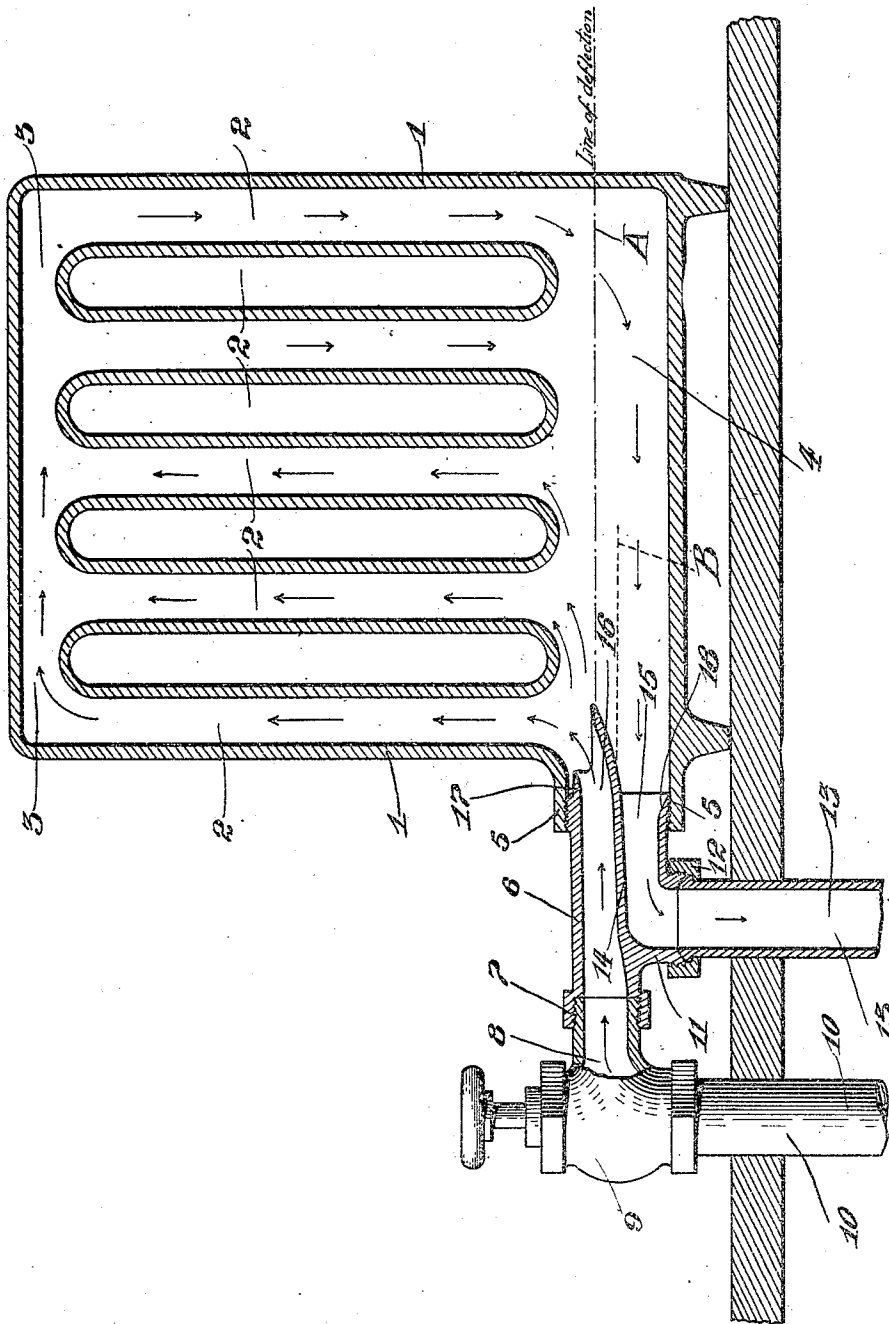


E. J. DEEGAN.
 PIPE CONNECTION FOR FLUID HEATING SYSTEMS.
 APPLICATION FILED MAR. 9, 1910.

961,341.

Patented June 14, 1910.



WITNESSES:

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UNITED STATES PATENT OFFICE.

EDWARD J. DEEGAN, OF NEW YORK, N. Y.

PIPE CONNECTION FOR FLUID-HEATING SYSTEMS.

961,341.

Specification of Letters Patent. Patented June 14, 1910.

Application filed March 9, 1910. Serial No. 548,219.

To all whom it may concern:

Be it known that I, EDWARD J. DEEGAN, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Pipe Connections for Fluid-Heating Systems, of which the following is a specification.

The invention relates to improvements in pipe connections for fluid heating systems and has particular reference to that class of pipe connection or coupling utilized particularly in connection with hot water heating systems.

The object of the invention is the providing of a compound or divided pipe connection adapted to receive independent fluid intake and fluid return pipe connections having formed therewith a partition extending diametrically across and longitudinally therein and beyond the mouth of said connection or coupling, said extension being cupped at its end adapted to deflect the intake fluids under pressure into a plurality of fluid ducts or legs in a radiator, and means adapted to receive the return flow of said fluids from said radiator obviating the impedance of the flow of said intake and return fluids, each of said independent fluid passageways in said connection or coupling having substantially the same fluid reception capacity.

In the following is described in connection with the accompanying drawings one embodiment of the invention, the features thereof being more particularly pointed out hereinafter in the claims.

In the drawings, the figure as shown is a longitudinal sectional view of the divided connection or coupling illustrating the manner in which the same is attached or mounted on a radiator which is shown in conventional outline and further the manner in which the coupling is attached to the fluid intake and return pipe connections.

Similar characters of reference indicate similar parts throughout the drawing.

In the drawing, 1 indicates the conventional showing of a fluid heating radiator provided with vertical fluid ducts or legs 2 and the upper horizontal fluid passageway 3 and the lower drainage passageway 4 provided at its inner end with a reception nipple 5 threaded internally and adapted to receive the threaded end of the divided pipe connection or coupling 6 which has formed

thereon an internally threaded shoulder 7 receiving connection 8 on manually controlled valve 9 which in turn receives or has attached thereto fluid intake pipe connection 10. Said divided connection or coupling 6 has formed on its lower side an externally threaded nipple 11 adapted to receive coupling head on fluid return pipe connection 13.

14 indicates a gland or partition cast or formed with the body 6 extending diametrically across said body longitudinally and beyond the mouth 15 of said divided connection, said extension being cupped at 16 and provided at its top with an overhanging lip 17, the lower wall of said coupling being tapered at 18 to assist in draining the precipitated fluids from said radiator 1.

A indicates the approximate line of deflection above which the fluids are deflected by reason of the cupped formation 16 of the extended portion of gland or partition 14, the heated fluids which are under pressure being forced at all times above said line of deflection. B indicates a line parallel with the axis of said gland or partition 14, the object of illustrating said line being to point out the fact that the deflected fluids will not at any time drop below said line. The natural tendency of the heated fluids is to ascend in a means of radiation and the spent or expanded fluids to precipitate or fall in the means of radiation. The cupped extension of said gland or apparatus assisting the natural course of the fluids in this instance. It is essential that the live fluids be driven in the path of a plurality of the fluid expansion ducts or legs and not any individual one as when said fluids are caused to be deflected over a greater area of the heating surface in the means of radiation the greater portion of said means of radiation will receive the initial heat of the intake fluids.

The operation of the device is as follows:—When suitably connected up with the fluid intake pipe connection, radiator and fluid return pipe connection and manually controlled valve operated, the intake fluids under pressure will pass through the passageway above the gland or partition 14 and deflect by reason of the cupped extension 16 into a plurality of the fluid expansion ducts or legs 2, the spent or chilled fluids precipitating in the radiator and drained therefrom through the passageway beneath the gland or partition 14 to return pipe connection 13. It is obvious that the device may be varied

without departing from the spirit of the invention.

What I claim and desire to secure by Letters Patent of the United States is:—

- 5 1. A device of the character described comprising a divided pipe connection for fluid heating systems, a radiator provided with a plurality of fluid ducts having formed thereon a boss adapted to receive said connection, said connection having centrally located therein a gland extending diametrically across and longitudinally beyond the end thereof dividing the same into an upper inlet passageway and a lower outlet passageway having the same fluid reception capacity the extended portion of said gland being cupped and closed at its sides and adapted to deflect the entering fluid into a plurality of said fluid ducts.
- 20 2. A device of the character described comprising a divided coupling for heating systems, a radiator provided with a plurality of fluid ducts having formed thereon a boss adapted to receive said coupling, a partition extending diametrically across and longitudinally beyond the end thereof dividing the same into an upper inlet passageway and a lower outlet passageway having the same fluid reception capacity the extended portion of said gland being cupped and closed at its sides and adapted to deflect the entering fluid into a plurality of said
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fluid ducts, and bosses formed on the body of said coupling adapted to receive connections for said inlet passageway and said outlet passageway. 35

3. A device of the character described including a divided coupling for heating systems, a radiator provided with a plurality of fluid ducts having formed thereon an internally threaded boss adapted to receive said coupling, a partition formed in said coupling extending diametrically across and longitudinally beyond the end thereof dividing the same into an uninterrupted upper inlet passageway and an uninterrupted lower outlet passageway having the same fluid reception capacity the extended portion of said gland being cupped and partially closed at its sides and adapted to deflect the entering fluid into a plurality of said fluid ducts, a boss formed on said coupling adapted to receive an independent connection for said inlet passageway, and a boss formed on the body of said coupling adapted to receive an independent connection for said outlet passageway. 40 45 50 55

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

EDWARD J. DEEGAN.

Witnesses:

LAURA E. SMITH,
CLARENCE S. ASHLEY.