

J. K. PEACOCK.
 AUTOMATIC PIPE RELIEF.
 APPLICATION FILED APR. 8, 1912.

1,044,416.

Patented Nov. 12, 1912.

Fig. 1.

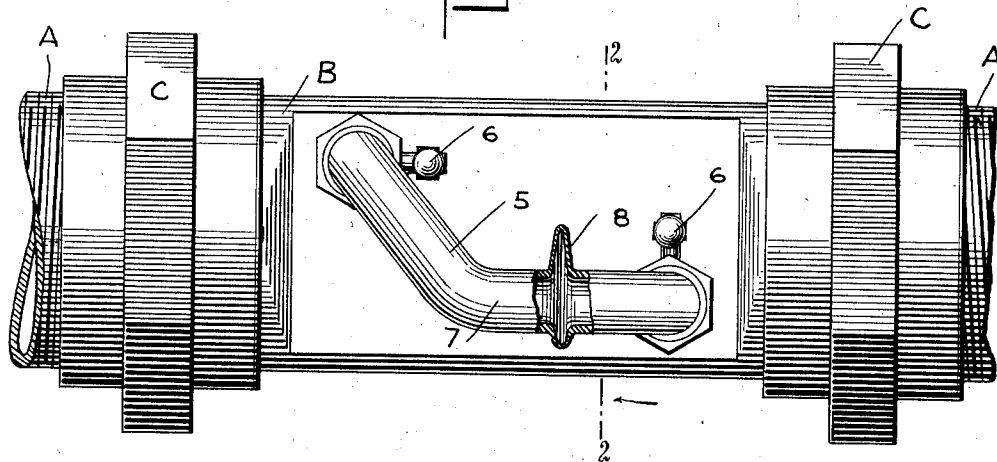
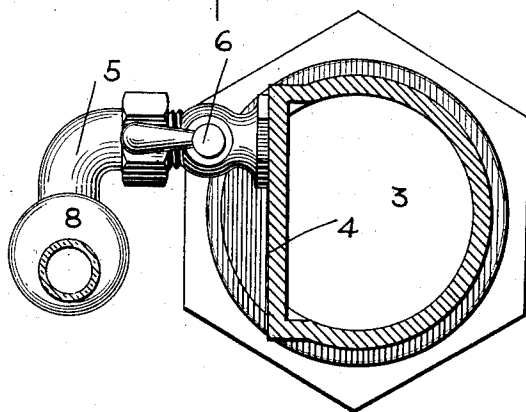


Fig. 2.



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JAMES K. PEACOCK, OF NEW YORK, N. Y.

AUTOMATIC PIPE-RELIEF.

1,044,416.

Specification of Letters Patent.

Patented Nov. 12, 1912.

Application filed April 8, 1912. Serial No. 689,146.

To all whom it may concern:

Be it known that I, JAMES K. PEACOCK, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Automatic Pipe-Relief, of which the following is a full, clear, and exact description.

My invention relates to a means for relieving the pressure in a pipe at a predetermined point.

In plumbing systems in houses, and especially in the systems constituting the water-heating apparatus, it frequently happens that the water in the pipes freezes, or due to other reasons, abnormal pressure is set up in the pipes which ruptures the latter and often results in flooding the house. To overcome this disadvantage, I provide a weakened portion to the pipe system, so that should a rupture occur, the break will be at this weakened point and the water conveyed away to the sewer, bucket or other suitable receptacle. This weakened portion in the case of a hot-water system is preferably at the lowest point of the system, that is, in the return pipe, so that in case of a break the system may be drained of its water.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures, and in which—

Figure 1 is a side elevation of a preferred embodiment of my invention inserted in a return pipe, parts being broken away to show the peculiar construction of a weakening element, and Fig. 2 is a vertical transverse sectional view taken on the line 2—2 of Fig. 1, looking in the direction of the arrow.

Inserted within the return pipe A and constituting part of the same, is a relief B constituting my invention, fastened in alignment with the ends of the pipe A by means of unions C or other suitable connections. The relief B is in the form of a pipe 3 having a flat face 4, said flat face having an opening extending therethrough at one of its corners, and a second opening at the diametrically opposite corner. The two openings are placed in fluid connection by means

of an angle-shaped by-pass 5, constructed of glass or other readily frangible material. There is preferably disposed between each end of the by-pass 5 and the pipe 3, a suitable valve 6, by means of which the passage of water through the by-pass may be intercepted. This by-pass has a horizontal portion 7, the axis of which is positioned in a plane parallel and adjacent to the bottom of the bore of the pipe 3, so that if there is any water in the pipe 3, it will flow into the horizontal portion of the by-pass 5. Intermediate the length of the horizontal portion 7, the sides of this horizontal portion are extended to form a thin walled bulb 8, which is substantially in the form of a wedge-shaped plate. It will be understood that the water filling the interior of this bulb has a relatively large surface exposed to the influence of the surrounding air, and that any freezing taking place in the system will naturally start in the bulb 8. This bulb being weak will give way under the action of the expanding water in freezing, opening the system and permitting the water to flow through the ruptured bulb 8 into the sewer, bucket, or other receptacle.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A pipe relief, comprising a horizontally-arranged pipe, and a downwardly-inclined by-pass in fluid communication with said pipe at both ends, said by-pass having a weakened portion adjacent its lower end, whereby water will flow into said weakened portion when the pipe is incompletely filled.

2. A relief for water systems, comprising a horizontally-disposed pipe, an angle-shaped by-pass in fluid communication with the upper and the lower portions of said pipe, said by-pass having a horizontally-disposed lower portion, and a bulb formed in said horizontal portion, said bulb being of frangible material, whereby abnormal pressure in said pipe and by-pass will cause the rupture of said system at said bulb.

3. A relief for water systems, comprising a horizontally-disposed pipe, an angle-shaped by-pass in fluid communication with the upper and the lower portions of said

pipe, said by-pass having a horizontally-disposed lower portion, and a bulb in the form of a wedge-shaped plate extending outwardly from said horizontal portion, to afford an extensive freezing surface to the water in said bulb.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

JAMES K. PEACOCK.

Witnesses:

W. S. ORTON,
PHILIP D. ROLLHAUS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."