G. HAYES.

LEADER-PIPE.

No. 173,784. Patented Feb. 22, 1876.

Fig. 1.

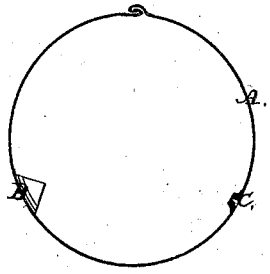


Fig. 2.

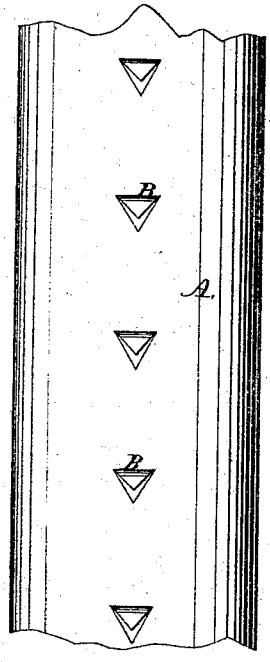
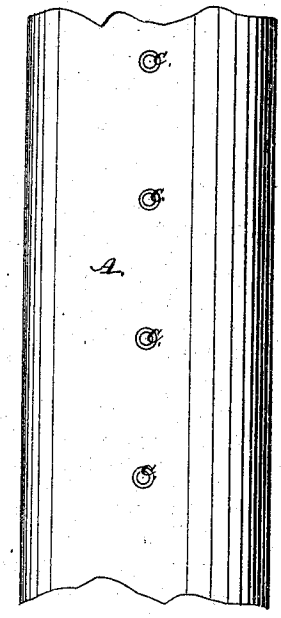


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE HAYES, OF NEW YORK, N. Y.

IMPROVEMENT IN LEADER-PIPES.

Specification forming part of Letters Patent No. **173,784**, dated February 22, 1876; application filed July 21, 1875.

CASE A.

To all whom it may concern:

Be it known that I, GEORGE HAYES, of 71 Eighth Avenue, in the city, county, and State of New York, have invented a new and useful Improvement in Leader-Pipes, for conveying rain-water from the roofs of buildings, or any similar purpose, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

My improvement relates to leader-pipes so constructed as never to become charged with water through stoppage, thereby avoiding the possibility of their bursting in frosty weather. It consists of a leader-pipe formed, in the usual manner, of sheet metal, without reference to expansion or contraction, in which pipe I perforate or puncture one or more rows of openings, whether round, angular, or other shape, running vertically from end to end of pipe, so that should a stoppage occur in the pipe the openings will allow all the water to drain or run to the outside of leader or pipe. At the same time I arrange these openings so that when the leader is performing its purpose —that of conducting the water in a downward direction—no spray will escape to the outside or any leakage will occur.

This improvement can be added to any description of leader, even to old or second-hand ones, without adding materially to their cost, while, as compared with corrugated leaders, the cost will be very much less.

This improvement will also avert the necessity of embedding the leaders in the brick-work or inside of the building as a protection against the bursting through exposure to the frost.

In the accompanying drawing, Figure 1 represents a cross-section of a leader-pipe. Figs. 2 and 3 represent vertical views of same.

Similar letters of reference indicate corresponding parts in each figure.

The leader A is constructed of sheet metal, in the ordinary manner. The punctured openings B are made of triangular shape, the point being downward. The two sides are cut clear through, leaving the third or upper side merely bent inward, forming an apron or guard protecting the openings, and preventing the water on its downward course from splashing or running to the outside of leader A, at the same time allowing a free escape of water should a stoppage occur in the pipe; or, if by any means the leader should happen to freeze, the power of the sun or a change in the temperature would melt the ice, and the water would pass freely off without causing the pipe to burst. The punctured or perforated openings C are made round with a pointed tool, leaving a burr on the inside of pipe, thus preventing a current of water or a spray passing to the outside, yet allowing a free escape of water should a stoppage in the pipe occur.

I claim as my invention—

A leader-pipe having perforated or punctured openings running in a vertical direction, and having bars or flaps on the inside, for the purpose herein set forth.

GEORGE HAYES.

Witnesses:

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