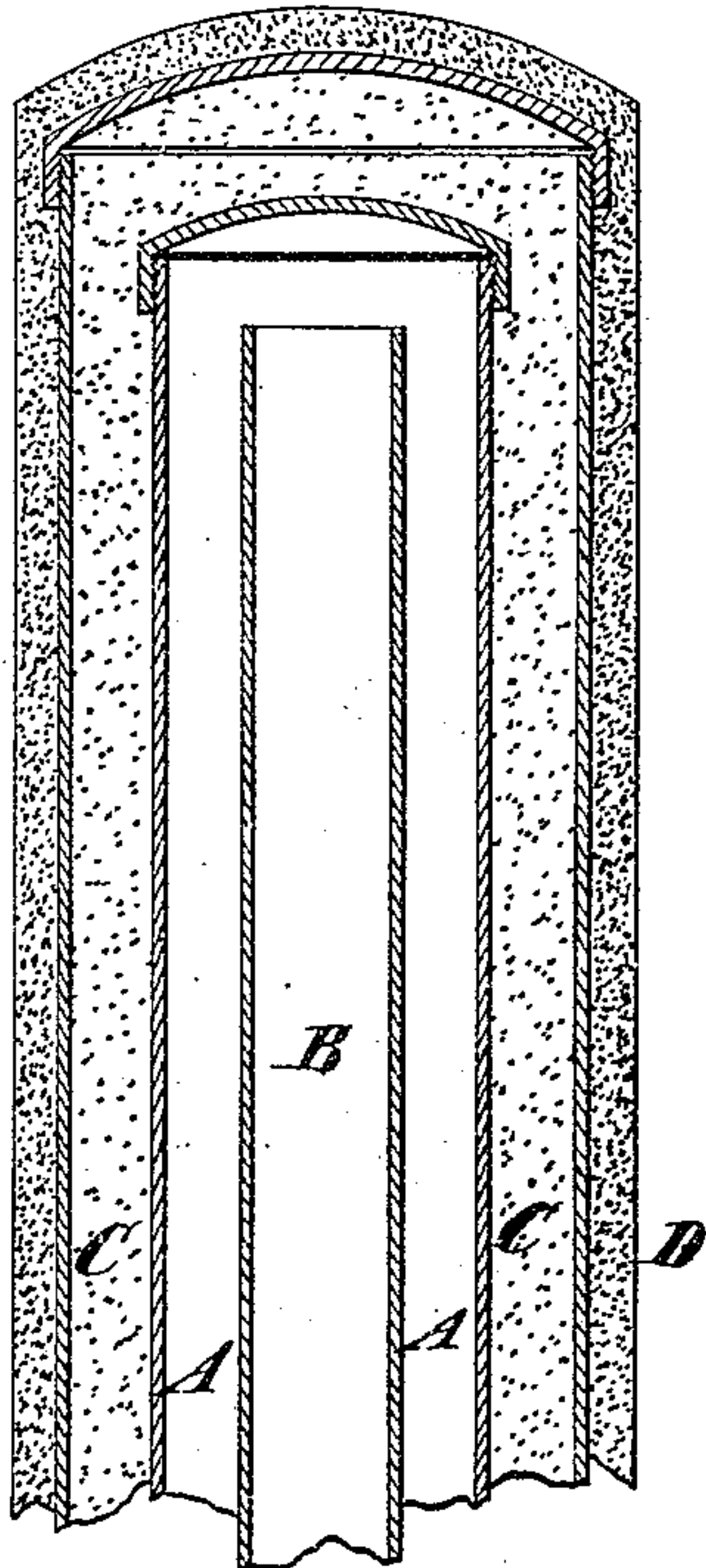


(No Model.)

M. J. WALSH.
COVERING FOR STEAM CONDUITS.

No. 263,265.

Patented Aug. 22, 1882.



Witnesses:

James R. Bowen.
T. J. Leane

Inventor:

Maurice J. Walsh
By his atty.
Edwin H. Brown.

UNITED STATES PATENT OFFICE.

MAURICE J. WALSH, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS, TO MARY C. WALSH, OF SAME PLACE.

COVERING FOR STEAM-CONDUITS.

SPECIFICATION forming part of Letters Patent No. 263,265, dated August 22, 1882.

Application filed May 4, 1882. (No model.)

To all whom it may concern:

Be it known that I, MAURICE J. WALSH, of New York, in the county and State of New York, have invented a certain new and useful
5 Improvement in Covering for Steam-Conduits, of which the following is a specification.

My improvement relates particularly to conduits for conveying steam along streets to buildings where the same may be needed.

10 The improvement consist in the combination of a pipe for containing the steam, a jacket surrounding the said pipe and containing a mixture of caustic soda, acetic acid, and water, and an external wrapping of a material which
15 is a non-conductor of heat, whereby I am enabled to store up heat in the mixture contained within the jacket when the steam has much latent heat and to give it out when the heat of the steam is reduced, thereby maintaining a
20 greater uniformity in the steam furnished.

The improvement may comprise two steam-pipes, one for conveying the steam in one direction and the other for conveying it in the reverse direction. I also consider the above-
25 mentioned mixture as a feature of my invention.

The accompanying drawing represents a central longitudinal section of a conduit laid in a street and embodying my improvement.

30 A designates a pipe, of metal or other suitable material, for conveying steam in one direction.

B designates a pipe of like material arranged within the former and communicating therewith, so that it will conduct steam there-
35 from back again to the source.

C designates a jacket surrounding the pipe B, and containing a mixture consisting of about two parts, by weight, of caustic soda, eleven parts of concentrated acetic acid, and
40 thirteen parts of water. This mixture will retain a very large amount of heat latent and give it out slowly. Hence it will absorb heat at times and give it out at other times when necessary. It will keep the pipes hot during the

time when steam is cut off, and thereby prevent the great amount of condensation which would otherwise occur on turning steam on again. The mixture of caustic soda, acetic acid, and water always remains in a liquid state. It is much more advantageous than caustic soda and acetic acid alone, because it will retain a much larger amount of heat latent, and hence will remain effective for a longer time. Moreover, owing to the substitution of water for a part of the caustic soda and acetic acid, which would otherwise be required to fill the jacket in which the mixture is contained, the cost of the mixture is very materially cheaper than it would be if water were not used.

D designates a wrapping of asbestos or other material which is a good non-conductor of heat. This combination lessens the waste of steam by condensation which ordinarily occurs in conveying steam from one place to another.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of a pipe for containing steam, a jacket surrounding it and containing a mixture of caustic soda, acetic acid, and water, and an external wrapping of a material which is a non-conductor of heat, substantially as and for the purpose specified.

2. The combination of a pipe for conveying steam in one direction, a pipe within the former for conveying steam in the reverse direction, a jacket surrounding the said pipes and containing a mixture of caustic soda, acetic acid, and water, and an external wrapper of a material which is a non-conductor of heat, substantially as and for the purpose specified.

3. The mixture composed of caustic soda, acetic acid, and water, substantially as and for the purpose herein described.

MAURICE J. WALSH.

Witnesses:

T. J. KEANE,
JAMES R. BOWEN.