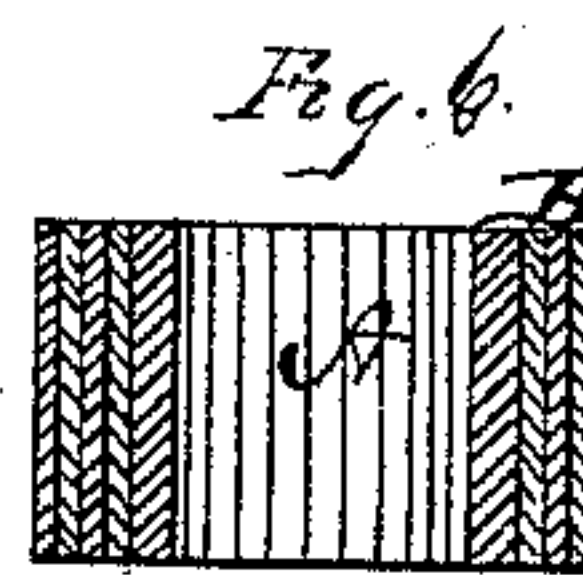
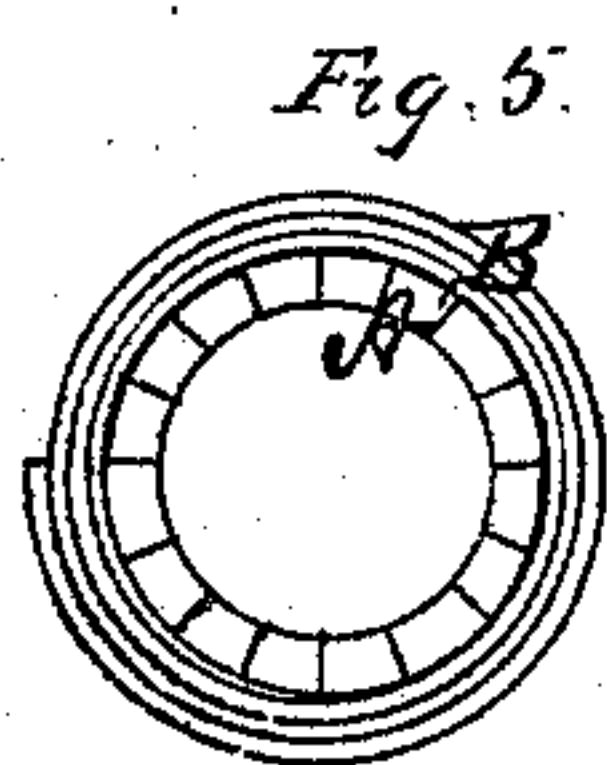
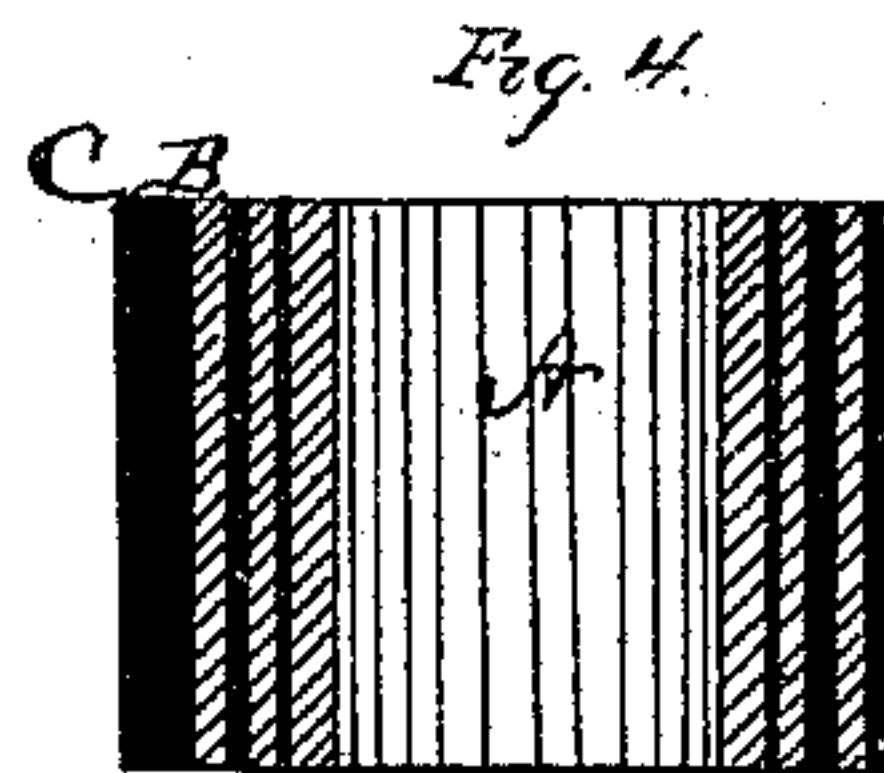
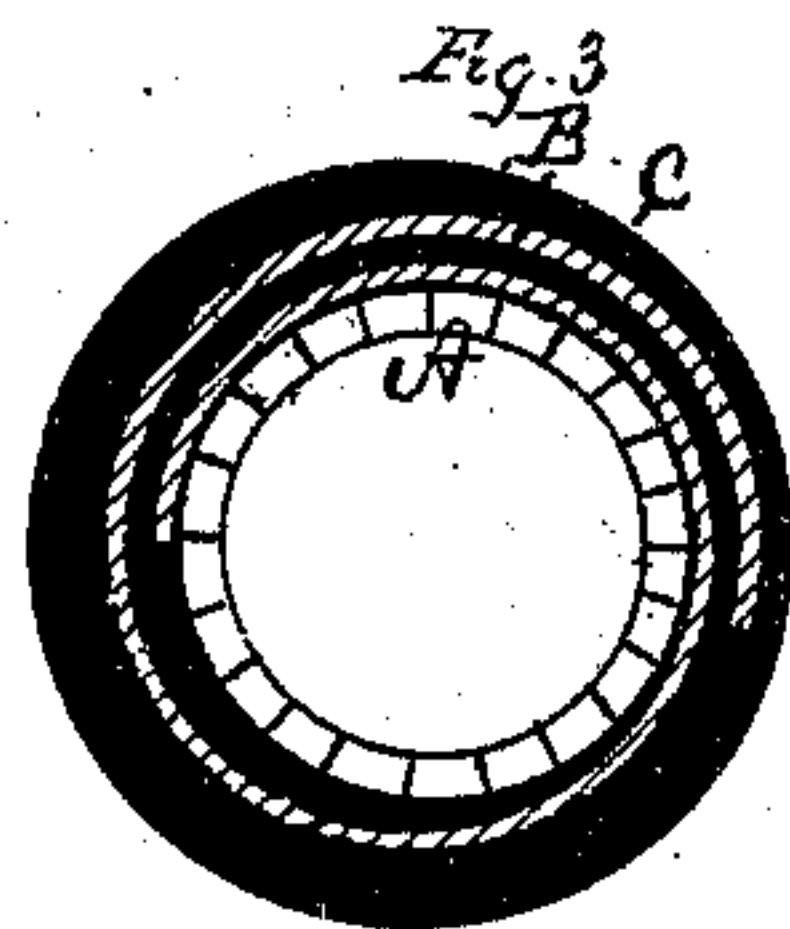
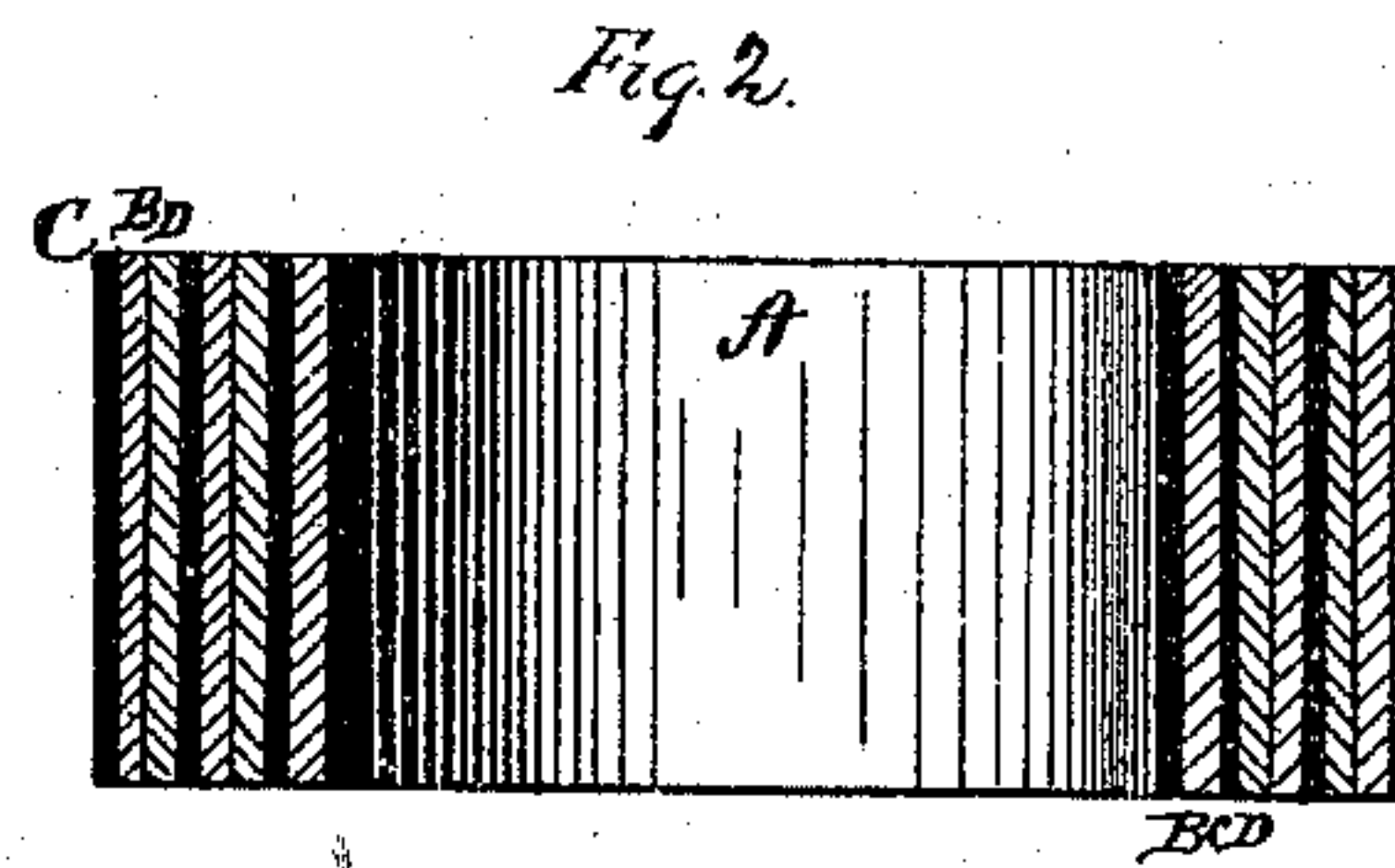
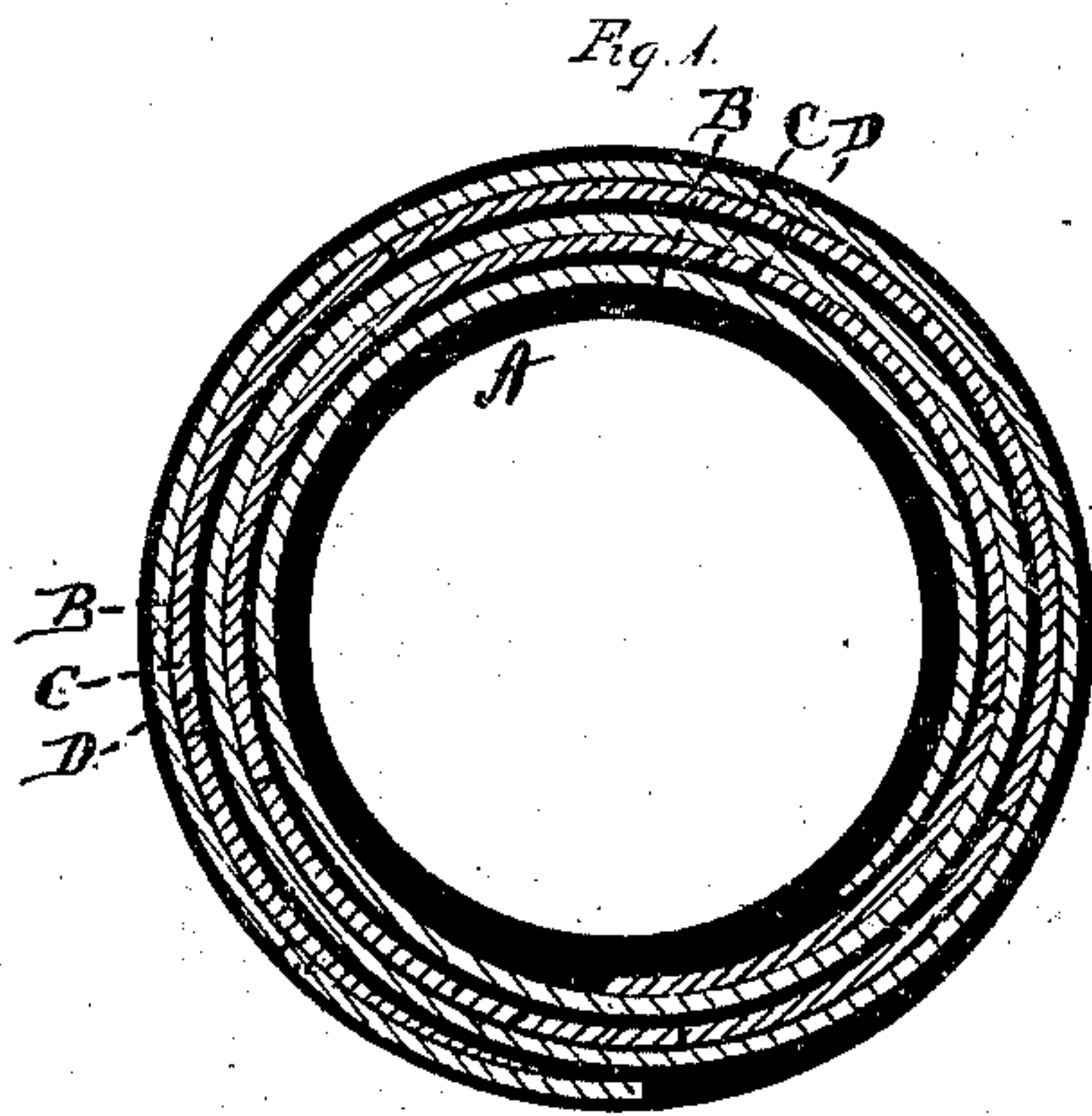


D. ALLEN.

Improvement in Water-Pipes.

No. 126,769.

Patented May 14, 1872.



Witnesses:

Jas. E. Hutchinson  
de L. Puert.

Inventor

Delos Allen.  
per Alexander Watson  
Attorneys.



# UNITED STATES PATENT OFFICE.

DELOS ALLEN, OF BLOOMINGTON, ILLINOIS, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO PERRY AYLSWORTH, OF SAME PLACE.

## IMPROVEMENT IN WATER-PIPES.

Specification forming part of Letters Patent No. 126,769, dated May 14, 1872.

*To all whom it may concern:*

Be it known that I, DELOS ALLEN, of Bloomington, in the county of McLean and State of Illinois, have invented certain new and useful Improvements in Water-Pipes or Pipes for other purposes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The nature of my invention consists, first, in winding thin strips of wood of any length in several layers one over the other over an interior pipe of staves or cloth and asphalt, or other material, to strengthen the same; second, in winding thin strips of wood of any length in several layers one over the other, and with cement or other suitable material between the layers, over an interior pipe of staves, or cloth and asphalt or other material; and, third, in winding thin strips of wood of any length in several layers one over the other over an interior pipe of cloth and asphalt or other material, and inserting between said layers thin strips of wood running lengthwise of the pipe, and with or without cement or similar material between the layers.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which forms a part of this specification, and in which—

Figure 1 is a cross-section, and Fig. 2 a longitudinal section of a cloth and asphalt interior pipe having strips of wood wound around in layers, with other strips and cement between the layers, the intermediate strips running lengthwise of the pipe. Figs. 3 and 4 represent similar views of thin strips of wood wound in layers around an interior pipe of staves with cement between the layers. Figs. 5 and 6 are similar views, showing the same kind of pipe without the cement between the layers.

A represents a pipe made of cloth and asphalt or other suitable material, which is wound around with thin strips, B, of wood of any length. These strips are wound around the interior pipe in several layers one over the other, asphalt, C, or other suitable ce-

ment being placed between the layers. The interior pipe A may be made of staves, as shown in Figs. 3, 4, 5, and 6, and the asphalt or cement C may be dispensed with, as shown in Figs. 5 and 6. When the interior pipe A is made of cloth and asphalt, or other similar material, strips D D, of wood, are put in between the layers of strips B B, said strips D D running lengthwise with the pipe.

Having a tight inside pipe the wood wound in this manner gives strength enough to stand any required pressure. Wound around the staves it has all the lateral strength needed, but when wound over an inside cloth and asphalt pipe the strips D are put in to give the required lateral strength, these strips running lengthwise with the pipe or at right angles with the strips wound around. The different sections of my pipe are joined by mortise-and-tenon joint, the tenon being warmed and then covered with hot asphalt or other cement before joining.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A pipe, consisting of an interior pipe of staves or cloth and asphalt, or other suitable material, with wooden strips wound around the same in several layers one over the other, substantially as herein set forth.

2. A pipe, consisting of an interior pipe of staves or cloth and asphalt, or other suitable material, with wooden strips wound around the same in the several layers one over the other, and asphalt or other cement between the layers, substantially as set forth.

3. A pipe, consisting of an interior pipe of cloth and asphalt, or other suitable material, with wooden strips wound around the same in several layers one over the other, and other strips, with asphalt or other cement inserted lengthwise between the layers, substantially as herein set forth.

In testimony whereof I hereto set my hand and seal this 25th day of January, 1872.

DELOS ALLEN. [L. S.]

Witnesses:

THOS. SLADE,  
W. M. HATCH.