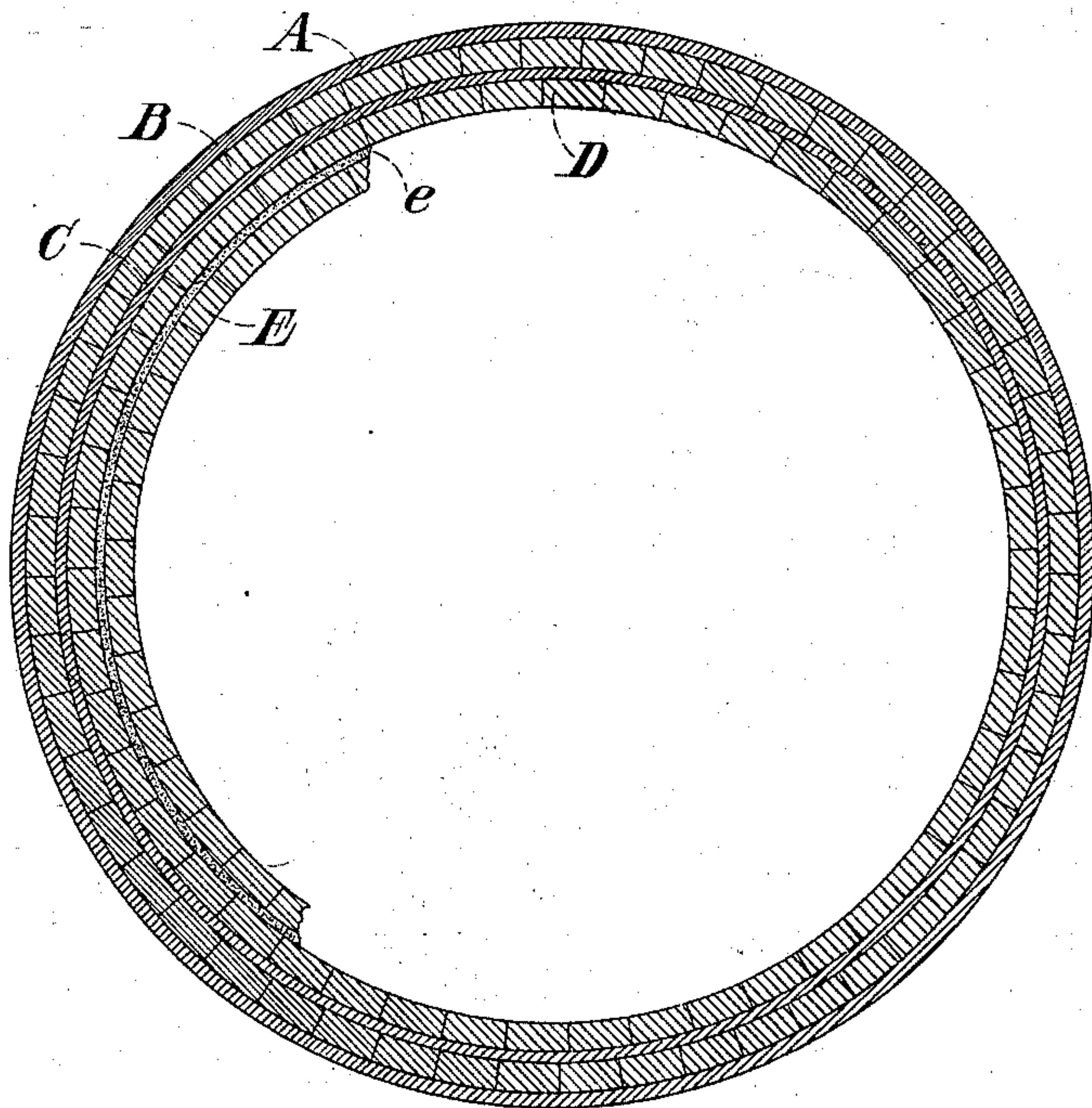


No. 720,038.

PATENTED FEB. 10, 1903.

S. A. LEAVITT.  
LINING FOR PULP DIGESTERS.  
APPLICATION FILED SEPT. 5, 1902.

NO MODEL.



Witnesses

*Effie B. Howard*  
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*Attorney*

# UNITED STATES PATENT OFFICE.

SAMUEL A. LEAVITT, OF MILLINOCKET, MAINE.

## LINING FOR PULP-DIGESTERS.

SPECIFICATION forming part of Letters Patent No. 720,038, dated February 10, 1903.

Application filed September 5, 1902. Serial No. 122,172. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL A. LEAVITT, a citizen of the United States, residing at Millinocket, in the county of Penobscot and State of Maine, have invented certain new and useful Improvements in Linings for Pulp-Digesters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention consists of an improvement in the linings of pulp-digesters which are designed for use in the manufacture of pulp by the "sulfito process," and is fully described in the accompanying drawing, which shows a horizontal section of my lining. The requirements of a digester suitable for use in such process are two—viz., first, strength to resist pressure from within, and, second, resistance to the action of heat and the chemicals used in the process of cooking the pulp.

I use first for strength an outer metallic shell A, as commonly, and then to protect this from the corrosive action of the acids used in the process a lining constructed as follows and which will resist the action of heat: first, a wall or shell of brick B laid dry against the inner surface of the metallic shell without cement of any kind between the shell and the brick. These brick are laid in cement. To the inner surface of the brick lining B, I apply a composition of litharge and glycerin mixed in such proportions as to admit of its being spread upon such inner

surface and of adhering thereto, forming a coat C. This coat of litharge and glycerin may be about one-fourth of an inch in thickness. Within the coat of litharge may be added a second shell of brick D to protect the coat C from erosion by the friction of the contents of the digester when agitated, and when desired even a third shell of brick E, the inner shell, whether it be a second or third, being preferably of fire-brick and each course being laid with reference to its neighbor with broken joints. If the third shell of brick E be used, a layer of cement *e* about one-half inch thick should be interposed between the shells D and E.

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

1. A pulp-digester consisting of the combination of an outer metallic shell; a brick shell laid in cement, within and laid dry against, said metallic shell; and a coat of litharge and glycerin applied to the inner surface of said brick shell.

2. A pulp-digester consisting of the combination of an outer metallic shell; a brick shell laid in cement, within and laid dry against, said metallic shell; a second brick shell within the first brick shell; and a thin coat of litharge and glycerin interposed between said brick shells.

SAMUEL A. LEAVITT.

Witnesses:

CLINTON STEVENS,  
EDWARD A. PERRY.