

No. 825,819.

PATENTED JULY 10, 1906.

J. W. GEIBEL.

PROCESS OF REMOVING SAP, &c., FROM WOOD.

APPLICATION FILED JAN. 3, 1905.

FIG. 1.

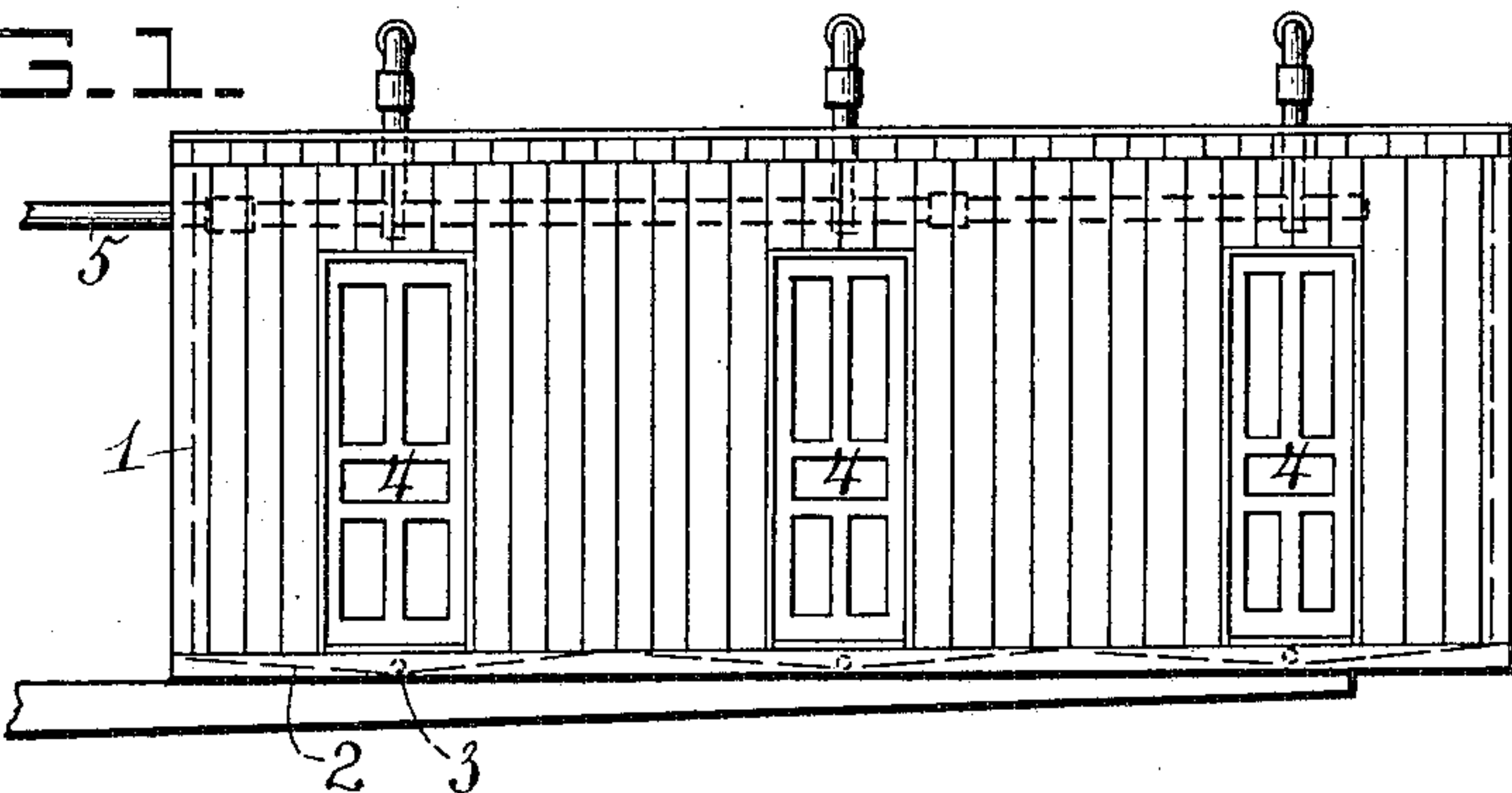


FIG. 2.

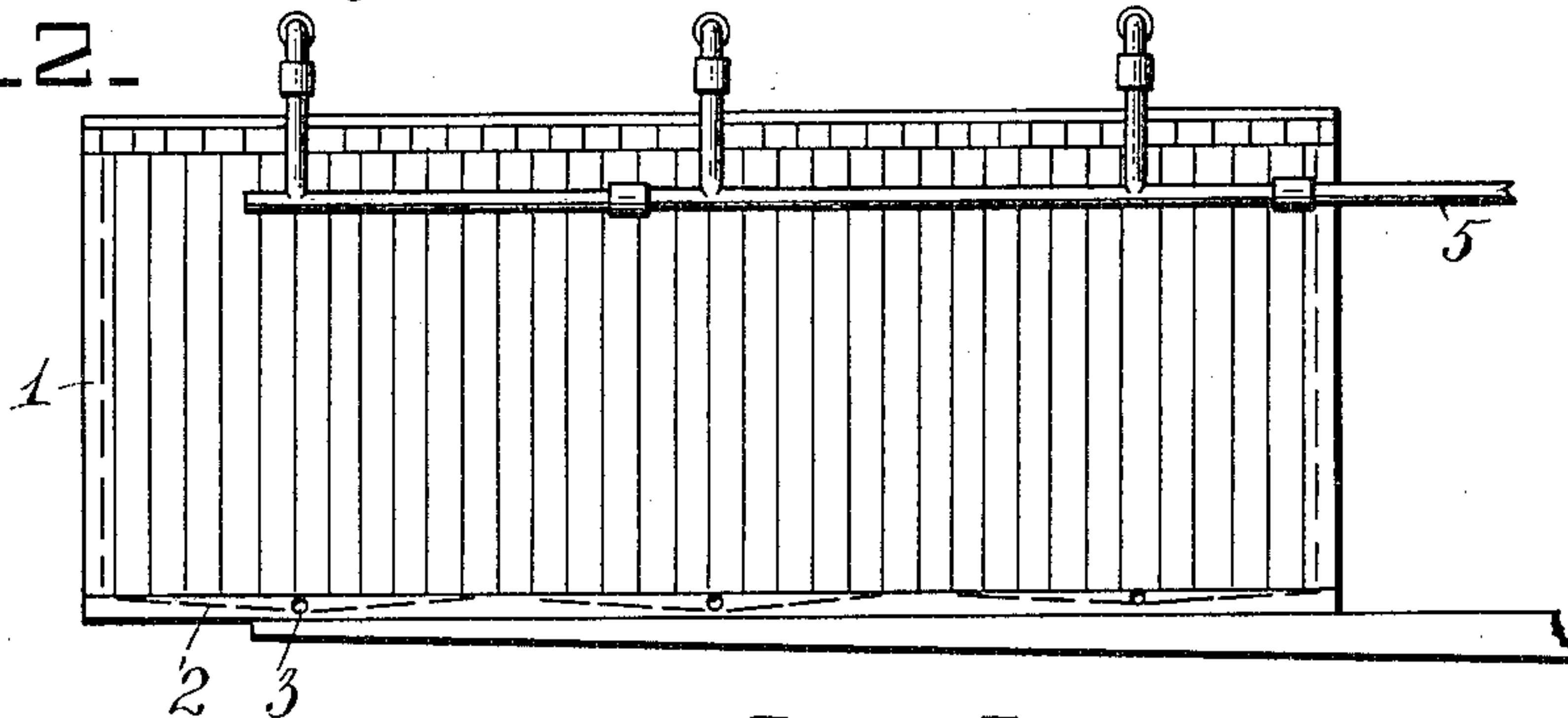


FIG. 3.

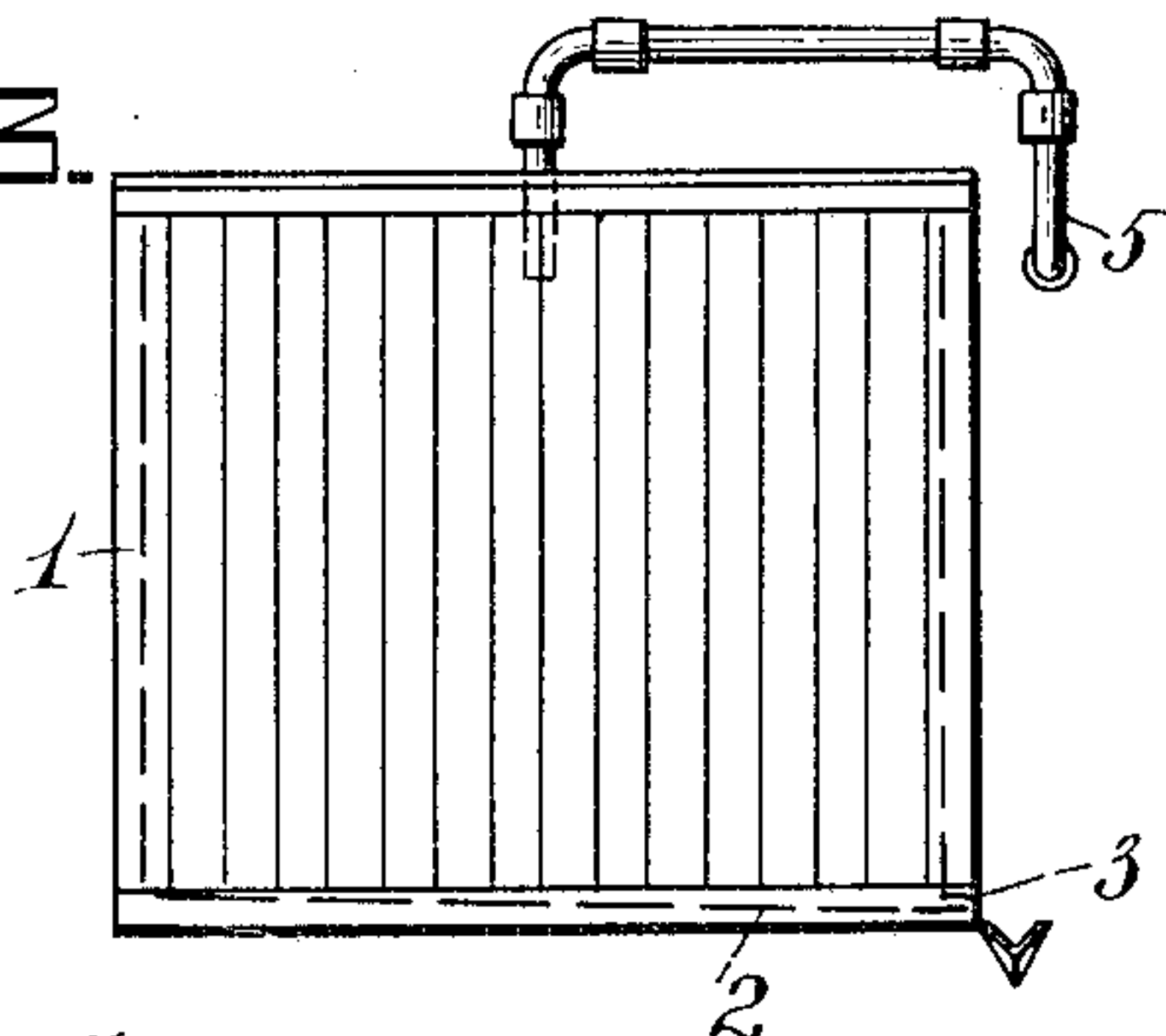
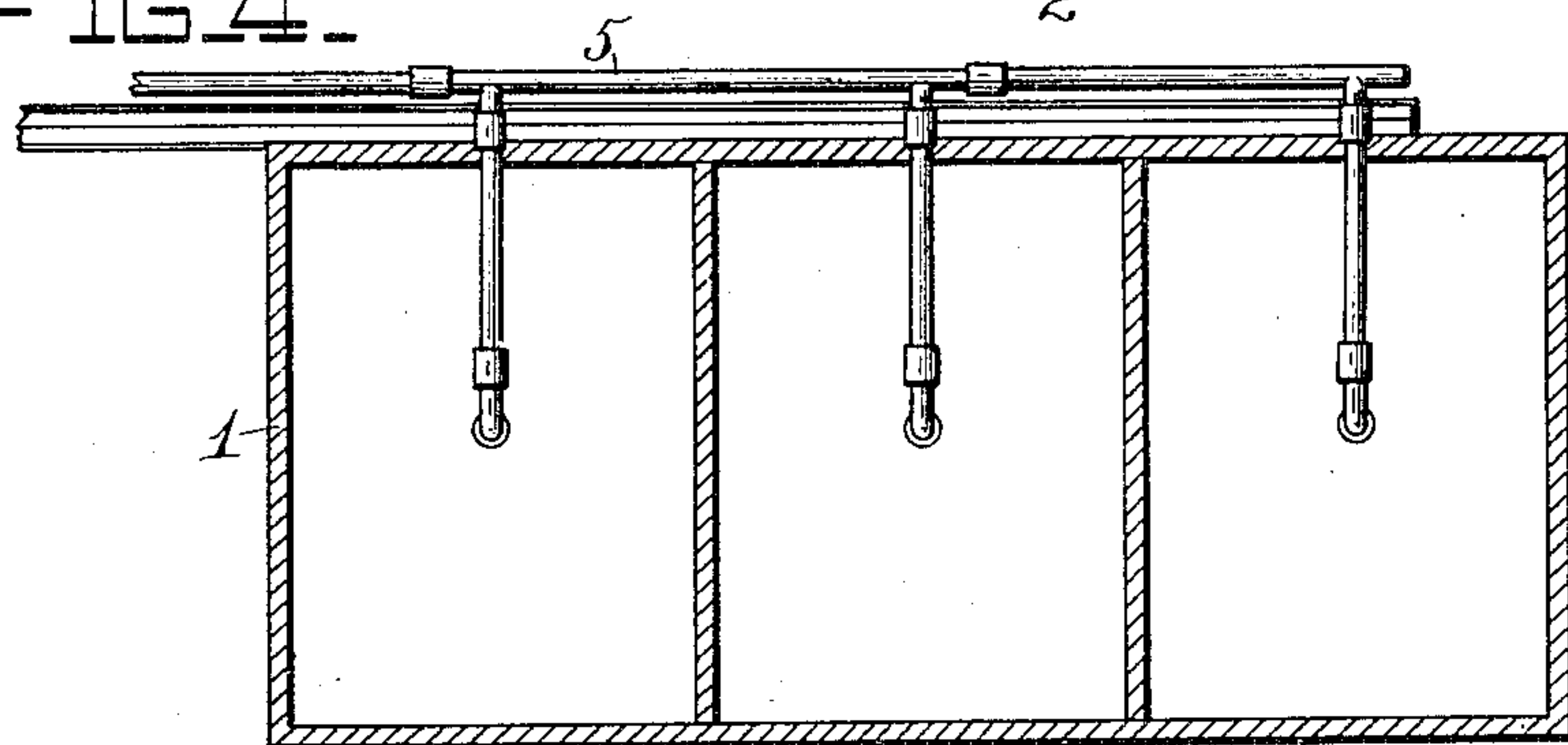


FIG. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN W. GEIBEL, OF LOYSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD TO HUMPHREY D. TATE, OF BEDFORD, PENNSYLVANIA.

PROCESS OF REMOVING SAP, &c., FROM WOOD.

No. 825,819.

Specification of Letters Patent.

Patented July 10, 1906.

Application filed January 3, 1905. Serial No. 239,464.

To all whom it may concern:

Be it known that I, JOHN W. GEIBEL, a citizen of the United States, residing at the village of Loysburg, in the township of South Woodbury, in the county of Bedford and State of Pennsylvania, have invented new and useful Improvements in Processes of Extracting and Removal of Acids and Bark from All Kinds of Wood, of which the following is a specification.

This invention relates to the process of extracting and removing acids and bark from all kinds of wood by means of steam, and has for its object to render the process more expeditious and considerably cheaper.

In the drawings, Figure 1 is a front view of a plant designed to carry out my process. Fig. 2 is a rear view of the same. Fig. 3 is an end view of the same; and Fig. 4 is a vertical central longitudinal section of Fig. 1 looking toward the rear, parts being in elevation.

Heretofore in extracting and removing acids and bark it has been necessary to cut off or shave the bark and to cut into small particles or chips the wood, which was then boiled in order to extract the acids in order to use the wood divested of the same for purposes for which the wood cleared of acids is or may be used, such as pulp for the manufacture of paper. Wood for "paper-making" is becoming scarce and expensive, and only certain kinds of wood are now used. Certain other kinds of wood which are cheaper and more plentiful could and would be used for such purposes if the acids contained in them could be cheaply eliminated, as in their fiber and otherwise their utility is conceded.

Instead and in place of the present slow and expensive process it is designed and intended by my new, simple, and inexpensive process to use steam to do the said work and to accomplish the said desired result, and in the following way and manner, viz:

An ordinary air-tight crib or room 1 of sufficient dimensions to contain from one to three or more cords of wood cut into sticks or logs from three to five feet or more in length and of the usual cord-wood thickness is constructed either singly or, as shown in the

drawings, in rows of three and under the same roof. The floor 2 of said crib or room is constructed and laid trough-like, so that the sap, water, acid, &c., from the wood and steam may flow to and collect at one point, from which it is discharged from the crib or room by means of a waste-pipe 3 to any desired place. The wood is placed or stacked on its ends until the crib or room is filled, when the air-tight door 4 is closed. The steam is introduced into the closed crib or room by means of a pipe 5 running into it along or near the top or roof and is regulated and controlled by a stop-cock (not shown) on the main pipe running on the outside along or near the top or roof of the crib or room, conveniently placed for handling. The duration of the steam-bath and its pressure will be governed in a great measure by the color of the liquid discharged from the waste-pipe, and experience will soon enable the operator to determine when the acids have been eliminated and the bark in condition for easy peeling. By this steam process the sticks or logs of cut wood are made to undergo the same process that living standing trees are subjected to by nature when the sap, &c., flows up or settles down or escapes in the spring or autumn. The said sticks or logs of wood, either green or dry, freshly cut, or well dried and seasoned, upon being subjected to this process of steam heating and bathing discharge from its every pore all the sap or acid that may be contained within it.

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

The process of treating wood for paper-pulp, which consists in stacking it on end in a sealed closure, subjecting it to the pressure of steam and removing the sap, water and acid from the inclosure as it accumulates.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN W. GEIBEL.

Witnesses:

E. H. BLACKBURN,
CHAS. R. MOCK.