

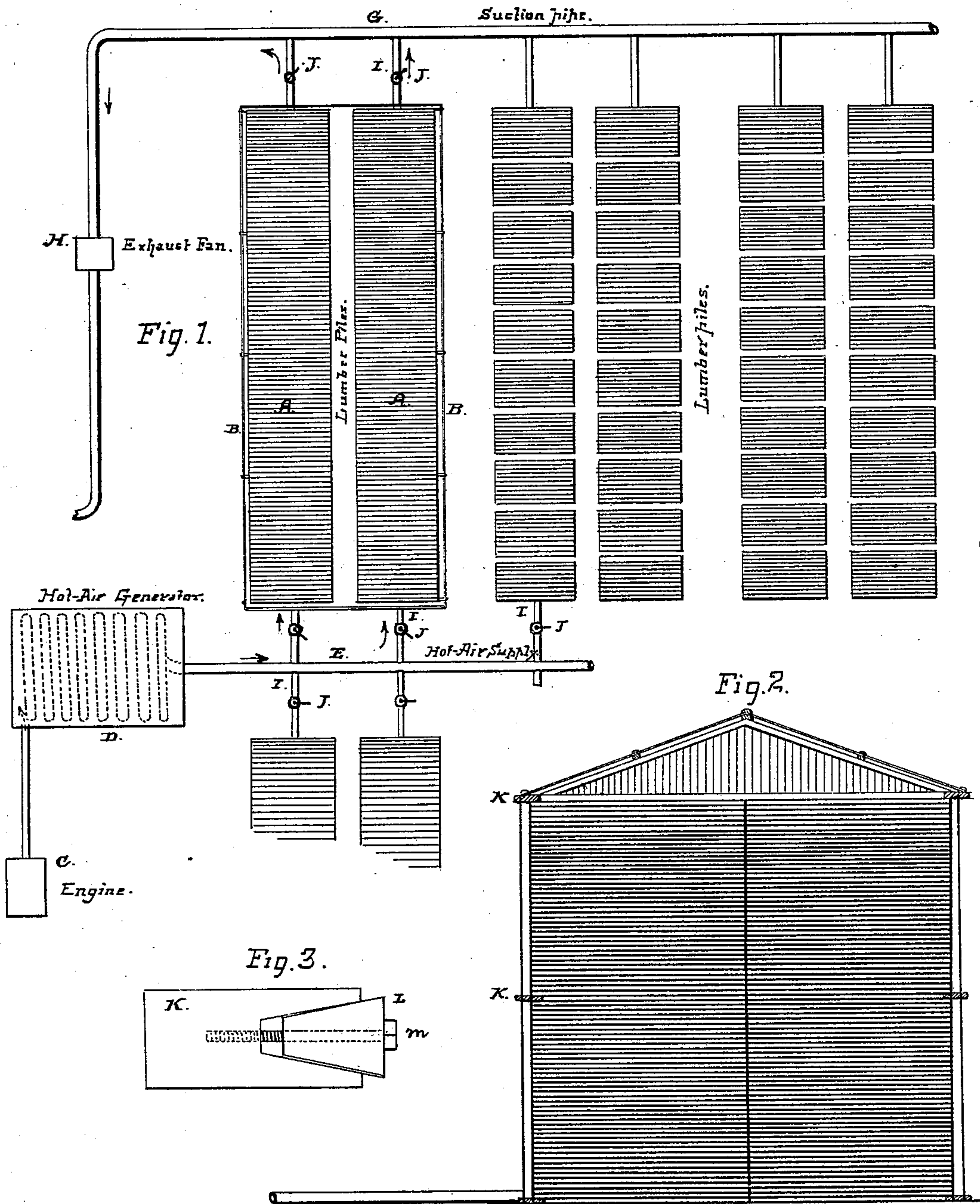
(No Model.)

J. RANDALL.

PROCESS OF AND APPARATUS FOR DRYING LUMBER.

No. 253,556.

Patented Feb. 14, 1882.



Witnesses:

*Wm. L. Lott*  
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Inventor:

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by his Atty., *Reuben V. Gibson*



# UNITED STATES PATENT OFFICE.

JAMES RANDALL, OF SAN FRANCISCO, CALIFORNIA.

## PROCESS OF AND APPARATUS FOR DRYING LUMBER.

SPECIFICATION forming part of Letters Patent No. 253,556, dated February 14, 1882.

Application filed May 25, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES RANDALL, of the city and county of San Francisco, in the State California, have invented certain new and useful Improvements in Processes of and Apparatus for Drying Lumber; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings.

My invention relates to a novel arrangement for subjecting lumber which has been piled in a yard or other locality to a current of heated air in order to dry and season it without handling or removing it from the place where it is piled.

It consists in erecting a temporary cover or housing over the pile of lumber, and then introducing the heated air at one end of the pile and withdrawing it from the other end, so as to pass the hot air over and through the pile, all as hereinafter more fully described.

Referring to the accompanying drawings, Figure 1 is a general plan, showing the application of my improvement. Fig. 2 shows the manner of housing or inclosing a pile of lumber. Fig. 3 shows one of the clamps.

A represents a pile of lumber, which is piled up in racks in the ordinary way of piling lumber. In order to dry and season this pile of lumber, I construct a temporary housing, B, which can be made of canvas, boards, or other material over it so as to completely inclose the pile. I then introduce hot air into the housing at one end and withdraw it at the opposite end, so as to establish a current of hot air through the lumber in the pile, and this current I maintain until the lumber is thoroughly dried and seasoned, after which I remove the cover or housing, leaving the lumber in a seasoned condition without any handling whatever. By this arrangement lumber can be readily dried and seasoned at the saw-mill immediately after it is sawed or in the lumber-yard. Fig. 1 represents an arrangement which is specially adapted for accomplishing this result in the mill-yard by the waste heat from the furnace of the engine. It represents a number of piles of lumber placed side by side in the ordinary manner of piling lumber in a yard.

O is the engine, which supplies the power for running the mill. Near the furnace or fire-

place of this engine I construct a heat-generator, D, through which coils of pipe can pass from the fire-place; or, if preferred, the exhaust-steam from the engine may be passed through it, so as to heat the air which passes into and through the generator. From this generator or chamber I lay a permanent pipe or tube, E, through the yard, between the piles of lumber, in any desired direction, and the end of this pipe or tube I close tightly to prevent the escape of the hot air. At the opposite end of the piles A A, I lead another permanent pipe, G, parallel with the pipe E. One side of this pipe I close tightly and the other end I connect with a fan-blower, H. Each of these pipes has short tubes I, leading at right angles from it toward the ends of the piles of lumber, and each short tube has a cock, J, by means of which the passage through it can be closed. I then construct my temporary housing over whichever pile or piles of lumber I may desire to subject to the drying operation, so as to inclose the ends of the branch tubes I at each end of the pile. I then open the cocks so as to admit the heated air inside the housing and through the egress-pipe G. The fan-blower is then set in operation, and a current of heated air is drawn through the pile of lumber, so as to dry and season it in the usual manner of drying and seasoning lumber in drying-houses.

When I employ a canvas cover or housing I introduce clamping-timbers K K (shown more plainly at Figs. 2 and 3) at intervals in the pile of lumber. Each timber K has a groove cut out of one side or edge, in which a follower or rail, L, is placed and secured by screws m or other device. This serves as a clamp to secure and hold the canvas cover and form a strong and substantial housing, which can readily be removed when the drying and seasoning are finished.

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

1. The improvement in the art of drying and seasoning lumber, consisting in erecting a temporary cover or housing over the lumber after it is piled and passing a current of heated air through the lumber, substantially as above described.

2. The improvement in mill and lumber yards, consisting in laying permanent pipes E G between the piles of lumber, each of which pipes is provided with branch tubes I, extending  
5 toward the ends of the piles of lumber, and then connecting one of the pipes with a hot-air generator or heater and the other with a fan-blower, H, substantially as and for the purpose described.  
10 3. In the construction of piles of lumber in

yards, the combination of the timbers built or placed at intervals in the piles, a clamping device, and a temporary cover, substantially as described.

In witness whereof I have hereunto set my hand and seal.

JAMES RANDALL. [L. S.]

Attest:

W. F. CLARK,  
W. VOIT.