

UNITED STATES PATENT OFFICE.

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DRY-KILN.

1,028,292.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWARD D. SIDMAN, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Dry-Kilns, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention consists in certain novel features of construction, with particular reference to the construction and arrangement of a combined heating and spraying system, the means employed for regulating the heat from outside the kiln, the peculiar construction of the adjustable spray pipes, and various other structural features as more fully hereinafter described.

In the drawings, Figure 1 is a plan view of a portion of the kiln; Fig. 2 is a similar view showing a different position of one of the adjustable spray pipes.

A is the outer wall of the kiln, of any suitable construction, and which is preferably divided by a movable partition or curtain B into two compartments.

C are steam radiator pipes extending longitudinally of the kiln and connected at their ends to headers D. These pipes preferably extend into each of the compartments E and F on opposite sides of the partition, or curtain, B.

H is a stationary spray pipe, which extends centrally and longitudinally of the compartment E, and I are adjustable spray pipes adjacent to the sides of the compartment. Both of these spray pipes are fed from the same system which supplies heat, preferably by tapping the feed pipe J, which supplies steam to one of the headers D, and connecting it to a pipe K, having the controlling valve L therein, and the transversely-extending portion M. The pipe M is connected to the central spray pipe H, and also extends to each of the side spray pipes I. The latter are provided with a swivel connection O, which permits them to be either adjusted vertically, as illustrated in Fig. 1, or horizontally, as indicated in Fig. 2. Within the compartment F, which is used for the final drying of the lumber, a

single spray pipe P is employed, which extends longitudinally and centrally of the chamber, and receives its steam by tapping one of the radiator pipes C.

Q is a valve-controlling steam connection to the spray pipe P, which has a stem R extending outward, so that the valve may be operated from outside the kiln, and a similar operating stem R' is provided for the valve L.

When the construction described is intended for use in the seasoning of lumber, it is first subjected to a treatment in a humid atmosphere to initiate the drying from the center, and subsequently to an atmosphere decreasing in humidity. The compartment E is employed for the first step in the process, and to this end is provided with the side spray pipes, as well as the spray pipe in the center. These operate to constantly inject moisture into the air of the kiln and at opposite ends of the lumber, which is arranged transversely, and upon opposite sides of the central spray pipe H. By means of the valve stems extending outside the kiln, the sprays may be regulated so as to maintain the proper degree of humidity. Where the lumber varies in length, the side spray pipe I may be adjusted from its vertical position, where it is adjacent to the side wall of the kiln, to a horizontal position, where it extends inwardly. In the latter position, it is also arranged in a lower plane, which is more favorable for certain conditions of treatment. Thus the apparatus is adapted for accurately regulating the conditions of moisture and humidity to suit the requirements of the process.

What I claim as my invention is:

1. In a dry kiln, a plurality of spray pipes arranged to extend at opposite ends of the lumber in the kiln, and adjustable in relation to each other.

2. In a dry kiln, a spray pipe having a supply arm extending laterally therefrom, a supply pipe, and a swivel connection between said supply arm and the supply pipe.

3. A dry kiln, comprising heat-radiating steam pipes, a stationary spray pipe extending centrally and longitudinally of the kiln and laterally-adjustable spray pipes at op-

posite sides of the kiln connected to said centrally extending pipe.

4. In a dry kiln, a spray pipe extending longitudinally and centrally of the kiln,
5 branch pipes extending to near the sides of the kiln, and spray pipes having swiveled connections with the branch pipes.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD D. SIDMAN.

Witnesses:

NELLIE KINSELLA,
JAMES P. BARRY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."