

UNITED STATES PATENT OFFICE.

EZRA DAVEE, OF MARSHALL, ILLINOIS.

IMPROVEMENT IN PROCESSES OF SEASONING WOOD.

Specification forming part of Letters Patent No. 115,446, dated May 30, 1871.

I, EZRA DAVEE, of Marshall, in the county of Clark and State of Illinois, have invented a new and useful Process for Seasoning Timber, of which the following is a specification:

Nature and Objects of the Invention.

My improvement consists in covering or enveloping the timber in an air-tight covering of earth, and subsequently applying heat to the exterior, which, being communicated through the earth to the timber, will cause the moisture to be rapidly evolved therefrom, and at the same time absorbed by the earth which envelops it.

General Description.

In carrying out my invention I prepare a stack of timber to be heated, placing almost any desired amount in one body, with sufficient interstices to permit the passage of the vapors, after which I cover the whole body with earth, making the covering air-tight. The earth thus prepared may have a thickness of fifteen inches, more or less. A receptacle for the timber may be conveniently prepared by excavation. Around the sides and one end of the excavation a flue is prepared, about a foot wide, more or less, extending to a depth equal to that of the excavation which is to receive the timber. A central flue is formed in the bottom of the said excavation, running its entire length, fifteen inches square, more or less, and covered over with earth. This central flue communicates with the transverse part or end of the flue first mentioned, which, in turn, communicates with those extending along the sides of the excavation. The receptacle thus prepared is filled with timber to the level of the ground, (or the stack may be extended upward to any convenient height above the surface of the ground, if preferred,) and closely covered with an envelope of earth. A fire is placed at the mouth of the center flue at the end opposite to that which communicates with the external flue. The gaseous products of combustion will thus be caused to pass through the central flue beneath the timber, along the end flue, and through the external flues on the two sides of the stack, thus traversing the entire

length of the stack, after which they may be carried off through vertical flues communicating with the ends of the said flues and passing up through the earth. These flues may communicate with pipes extended to a sufficient height to produce a necessary current of air. Any desired heat may thus be produced to season the timber within a short time.

From the above description it will be understood that the heat is applied to the timber only through the medium of the earth, without any direct contact of heated air or gases. By this means green timber can be seasoned without the slightest injury, all its natural properties being retained. Its strength, toughness, durability, and value for all purposes are thus greatly enhanced. It is also found to be free from all liability to warp, or to shrink or swell, under changes of weather.

The period usually required to treat a large body of timber is from thirty to sixty hours, during eighteen hours of which time an active fire should be kept burning, after which the heat should be confined as much possible. One cord of wood has been found sufficient to thoroughly season ten thousand feet of timber; and it is manifest that the process can be carried out with greater economy by the use of coal. In from thirty to sixty days after treatment the timber will be found perfectly seasoned.

Claims.

I claim as my invention—

1. The process for seasoning timber, substantially as herein described.
2. Seasoning timber by the agency of heat applied through an intervening wall or interval of earth, substantially as herein described.

To the foregoing specification of my improved means and process for seasoning timber I have set my hand this 27th day of March, 1871.

EZRA DAVEE.

Witnesses:

M. D. HARE,
S. L. WHITEHEAD.