(No Model.) 2 Sheets—Sheet 1.

H. FLAD.

Method of Seasoning Wood.

No. 231,783. **Patented Aug. 31, 1880.**

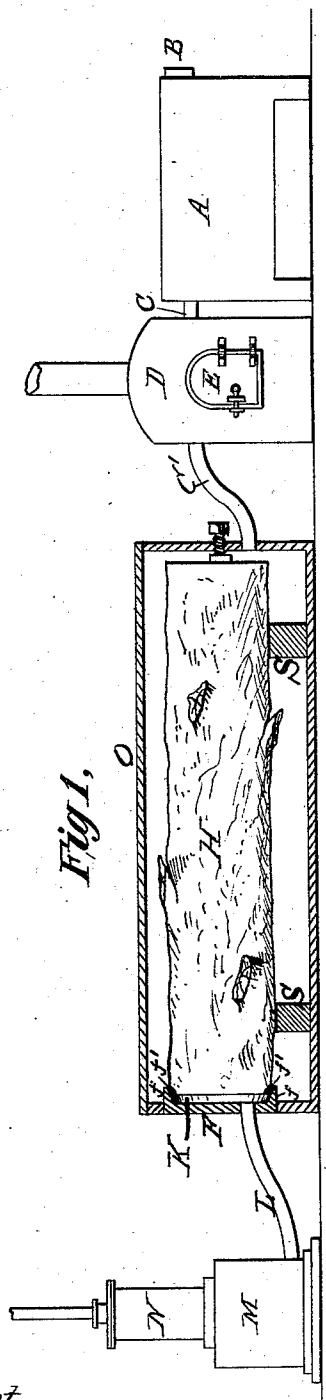


Fig 1,

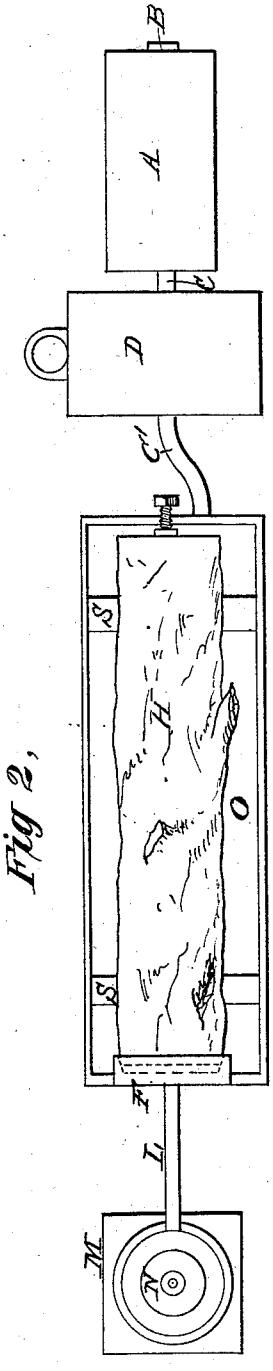


Fig 2,

Attest
Geo. T. Smallwood Jr.
Harry E. Knight

Inventor
Henry Flad
By Knight Bros
Attys.

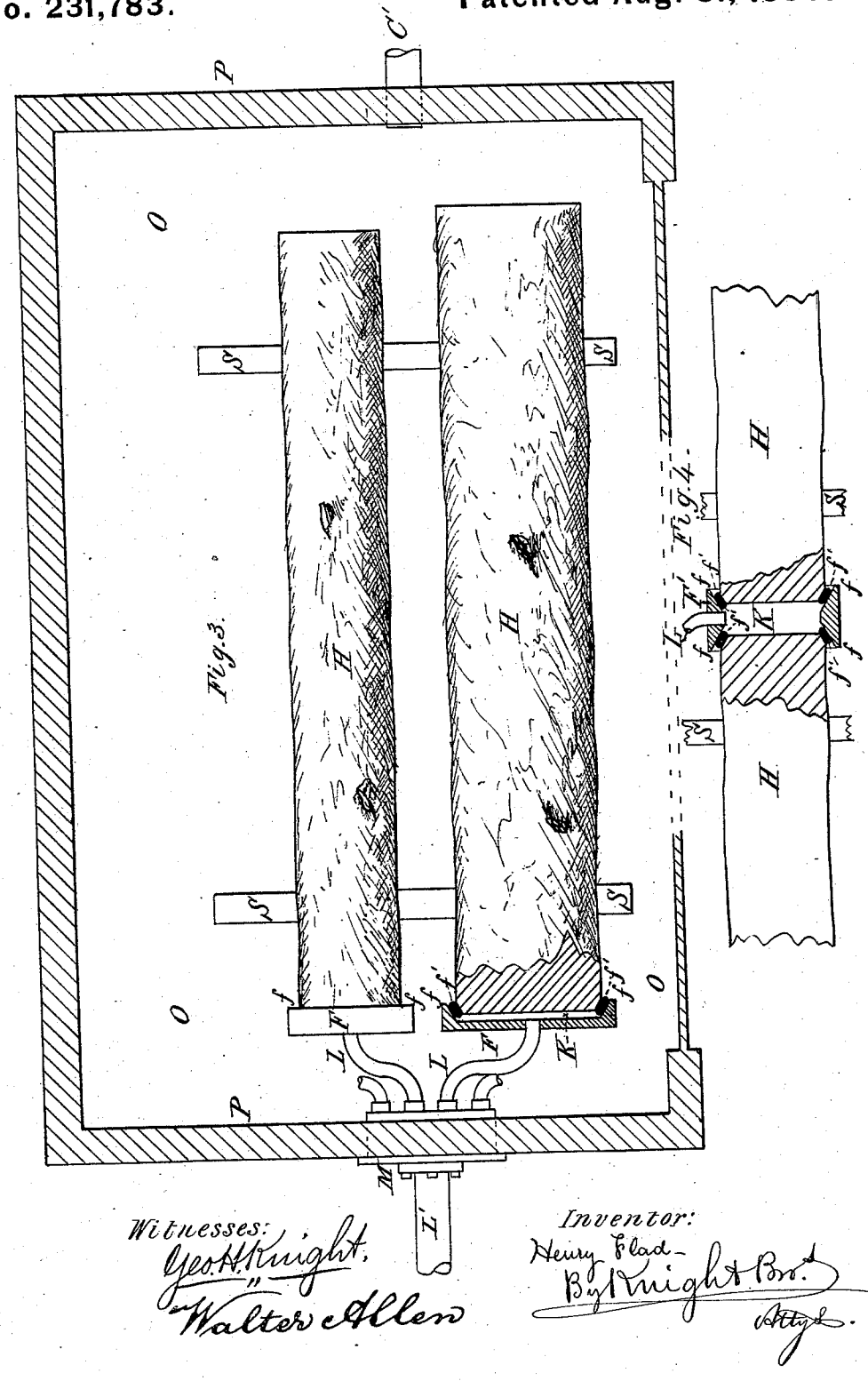
N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

H. FLAD.

Method of Seasoning Wood.

No. 231,783. Patented Aug. 31, 1880.



Witnesses:
Geo. H. Knight.
" Walter Allen

Inventor:
Henry Flad—
By Knight Bros.
Attys.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HENRY FLAD, OF ST. LOUIS, MISSOURI.

METHOD OF SEASONING WOOD.

SPECIFICATION forming part of Letters Patent No. 231,783, dated August 31, 1880.

Application filed May 17, 1880. (No model.)

To all whom it may concern:

Be it known that I, HENRY FLAD, of St. Louis, Missouri, have invented new and useful Improvements in Methods of Seasoning Timber, of which the following is a specification.

My method consists in placing the timber in a closed chamber which is supplied with desiccated air and exhausting the air from the end or ends of the log or logs, so as to cause the dried air entering the timber through all the exposed pores, both in the end and sides, to completely permeate the wood, and in passing through the same to carry off the moisture therefrom.

My invention further relates to a ring connected by a pipe with suitable exhaust appliances and provided on both faces with packing appliances, adapting it to be placed between the adjacent ends of two logs, so as to act on both simultaneously and dispense with the necessity of a cup having the necessary strength to resist atmospheric pressure over its entire area.

In the drawings, Figure 1 is a side elevation of the apparatus, partly in central section at *a a*, Fig. 2. Fig. 2 is a plan omitting the cover of the hot-air chamber. Fig. 3 is a plan illustrating a manner of treating a number of logs with a single vacuum apparatus, part being in section at *b b*, Fig. 1. Fig. 4 is a central section, showing the packing-ring employed for acting by suction on the adjacent ends of two logs simultaneously.

A is a vessel or chamber closed with the exception of the air-induction opening B and eduction opening or pipe C. The chamber A contains chloride of calcium, sulphuric acid, or any suitable material that will absorb the moisture of air passing through the chamber. From the chamber A the air passes through the pipe C, through a heated chamber, D. The chamber D is heated by a furnace, E, or by other suitable means. The pipe C may pass through the fire-chamber of the furnace either straight, bent, or coiled, and the pipe C′ be in one piece with pipe C; or the pipe C may discharge into a heating-chamber, D, C being the induction-pipe to said chamber, and the pipe C′ forming the eduction-pipe thereof. The heating of the air of course increases its capacity for the absorption of moisture.

The desiccated air flows through the pipe C′ into an air-tight chamber, O, containing the logs H, which are supported on skids S. The inclosing-walls of the chamber are shown at P P, Fig. 3. The chamber may be made a sufficient size to contain any proper number of logs, each of which is fitted with a cap, F, at one end, forming a suction-chamber, in communication, by pipes L, with a vacuum-chamber, M, connected, either directly or through an eduction-pipe, L, with an air-pump, N, or any suction device. The cap F is made to fit tightly over the end of the log by any suitable means. I have shown an annular flange, *f*, embracing the end of the log and a packing, *f′*, interposed between it and the timber. This packing may be of greased rope, rubber, or other material. The air enters the open end of each log and any open pores in the sides, and is forced through the pores of the wood by the normal pressure of the atmosphere, owing to the vacuum produced in the chamber K. Means of producing the vacuum are so well known that it is not necessary to describe any special means.

I do not confine myself to any special apparatus to produce a vacuum, or make claim as inventor of the same. Neither do I claim novelty in the vacuum-cap F.

In Fig. 4 is shown the vacuum-ring forming the second part of my invention, the said ring being adapted to fit two logs laid in line with their ends a little distance apart. The ring F′ is formed with a flaring flange, *f*, at each edge to embrace the ends of the respective logs, and it is packed by gaskets *f′*, similar to those applied to the single cap, as before described, so as to form a tight vacuum-chamber, K, between the ends of the logs. The suction-pipes L are passed either directly through the wall P of the chamber O or into a vacuum-chamber, M, connected by a common pipe, L′, with the air-pump, as preferred.

It will be understood that in carrying out my process or method the air is always forced through the timber by pressure, either by partial removal of the atmospheric pressure from

one end of a log or logs immersed in dry air or by an increase of the pressure above the normal atmospheric pressure in the dry-air chamber, or by both combined in the most effective form of apparatus.

The air is dried before passing through the timber, either by heating it or by bringing it in contact with some material having so strong an affinity for moisture as to withdraw it from the air. When either the vacuum or pressure producing device is used the other may be dispensed with.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. The method of seasoning wood by placing one or more timbers in a closed chamber supplied with dried air at ordinary pressure, and exhausting the air from the end or ends of the log or logs, substantially as herein set forth.

2. The ring F′, provided with an exhaust-pipe, L, and with packing appliances, *f′ f′*, on both faces, to adapt the apparatus for operating simultaneously on the adjacent ends of two timbers, as set forth.

HENRY FLAD.

Witnesses:
SAML. KNIGHT,
GEO. H. KNIGHT.