(No Model.)

J. D. STANLEY.

DEVICE FOR CHARRING LOGS.

No. 361,193. Patented Apr. 12, 1887.

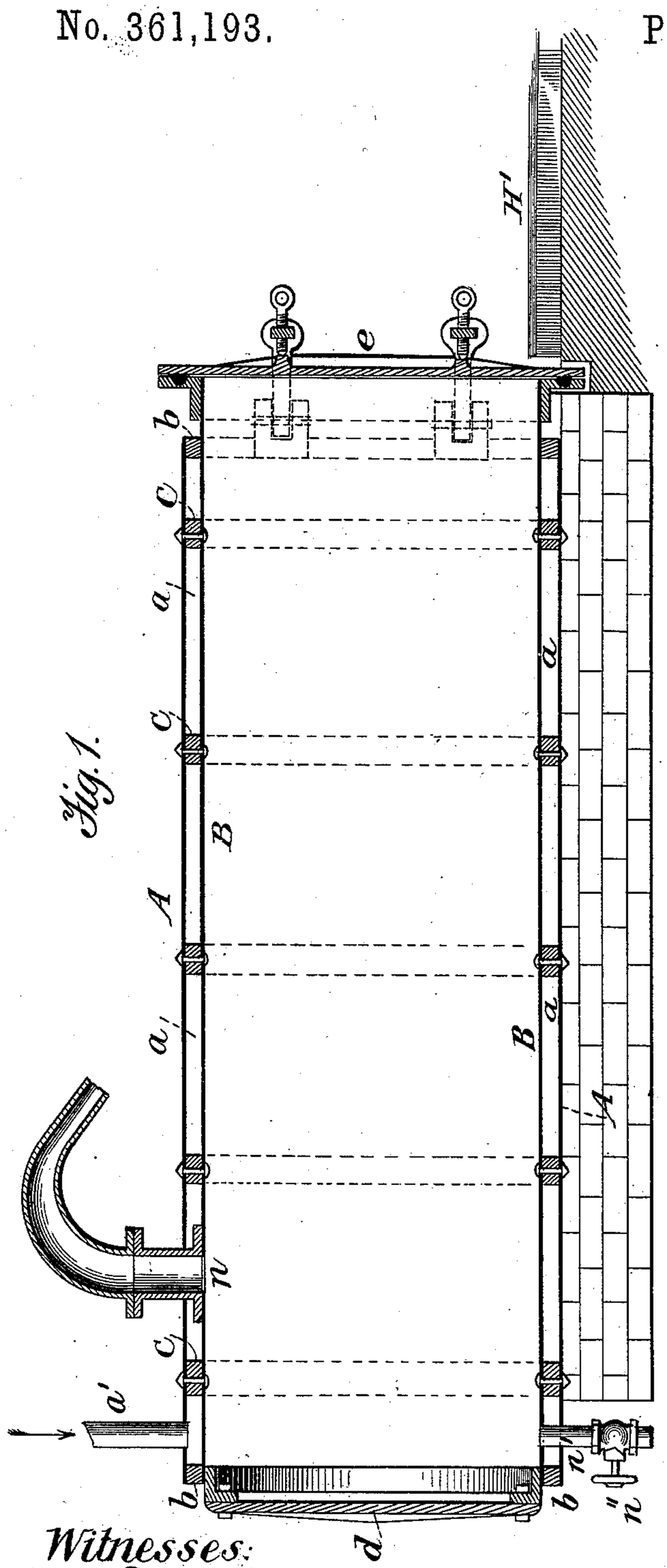

Fig. 1.

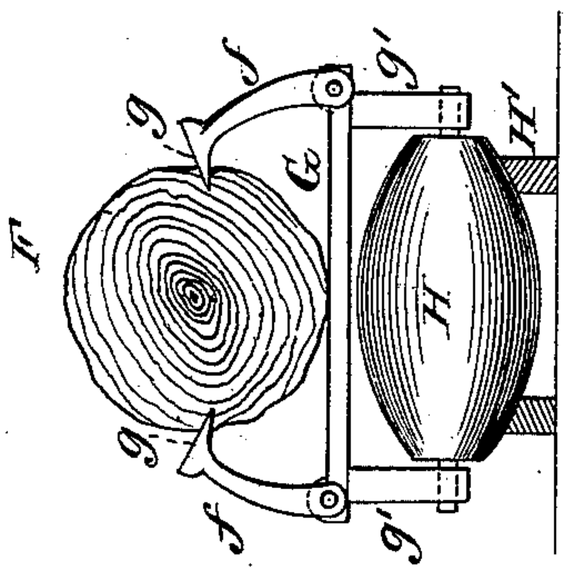

Fig. 3.

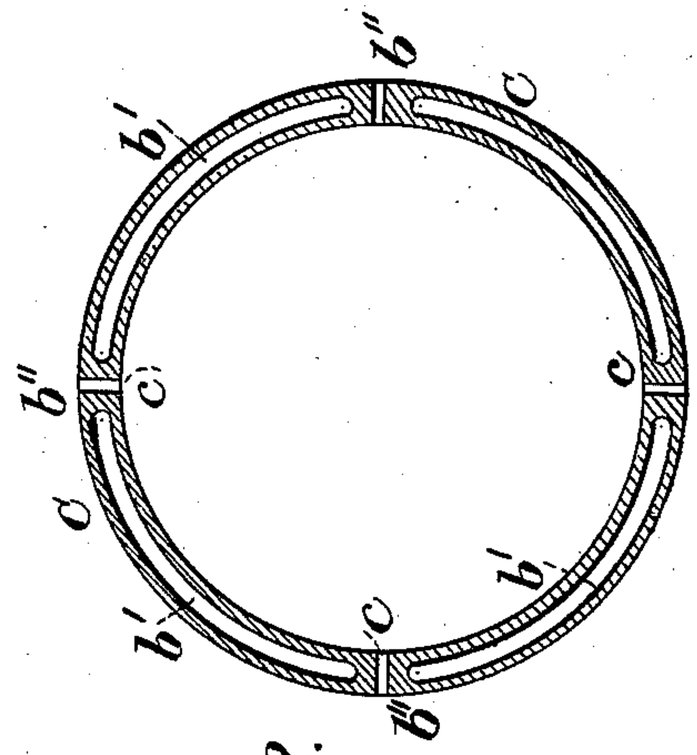

Fig. 2.

Witnesses:
A. Ruppert.
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UNITED STATES PATENT OFFICE.

JAMES D. STANLEY, OF EASTOVER, SOUTH CAROLINA, ASSIGNOR TO CHARLES P. STEVENSON, OF PITTSBURG, PENNSYLVANIA.

DEVICE FOR CHARRING LOGS.

SPECIFICATION forming part of Letters Patent No. 361,193, dated April 12, 1887.

Application filed July 3, 1886. Serial No. 207,131. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. STANLEY, of Eastover, in the county of Richland and State of South Carolina, have invented certain new and useful Improvements in Apparatus for Charring or Carbonizing and Creosoting or otherwise Treating Logs of Timber, of which the following is a specification, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention is designed more especially for use in connection with logs for piling, its object being to protect the pile from the action of worms, salt-water, &c.

In the accompanying drawings, Figure 1 is a longitudinal sectional elevation of my invention. Figs. 2 and 3 are transverse sections of details of the invention, as hereinafter specified.

Similar letters of reference indicate similar parts in the respective figures.

A is a cylinder made of plate-iron of any suitable dimensions—say three feet in diameter—and of any required length. B represents a second cylinder, surrounding the cylinder A, a jacket or space, *a*, being formed between the two cylinders. The ends of the jacket are closed, as shown at *b*.

Between the cylinders A and B are placed cast-iron rings C, of, say, four inches in width and of a depth in cross-section equal to the width desired for the jacket or space *a*. The rings are shown in section in Fig. 2. They are provided with four or more segmental openings, *b'*, which pass entirely through them, the parts *b''* between said openings being used for the rivet-holes *c*, by means of which rivets the rings C are connected to the plate-iron cylinders A and B.

One head of the inner cylinder, A, is permanently closed by a head, *d*, while the other head, *e*, is made removable and secured to the cylinder in the manner described in an application filed by me of even date herewith.

In Fig. 3 is seen a cross-section of a log and of the means used for sliding said log into the cylinder for treatment. F represents the log, and G a frame, to which are pivoted two dogs, *f*, having each a spike or tooth, *g*, which is driven into the log. The frame G is provided with bearings *g'*, in which is mounted an iron roller, H, having a shape conforming to that of the inner cylinder. As shown in Fig. 3, the dogs are driven into the log, thus securing it to the frame and roller. Two or more of such devices are used. At least one is necessary at each end of the log, and others may be used at intervening points in its length.

The cylinders A B are mounted upon suitable brick-work, and are preferably arranged adjacent to a hollow or concave track, H', conforming in shape to the roller H.

The operation is as follows: The detachable head *e* having been removed and the log run in from the permanent track H' to the interior of the cylinder A, the head *e* is replaced and secured. Superheated steam is now admitted to the jacket or space *a* through the pipe *a'*, and the inner cylinder, A, brought to the requisite degree of heat. The log must remain a sufficient length of time within the cylinder to become fully dried, carbonized, or charred, the vapors from the wood escaping through the aperture *n* to a condenser. The creosoting or other material may be forced or pumped into the inner cylinder through the same or another aperture, thus completing the operation. The fluid is withdrawn through the aperture *n'*, provided with a cock, *n''*. The operation having been completed, the head *e* is removed and the log withdrawn. The segmental openings *b'* through the rings C form a continuation of the jacket or space *a*, thus admitting the steam throughout the entire length of the jacket or space. If desired, the cylinder may be heated by a furnace below it instead of by steam. Indicators and gages are used to show the temperature and pressure.

Having described my invention, I claim—

1. The inner cylinder, B, and its heads, the outer cylinder, A, solid rings *b*, and perforated rings C, combined with the vapor-pipe *n*, steam-pipe *a'*, and fluid-discharge *n'*, substantially as set forth.

2. The cylinder B and track H', combined with the convex roller H, frame G, bearings *g'*, and pivoted dogs *f*, having teeth adapted to be driven into a log, substantially as set forth.

In testimony whereof I hereunto set my hand and seal.

JAMES D. STANLEY. [L. S.]

Witnesses:

GEO. H. HOWARD,

PHILIP MAURO.