

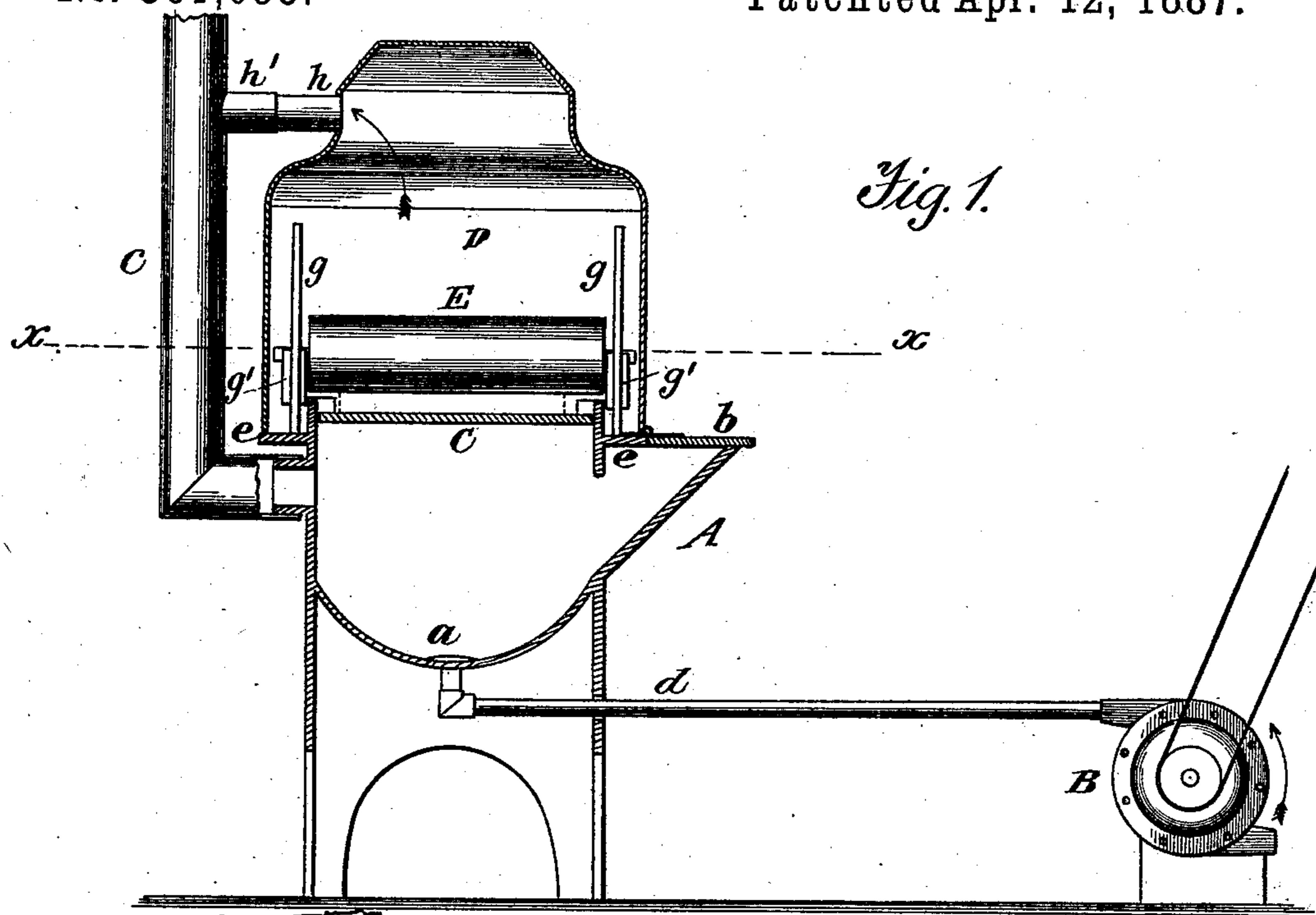
(No Model.)

J. D. STANLEY.

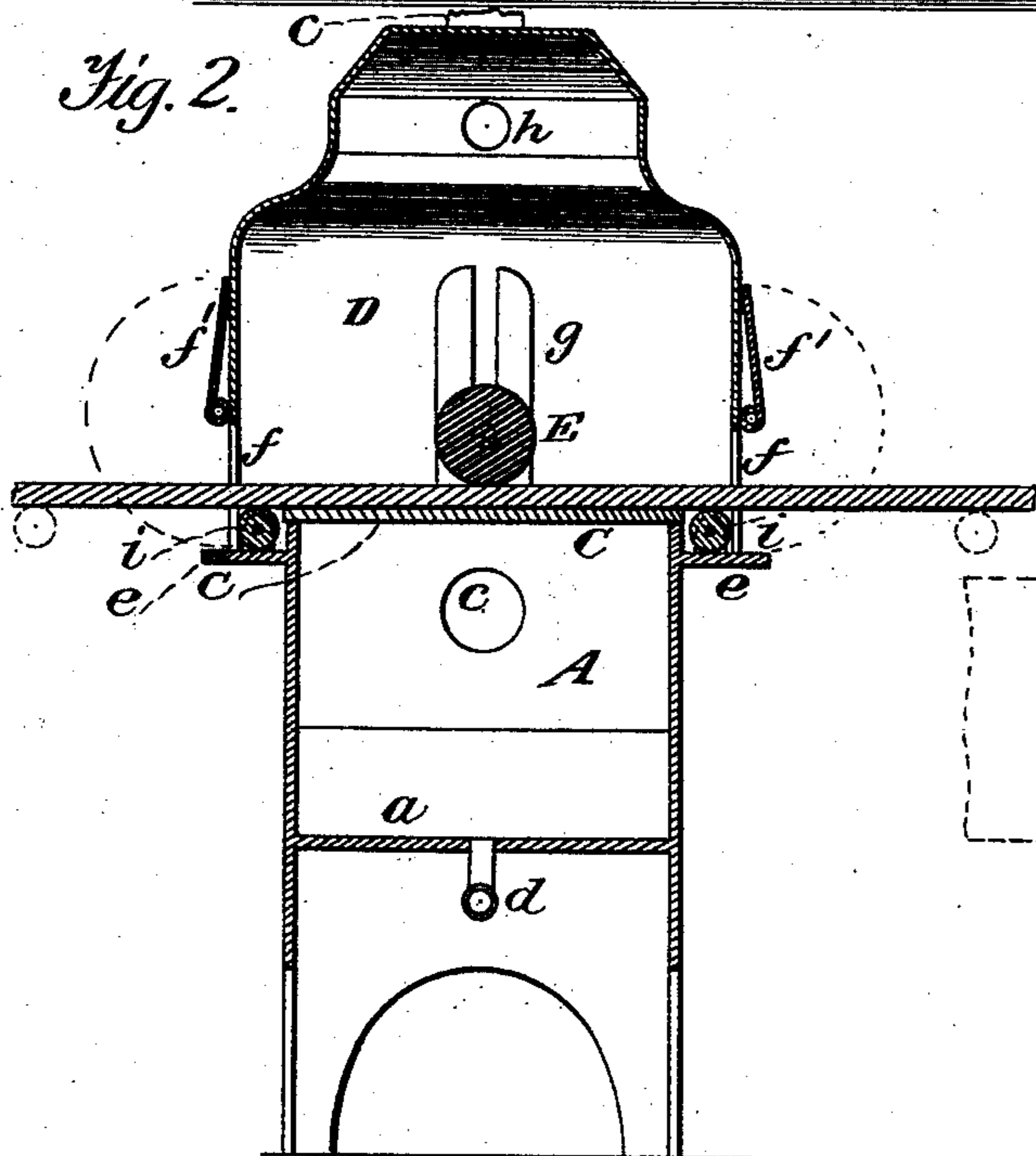
DEVICE FOR CHARRING SURFACES OF TIMBER.

No. 361,095.

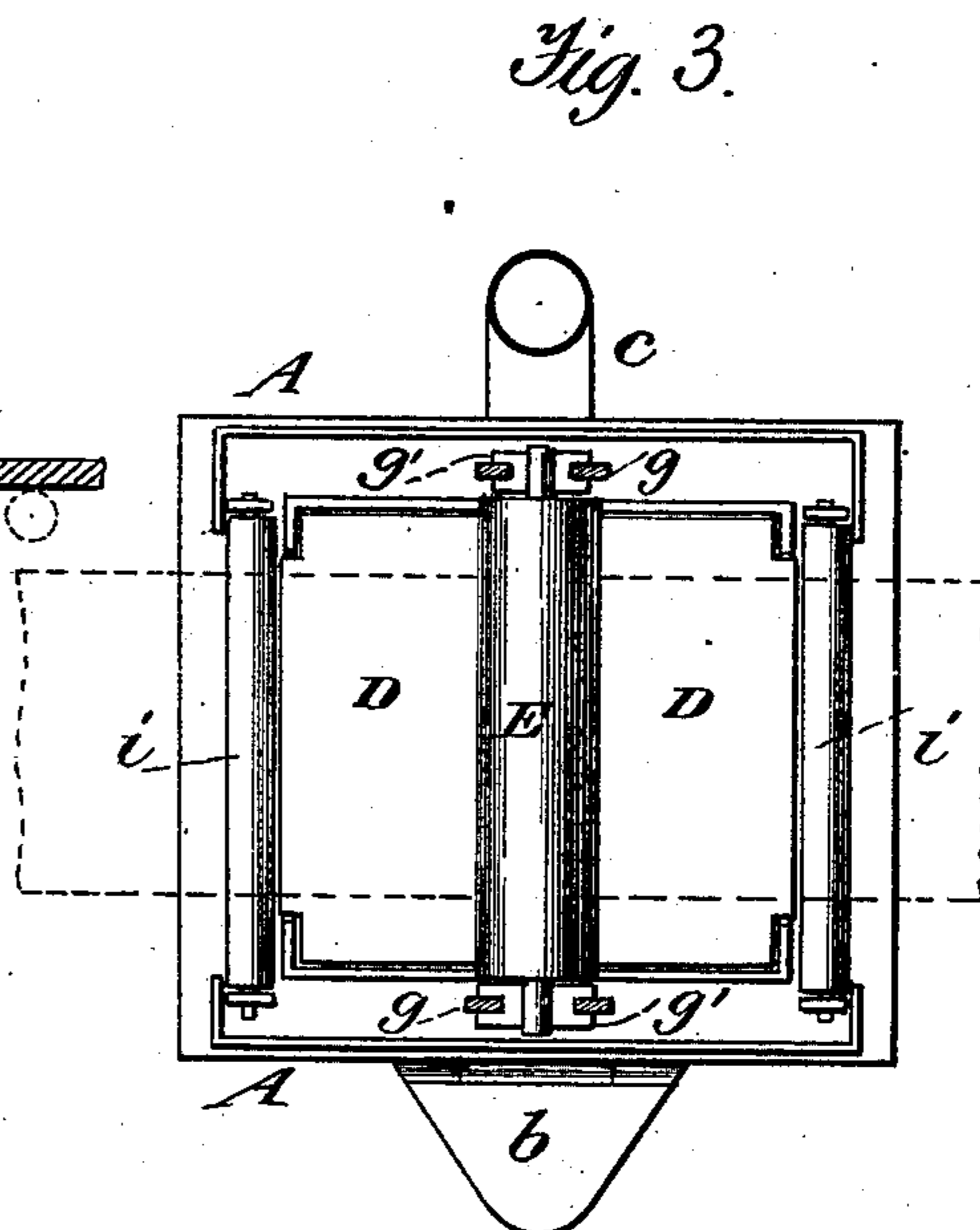
Patented Apr. 12, 1887.



*Fig. 1.*



*Fig. 2.*



*Fig. 3.*

Witnesses:

E. Hickenlooper.  
H. A. Daniels,

Inventor:  
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*Attys*

# UNITED STATES PATENT OFFICE.

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## DEVICE FOR CHARRING SURFACES OF TIMBER.

SPECIFICATION forming part of Letters Patent No. 361,095, dated April 12, 1887.

Application filed July 3, 1886. Serial No. 207,130. (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 Furnaces for Carbonizing or Charring the Surfaces 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 intended for charring or carbonizing one side of planks or pieces of timber used for shipbuilding or other purposes, the object of the carbonizing or charring being to render the plank worm-proof and to protect it from the action of the elements; and the invention consists in the features and combinations hereinafter expressed.

In the accompanying drawings, Figure 1 is a vertical longitudinal section of an apparatus embodying my invention. Fig. 2 is a vertical transverse section; and Fig. 3 is a sectional plan on the line *x x*, Fig. 1.

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

A is a furnace of ordinary construction, which may be of iron or brick, having a grate, *a*, fuel-feeding door *b*, and smoke-flue *c*.

B represents a fan or blower of any ordinary or approved construction, said blower being connected by means of a pipe, *d*, which enters the fuel after the manner of the ordinary blacksmith's forge.

C represents a solid iron plate, which constitutes the top of the furnace, said plate being preferably removable, and of sufficient thickness to prevent warping and to allow a concentration of a high degree of heat therein.

D is the upper portion or casing of the furnace, which rests upon a shelf or flange, *e*, situated a short distance below the heating-plate C. At opposite sides of the casing D are openings *f*, which are preferably closed by hinged doors *f'*. Attached to the shelf or flange *e* are slotted standards *g*, in which are placed sliding blocks *g'*, which serve as the bearings for a heavy metallic roller, E, the weight of said roller being sufficient to normally keep it down in its bearings to the lower limit of the slots of the standards *g*. The casing D is pro-

vided at its upper part with an outlet, *h*, which connects with a branch, *h'*, secured to the smoke-flue *c*.

A roller, *i*, is placed at the front of each opening *f*, having bearings secured to the shelf or flange *e*, and, if desired, other rollers, detached from the apparatus, may be placed at either side thereof to serve as rests for the plank as it enters and leaves the machine.

The operation is as follows: The furnace having been fired up and a high degree of heat obtained therein through the medium of the blower B, the plate C is made red-hot. The hinged doors *f'* being raised, the plank to be carbonized or charred is entered at one of the openings *f* and pushed through the casing D, the lower surface of the plank resting upon the solid heating-plate C, while the roller E rests upon the upper side of said plank, pressing it down to the plate. The board is passed over the plate C sufficiently slowly to allow the under surface of said plank to be carbonized or charred, and it is usually found that it is only necessary to pass the plank through the apparatus once to char one side of the plank. If desired, both sides of the plank may be charred or carbonized in the above-mentioned manner. The smoke from the furnace, it will be understood, passes off through the flue *c*, while the vapors from the wood pass off into the same flue through the outlet and branch *h h'*, the draft produced in the flue being sufficient to draw off said vapors and keep the interior of the casing perfectly free from them.

Having described my invention, I claim—

1. The furnace A and casing D, the latter having the openings *f* and vapor-outlet *h*, combined with the charring-plate C and roller E, substantially as set forth.

2. The combination of the furnace A, casing D, heating-plate C, smoke-flue *c*, and vapor-flue *h h'*, substantially as set forth.

In testimony whereof I hereunto set my hand and seal.

JAMES D. STANLEY. [L. S.]

Witnesses:

G. H. HOWARD,  
PHILIP MAURO.