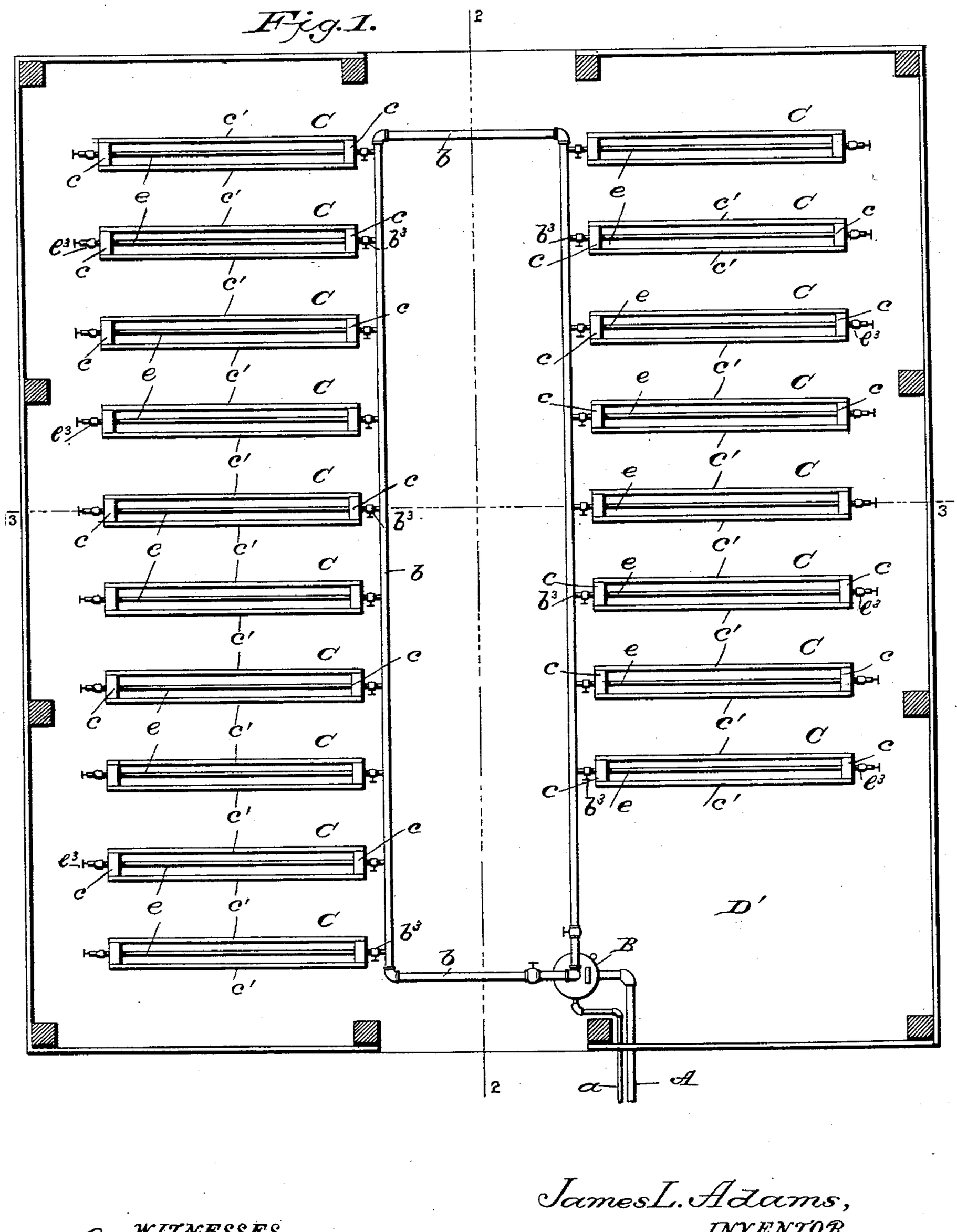
(No Model.) 2 Sheets—Sheet 1.

J. L. ADAMS.

BARN FOR CURING TOBACCO.

No. 541,305. Patented June 18, 1895.

Fig. 1.



WITNESSES

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(No Model.) 2 Sheets—Sheet 2.

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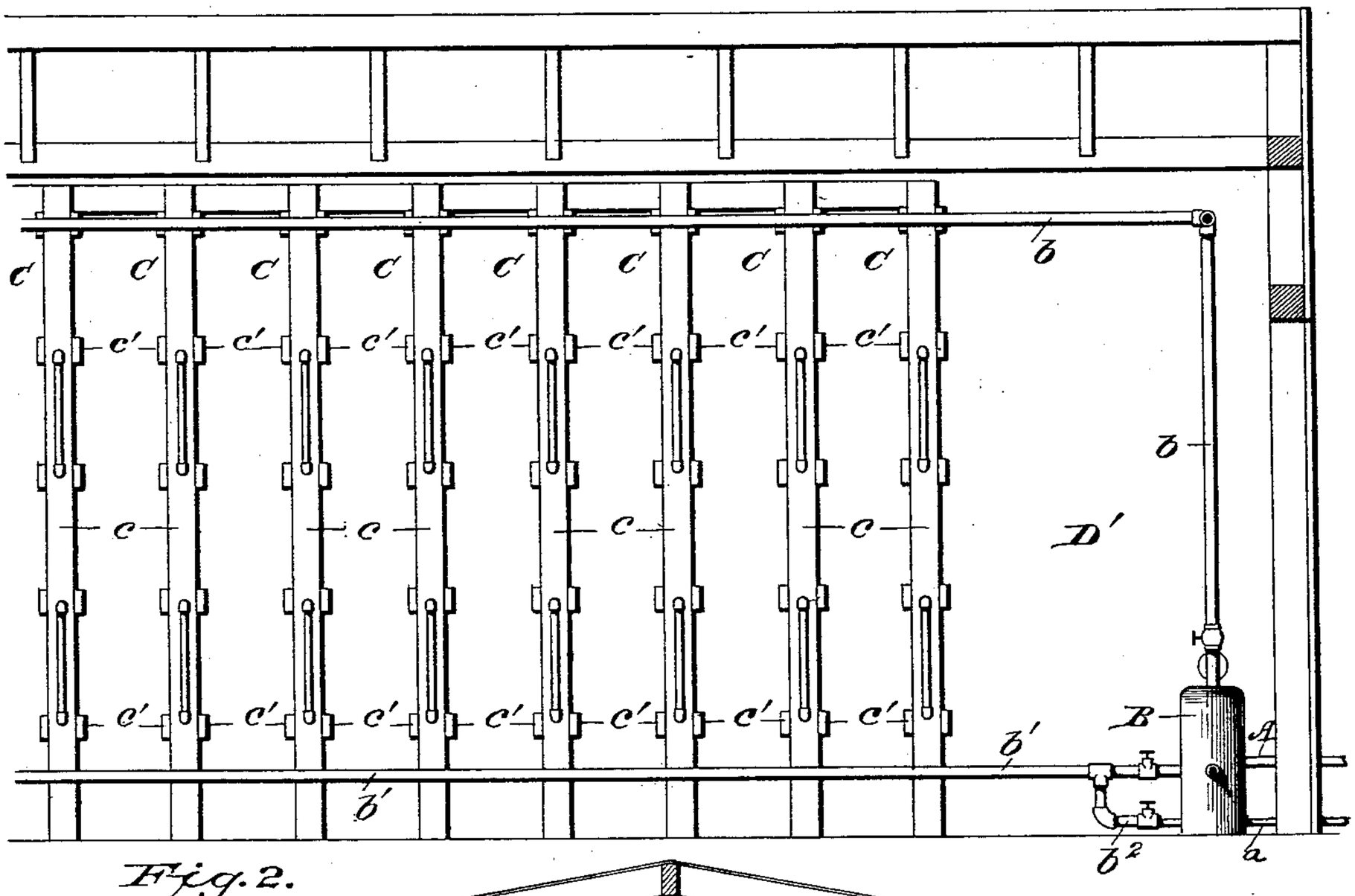

Fig. 2.

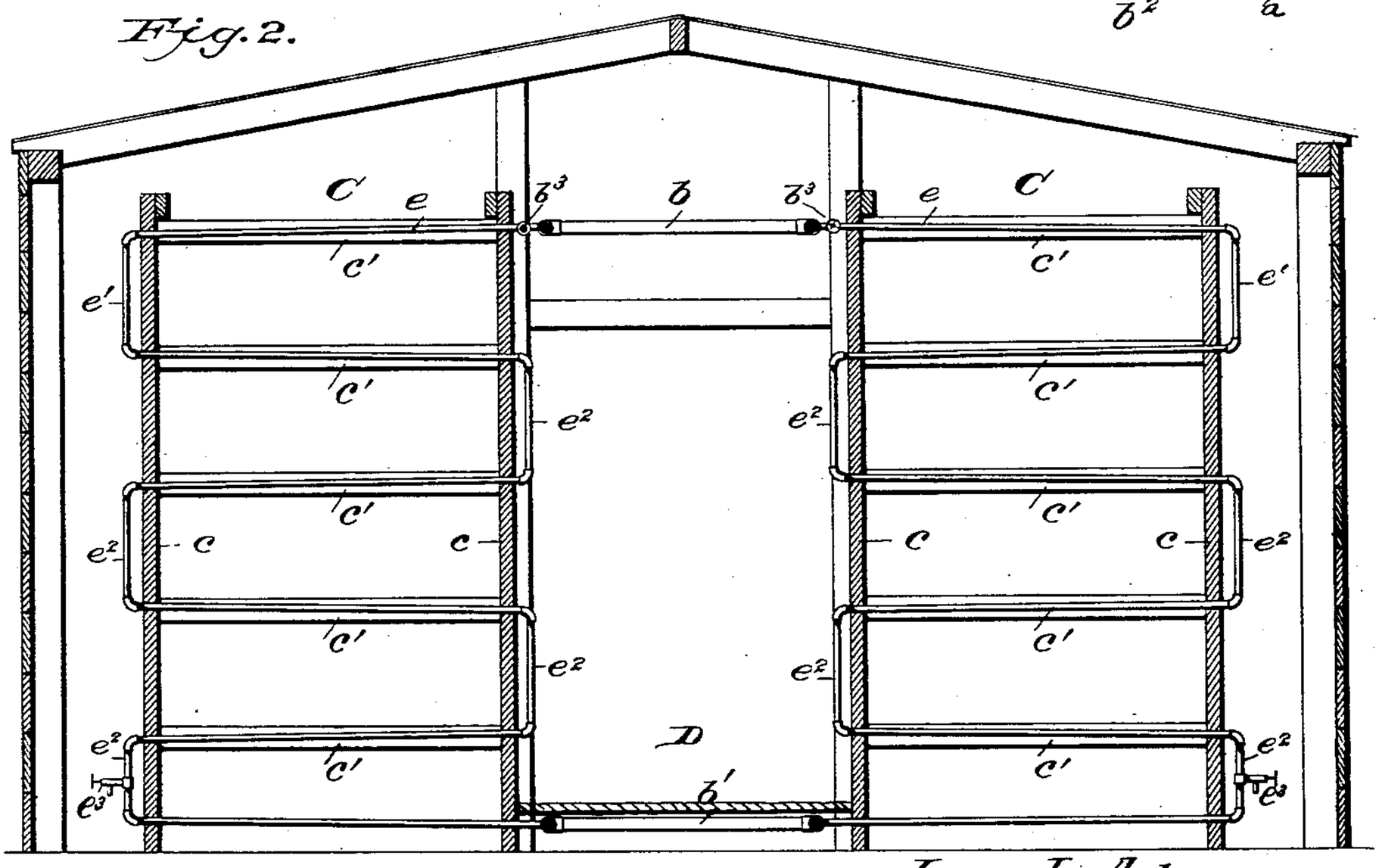

Fig. 3.

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UNITED STATES PATENT OFFICE.

JAMES LEE ADAMS, OF LITTLE HICKMAN, KENTUCKY.

BARN FOR CURING TOBACCO.

SPECIFICATION forming part of Letters Patent No. 541,205, dated June 18, 1895.

Application filed March 14, 1895. Serial No. 541,730. (No model.)

To all whom it may concern:

Be it known that I, JAMES LEE ADAMS, a citizen of the United States of America, residing at Little Hickman, in the county of Jessamine and State of Kentucky, have invented certain new and useful Improvements in Barns for Curing Tobacco; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide means for drying tobacco by the radiation of steam heat and in the application of steam to give to the atmosphere in the barn the desired degree of humidity for ordering.

In the accompanying drawings, forming part of this specification, Figure 1 is a horizontal sectional view of a tobacco-curing barn or warehouse, showing my invention applied thereto. Fig. 2 is a longitudinal sectional view on the line 2 2 of Fig. 1, and Fig. 3 is a transverse sectional view on the line 3 3 of Fig. 1.

My invention is preferably put up in a building which may be a frame structure having the usual roof and side walls, and at some distance from the building is located a steam-boiler (not shown) which is connected by means of pipes A and *a* with a suitable steam dome or chest B with which are connected steam pipes for conducting the steam to the different parts of the building.

C designates a series of racks which preferably consist of vertical posts or uprights *c* to which are attached strips *c'* arranged in horizontal tiers. The racks are arranged in the barn or building so as to leave a central drive-way D and a space or room D' in which the tobacco is delivered from the field for the purpose of handling the same and placing it on suitable hangers which are subsequently attached to the strips *c'*. After the tobacco is cured it can be brought back to this room and stripped or otherwise handled for packing the same in cases for transportation.

It will be noted that the racks are arranged in horizontal and vertical tiers and directly through the building is the drive-way D hereinbefore referred to, and a passageway is also provided around the racks adjacent to the walls of the building, as well as between the racks, so that they will be easily accessible for placing the hangers thereon and manipulating the valves in the pipes hereinafter described.

From the steam dome or chest B extends a pipe *b* which projects from the top of the dome upwardly and then horizontally, and by means of pipes and elbow-joints extends around the central portion of the building back to the vertical portion of the pipe which is connected to the steam dome. A similar pipe *b'* extends from the lower portion of the steam dome or chest around the lower part of the central portion of the building and returns to the steam chest by means of the coupling b^2. The pipes *b* and *b'* are of considerable diameter according to the size of the barn and the number of racks built therein.

At intervals the horizontal portions of the steam pipe or conduit *b* are tapped by small pipes *e* which pass through the uprights *c* so as to extend between the strips or racks *c'* and are connected to short vertical sections *e'* which are also connected to the pipes in the second series of racks, the pipes in the lower racks being connected to each other by sections e^2, while the lower horizontal pipes connect with the return pipe or conduit *b'*, as shown in Fig. 2. At suitable points in the steam circulating system blow-off cocks e^3 are provided by which the humidity of the atmosphere can be regulated for ordering the tobacco. There are also suitable cocks or valves b^3, as shown for regulating the supply of steam from the steam chest or dome to the radiating pipes.

The steam chest or dome may be of any approved construction, and in practice I may use a chest which is divided into suitable compartments having valves. The steam may pass from the boiler into the upper compartment of the chest and from there into the pipe or conduit *b* from which it is distributed to the pipes that pass through the racks *c* and is returned to the lower compartment of the chest by way of the pipe *b'*, the cock in the pipe b^2 being left open for the purpose while the cock immediately above is closed; the condensation that collects in the lower compartment of the chest being returned to the

boiler through the pipe *a*. If desirable the circulation can be reversed, or the valve in the pipe *b'* opened so that steam will be admitted into both of the pipes *b* and *b'*. This is done when it is desired to allow some of the steam to escape for the purpose of regulating the humidity of the atmosphere in the barn, the steam escaping through the cocks e^3.

Particular attention is called to the arrangement of the racks and the passage of the pipes through the uprights thereof and between the horizontal strips or bars upon which the hangers carrying the tobacco are suspended. By means of this arrangement the pipes *e* are not only held in position but the upper conduit *b* is also held in place, as well as the return conduit *b'*, the latter being preferably located below the floor of the drive-way. The inclination of the pipes is such that any condensation will be carried back to the dome or steam chest, and entering the lower portion thereof may be returned to the boiler through the pipe *a* referred to.

The invention hereinbefore described is used in treating tobacco especially for curing the same or sweating it when necessary, and as the steam is let into the building through the cocks hereinbefore referred to for giving to the atmosphere of the building the proper humidity for ordering the tobacco I may also apply with the steam an aromatic flavoring which will permeate the atmosphere and the tobacco leaves suspended therein.

The building when not used for curing tobacco can be used for other purposes, and the invention is not only applicable to buildings constructed for the purpose but those already constructed.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a building having a series of racks or frames, of steam circulating pipes or conduits, the main conduit being supported by smaller distributing pipes, as *e*, which pass through the vertical supports for the racks and between the strips which support the tobacco hangers, whereby the main conduit is supported and the smaller pipes placed so as not to come in direct contact with the tobacco to be cured.

2. In a tobacco curing barn or structure, the combination, of a series of vertical racks made up of uprights having horizontal strips attached thereto, of pipes supported by being passed through the uprights between the horizontal strips, substantially as shown and for the purpose set forth.

3. A tobacco curing barn or building having a series of racks arranged therein so as to provide a central drive-way and passageways adjoining the walls of the building as well as between the racks; a steam circulating system consisting in part of a steam distributing pipe *b* and return pipe *b'* and with serpentine pipes of smaller diameter which are supported by the racks, and cocks for permitting the escape of steam to the interior of the building adjacent to the different racks, substantially as described.

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

JAMES LEE ADAMS.

Witnesses:

ARCH. STOTTS.

WM. H. HAMILTON.