

DRIER.

Patented July 30, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

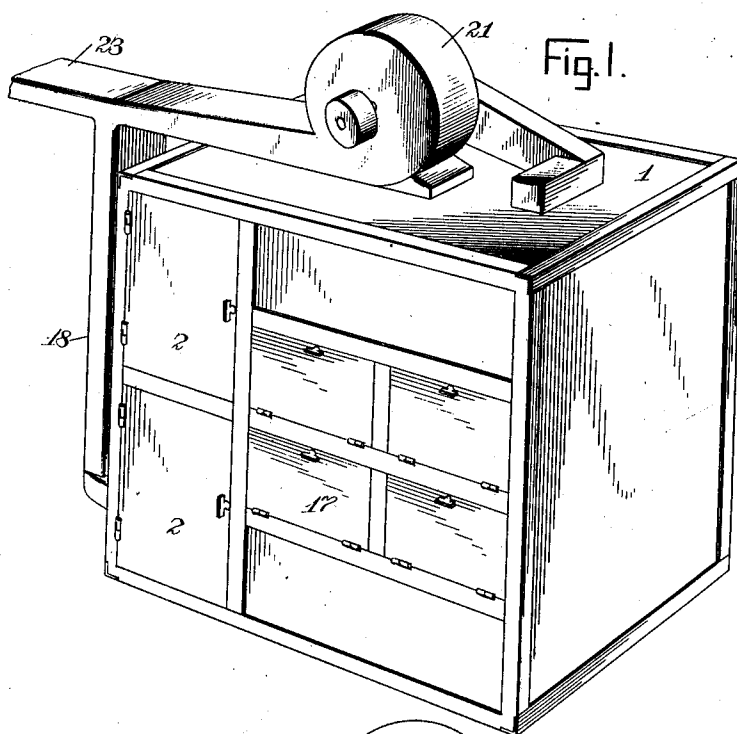
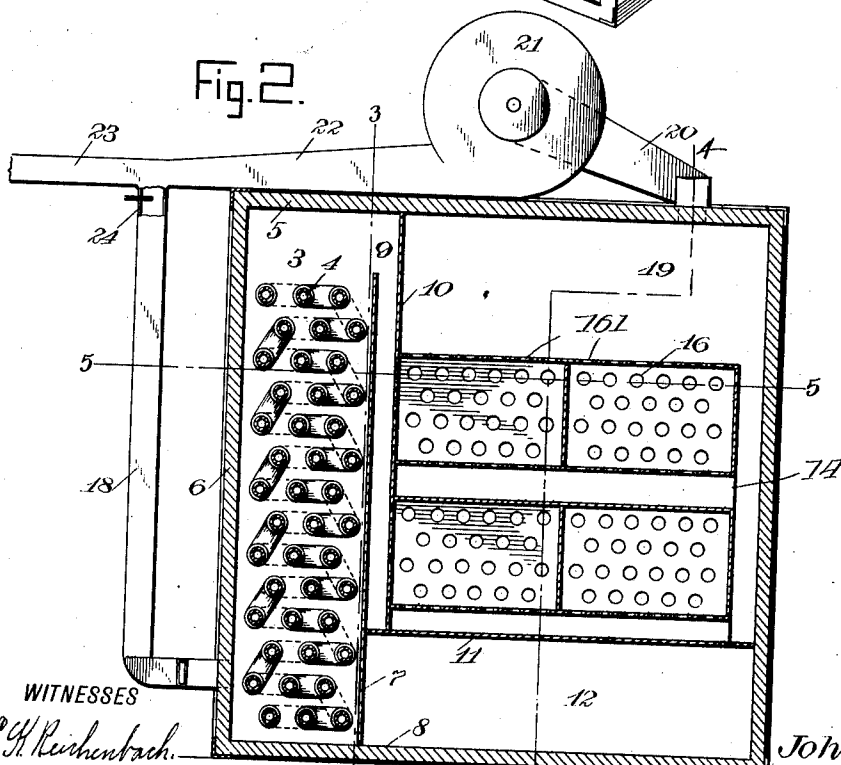


Fig. 2.



WITNESSES

C. H. Reichenbach.

W. J. Orton.

INVENTOR

INVENTOR
John C. Cogburn

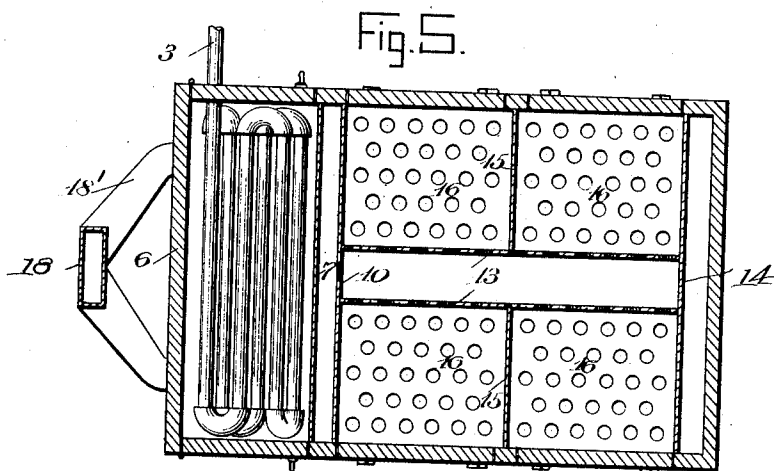
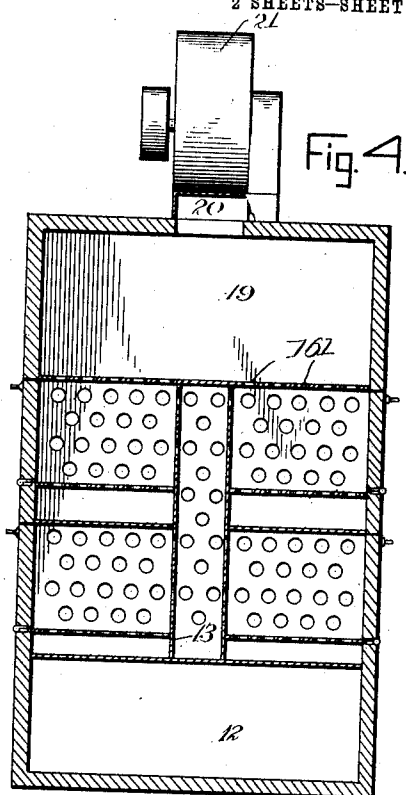
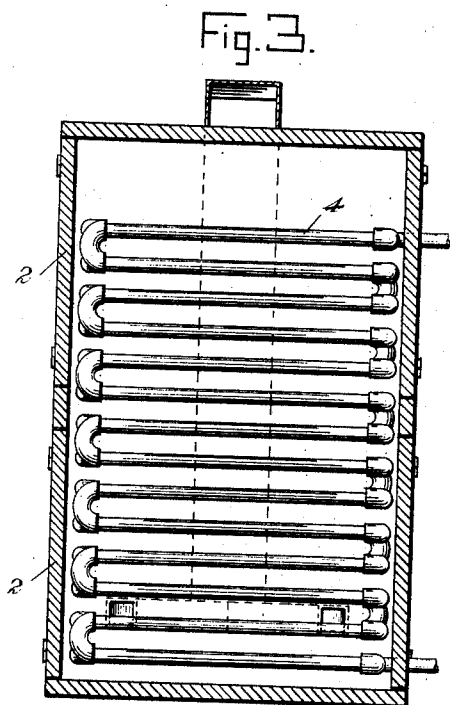
BY *Mumfco.*
ATTORNEYS

1,034,205.

J. C. COGBURN.
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2 SHEETS—SHEET 2.



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C. H. Reichenbach.

W. S. Orton

INVENTOR
John C. Cogburn
BY *Mum & Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

JOHN CLARENCE COGBURN, OF MARIETTA, GEORGIA.

DRIER.

1,034,205.

Specification of Letters Patent.

Patented July 30, 1912.

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To all whom it may concern:

Be it known that I, JOHN CLARENCE COGBURN, a citizen of the United States, and a resident of Marietta, in the county of Cobb and State of Georgia, have invented a new and Improved Drier, of which the following is a full, clear, and exact description.

My invention relates in general to a new and improved form of drier, and more particularly to that class of driers known as the "hot air driers."

An object of my invention is to supply a continuous current of hot air directly to separate drying compartments.

A further object of my invention is to withdraw the saturated air from each of said compartments by means of a fan attachment.

A still further object of my invention is to regulate the admission of unsaturated air to the device.

With the above and other objects in view, as will more fully hereinafter appear, the present invention consists in certain novel details of construction and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and more particularly pointed out in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, and in which—

Figure 1 is a perspective view showing the outside of a preferred embodiment of my device; Fig. 2 is a vertical sectional view taken longitudinally through my device, showing certain parts in elevation; Fig. 3 is a transverse sectional view taken across my device in a plane indicated by the line 3—3 of Fig. 2; Fig. 4 is a similar view taken on the line 4—4 of Fig. 2; and Fig. 5 is a transverse horizontal sectional view taken on a plane indicated by the line 5—5 of Fig. 2.

My drier is in the general form of a rectangular compartment 1, having swinging doors 2 on opposite faces of the structure, which doors admit of access to a compartment 3 in which is positioned a series of steam coils 4, disposed in layers one above the other to a point slightly below the top 5 of the device. This compartment is formed by one end wall 6 and a thin partition 7 extending from the bottom 8 upward and parallel with the wall 6, terminating a

short distance below the top 5 and above the uppermost layer of steam pipes, to form an air passage 9. Disposed a slight distance from the partition 7 is a similar partition 10 disposed parallel to the first-mentioned partition. This partition 10 depends from the top 5 and extends down toward the bottom of the device, to meet a horizontally-disposed floor 11, which floor forms the upper element of a "dead air" space 12 positioned between said floor and the bottom 8 of the compartment. Extending at right angles to the partition 10, are two vertically-disposed parallel spaced apart partitions 13, which extend to a transverse partition 14 disposed parallel to the partition 10 and extending from the front to the rear of the device. Extending outwardly in opposite directions from each of the partitions 13, are dividing partitions 15, which form a series of drying compartments 16 having openings 161 in the top thereof, access to which compartments is afforded by means of swinging doors 17 disposed on opposite sides of the compartment.

Unsaturated dry air is admitted to the heating chamber 3 at the lower portion thereof through a conduit 18, the lower end of which is bifurcated at 18' to diffuse the entrance of air. The unsaturated air then passes through the layers of steam or other form of heating pipes 4, down through the conduit formed by the walls 7 and 10 and then passes between the two tiers of compartments through the perforations in each of the compartments 16, abstracting all moisture from the articles contained therein, and the moisture-laden air is drawn into a compartment 19 above the layers of perforated compartments 16 and through a conduit 20 leading from said compartment by means of a fan 21, which forces the air through a conduit 22 back through the conduit 18 to be again passed over the pipes or to the exhaust through a conduit 23. The amount of air passing through the conduit 18 is controlled by a valve 24.

Many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof. It is intended that all matters contained herein, in the above description, or shown in the accompanying drawings, shall be interpreted as illustrative and not in a limiting sense. It is also to be

understood that the language used in the following claims is merely intended to cover all the generic and specific features of the invention herein described and all statements of the scope of the invention, which, as a matter of language, might be said to fall therebetween, and that materials, sizes and relativities of parts are non-essential, except as called for in the claims.

10 Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In a drier of substantially rectangular shape, two horizontally-disposed partitions spaced apart and extending vertically of said drier, to form in said drier a heat compartment, a drying compartment and a hot air conduit between said compartments; means for supplying air to the lower portion of said heating compartment, said partitions having passage-ways therethrough to permit the passage of heated air through said conduit to the lower portion of said drying compartment, and means including a fan leading from the upper portion of said drying compartment, whereby the saturated air is drawn off from said drying compartment and returned to said heating compartment.

2. A rectangular drier having three vertical parallel spaced-apart partitions, the outside partitions spaced from the adjacent sides of the drier, one of said partitions forming with the adjacent side of the drier, a heating compartment, and a pair of vertical spaced-apart perforated partitions con-

necting the other two partitions parallel with and adjacent their vertical centers, to form a series of drying compartments.

3. A rectangular drier having three vertical parallel spaced-apart partitions, the outside partition spaced from the adjacent sides of the drier, one of said partitions forming with the adjacent side of the drier, a heating compartment, and a pair of vertical spaced-apart perforated partitions connecting the other two partitions parallel with and adjacent their vertical centers, to form a series of drying compartments, the bottom of said drying compartments being spaced from the bottom of said drier to form a closed dead-air space.

4. A rectangular drier having three vertical parallel spaced-apart partitions, the outside partitions spaced from the adjacent sides of the drier, one of said partitions forming with the adjacent side of the drier, a heating compartment, a pair of vertical spaced-apart perforated partitions connecting the other two partitions parallel with and adjacent their vertical centers, to form a series of drying compartments, and perforated partitions disposed in each of said drying compartments.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN CLARENCE COGBURN.

Witnesses:

RALPH W. NORTHCUTT,
JAS. J. DANIELL.