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S. T. SWASEY.

APPARATUS FOR DRYING GLUE.

No. 192,846. Patented July 10, 1877.

Fig. 1.

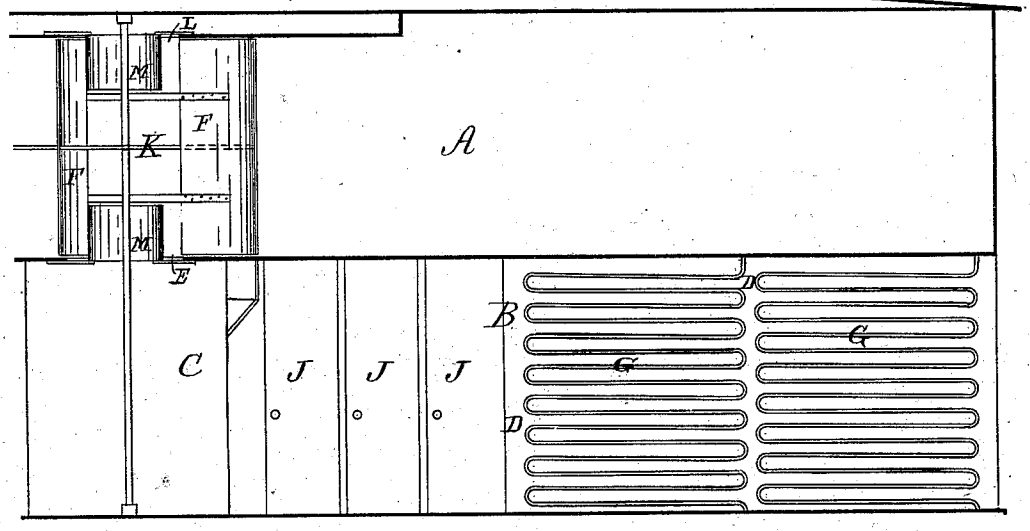
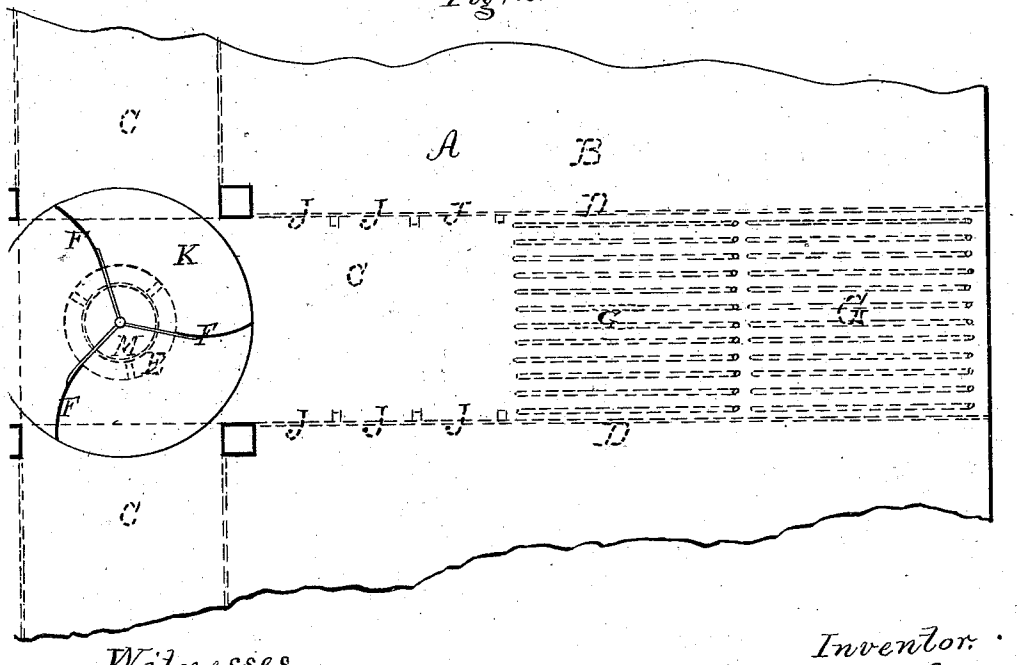


Fig. 2.



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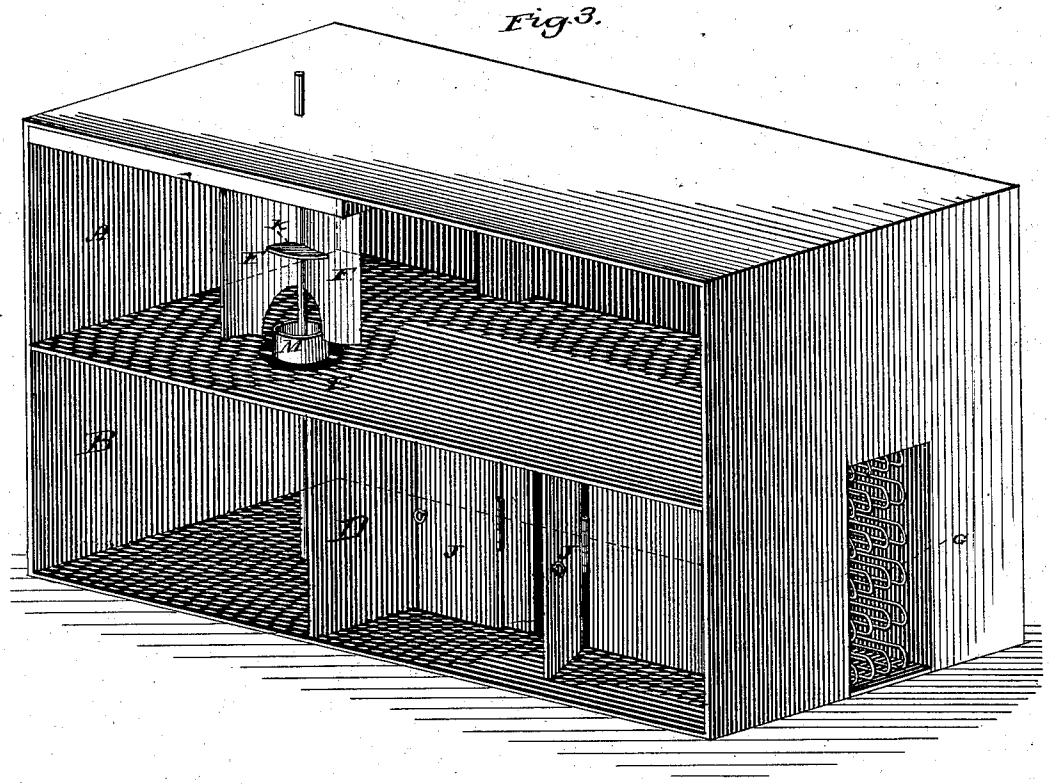
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Fig 3.



Attest:

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UNITED STATES PATENT OFFICE.

SAMUEL T. SWASEY, OF SALEM, MASSACHUSETTS.

IMPROVEMENT IN APPARATUS FOR DRYING GLUE.

Specification forming part of Letters Patent No. **192,846**, dated July 10, 1877; application filed September 30, 1875.

To all whom it may concern:

Be it known that I, SAMUEL T. SWASEY, of Salem, in the county of Essex and State of Massachusetts, have invented an Improved Drying Apparatus; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

This invention is an improvement on my previous inventions, in which, by the use of a revolving vertical fan, I took the heated air from a lower room or chamber into an upper, and there forced it laterally through or between the material to be dried.

In my present invention I so arrange my building and apparatus that the material can be dried in either or both rooms, and shall describe it as applied to the drying of glue.

In my previous patents the distributing-fans were described as being located in the center of a room or building, and the heated or dry air taken from the entire room below.

In my present invention I partition off my lower room into compartments, in lines radial from the fan-wheel shaft, and preferably extend them to the outside of the building, having their outer ends open for the free admission of the air. Near the outer ends of these compartments I place pipes, which, in winter, may be used as radiators for heating, and in summer as condensers for cooling, the air which enters the compartments between them. I preferably construct these compartments of just sufficient width to admit two stacks of crates or nets, and in order to facilitate the entrance and removal of these crates or nets I place doors in the partitions at intervals sufficiently frequent for that purpose.

In the drawings which accompany and form a part of this specification, Figure 1 is a sectional elevation, Fig. 2 is a sectional plan, and Fig. 3 is a perspective view, of my apparatus.

A represents the upper room, and B the lower, in which are compartments C, formed by partitions D. In the floor, between the two rooms, is the opening E, above which I place the fan-wheel F. Near the outer ends of the compartments C are pipes G, which may be used either as radiators or condensers, while in the partitions D are doors J, to admit of entering or removing the crates of glue.

While I have described my apparatus as having more than one compartment, it is evident that but one may be used, if desired. It will be also evident that I may do away with the partitions D and utilize the entire width of the building, the main object being to have sufficient space to stack the glue between the radiator or condenser and the opening beneath the fan.

As in my previous patents, I conduct air from the lower room through pipes or flues to an opening, L, over the fan-wheel F. As the fan revolves, the currents of air from above and below come in conflict with each other, and the result is an unequal distribution of the air by the fan. To obviate this I place in about the middle of the fan, vertically, the diaphragm K, so that each current of air may come to the center of the fan, and yet not affect each other. I may also place one or more pipes or tubes, M, around the fan-wheel shaft, and in the openings E and L, to assist in distributing the air equally over the surface of the fan.

The operation of my apparatus is as follows: The fan-wheel, being revolved by any suitable mechanism, creates a partial vacuum, which must be filled by air from below. This air, being first deprived of some of its moisture, passes over the glue on the crates in the lower room or compartments, absorbing some of the moisture therefrom; it then passes through the openings above and below the fan, and, being driven laterally through other crates stacked around the fan, and having become loaded with moisture, passes off through ventilators provided for that purpose.

The particular advantage of this arrangement is, that while with an apparatus arranged according to my previous patents the glue in the upper room nearest the fan would receive the greatest force of the air, the present method of sucking the air through a long room or compartment must necessarily give an equal velocity to the whole volume of air passing through that space.

I claim—

1. The combination of the chamber A, com-

partments C, heater or condenser G, and fan F, substantially as described.

2. The combination of the chamber A, compartments C, heater or condenser G, fan F, and doors J, arranged substantially as and for the purpose described.

3. In combination, the chamber A, compartments C, fan F, and diaphragm K, substantially as shown and described.

4. In combination, the chamber A, compartments C, fan F, and tubes or pipes M, substantially as described.

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