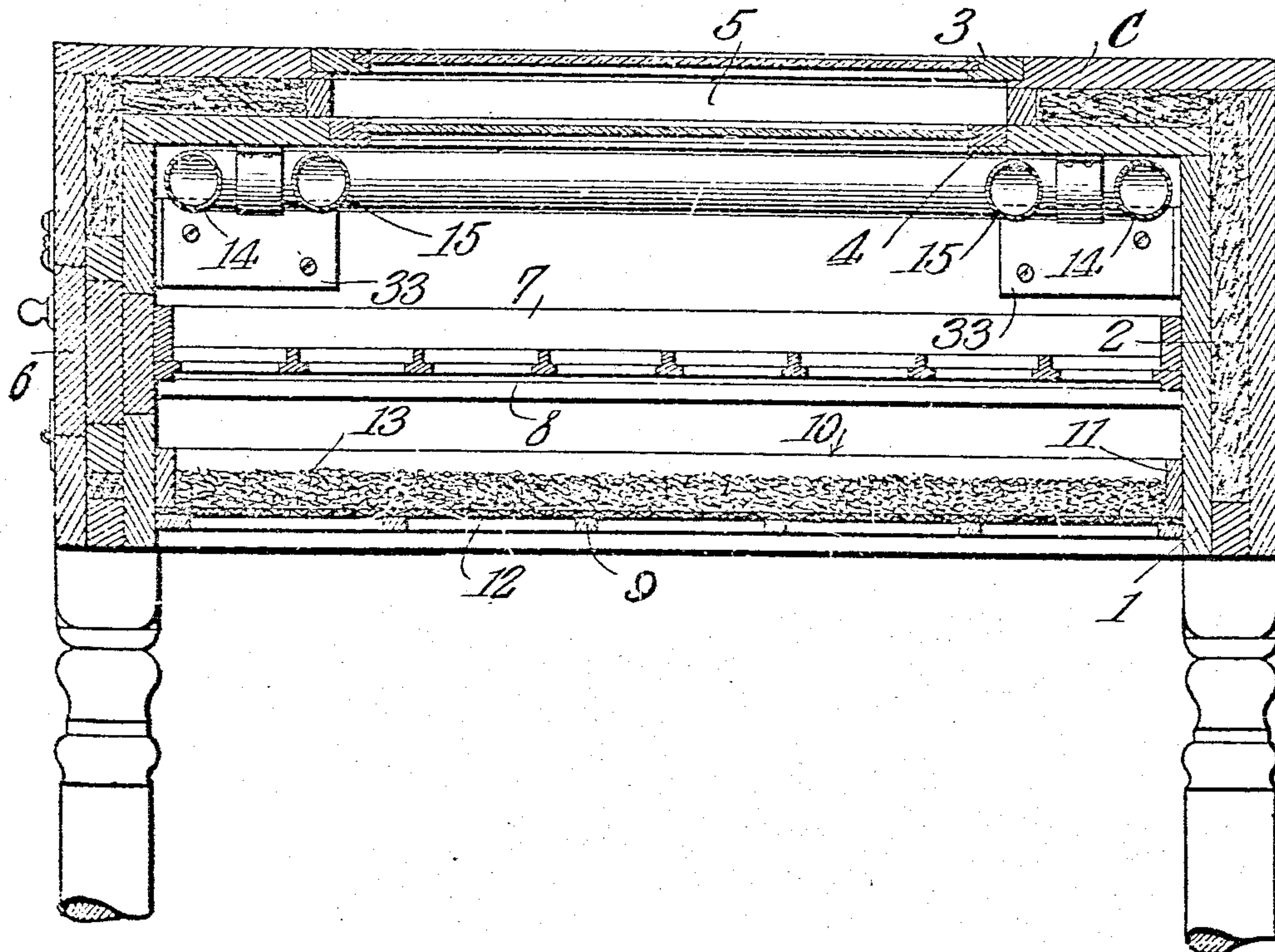


B. A. ENGELMANN.
 INCUBATOR.
 APPLICATION FILED JAN. 15, 1909.

980,228.

Patented Jan. 3, 1911.



Witnesses

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UNITED STATES PATENT OFFICE.

BERTRAM ADOLPH ENGELMANN, OF BAKER, KANSAS.

INCUBATOR.

980,228.

Specification of Letters Patent.

Patented Jan. 3, 1911.

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To all whom it may concern:

Be it known that I, BERTRAM ADOLPH ENGELMANN, a citizen of the United States, residing at Baker, in the county of Brown and State of Kansas, have invented a new and useful Incubator, of which the following is a specification.

This invention relates to incubators, and one of its objects is to provide a floor or bottom so constructed as to constitute a soft support for the chicks when hatched, said floor at the same time permitting minute quantities of air to percolate therethrough and into the interior of the incubator without danger of chilling the contents thereof. With these and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claim.

In the accompanying drawing, which is a vertical, longitudinal section through the incubator the preferred form of the invention has been shown.

Referring to the drawing by characters of reference C designates the casing constituting the body of the incubator, said casing being supported in a suitable manner, and the walls thereof being each preferably formed of two thicknesses of wood or other suitable material such as indicated at 1, said thicknesses being spaced apart and having a packing of mineral wool or other insulating material 2 interposed between them. The top of the casing may be formed either partly or entirely of outer and inner frames 3 and 4 respectively, each of which contains a light of glass, whereby the contents of the casing can be viewed at all times. The two frames 3 and 4 are spaced apart and an air space 5 is formed between them.

A door 6 is hingedly connected to one of the walls of the casing, preferably the front wall, the length and height of the door being slightly greater than the corresponding dimensions of a tray 7, which is slidably mounted upon guide and supporting cleats 8 secured within the casing C. It will be apparent therefore that when the door 6 is opened the tray 7 can be readily slid out of the casing. This tray constitutes means for

holding the eggs to be hatched, and can be of the usual or any preferred construction.

A series of supporting strips 9 extend across the bottom portion of the casing C, and these strips constitute supports for a tray 10, the frame 11 of which is provided with a coarse fabric bottom portion, as indicated at 12, a quantity of light comminuted material, such for example as wheat chaff, is contained within the tray 10 and supported by the coarse fabric 12, this material being indicated at 13, and constituting not only a soft floor for the compartment within the casing C, but also serving to permit minute quantities of fresh air to percolate through the tray and into the compartment.

Supported in any suitable manner within the upper portion of the compartment within casing C are one or more heating pipes 14 and 15 connected to a suitable heater not shown. Plates 33 of copper or other good heat-conducting material are secured within the corners of the compartments within casing C and are designed to conduct the heat into said corners and thus prevent the eggs contained within the corner portions of the casing from becoming chilled. Obviously any desired number of these plates may be utilized and they may be located wherever deemed necessary.

In using the device herein described the tray 7 is filled with eggs, and, after the door 6 has been opened, said tray is inserted through the door opening and on to the supporting cleats 8. The door is then closed and the contents of the incubator can be viewed at all times through the glass doors or closures 3 and 4 mounted within the top of the casing C. The incubator is then heated by directing a suitable heating medium into the pipes 14 and 15. Fresh air is, of course, constantly supplied in minute quantities through the comminuted material constituting the floor.

What is claimed is:—

An incubator including a casing, a series of parallel supporting strips extending across the open bottom of the casing, a frame removably mounted within the casing, a cloth secured at its edges to the frame and resting loosely on the strips, said cloth con-

stituting the bottom of the incubator and the cloth and frame coöperating to form a tray, and a layer of light, closely lying comminuted material resting on the cloth and
5 completely covering it, said material and cloth constituting means for retarding the passage of air into the casing.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

BERTRAM ADOLPH ENGELMANN.

Witnesses:

J. G. ENGELMANN,

W. A. Ross.