

A. B. LAWTHER.  
Artificial Honey-Comb.

No. 200,549.

Patented Feb. 19, 1878.

Fig. 2

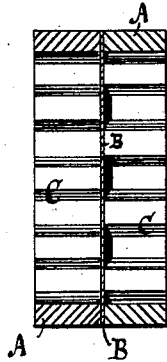


Fig. 1

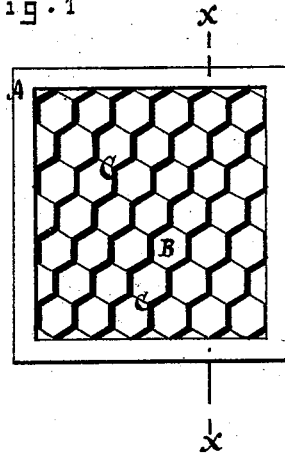


Fig. 3

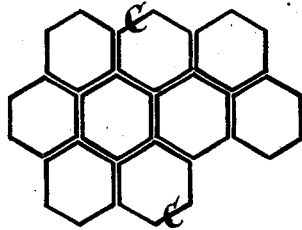


Fig. 4

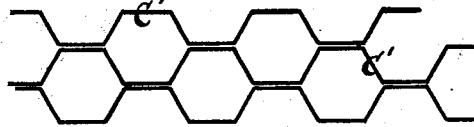
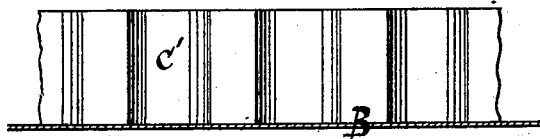


Fig. 5



WITNESSES:

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Alfred B. Lawther.

# UNITED STATES PATENT OFFICE.

ALFRED B. LAWTHER, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN ARTIFICIAL HONEY-COMBS.

Specification forming part of Letters Patent No. 200,549, dated February 19, 1878; application filed October 29, 1877.

*To all whom it may concern:*

Be it known that I, ALFRED B. LAWTHER, of the city of Chicago, county of Cook, and State of Illinois, have invented a new and useful Improvement in Artificial Honey-Combs, of which the following is a specification:

The object of my invention is to provide combs of suitable form and material, ready made, for honey-bees to store their honey in, thus saving them the labor of preparing the wax and constructing combs in the usual manner, thereby greatly increasing their power to gather honey, it being estimated by those experienced in the management and care of bees that the production of one pound of wax requires an amount of time and labor on the part of the bees that would suffice to gather twenty pounds of honey.

A further advantage arising from my invention is that combs, constructed accordingly can be filled and emptied repeatedly without breaking, the honey being extracted by means of a centrifugal machine, as is commonly done with other honey-combs, when it is desired to use them the second time.

In constructing my improved honey-comb I use, by preference, four principal parts, viz: first, an open frame of wood, made up of two similar but narrower frames; second, a web or plate of paper, cloth, or any suitable material interposed between the two halves of the frame; third, cells composed of paper, cloth, or similar material arranged within the frame and resting on the web or plate, which thus becomes the bottom for all the cells in common; fourth, a coating of bees-wax applied to the surfaces of the cells, web, and frame to cement them together, and to render the surfaces similar to the surfaces of a natural honey-comb. This coating can be applied in a melted state, and any excess can be thrown off by a centrifugal machine.

For convenience in making the artificial comb, the cells, web, and frame can be glued or cemented together before applying the wax coating, care being taken to use such glue or cement as would not dissolve in melted wax.

The above described I prefer, though various modifications are possible. Thus the web could be dispensed with, and each cell could be made with a bottom instead of open, the union of these bottoms of the double row of cells forming a substitute for the web. The

frame could also be dispensed with, and the requisite strength obtained by making the web and cells of extra thickness, &c. Therefore I do not confine myself to any exact form of construction.

Having thus given a general description of my invention, I will proceed to give a detailed description.

Referring to the drawings, Figure 1 is a plan of the cells and frame. Fig. 2 is a section at *x x*, Fig. 1, showing the frames A A, web B, and cells C. Fig. 3 is a view of the cells C on a larger scale, before they are joined together. Fig. 4 is a plan of cells constructed of a continuous plate or sheet, corrugated in such a form that when two or more are joined together the cells will be complete. Fig. 5 is a section of the same form, showing also the web B to which the edges of the corrugated plates are secured.

In constructing a honey-comb according to the form of my invention I most prefer, I first make the frames A A, then secure the web B between them by glue. The cells C are then made by forming up strips of strong paper, the width of the paper being the depth of the completed cell, into either circular or nearly hexagonal pipes, glue being used to secure the edges of the paper. After the glue has hardened, the pipe or cell is pressed in a die or mold to give it a truly hexagonal form, when I secure it by one end by glue to the web B in its proper position. After the frame A is filled with cells, melted wax is poured into the cells and immediately poured out, except such coating as may adhere to the surfaces. Should this be excessive, a centrifugal machine can be used to remove all excess.

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

1. An artificial honey-comb constructed of fibrous materials, as described.
2. An artificial honey-comb formed of fibrous material and coated with wax, substantially as specified.
3. The combination of the frames A A, web B, and artificial cells C, formed substantially as described.

ALFRED B. LAWTHER.

Witnesses:

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ARCHELAUS PUGH.