(No Model.)

L. A. ASPINWALL.

ARTIFICIAL HONEY COMB.

No. 397,046. Patented Jan. 29, 1889.

Fig. 2.

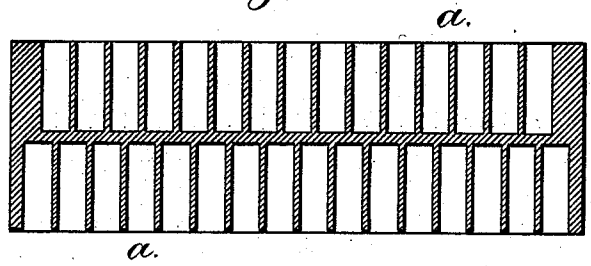
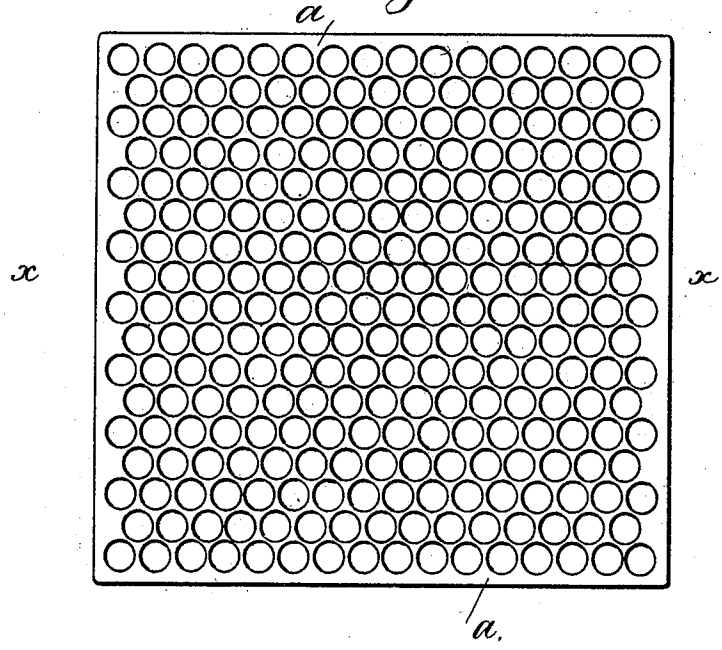


Fig. 1.



Witnesses

Chas. A. Smith

Harold Serrell

Inventor.

Lewis A. Aspinwall

per Lemuel W. Serrell

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

LEWIS AUGS. ASPINWALL, OF THREE RIVERS, MICHIGAN, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO WALTER ALEXANDER AND MARY E. BEAN, OF SAME PLACE, AND F. E. ASPINWALL, OF LOUDONVILLE, NEW YORK.

ARTIFICIAL HONEY-COMB.

SPECIFICATION forming part of Letters Patent No. 397,046, dated January 29, 1889.

Application filed June 12, 1888. Serial No. 276,831. (No model.)

To all whom it may concern:

Be it known that I, LEWIS AUGUSTUS ASPINWALL, of Three Rivers, in the county of St. Joseph and State of Michigan, have invented an Improvement in Artificial Honey-Combs, of which the following is a specification.

Efforts have been made to produce artificial honey-combs; but difficulties have arisen preventing such combs being fully available. If the artificial comb is of wax, it is liable to become too soft in hot weather for handling, and it cannot be used a second time. If made of tin, celluloid, hard rubber, or similar material, it is expensive and not acceptable to the bees, which require a surface of wax upon which to deposit their honey, and where efforts have been made to coat such combs with wax the coating is liable to scale and become injured.

When paper has been formed into a comb, the same has not the strength necessary for handling, and where such artificial combs have been placed in centrifugal separators for removing the honey they have collapsed and become unfit for further use. I find that a strong comb adapted to repeated use can be made of a slab of end-grain wood with holes bored into the same parallel to the grain of the wood, and that the same becomes saturated when introduced in melted wax, and that the surplus wax can be thrown off by a centrifugal machine, so as to free the holes from wax, and there will remain a thin film or surface-coating on the wood that renders the artificial comb as well adapted to the reception of honey and of the wax closing the cells as a natural honey-comb.

In the drawings, Figure 1 is an elevation of the honey-comb; and Fig. 2 is a section at the line *x x*, Fig. 1.

The comb is formed of an end-grain slab of wood. I prefer "bass-wood," but do not limit myself in this particular. The slab is about the usual thickness of a honey-comb, and the holes are bored into the same of about the size and in about the position of those in a natural honey-comb. When the holes are bored into both surfaces of the end-grain slab, they should not be in line, but the holes on one face should be in line with the partitions of the other face to lessen the risk of the inner ends of the holes breaking into each other. In all instances the holes are parallel to the grain or fiber of the wood, so that the partitions between the holes can be as thin as possible and the holes smooth. In consequence of the grain or fiber of the wood running parallel with the length of the holes, it is possible to bore the holes very close together without the wood of the partitions chipping or breaking away in the boring operation, as would inevitably be the case if the holes were bored across the grain, as then the grain or fiber of the wood would only be as long as the thickness of the partitions and would possess no strength. The prepared slab is to be introduced into melted wax, and the wax penetrates and fills the pores of the wood, and after the slab has been removed from the melted wax the surplus wax is discharged from the holes, preferably by placing the artificial comb in a centrifugal machine while the wax is in a fluid condition, so as to be thrown off; but there will remain a thin film or coating on the entire surface of the wood, and hence this artificial comb possesses all the properties of the natural comb, and it is superior to the same, because the honey can be thrown out by centrifugal action without injury to the comb, so that such artificial comb can be used several times. Of course the bees, being relieved from the labor of making the comb, devote themselves to the gathering of the honey, thus increasing the yield from a given number of bees.

I prefer to employ beeswax alone upon the artificial comb; but a compound of beeswax with rosin or other gums, which is less expensive, may be employed, the natural odor being retained, the compound being acceptable to the bees and accomplishing the same result.

I claim as my invention—

An artificial honey-comb composed of an end-grain slab of wood with cells parallel to the grain of the wood, the entire surface being coated and the pores filled with wax, substantially as specified.

Signed by me this 2d day of June, 1888.

L. AUGS. ASPINWALL.

Witnesses:

D. W. THAYER,

W. C. SHANAFELT.