

H. B. DEAN,
 ARTIFICIAL HONEYCOMB.
 APPLICATION FILED AUG. 18, 1919.

1,389,294.

Patented Aug. 30, 1921.

2 SHEETS—SHEET 1.

FIG. 1.

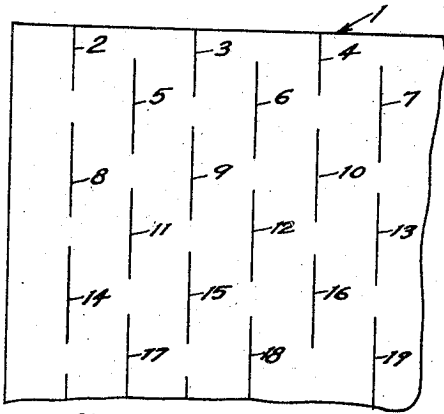


FIG. 2.

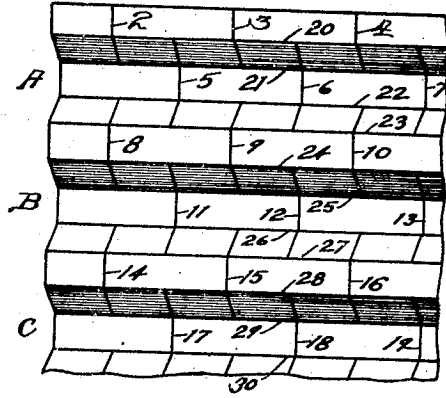


FIG. 3.

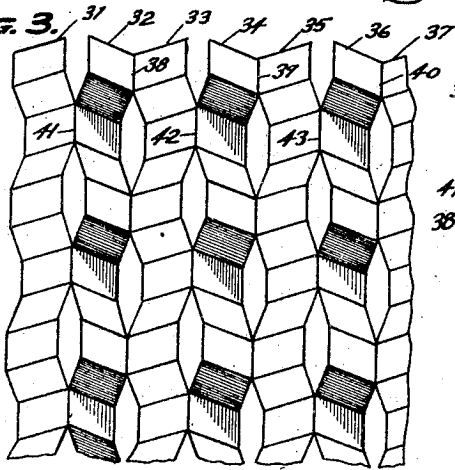


FIG. 4.

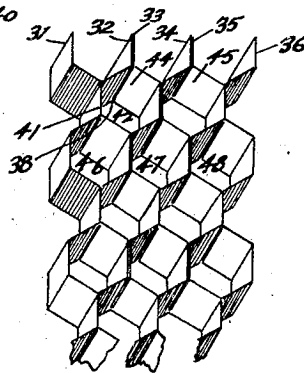


FIG. 5.

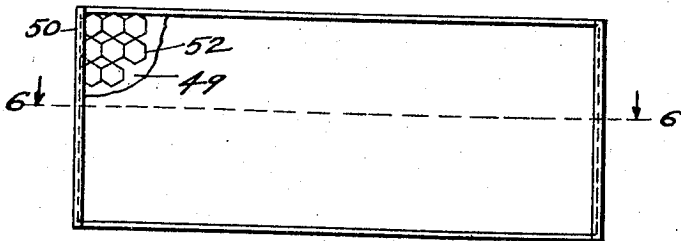
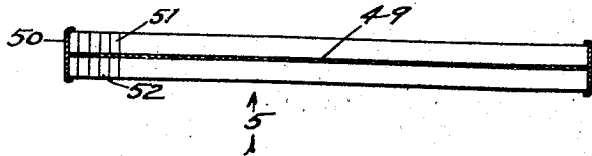


FIG. 6.



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2 SHEETS—SHEET 2.

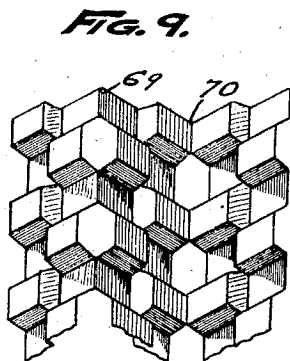
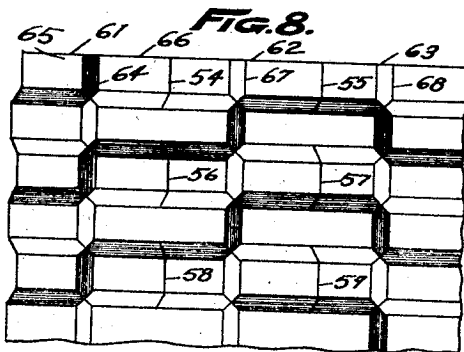
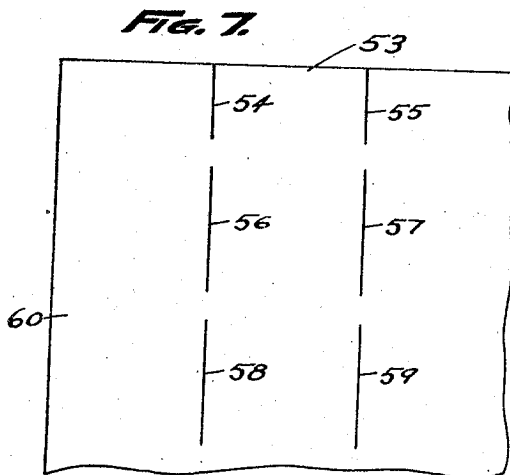


Fig. 10.

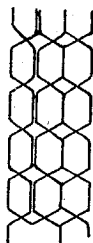
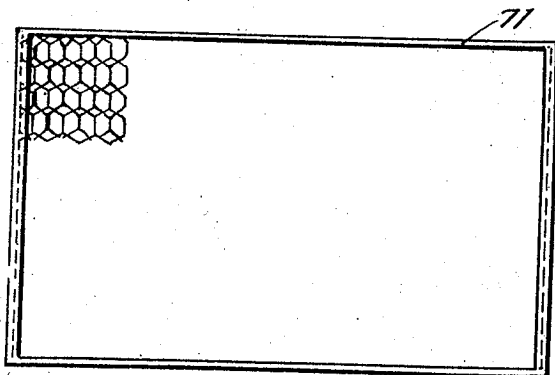


Fig. 11.



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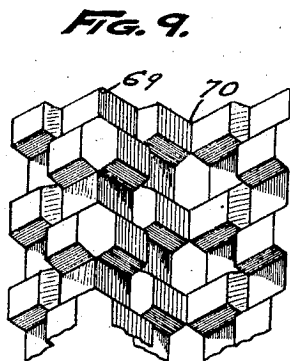
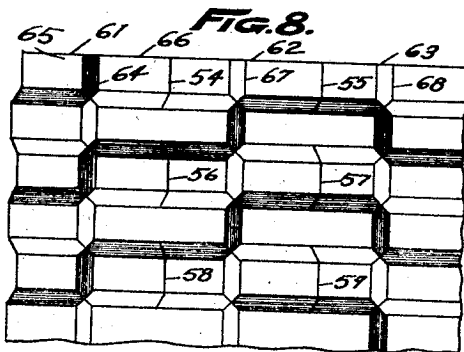
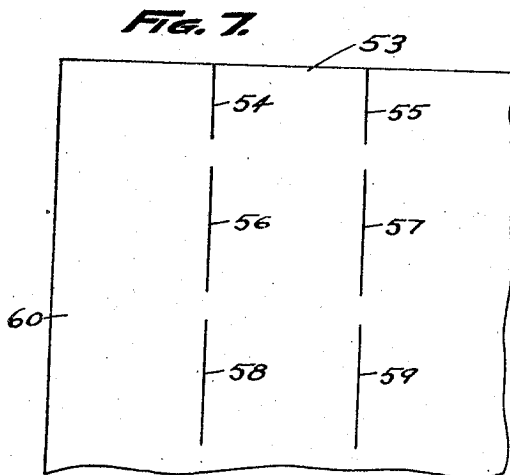


Fig. 10.

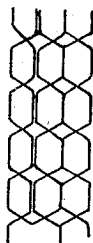
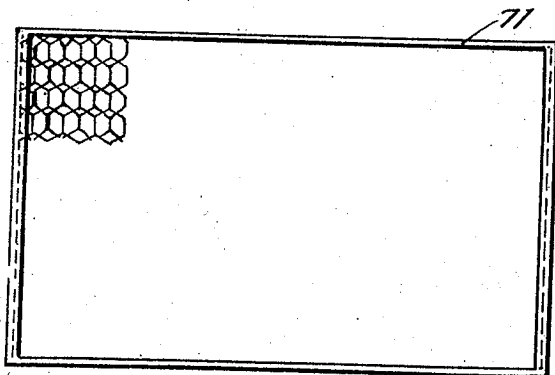


Fig. 11.



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thereby bringing the half cells together to produce the complete cells 44, 45 and so on and 46, 47, 48 and so on.

Reading in the direction of Fig. 2 the cells 44 and 45 are in a tier of half cells A and so on, and the cells 46, 47 and 48 are in the tier of half cells B and so on.

Reading in the direction of Fig. 3 the cells 46 are formed by the tiers 31 and 32 of half cells, and the cells 44 are formed by the tiers 32 and 33. The cells 47 are formed by the tiers 33 and 34. The cells 45 are formed by the tiers 34 and 35. The cells 48 are formed by the tiers 35 and 36 and so on.

The folded edges 41 connect the tiers 31 and 32 together to form the cells 46. The folded edges 38 connect the tiers 32 and 33 together to form the cells 44. The folded edges 42 connect the tiers 33 and 34 together to form the cells 47 and so on, the edges 41, 42, 43 and so on being at the opposite ends of the cells and opposite sides of the sections of plate from the folded edges 38, 39, 40 and so on. In other words, the plate is folded back and forth from one edge to the opposite edge thus tying the half cell tiers together in both directions and holding the tiers from being displaced relative to each other, and the very act of folding the metal back and forth assembles the tiers in proper relation to produce the cells.

Referring to Figs. 5 and 6, the parting plate 49 is placed in a rectangular slide frame 50, and the honeycomb sections 51 and 52 are placed against opposite sides of the plate 49, it being understood that the sections 51 and 52 are constructed as explained with reference to Figs. 1 to 4.

Referring to the modification shown in Figs. 7, 8, 9 and 10 the plate 53 is similar to the plate 1, and the first step in its construction is to make the half slits 54, 55 and so on, and the slits 56, 57 and so on, and the slits 58, 59 and so on throughout the sheet. The slits 54 and 55 are in a row one way and the slits 54, 56 and 58 and 55, 57 and 59 are in rows the other way. The slits 54, 56 and 58 are in a line longitudinal of the slits, and the slits 54 and 55 and 56 and 57 and 58 and 59 are in lines crosswise of the slits. Care should be taken to make the slits exactly the right length and exactly the right distances apart both ways.

The second step in its construction is the forming of the sheet, as shown in Fig. 8. The space between the edge 60 of the plate and the slits 54, 56 and 58 is pressed to form the double half cell tier 61, and the space between the vertical row of slits, that is between 54 and 55 is pressed to form the double half cell tier 62, and the space at the opposite side of the vertical row of slits beginning with 55 is pressed to form the double half cell tier 63. The tier 61 has a mutilated portion 64 extending through its

center to separate the double half cell 61 into half cell portions 65 and 66, and the tier 62 has a mutilated portion 67, and the tier 63 has a mutilated portion 68 similar to the portion 64.

The mutilated portions 64, 67 and 68 form the parting between the honeycomb sections on one side and the honeycomb sections on the other side and take the place of the parting plate 49.

The third step in its construction consists in bending the formed plate shown in Fig. 8 on the lines 69, 70 and so on, said lines 69 and 70 being in line with the slits 54 and 55. The lines 69 and 70 between the ends of the slits serve to bind the tiers 61, 62 and 63 together.

The fourth step in its construction consists in pressing the half cells together to make complete cells as shown in Fig. 10.

The complete double honeycomb is placed in a slide frame 71 and is ready for use.

Thus I have produced a honeycomb in which a single sheet of metal produces a plurality of tiers of half cells, the tiers being integral on alternate sides so that the folding of the metal assembles the tiers to produce the cells and holds the parts from being displaced.

Various changes may be made without departing from the spirit of my invention as claimed.

I claim:

1. A honey-comb composed of a sheet, the sheet being slitted, bent on parallel lines crosswise of the slits, bent on the lines of the slits back and forth, and the bent portions folded upon themselves and forming a plurality of tiers of cells.

2. A honey-comb composed of a sheet, the sheet being slitted, bent on parallel lines crosswise of the slits, bent on the lines of slits back and forth, and the bent portions folded upon themselves and forming a plurality of tiers of cells integrally connected on alternate sides.

3. A honeycomb composed of a sheet of metal bent to form half cells and folded back and forth upon itself to form complete cells, the complete cells being integrally connected upon alternate sides.

4. A honey comb composed of a sheet of suitable material, slitted in parallel rows, and bent transversely to the length of said slits to form half cells, and then bent back and forth upon itself at right angles thereto to form complete cells.

5. A honey-comb composed of a sheet, bent to form half cells and bent back and forth upon itself forming complete cells.

6. A honey comb composed of a sheet of material intermittently slitted in parallel rows, the slits of alternate rows overlapping contiguous ends of slits of intermediate rows in staggered relation, said sheet

being bent on parallel lines extending transversely of the said slits, and then alternately bent back and forth upon itself along the line of the slits, to form a plurality of tiers of cells.

5 7. A honeycomb composed of a sheet of suitable material intermittently slitted in parallel rows, the slits in alternate rows overlapping the contiguous ends of slits of intermediate rows in staggered relation, the
10 spaces between the ends of the slits in the line of their rows being substantially one-third of the length of said slits, said sheet being bent on parallel lines extending trans-

versely of the said slits, and then alternately bent back and forth upon itself along the slits, to form a plurality of tiers of cells.

8. A honeycomb composed of a sheet of thin material having formed therein parallel rows of slits, the same being disposed in staggered relation, said sheet being bent along parallel lines at right angles to said slits, and then bent back and forth along the lines of slits to form complete cells.

In testimony whereof I have signed my name to this specification.

HARRY B. DEAN.