

**CLAIMS**

What is claimed is:

1. A shape-changing food comprising:  
a flat piece of flour-based dough having a top surface and a bottom surface and comprised of at least two layers of doughs, wherein:  
the flour-based dough is comprised of semolina flour;  
each layer has a different composition and a predetermined thickness;  
the flat piece of flour-based dough is cut to an initial shape and an initial size;  
and  
the top surface has at least one groove running perpendicular to a predetermined bending direction and the at least one groove has a groove depth and a groove spacing chosen to achieve a predetermined final shape or a predetermined bending angle.
2. The shape-changing food of claim 1, wherein the flat piece of flour-based dough changes shape by exposing the flat piece of flour-based dough of the initial shape and the initial size with the at least one groove to a stimuli selected from the group consisting of hydration and dehydration.
3. The shape-changing food of claim 1, wherein at least one dough layer is comprised of semolina flour and egg whites and at least one other dough layer is comprised of semolina flour and fiber.
4. The shape-changing food of claim 3, wherein a predetermined final shape or a predetermined bending angle of the flat piece of flour-based dough is achieved by selecting the composition of each layer of dough.
5. The shape-changing food of claim 3, wherein a predetermined final shape or a predetermined bending angle of the flat piece of flour-based dough is achieved by selecting the thickness of each layer of dough.

6. The shape-changing food of claim 3, wherein a predetermined final shape or a predetermined bending angle of the flat piece of flour-based dough is achieved by selecting a ratio of the thicknesses of the layers of dough.
7. The shape-changing food of claim 1, wherein the at least one groove is imprinted onto the top surface.
8. The shape-changing food of claim 2, wherein the hydration stimuli is boiling and the dehydration stimuli is baking.
9. The shape-changing food of claim 1, wherein the flat piece of flour-based dough is comprised of at least one flour and at least one liquid.
10. The shape-changing food of claim 1, wherein the at least one groove is included in at least one set of parallel grooves.
11. The shape-changing food of claim 10, wherein the at least one set of parallel grooves covers the top surface of the flat piece of flour-based dough.
12. The shape-changing food of claim 1, wherein the bottom surface has at least one groove running perpendicular to a predetermined bending direction, and wherein the at least one groove has a groove depth and a groove spacing chosen to achieve a predetermined final shape or a predetermined bending angle.
13. A method for creating shape-changing food comprising:
  - grooving at least one groove onto a flour-based dough having a top surface and a bottom surface and comprised of at least two layers of dough, wherein:
    - the flour-based dough is comprised of semolina flour;
    - each layer has a different composition and a predetermined thickness; and
    - the at least one groove is grooved at an angle perpendicular to a predetermined bending angle and at a groove spacing and groove depth chosen to result in a predetermined final shape or the predetermined bending angle;

exposing the flour-based dough with the at least one groove to a stimuli to cause the prepared flour-based dough to change shape; and

removing the flour-based dough from the stimuli when the predetermined final shape or the predetermined bending angle has been achieved.

14. The method of claim 13, wherein the stimuli is selected from the group consisting of hydration and dehydration.

15. The method of claim 13, wherein at least one dough layer is comprised of semolina flour and egg whites and at least one other dough layer is comprised of semolina flour and fiber.

16. The method of claim 15, wherein the predetermined final shape or the predetermined bending angle of the flat piece of flour-based dough is achieved by selecting the composition of each layer of dough.

17. The method of claim 15, wherein the predetermined final shape or the predetermined bending angle of the flat piece of flour-based dough is achieved by selecting the thickness of each layer dough.

18. The method of claim 15, wherein the predetermined final shape or the predetermined bending angle of the flat piece of flour-based dough is achieved by selecting a ratio of the thicknesses of each layer of dough.

19. The method of claim 13, wherein the at least one groove is imprinted onto the top surface.

20. The method of claim 14, wherein the hydration stimuli is boiling and the dehydration stimuli is baking.

21. The method of claim 13, wherein the prepared flour-based dough is comprised of at least one flour and at least one liquid.

22. The method of claim 13, wherein the at least one groove is included in at least one set of parallel grooves.
23. The method of claim 22, wherein the at least one set of parallel grooves is covering the top surface of the prepared flour-based dough and runs perpendicular to the predetermined bending angle.
24. A method for creating pasta dough having a grooved surface comprising:  
grooving at least one groove onto a flat flour-based dough having a top surface and a bottom surface and comprised of at least two layers of doughs, wherein each layer has a different composition and a predetermined thickness and the flour-based dough is comprised of semolina flour.
25. The method of claim 24, wherein the at least one groove is imprinted at an angle perpendicular to a predetermined bending angle and at a groove spacing and a groove depth chosen to result in a predetermined final shape or the predetermined bending angle.
26. The method of claim 24, wherein the at least one groove is imprinted onto the top surface of the dough.
27. The method of claim 26, wherein the at least one groove includes at least one groove imprinted on the top surface of the dough and at least one groove imprinted on the bottom surface of the dough.
28. The method of claim 24, wherein the flour-based dough is comprised of semolina flour and at least one liquid.
29. The method of claim 25, wherein the at least one groove is included in at least one set of parallel grooves.
30. The method of claim 29, wherein the at least one set of parallel grooves covers the top surface of the prepared flour-based dough and runs perpendicular to the predetermined bending angle.

31. The method of claim 24, wherein at least one dough layer is comprised of semolina flour and egg whites and at least one other dough layer is comprised of semolina flour and fiber.