United States Patent No. 7,081,222
Newly Confirmed Patentable Claims

1. A process for the molding and assembling of a two-part plastic object, the process comprising the steps of:

providing a machine including first and second rotatable molds, each mold having at least two mold cavities formed therein, and each of said molds having and rotatable on a substantially vertically orientated axis of rotation;

introducing plastic into one of said mold cavities in said first rotatable mold, to form a part, at a first forming position located at a distal facing side of said first rotatable mold;

introducing plastic into one of said mold cavities in said second rotatable mold, to form a part, at a second forming position located at a distal facing side of said second rotatable mold;

rotating said rotatable molds; and

joining parts in opposing mold cavities at an assembly position when one of said mold cavities of said first mold and one of said mold cavities of said second mold are aligned intermediate to said axes of rotation;

wherein the at least two mold cavities in each mold enables said parts to be simultaneously formed at said forming positions and assembled together at said assembly position by a purely mechanical assembly of said parts.

2. The process of claim 1 wherein the steps of introducing plastic at the forming position and joining opposing parts at the assembly position are performed simultaneously, and repeatedly between rotating steps, to continuously produce multiple objects.

3. The process of claim 1 further including the step of applying heat to an edge of the part before the joining step.

4. The process of claim 1 further including the step of ejecting a finished object from said mold cavities after the joining step.

5. The process of claim 1 further including the step of moving at least one of said molds in a transverse direction perpendicular to said axis of rotation, during the joining step, to close together the molds at said assembly position.

6. A process for the molding and assembling of a two-part plastic object, the process comprising the steps of:

providing a machine including first and second rotatable molds, each mold having at least two mold cavities formed therein, and each of said molds having and rotatable on an axis of rotation;

introducing plastic into one of said mold cavities in said first rotatable mold, to form a part, at a first forming position located at a distal facing side of said first rotatable mold aligned with said axes of rotation;

introducing plastic into one of said mold cavities in said second rotatable mold, to form a part, at a second forming position located at a distal facing side of said second rotatable mold aligned with said axes of rotation;

rotating said rotatable molds; and

joining parts in opposing mold cavities at an assembly position when one of said mold cavities of said first mold and one of said mold cavities of said second mold are aligned intermediate to said axes of rotation;

wherein the at least two mold cavities in each mold enables said parts to be simultaneously formed at said forming positions and assembled together by a purely mechanical assembly of said parts at said assembly position.

7. The process of claim 6 wherein the steps of introducing plastic at the forming position and joining opposing parts at the assembly position are performed simultaneously, and repeatedly between rotating steps, to continuously produce multiple objects.

8. The process of claim 6 further including the step of applying heat to an edge of the part before the joining step.

9. The process of claim 6 further including the step of ejecting a finished object from said mold cavities after the joining step.

10. The process of claim 6 further including the step of moving at least one of said molds in a transverse direction perpendicular to an axis of rotation of the movable mold, during the joining step, to close together the molds at said assembly position.

11. A process for the molding and assembling of a two-part plastic object, the process comprising the steps of:

providing a machine including first and second rotatable molds, each mold having at least two mold cavities formed therein, and each of said molds having, and being rotatable on, a substantially vertically orientated axis of rotation;

introducing plastic into one of said mold cavities in said first rotatable mold, to form a first part, at a first forming position located at a distal facing side of said first rotatable mold;

introducing plastic into one of said mold cavities in said second rotatable mold, to form a second part, at a second forming position located at a distal facing side of said second rotatable mold;

rotating said first rotatable mold ninety degrees about its axis and rotating said second rotatable mold ninety degrees about its axis;

after the first and second rotatable molds are rotated, applying heat to an edge of the first part and the second part;

after the step of applying heat to an edge, rotating said first rotatable mold an additional ninety degrees about its axis and rotating said second rotatable mold an additional ninety degrees about its axis;

joining parts in opposing mold cavities at an assembly position when one of said mold cavities of said first mold and one of said mold cavities of said second mold face each other;

wherein the at least two mold cavities in each mold enables said parts to be simultaneously formed at said forming positions and assembled together at said assembly position.

12. The process of Claim 11 wherein said first rotatable mold is rotating clockwise about its axis and the second rotatable mold is rotating counterclockwise about its axis.

13. The process of Claim 11 further including the steps of introducing in said first rotatable mold a component selected from the group consisting of electronic components, fluid components and metal components and combining said component with the first part to form a finished product.

14. A process for the molding and assembling of a two-part plastic object, the process comprising the steps of:

providing a machine including first and second rotatable molds, each mold having at least two mold cavities formed therein, and each of said molds having, and being rotatable on, an axis of rotation;

introducing plastic into one of said mold cavities in said first rotatable mold, to form a part, at a first forming position located at a distal facing side of said first rotatable mold aligned with said axes of rotation;

introducing plastic into one of said mold cavities in said second rotatable mold, to form a part, at a second forming position located at a distal facing side of said second rotatable mold aligned with said axes of rotation;

rotating said first rotatable mold ninety degrees about its axis of rotation and rotating said second rotatable mold ninety degrees about its axis of rotation;

after the first and second rotatable molds are rotated, applying heat to an edge of the parts in the corresponding rotatable molds;

after the step of applying heat to an edge, rotating said first rotatable mold an additional ninety degrees about its axis of rotation and rotating said second rotatable mold an additional ninety degrees about its axis of rotation;

joining parts in opposing mold cavities at an assembly position when one of said mold cavities of said first mold and one of said mold cavities of said second mold are aligned intermediate to said axes of rotation;

wherein the at least two mold cavities in each mold enables said parts to be simultaneously formed at said forming positions and assembled together.

15. The process of Claim 14 wherein said first rotatable mold is rotating clockwise about its axis and the second rotatable mold is rotating counterclockwise about its axis.

16. The process of Claim 14 further including the steps of introducing in said first rotatable mold a component selected from the group consisting of electronic components, fluid components and metal components and combining said component with the first part to form a finished object.