

## Title of Invention Multi-purpose pancake art machine

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### Abstract of Invent

This device allows the customer to provide a certain quality of pancake art and lettering with pictures or pictures of the desired type, regardless of the manufacturer's drawing ability. It does not require complicated programs such as CAD or illustration, and automatically turns the pancakes inside out, so the producer only needs to collect them. Consumers can receive customized products of their choice, and producers can provide pancake art and lettering of a certain quality regardless of their drawing skills or program skills. We also expect to reduce labor force through semi-automated processes. By distributing this device to cafes, the cafe's signature menu is created to provide consumers with more diverse experiences and to provide producers with a certain quality of service regardless of their ability.

### Characteristics

- Nozzle section
  - Two nozzles that are easy to detach and detach for various purposes such as pancakes, icing, and chocolate.
  - There is a guideline and motor on the nozzle so that it can move about 20cm in the Z-axis direction (up and down), allowing direct lettering on the high cake.
- Control team
  - Insert a small computer into the control box to send photos via your smartphone.
  - Self-developed image recognition conversion program allows the device to recognize photos or pictures without a program such as a CAD or illustration.
- Drive part
  - Core xy method allows stable operation even if the nozzle is heavy.
- Electric fan
  - Make one side of the electric fan curved so that it can be automatically turned over with the flip of the nozzle.

### Application field

The cafe market is already saturated, although the rate of cafe start-ups has increased recently due to the increasing consumption of coffee. In order to survive in the saturated cafe market, we are going to provide signature menus to characterize the cafe. In case of pancake art and lettering, individual painting skills are important, but in case of painting skills, they are often innate and difficult to acquire. Therefore, pancake art and lettering, which draw pictures that consumers want, can be provided with a constant quality and semi-automated process.

### Photo of Invention

