Mockup

- Cake decorating appliance
  - Shoots variety of toppings
  - Fun yet efficient
  - Primarily for bakeries

- Mockup features
  - Auger feeding
  - Continuous flow via fan
  - Cordless
Evolution of Market

Ice Cream Shop (Toscanini's)  Bakery (Party Favors)

Theatrical  Efficient

Topping Bursts  Easily Cleaned

Cordless

Continuous Flow
Enables bakers in commercial kitchens to effectively decorate cakes with projectile toppings

<table>
<thead>
<tr>
<th>Customer Needs</th>
<th>Design Attributes</th>
<th>Engineering Specifications</th>
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</thead>
<tbody>
<tr>
<td>Applies controlled coating of toppings</td>
<td>Topping flow rate</td>
<td>Flow rate varies by $&lt;10%$</td>
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<tr>
<td>Is easy to clean</td>
<td>Disassembly capability</td>
<td>All surfaces in contact with toppings can be disassembled and washed in dishwasher</td>
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<tr>
<td>Is easy to maneuver</td>
<td>Mobility and weight</td>
<td>Must be un-tethered and weight must be $&lt; 5$ lbs</td>
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<tr>
<td>Can apply a variety of toppings</td>
<td>Versatility</td>
<td>Capable of projecting toppings of sizes ranging from powder to diameter of $1$cm</td>
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Estimated Retail Cost: $<100$
Key Risks

- Feeding mechanism
  - Clog-proof
  - Controlled flow rate

- Propulsion mechanism
  - Strong flow
  - Steady flow
Feeding Mechanisms

Funnel

Shutter

Auger
Propulsion Mechanisms

Impeller

Compressed Air

Fan
Next Steps

- Interchangeable cartridges

- Nozzles
  - Better Precision
  - Decorative patterns