A Topping Gun

- **What does it do?**
  - Shoots sprinkles, crushed nuts & small candies
  - Even coating of toppings
  - Better design capabilities

- **Features**
  - Cordless
  - Burst or continuous flow settings
  - Exchangeable topping cartridges
Realization

- **Successes:**
  - Operational
  - Cordless
  - Fan Powered

- **Possibilities:**
  - CO\textsubscript{2} cartridge powered
  - feeding mechanism
    - top loading: electric hopper
    - bottom feeding: piston cylinder
  - adjustable speed for topping variety
Technical Info

- Assumptions
  + 12 in. horizontal displacement
  + 2 in. vertical displacement

- Measured
  + Average sprinkle weight = 0.1 g

- Calculations
  + Sprinkle velocity = 0.48 m/s
  + Air Velocity = 5-7 m/s

- Can base propulsion choices off this
Market

- Who wants this?
  + Ice Cream Shops
    - Primary Contact: Gus from Tosci’s
  + Show Bakeries
  + Home Chefs

- U.S. market potential:
  + 40,000 small retail bakeries
  + 13,000 small ice cream parlors
  + Market for food preparation appliances: $1.7 billion

“You’ve got the theatrical nature of food down”
-Gus
Benchmarking

- Patent on an industrial scale cake decorator
  - patent published in 2007
  - not a true competitor
Questions?
Sources

- http://www.manta.com/mb_35_C432C05N_000/ice_cream_stands_or_dairy_bars
- http://www.manta.com/mb_34_B61CD_000/retail_bakeries?refine_company_rev=R01