

Develop the ice shovel that can adjust the amount of ice scooped

1. **Developing Staff Members** : Develop the ice shovel that can adjust the amount of ice scooped

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3. **Development Idea**

This study is to improve the function of traditional ice shovel. First, the biggest problem is that the user is unable to precisely and accurately control the quantity of ice cube. Such a shovel not only increases the production cost of ice cubes but also causes the waste of water resource. Second, the traditional ice spoon cannot meet the beverage's fast and quick requirement. The user must swing the arm up and down to reduce the amount of ice in the shovel with carefulness. Swing up and down with carefulness will lower the user's speed. Moreover, the users easily suffer shoulders and biceps ache resulting from swing the arm up and down. The action will cause the user's occupational injury.

Therefore, the study is to develop an ice shovel with the adjustable function. There will be an adjustment button on the handle of the ice shovel. The user is able to accurately adjust the amount of ice for the customer's required ice level preference and pour into the shaker cup. It is unnecessary to pour out the excess for ice less or ice free. Without discarding the excess ice cubes, the hand-shank beverage shops save more of the production cost and the water source. Most important, the adjustable ice shovel can improve the beverage maker's efficiency and speed. The disadvantage for the ice shovel will be solved.

4. **Technological Competition and**

Industrial Application

Application industry : Catering industry, Beverage industry, Life application.

5. **Merchandise Statement of Achievement**

The difference between the adjustable ice shovel and the traditional ice shovel is that the ice volume adjustment function is added to it, let users to adjust the amount of ice they need when using this product, to achieve the purpose of making beverages quickly, avoid wasting ice cubes, the adjustable ice shovel can make of stainless steel and stainless steel springs, so, the

technological cost is fairly low.

(1) Commodity competitiveness

- Competitiveness of the existing products : No adjustable ice shovel is sold on the market at moment. Most of the ice shovels existing on the market are the fixed quantity-smallness, medium, largeness, as Finger 6 showing. Due to cost considerations, the beverage stores usually won't buy various sizes ; only one size is chosen in normal. Thus, the production has the competitive advantage in the adjustable function.
- Threat of the new production : The characteristics of the adjustable ice shovel is to completely utilize ice cubes, save the waste of water, and reduce the production cost. Thus, the threat of new production is extremely small.
- Threat of the substitutes : Based the quantitative measure, there are three kinds- small ice shovels, medium ice shovel, and large ice shovel. Therefore, there is no replacement.
- Customer bargaining power : The product can be made of plastic or stainless steel, which of production cost is low. There are many beverage stores in Taiwan. Therefore, the production would create a small profit on a great quantity of goods. In addition, the production has applied

for a patent; so, there is the low wiggle room on the price of this production.

- Supplier bargaining power : The components of this product are made of plastic or stainless steel. A wide diversity of component resources, so the suppliers have less opportunity to raise the component cost.

This product adjusts the position of the baffle on the scoop through the adjustment button, then adjust the amount of ice scooped by the ice shovel, can accurately scoop the amount of ice needed by the user, the adjustable ice shovel not only can quickly adjust the amount of ice required by consumers, increase the efficiency of the store to make drinks, can also reduce the excess waste of ice cubes when making beverages, thereby reducing the consumption of water resources, also has leaking hole to drain excess water and reduce the chance of bacterial growth. The disadvantages of traditional ice shovels will be solved. Therefore, compared with the traditional ice shovel, this product design is indeed highly innovative and progressive.