Single-Use Camera Project

**Kodak Fun Saver Parts and Functions**

**Optical System**

**Trigger Assembly**

**Viewfinder**

**Film**
Exterior

Battery

Scroll

Packaging
<table>
<thead>
<tr>
<th>Parts</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>back cover- plastic</td>
<td>encase internal components</td>
</tr>
<tr>
<td>front cover-plastic</td>
<td>encases internal components</td>
</tr>
<tr>
<td>film cartridge- plastic casing and film</td>
<td>stores film that has already been exposed and ready for processing</td>
</tr>
<tr>
<td>spool for unexposed film-plastic</td>
<td>holds unexposed film</td>
</tr>
<tr>
<td>battery-metal casing</td>
<td>provides power to circuit board to complete flash process</td>
</tr>
<tr>
<td>center frame chassis-plastic</td>
<td>framework for all internal parts to attach to</td>
</tr>
<tr>
<td>flash circuit-silicone, solder</td>
<td>charges the flash</td>
</tr>
<tr>
<td>lens-plastic</td>
<td>focuses image for clear picture onto film</td>
</tr>
<tr>
<td>lens fastener-plastic</td>
<td>holds lens in place</td>
</tr>
<tr>
<td>shutter blade-plastic</td>
<td>houses lens and lens holder onto chassis</td>
</tr>
<tr>
<td>lens housing-plastic</td>
<td>opens to allow light in for image capture</td>
</tr>
<tr>
<td>shutter spring-copper</td>
<td>pulls shutter into place</td>
</tr>
<tr>
<td>button mechanism-plastic</td>
<td>user operated; allows process for one picture to be take place</td>
</tr>
<tr>
<td>view finder-plastic</td>
<td>allows user to see image that will be taken</td>
</tr>
<tr>
<td>unexposed picture counter-plastic</td>
<td>displays number of photographs still available</td>
</tr>
<tr>
<td>unexposed picture counter-plastic</td>
<td>advances film to allow for next picture to be taken</td>
</tr>
<tr>
<td>film advancer gear-plastic</td>
<td>pulls film ahead once film advance wheel is turned</td>
</tr>
<tr>
<td>film advancer locking mechanism-plastic</td>
<td>insures the film advancing mechanism only advances for one frame at a time</td>
</tr>
<tr>
<td>revolving shaft-plastic</td>
<td>allows for parts to advance one cycle</td>
</tr>
<tr>
<td>locking mechanism release lever-plastic</td>
<td>releases after each picture to allow for an additional film advancement</td>
</tr>
<tr>
<td>resistance spring-steel</td>
<td>provides force for film advancement mechanism to complete cycle</td>
</tr>
</tbody>
</table>
Methods for a More Efficient Disposable Camera

The opportunity to make a more cost-effective and more importantly eco-friendly disposable camera is extremely tangible due to the fact that the camera is disposable. From a marketing standpoint, this means that the consumer will generally not have a distinct preference for the camera’s details, such as size and material. Instead, with a camera that will be disposed of after a small amount of use, perhaps the only concern for the consumer is that it functions properly and consistently. So, despite whether the camera is made of cardboard, plastic, or aluminum, as long as the picture is clear, the consumer is happy. Therefore, alternatives to Kodak’s camera are:

- Cardboard frame
- A flash generated by mechanical energy applied by the user (such as flicking a scroll)
- Smaller size (less material)
- Biodegradable or lighter packaging

Recycling and Reusing Materials of the Kodak Fun Saver Single Use Camera

The Kodak Fun Saver camera is something that can be considered very good for the environment because of how much of it is recycled and reused. The company says that more than 1.5 billion Fun Saver cameras and similar products have been recycled since 1990, which accounts for more than 60% of its total sales. The only component in the camera that cannot be reused is the film itself, since even the battery does not get completely used and can be resold to other companies. With that in mind, a Kodak Fun Saver camera can be returned to the shelf in only 30 days after the original photos were developed. With its way of recycling components back to have the same use, Kodak has actually managed to create the best "closed loop" recycling system in the world.
Single-Use Camera Process Flow Chart

1. Turn Winding Wheel
2. Film Rolls Into Canister
3. Filmstrip Pulled To New Exposure
4. "Flash Ready" Signal Light Turns On
5. Battery Charges Flash
6. Flash Turns On
7. Take Picture
8. Flash Goes Off
9. Shutter Allows Light To Enter Camera
10. Image Is Captured On Film
11. Flash Powers Down
12. Cycle Repeats Itself

Single-Use Camera Functional Decomposition Diagram

- Single Use Camera
  - Energy Processing
  - Mechanical
  - Electrical
  - Material Processing
  - Signal Processing
    - Light
      - Lens
        - Projected Image
        - Light-Sensitive Film
        - Stored Image
      - View Finder
        - Select View
      - Shutter
        - One Frame At A Time
      - Advance Film
      - Open Shutter
        - Flash Goes Off
        - "Flash Ready" Signal
      - Battery
      - Wind-up Shutter
      - Counting frames
      - Take Picture
      - Charge Flash
      - Advance Film
      - Open Shutter
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