Uphill Struggle

The Problem

Jack and Jill have made a luxury double-seater cart, but it is very heavy to push up the hill.

Can you design a way to stop the cart from rolling back down the hill when they stop to catch their breath?
Design Brief

Design and make a vehicle that:
• can carry at least 50 g (≈ 1.75 oz) (or approximately 1 weight brick)
• has a safety feature that does not prevent the vehicle from rolling forwards

1. Make a sketch of the idea you designed and made.

2. Label the three most important parts, explaining how they work.

3. Suggest three improvements.
## Problem Solving Activity:

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<tr>
<th>Name(s):</th>
<th>Date:</th>
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### GOALS

#### Design Brief:
Understand the problem, develop prototypes to solve it, test those prototypes and revise your design to make it better.

- **BRONZE**
  - Our design met the goals or criteria defined by the activity.

- **SILVER**
  - We met Bronze
  - We tested our prototype multiple times.
  - We made at least one improvement.

- **GOLD**
  - We met Silver
  - We made at least two improvements.

- **PLATINUM**
  - We made at least two different designs.
  - We picked the best design, tested it, and made several improvements.

#### Creativity:
Come up with inventive and creative solutions to problems. Consider multiple solutions.

- **BRONZE**
  - We started the activity and have at least one possible solution that looks reasonable.

- **SILVER**
  - We brainstormed two to three ideas.
  - We built a working model to solve the problem.

- **GOLD**
  - We brainstormed more than three ideas.
  - We built an effective model to solve the problem.

- **PLATINUM**
  - We brainstormed many ideas.
  - We built and tested prototypes for at least two ideas.
  - We built an original and effective model that solves the problem.

#### Collaboration:
Work is shared effectively and the team encourages and helps each other.

- **BRONZE**
  - We sometimes worked together well but some team members did more work than others or we needed help from the teacher to resolve some disagreements.

- **SILVER**
  - We generally worked together well, providing help and support to each other.
  - The work was shared fairly evenly among the group members.

- **GOLD**
  - We worked together well, providing help and support to each other.
  - The work tasks were shared evenly.
  - We addressed issues that arose.

- **PLATINUM**
  - We worked together unusually well, overcoming unexpected obstacles by working together as a team.
  - We actively helped and supported each other.
  - We addressed issues that arose with honest, constructive feedback.

### Notes:

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