STEAMPUNK RALLY

2-8 | 60 | 14+

ROXLEY

THE STORY

It is the turn of the 20th century, a renaissance of steam, steel and the mysterious power of Electricity! The mad genius, Nikola Tesla, has summoned the world's greatest minds to challenge them in a no-holds-barred race through the Swiss Alps. On this neutral ground, the competitors will construct, push to the breaking point, and jury-rig fantastical contraptions of their own design to crown, once and for all, the greatest Inventor of all time!

"Race of the Century!" cry out newspapers around the world. Controversy over the results of the Swiss Rally sparks public interest in details surrounding the Inventors' rivalries. This leads to the construction of the Hoverdrome; an enormous floating stadium built with strange and futuristic technology by a mysterious private benefactor from Earhart Industries. There, the Inventors can once again test their mettle!
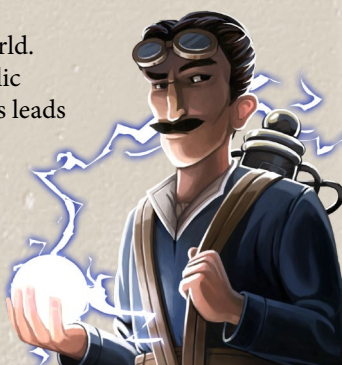
GAMEPLAY BASICS

Steampunk Rally is a card-drafting, dice-placement game. You will be rolling and placing dice on your **Invention** to generate **Motion**, gain more dice, prevent & repair damage, and discard used dice. Improve the efficiency of your **Invention** by adding **Machine Parts**. Harness the power of various **Boost** technologies, utilizing them to thwart your rival Inventors and achieve victory!

The game is played over a series of rounds until one player's **Invention** crosses the Finish Line, at which point one final round is played. The player furthest past the Finish Line after the final round is declared the winner!

VIDEO TUTORIAL

Are you more of a visual learner? We've got you covered. Open your web browser and head over to roxley.com/steampunk-rally to watch a video tutorial on how to play!

COMPONENTS INCLUDED

120 Machine Part cards in 3 colors (Gold, Silver and Copper Bordered)

40 Boost Cards (Black Bordered)

1 Play Direction token

16 Inventor Pawn tiles with bases

32 Inventor Machine Part & Cockpit cards

8 Player aids

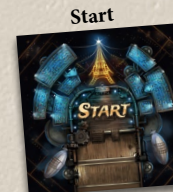**8 Light Bulb** tokens

36 Steam dice

36 Heat dice

36 Electricity dice

6 Challenge tiles

8 Damage Gauges

41 Cog tokens in 3 denominations

Start | Finish Line | End

8 Double-Sided Track tiles
1 Start, 5 Middle, 1 Finish Line, 1 End

Game Setup

1 Select which **Racetrack** you'd like to play (*Swiss Alps or Hoverdrome*) and ensure that all the **Track** tiles are flipped to the selected side.

2 Select three of the five available **Middle Track** tiles and build a continuous **Racetrack** of any shape.

3 Place the **Start** tile at one end of your newly created **Racetrack**.

4 At the other end of the **Racetrack**, attach the **Finish Line** tile as directed.

5 Complete your **Racetrack** by attaching the **End Track** tile to the **Finish Line** tile.

6 Place the supply of dice and **Cogs** within reach of all players.

7 Sort all **Machine Part** and **Boost** cards into four separate decks according to the color of their borders (Gold, Silver, Copper and Black).

8 Shuffle and place each deck face down within reach of all players. Then take the top card from each deck and place it face up beside the deck to create four separate discard piles.

9 Flip the the **Play Direction** token like a coin, and place it between two random players.

# Optional Setup: Challenge Tiles

10 **Challenge** tiles can provide new and exciting variations for experienced players. After the **Racetrack** has been assembled, you may add a **Challenge** by placing any one of the six **Challenge** tiles beside a space on the **Racetrack** that does not already feature a **Challenge**.

- We recommend adding no more than three **Challenge** tiles to the **Racetrack**.
- Be careful when placing **Challenge** tiles! When placing one on a single side of a forked path, the best route becomes clear, potentially making the game a little less interesting.

Your First Setup

If this is your first time playing the game, we recommend the following changes to **Game Setup**:

- Play with six or fewer players.
- Use the **Swiss Alps Racetrack**.
- Play without the optional **Challenge** tiles (you still use the **Challenge** spaces on the **Racetrack**).
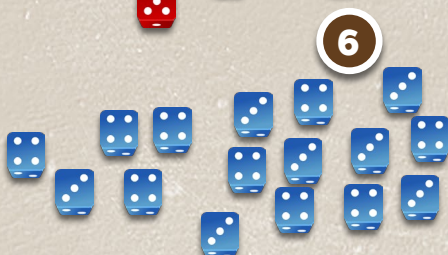
Player Area Setup

A Select an **Inventor**. Take the associated **Inventor Cockpit**, **Inventor Machine Part**, and **Inventor Pawn**. We recommend that players who didn't fare as well in a previous game be allowed to select first.

B Place your **Inventor Pawn** on the **Racetrack Start space**.

C Construct your **Invention** by placing your **Inventor Cockpit** and **Inventor Machine Part** face up in front of you, with both cards rotated upright (so the words are not upside down). Your starting **Invention** must have a complete valve connection (see "Valve Connections" below).

D Leave space below or to the side of your **Invention** for your **Dice Pool**.

E Place a **Light Bulb** token in your **Player Area** with the "On" side facing up.

F Place a **Damage Gauge** in your **Player Area** and set it to "0".

G Once all players have finished setting up, return all unselected **Inventor** cards and **Pawns** to the box.
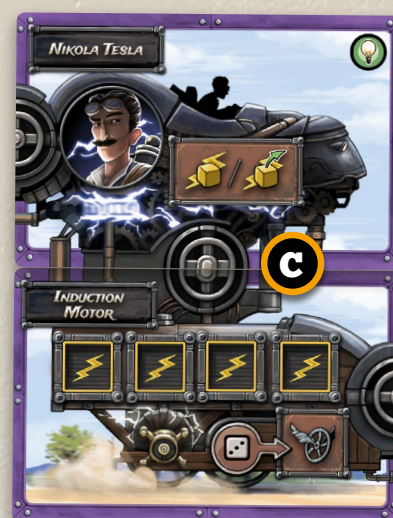
Dice Pool

Valve Connections

When the valve graphics of two **Machine Parts** come together to form a circle, it is considered to be a "complete" valve connection.

Complete valve connection

Incomplete valve connection

Playing the Game

Steampunk Rally is played over a series of rounds. Each round consists of four Phases:

Draft: add **Machine Parts** to your **Invention**; gain dice, **Cogs**, and **Boost** cards.

Vent: spend **Cogs** to subtract pips from dice currently occupying **Die Slots** on your **Machine Parts**. The **Vent Phase** is skipped during the first round of the game.

Race: Roll your dice and use them to activate your **Machine Parts**.

Damage: if your **Damage Gauge** is below 0, discard **Machine Parts**.

After you have completed all four **Phases**, perform **End of Round** tasks. A new round then begins with another **Draft Phase**.

Draft Phase

During the **Draft Phase**, you will receive two types of cards to perform actions with: **Boost** cards and **Machine Parts**.

Boost Cards

Boost cards feature a Black border Ⓐ. **Boost** cards gained during the **Draft Phase** may be played to receive the effects on the card Ⓑ.

Machine Part Cards

Machine Parts are used to build your **Invention**, and can be activated using dice or the **Light Bulb** token 💡 during the **Race Phase**. There are three types of **Machine Parts**. Each has a defining characteristic identified by its border color in addition to any other **Race Effects** it may generate:

Gold border
Generates **Motion**. Your **Invention** needs to move, so consider carefully before passing these cards.
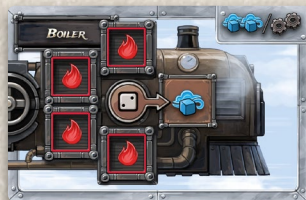
Silver border
Generates more dice, providing more power for your **Invention**.

Copper border
Has four **valve connections**, allowing you to easily expand your **Invention**.

Draft Phase – continued

At the beginning of the **Draft Phase** each player draws one card from each deck to create a hand of 4 cards. Then all players perform each of the following steps simultaneously. Do not proceed to the next step until all players have finished performing the current one.

① Select a card from your hand and place it face down in front of you.

② Perform one of the following actions using your selected card:

Construct
Reveal your selected **Machine Part** and immediately attach it to your **Invention** (see **"Building Your Invention"** section). If you cannot attach your selected card, you must instead discard it to **Generate Power** or **Gain Cogs** as noted below.

Generate Power
Discard your selected card to its appropriate discard pile. Take dice from the supply matching the amount and color displayed in the upper-right corner of the card. Place them in your **Player Area** to form your **Dice Pool**. You will roll and use these dice later, during the **Race Phase**.

Gain Cogs
Discard your selected card to its appropriate discard pile and take **Cogs** from the supply matching the amount displayed in the upper-right corner of the card.

Stash Boost
Place your selected **Boost** card face down under your **Damage Gauge**. You are now able to play this **Boost** card.

③ Pass the remaining cards in your hand to the player sitting next to you in the direction indicated by the **Play Direction** token. The cards you receive from an adjacent player become your new hand. Repeats Steps 1-3 until you have no cards left to pass, then proceed to the **Vent Phase**.

⚠ Important!

A unique element of Steampunk Rally is that each Phase in a round is resolved by all players simultaneously; there are no "turns" in the game. To ensure your game maintains order, it is important that the players communicate regarding the round's current Phase. Before proceeding to a new Phase, check with the other players to make sure they are ready to continue. This ensures that all players have had an opportunity to complete their actions. Do not proceed until all players are ready.

Ada Lovelace

(1815-1852+) The mathematical talents of Augusta Ada King, Countess of Lovelace, led her to become involved with Charles Babbage's Difference Engine, an entirely mechanical calculator based on principles similar to later Turing machines, and eventually the modern computer, possibly making Ada the world's first computer programmer. Pushed towards mathematics by her mother at a young age in the hope that she wouldn't go down the path of her father, the poet Lord Byron, she became inspired by the innovations of the industrial revolution and created fanciful designs for ships and steam-powered flying machines. Unknown to reputable historians, Ada's ongoing poor health drove her to develop the Difference Engine to a level that eventually allowed her to upload her consciousness into her invention, thereby achieving immortality, thenceforth interacting with the physical world via a construct of iron and porcelain.

Albert Einstein

(1879-1955) The academic world began to take notice of this dapper young college professor in 1905, later touted as his miracle year. Einstein published four mind-blowing papers that would forever revolutionize physics, covering the photoelectric effect, Brownian motion, special relativity, and equivalence of mass and energy. Initially shying away from celebrity, Einstein used his fame to promote pacifism, internationalism, and Zionism. Despite his fervent belief in peace and cooperation, fears of Nazi research into nuclear weapons compelled him to sign a letter to Roosevelt that led to the creation of the Manhattan Project, a weaponization of his famous formula, $E=mc^2$. He would look back on this as his one great mistake. He was frustrated with the direction Quantum Physics built upon his work, and until his dying day he adamantly insisted that "God does not play dice."

During the ⛏ **Vent Phase**, you may spend any number of **Cogs** to reduce the pip values of dice that currently occupy **Die Slots** on your **Invention**.

- Each **Cog** you discard allows you to reduce the value of your dice by a total of up to 2 pips (e.g. one die by 2 pips, or two dice by 1 pip each).
- Discard any die you reduce to less than 1 pip.

Vent Phase Boost Cards

Certain **Boost** cards are only playable during the ⛏ **Vent Phase**. If multiple players wish to play **Boost** cards, resolve them in the order determined by the **Play Direction** token, starting with the player closest to the token. Each player resolves all **Boost** cards they wish to play before moving to the next player. Normal **Boost** cards (that *do not* specify "Play during ⛏ **Vent Phase**") may still be played during this time.

Race Phase

At the start of the **Race Phase**, roll all the dice in your **Dice Pool**, as well as any dice stored in a diagonally shaped **Storage Die Slot** (A) (e.g. *Flywheel* cards and Marie Curie's **Inventor** card).

For the remainder of the ⚑ **Race Phase**, you may use these dice to activate **Machine Parts** in your **Invention** and gain their associated **Race Effects**. The **Race Effects** you gain are represented by the icons shown on the **Machine Part's** copper panel (B).
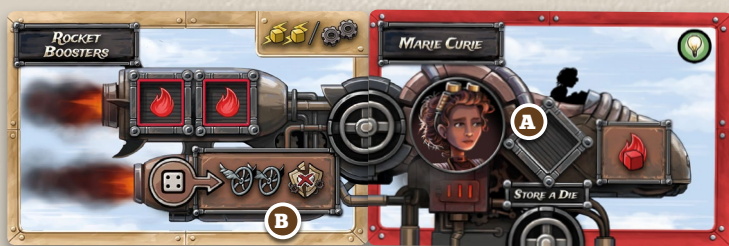
Cogs

At any time during the ⚑ **Race Phase** you may modify dice in your **Dice Pool** by spending **Cogs**:

- Discard a **Cog** to re-roll a die.
- Discard a **Cog** to increase the value of a die by 1 pip. You cannot increase a die beyond 6 pips.

Activating Machine Parts Featuring Die Slots

Most **Machine Parts** feature **Die Slots** (C) and can be activated by placing the type of die shown (Steam 💧, Heat 🔥, or Electricity ⚡) into these **Die Slots** from your **Dice Pool**. There is no limit to the number of activations that you can perform during the ⚑ **Race Phase**, as long as you have available **Die Slots** and the matching dice in your **Dice Pool**.

(1) Choose the **Machine Part** that you would like to activate.
- Only one **Machine Part** may be activated at a time.
- You may activate **Machine Parts** in any order.
- A **Machine Part** may be activated multiple time during a single race phase.

(2) Place dice from your **Dice Pool** into open **Die Slots** (C) on the **Machine Part**.
- The type of die placed into a **Die Slot** (C) must always match the type of die pictured in the **Die Slot**.
- Provided there are enough open **Die Slots** on a card, you may perform an activation using multiple dice (D).
- The sum of the pips on all dice placed during a single activation represents the **activation power** (example (D) represents an **activation power** of 10).
- Dice placed during a previous activation and already occupying **Die Slots** (E) do not add to the current **activation power**.

(3) Divide the **activation power** by the value shown on the 🎲➙ icon (disregarding the remainder). This is how many times you generate the card's **Race Effects** (F).
- A **Machine Part** featuring a star ⭐➙ icon allows you to perform its **Race Effects** only one time, with an **activation power** of 1 or more.
- You may only place dice in **Die Slots** if it results in being able to activate the **Machine Part** at least once.

(4) Immediately resolve all **Race Effects** generated by the activation. This is not optional, you must resolve all generated **Race Effects**.

> **Note:** After a die is placed in a **Die Slot** on a **Machine Part** and any **Race Effects** have been resolved, the die serves no further purpose. It must remain until removed (e.g. during the **Vent Phase**, via a Race Effect or Boost card, or when the Machine Part is discarded). Each Die Slot may only be occupied by a single die.

Alberto Santos-Dumont

(1873-1932) Credited in Brazil as the Father of Aviation, the charming and charismatic Santos-Dumont spent most of his adult life in Paris studying physics, chemistry, mechanics, electricity, and most devotedly aviation, which he hoped could usher in a prosperous new era for humanity. His aircraft designs were inspired by the coffee plantations he grew up on, as well as the works of Jules Verne. In 1901 he was awarded the Deutsch de la Meurthe prize for flying his dirigible from the Parc de Saint-Cloud to the Eiffel Tower and back in just 30 minutes. In a charitable gesture, he gave half the prize to his crew and then donated the other half to the poor of Paris. By 1908 he had designed the world's first series production fixed-wing aircraft, the Demoiselle, the design for which he made freely available. Santos-Dumont is also credited with popularizing the wristwatch.

Alexander Graham Bell

(1847-1922) Born in Edinburgh, Bell designed a wheat de-husking machine for his father's friend's mill at the age of 12. His mother's concurrent loss of hearing compelled Bell to become obsessed with the science of acoustics. His continued work with the deaf, and his research into hearing and speech, led him to discover a means of transmitting sounds via electrical current, earning him the first patent for the telephone. Granted numerous awards, prizes and honorary degrees, Bell spent much of his later life at his estate in Nova Scotia applying his endless curiosity to a broad range of inventions including patents for hydroplanes and other aerial vehicles, and overseeing construction of experimental boats as well as workboats for the Royal Canadian Navy. He considered the telephone an intrusion and refused to have one in his study.

Activating Machine Parts Featuring Light Bulb Icons

Inventor Cockpits and **Machine Parts** that contain the 💡 icon Ⓐ are not activated with dice. Instead, flip your **Light Bulb** token at any time during the **Race Phase** from the "On" side 💡 to the "Off" side 🔵, which activates them all at once. Resolve each of the activated **Machine Parts** individually in any order, resolving all **Race Effects** before moving to the next.

If you do choose to flip your **Light Bulb** token, you must resolve all 💡 icon **Machine Parts** on your Invention.

> **Your First Game:** During the first rounds of your first game, we suggest resolving the **Race Phase** one player at a time according to the **Play Direction** token. **Example:** if the token has the clockwise direction face up, the player to the left of the token would perform their first activation, followed by the next person in clockwise order, and so on continuously until all players are unable (or don't wish) to perform any further activations.

DAMAGE PHASE

During the ✴ **Damage Phase**, damage you accumulated during the round may cause you to lose **Machine Parts** from your **Invention**.

- If your **Damage Gauge** is at 0 or above, do not adjust it.
- If your **Damage Gauge** is lower than 0, you must select and discard a number of **Machine Parts** Ⓒ from your **Invention** equal to the number shown in red Ⓓ on your **Damage Gauge** and then reset your **Damage Gauge** to 0 Ⓔ.
- Remember to always follow all the rules in the **"Building Your Invention"** section.

Santos-Dumont loses one Machine Part and resets his Damage Gauge to 0.

Exploding

Whenever you would be forced to discard your **Inventor Cockpit**, your **Invention** violently explodes. If your **Invention** explodes, you must:

1. Move your **Inventor Pawn** to the space behind the player in last place Ⓖ. If you were already the player in last place, move backward one space toward the **Starting Line**.

2. Discard all of your **Machine Parts** Ⓗ except for your **Inventor Cockpit** Ⓛ.

3. Reset your **Damage Gauge** to 0 Ⓜ.

Santos-Dumont's **Invention** explodes during the ✴ **Damage Phase** because his **Damage Gauge** (-3) Ⓕ would result in him discarding his **Inventor Cockpit**.

Santos-Dumont moves into last place, resets his **Damage Gauge** to 0, and discards all **Machine Parts** except his **Inventor Cockpit**.

ELIJAH J. MCCOY

(1844-1929) Born in Canada the son of runaway slaves, McCoy's family moved back to the U.S. where he would start his career as a locomotive fireman, stoking fires and oiling engines. Despite obtaining a degree in Edinburgh, racial discrimination prevented him from finding work as a mechanical engineer. This did not stop him from revolutionizing steam engine maintenance with his automatic lubricator in 1872, and he ultimately patented 50 designs that dealt with lubricating systems. The authenticity of McCoy's lubricating cups is rumored to be the origin of the phrase "the real McCoy".

HERTHA AYRTON

(1854-1923) Phoebe Sarah Marks, AKA Hertha Ayrton, was a pragmatic and driven English engineer and inventor who held 26 patents for mathematical dividers, arc lamps, electrodes, and air propulsion. Like her close friend Marie Curie, she faced institutional sexism, and was denied a mathematics degree from Cambridge and entry into the Royal Society. Undeterred, she pursued a certificate from Girton, Cambridge's women's college, founded a fire brigade and a mathematics club, and led their choral society. Hertha's studies of the electric arc had a huge impact on the design of public lighting solutions, her Ayrton flapper fan helped defend British soldiers against poison gas attacks in WWI, and her amazing successes in the fields of physics, mathematics and engineering led to the removal of restrictions that denied women in the U.K. the right to serve on scientific committees.

End of Round

After all players complete the ✹ **Damage Phase**, the round is over. Before beginning a new round, perform the following tasks:

1 Flip your **Light Bulb** token to the "On" side.

2 If any of your **Machine Parts** feature **Storage Die Slots** Ⓐ, you may place a die in each one of these **Die Slots** from your **Dice Pool**. Stored dice are retrieved and added to your **Dice Pool** at the beginning of the next ✹ **Race Phase**.

3 Return all remaining unused / unstored dice in your **Dice Pool** to the supply. **Cogs** may be kept in your **Player Area** from round to round.

4 Flip the **Play Direction** token to the opposite side.

A new round now begins, starting with the ♟ **Draft Phase**.

Using Boost Cards

Boost cards feature a Black border and can be played at any time from your **Stash** to generate the **Race Effects** and **Boost Effects** described on the card.

- **Boost** cards may be played at any time during any Phase, unless otherwise specified by the card.
- After a **Boost** card is resolved, immediately discard it to its appropriate pile.
- Some **Boost** cards create an effect that remains in play for the duration of the current Phase or round. When a **Boost** of this type is played, leave it face up near the **Racetrack** to serve as a reminder to all players. Once it is no longer applicable, discard it as normal.
- There is **no limit** to the number of **Boost** cards you may keep in or your **Stash**, or use in a single round.

Building Your Invention

At all times, your **Invention** must adhere to the following rules:

1 All **Machine Parts** in your **Invention** must always connect to your **Inventor Cockpit** through a chain of complete **valve connections** (see "Valve Connections" section).

2 It is legal for two adjacent **Machine Parts** to share borders where only one of those cards has a valve (as long as **1** is followed for both **Machine Parts**).

3 At any time, you may freely rearrange any/all of the **Machine Parts** in your **Invention**, including your **Inventor Cockpit**. **Machine Parts** that you are unable to properly connect back to your **Inventor Cockpit** are discarded.

4 At any time, you may discard unwanted **Machine Parts** from your **Invention**.

5 All dice occupying **Die Slots** on discarded **Machine Parts** are also discarded.

6 You do not **Generate Power** (dice) or **Gain Cogs** for discarding **Machine Parts** **previously** attached to your **Invention**.

7 If you discard your **Inventor Machine Part** return the card to the game box, not a discard pile.

8 Your **Inventor Cockpit** may not be discarded for any reason (see **"Exploding"** under the ✹ **Damage Phase**).

9 All **Machine Parts** must be placed so that the card's name appears in the upper-left corner.

10 **Machine Parts** with a background image of the ground may be freely connected like any other **Machine Part**, and are are not restricted in placement.

A legally constructed **Invention**

Ferdinand von Zeppelin

(1838-1917) Descendant of a noble family dating back to the 1400s, Zeppelin served in the Prussian Engineering Corps in several wars. He also traveled to the USA to observe the civil war, where he joined the Union Army as a volunteer. It was there that he took his first ascent in a balloon. This led to a fascination that compelled him to pursue airship engineering. Zeppelin pioneered the use of airships for military use by the German army, and his LZ series provided inspiration for many successive designs.

Sakichi Toyoda

(1867-1930) Known as the "King of Japanese Inventors" and the Father of the Japanese industrial revolution, Sakichi Toyoda was born the son of a humble carpenter. He developed the wooden hand loom, founded Toyoda Industries, and developed a troubleshooting concept still used today called the "5 Whys," a question-asking technique used to illuminate the root cause of technical problems. A recession led him to take a trip to Europe and America where he saw the enormous potential for automation and was inspired to complete his most famous invention, the automatic power loom, and to convince his son Kiichiro to found the subsidiary company Toyota Motor Corporation, which now produces one 21st century automobile every 6 seconds.

Discarding & Shuffling Cards

Always discard cards to the discard pile with a matching border color. At the start of the 🏆 **Draft Phase**, if there are fewer cards in a given deck than there are players:

- Shuffle the deck and its discard pile to form a new deck.
- If the remaining deck still has fewer cards than the number of players, all players must discard cards of the required color until they have no more than four cards of that border color remaining in either their **Invention** or **Boost** card **Stash**.
- Reshuffle the deck and its discard pile.
- Turn over the top card of the deck to create a new discard pile.
- Continue the **Draft Phase** as normal.

Race Effects

Race Effects are represented by symbols received from **Boost** cards, **Machine Parts**, and **Challenge Spaces**.

- If at any time you receive a group of multiple **Race Effects** (A), you can resolve them in any order, but you must resolve all of them before you can do anything else (you may not omit unwanted **Race Effects**).
- Sometimes you will see multiple groups of **Race Effects** shown on a card separated by a slash (B). In this case, select one group and resolve all **Race Effects** within the selected group.
- **Race Effects** gained when playing **Boost** cards are resolved immediately, regardless of the current Phase.

Race Effects List

Gain a Die
Take a die of the specified color 🟦 / 🟥 / 🟨 from the supply and add it to your **Dice Pool**. Dice gained in this manner during the **Race Phase** are immediately rolled and available for use.

Discard a Die
You may remove a die of the specified color 🟦 / 🟥 / 🟨 from any **Die Slot** on your **Invention** (regardless of pips) and put it back in the supply. This die may be discarded from a **Machine Part** that generated this effect. This **Machine Part** may now be activated using these **Die Slots**.

Take Damage
Your **Damage Gauge** measures the structural integrity of your **Invention**. Any time you receive the **Take Damage Race Effect**, reduce the value displayed on your **Damage Gauge** by 1. If **Take Damage** causes your **Damage Gauge** to reveal the ❌ icon, immediately discard one **Machine Part** from your **Invention** and return your **Damage Gauge** to -7. If discarding **Machine Parts** in this fashion would force you to discard your **Inventor Cockpit**, your **Invention** explodes (see "Exploding" under the ☀ **Damage Phase**).

Reinforce Invention
Any time you **Reinforce** your **Invention**, increase the value displayed on your **Damage Gauge** by 1. If **Reinforcing** your **Invention** causes your **Damage Gauge** to reveal a **Cog** icon, gain a **Cog** from the supply and return your **Damage Gauge** to +3.

Gain a Cog
Immediately take a **Cog** from the supply.

Motion
Immediately move your **Inventor Pawn** one space forward on the **Racetrack**. Resolve any **Terrain** (⛰) icons traveled over.

Smooth Motion
Immediately move your **Inventor Pawn** one space forward on the **Racetrack**, *ignoring* all **Terrain** (⛰) icons traveled over.

Terrain

Whenever you move your **Inventor Pawn** forward on the **Racetrack** and you enter a space featuring a **Terrain** icon (⛰️), apply the **Take Damage Race Effect** equal to the number shown on the icon. If you gain multiple **Motion** (🪶) at once, you must advance your **Inventor Pawn** an equal number of spaces, taking damage from all **Terrain** icons present on all spaces you enter (you can't choose to ignore unwanted **Motion**).

Example: You gain 3 **Motion** and move your **Inventor Pawn** 3 spaces. The first space you enter features a ⛰️3, the second space you enter features a ⛰️2. You must **Take Damage** (💥) 5 times. Moving backward for any reason (e.g. a **Boost** card or **Challenge** space) does not inflict **Terrain damage**.

Running Out of Dice

In the rare situation that players need to take dice from the supply and there are none available, players may substitute dice currently occupying **Machine Part Die Slots** with **Cogs** or dice of another color from the supply.

- If replacing with **Cogs**, stack one **Cog** for each pip on the die being replaced.

- If replacing with dice of another color, ensure the pip values of the dice being replaced remain the same.

- Dice substituted in this manner still represent the type of die indicated by the **Die Slot** and may still be **vented** or discarded as normal.

- As soon as practical, replace the substitutes with the correct color die.

Challenge Spaces / Tiles

Some spaces on the **Racetrack** feature **Challenges**. These spaces provide various **Race Effects** if a certain requirement is fulfilled. Some **Challenges** are represented on the **Challenge tiles**, which can be placed on the board during setup. The following rules apply to **Challenges**, unless stated otherwise by a specific **Challenge**:

- If a **Challenge** requires that you discard something, but you don't have the necessary resources, you cannot generate the associated **Race Effect(s)**.

- When moving your **Inventor Pawn** multiple spaces, you **cannot** pause at **Challenge** spaces to execute them along the way. Exceptions to this rule include **Glaciers** and **Crowds**, which are automatically activated immediately when your **Inventor Pawn** enters that space.

Challenge Spaces List

Power Station, Newcomen Atmospheric Engine, Coal Mine

If your **Inventor Pawn** is at rest on one of these spaces at any time during a round, you may spend a **Cog** to receive the **Gain a Die** (🔵 / 🔴 / 🟡) **Race Effect**. You may do this as many times as you wish while your **Inventor Pawn** is at rest on on this space, as long as you have **Cogs** available to spend.

Rails

If your **Inventor Pawn** is at rest on one of these spaces at any time during a round, you may discard a die of the indicated type from your **Dice Pool** to immediately gain **Motion** equal to the number of 🪶 icons indicated (some spaces on the **Racetrack** containing **Rails** generate **Smooth Motion** 🌀, which ignores **Terrain** ⛰️).

Steam Pony

If your **Inventor Pawn** is at rest on one of these spaces at any time during a round, you may discard a die of the indicated type from your **Dice Pool** to gain the number of **Cogs** indicated. Each player may only execute this **Challenge** once per game.

Glaciers

A **Glacier** is a special type of **Terrain.** When your **Inventor Pawn** enters one of these spaces, you may discard a die of the indicated type from your **Dice Pool** to ignore all **Terrain** ⛰️ on this tile.

Jumps

If you end the 🎲 **Race Phase** on a space with a ⚠️ icon, you unfortunately did not make it across the **Jump** and you must move your **Inventor Pawn** backward toward the **Starting Line** until you are on a space which does not feature a ⚠️ icon.

Crowds

The moment your **Inventor Pawn** enters one of these spaces when travelling forward, immediately gain 5 **Cogs** minus 1 for each incomplete valve connection Ⓐ in your **Invention**. A half-valve that shares a border with another card is still considered to be incomplete. If you have 5 or more incomplete valves, ignore the jeers of the crowds and continue on your way. This **Challenge** is **not** activated if you enter it when moving backward. In the above example: **Ferdinand von Zeppelin gains no Cogs from the crowd because he has 5 incomplete valve connections.**

Lise Meitner

(1878-1968) Born into a Jewish family in Austria as Elise, Meitner later shortened her name, as well as changed her date of birth from November 7th to the 17th for unknown reasons. She worked on radioactivity and nuclear physics, was the first woman to become a full professor of physics at Berlin University, and was part of the team that discovered nuclear fission, an achievement for which her colleague Otto Hahn was awarded the Nobel Prize. She administered x-rays to wounded Austrian soldiers in WWI. Later, she moved to Sweden to escape the Nazi party and was active at Siegbahn's Nobel Institute for Physics at the Swedish Defence Research Establishment (FOA) and the Royal Institute of Technology in Stockholm. There she had a laboratory and participated in research on R1, Sweden's first nuclear reactor. Meitner refused an offer to work on the Manhattan project, declaring "I will have nothing to do with a bomb!"

Nikola Tesla

(1856-1943) Arch-rival of Thomas Edison, Tesla was a mad genius. Hailing from Serbia, his notions of death-rays, earthquake machines and alien communication devices terrified and enthralled the masses. His quest for free electricity for all humanity terrified businessmen, who repeatedly hindered his projects to improve the world. Simultaneously a recluse and a showman, his mystique was matched only by his strange intuition; he claimed that flashes of light revealed to him the workings of nature and theoretical machines which he was then astoundingly able to construct. Though he associated with such luminaries as Mark Twain and Antonín Dvořák, Tesla largely shunned human companionship as an impediment to his work, instead sharing perhaps his deepest connection with a street pigeon.

Determining Your Position

Some **Boost** cards refer to players that are *behind* or *in front of* you (i.e. further ahead) on the **Racetrack**. If a player is on the same forked track tile as you but on the opposite side of the fork, they count as being neither behind nor in front of you for the purposes of these cards.

In the scenario shown to the right, neither of the **Inventors** in the fork Ⓐ Ⓑ are considered to be *in front* or *behind* one another. Both of these **Inventors** are considered to be *in front of* the **Inventor** who hasn't entered the fork Ⓒ.

Starting line

And The Winner Is...

It is important to note that just because your **Invention** crosses the **Finish Line** first, you are not necessarily the winner.

- When a player crosses the **Finish Line** Ⓓ, it signals the next round will be the last. The final round is still played out as normal. **Note:** If the player crossing the **Finish Line** explodes during the **Damage Phase**, the final round is still triggered.
- After the final round, the player with the **Invention Pawn** furthest past the **Finish Line** is declared the winner!
- If there is a tie, the player with the most **Machine Parts** left in their **Invention** wins.
- If there is still a tie, the game ends in a draw and the tied players form a bitter lifelong rivalry.

Marie Curie crosses the Finish Line, triggering the final round.

Example Round

Guglielmo Marconi, Thomas Edison and Marie Curie are playing the first round of a three-player game. For the **Draft Phase**, they each draw four cards, one of each border color.

⬡ Draft Phase

From his first hand, Marconi selects the *Ion Thrusters* **Machine Part** and places it face down on the table. When he sees that Thomas Edison and Marie Curie have also chosen their cards, he reveals the *Ion Thrusters* **Machine Part** and attaches it to his **Invention** ① (he could get two **Cogs** or two yellow Electricity dice, but he hopes to get Electricity dice from other cards). His remaining cards are passed to Edison, who is on his right, since the **Play Direction** token (between Edison and Curie) currently shows counter-clockwise.

From the next three cards (passed to him by Curie) he selects *Thermocouple*, attaches it to his **Invention** ②, and passes the remaining two cards to Edison.

From his next hand of two cards he selects the **Boost** card *Weather Machine*, which states that it can be played during the ⬡ **Vent Phase**. He **Stashes** it under his **Damage Gauge** ③ for safekeeping (rather than discard it for a die or **Cogs**) and passes one last card. The final card he is passed is *Steam Vent*, which he discards for two red Heat dice ④.

⬡ Vent Phase

Marconi currently has no dice occupying Die Slots on his **Invention** and no **Cogs**, so he does not need to vent anything during the ⬡ **Vent Phase**. He declares that he wishes to play his *Weather Machine* **Boost card**. Curie and Edison also declare they wish to play boost cards during the ⬡ **Vent Phase**. The **Play Direction** token is between Curie and Edison, so Curie (who is the first player counter-clockwise from it) is allowed to play **Boost** cards first. She plays *Optimization*, which gives her 2 **Motion** ⬡ because of the 6 **Cogs** she gained during the ⬡ **Draft Phase** (from discarding a **Machine Part**, and from playing the *Difference Engine* **Boost** card). She does not lose **Cogs** from doing this, and moves forward two spaces on the **Racetrack**.

Marie Curie

(1867-1934) Born into poverty as Marie Skłodowska in Russia-controlled Warsaw, Curie left Poland to study at the University of Paris where she began her investigations into radioactivity. Through years of painstaking chemical processing, she discovered and proved the existence of Radium and Polonium (named for her beloved homeland) and shattered the scientific assumption that the atom was the smallest unit of matter. She overcame xenophobic and sexist vilification to win two Nobel prizes, then offered to have both medals melted down in order to help the war effort in WWI in which she also performed as a field medic, aiding French surgeons with her portable x-ray machines. Curie never patented her work. Sadly she would not live to see her daughter Irene also win a Nobel prize; Curie succumbed to leukemia caused by a lifetime of experiments in radioactivity. Not knowing the dangers of radioactivity, she was known to regularly keep radioactive isotopes in her pocket or desk drawer.

Thomas Edison

(1847-1931) Dubbed the "Wizard of Menlo Park," Thomas Alva Edison was a shrewd businessman, letting nothing divert his path of going down in history as one of the greatest inventors of all time, even when it necessitated dangerous x-ray experiments or electrocuting a circus elephant to death in the street to discredit his rival Nikola Tesla. He is credited with the statement "I have successfully discovered 1,000 ways to NOT make a light bulb." Largely homeschooled, Edison went to work at an early age selling newspapers and candy on the Michigan railroads, and became an apprentice telegraph operator after saving the life of a station agent's son. He would go on to accrue more than 1000 patents over his lifetime. Despite a hearing impairment from an early age, Edison's ingenuity, combined with his business savvy, made him a force to be reckoned with.

Now Marconi has the chance to play *Weather Machine*, which gives him one Electricity die and also gives all spaces that do not contain the ⛰ icon on the **Racetrack** 🏔 for the remainder of the round (the card is placed near the board to remind everyone).

Finally, Edison is allowed to play **Boost** cards. He plays *Faraday Cage*, which allows him to ignore the effects of **Boost** cards this round, including *Weather Machine*.

🎲 Race Phase

Everyone is now ready to move on to the 🎲 **Race Phase**. Marconi rolls the three dice in front of him. The Heat dice come up 5 and 2, and the Electricity die comes up 1.

He flips his **Light Bulb** token Ⓐ to activate his **Inventor** card and chooses to receive the **Reinforce Invention Race Effect** Ⓑ rather than take **Cogs** or an Electricity die.

He then activates the *Thermocouple* with the 2-value Heat die Ⓒ (he could alternatively use the 5-value Heat die, but this would be harder to remove with **Cogs** later), which grants him a **Cog** and an Electricity die, which he immediately rolls. It comes up 3 Ⓓ.

He uses the **Cog** he just got to add +1 to this Electricity die, making it a 4. He then activates his *Ion Thrusters* by placing this Electricity die along with the 1-value Electricity die, which gains him three **Race Effects** Ⓔ (he must resolve all of them): 2 x **Motion** and 1 x **Discard a Die**.

He decides to resolve the **Discard a Die Race Effect** first by removing the Heat die from his *Thermocouple*. The *Thermocouple* is now able to be used again Ⓕ.

He must then resolve the 2 **Motion Race Effects**. He moves his **Inventor Pawn** 2 spaces along the **Racetrack** ① (if he had 10+ pips on his Electricity dice, he could have received 4 **Motion** from the *Ion Thrusters*).

Normally, he would take no damage, since there are no **Terrain** symbols printed on the spaces he enters. However, his *Weather Machine* adds 1 **Terrain** to each of the spaces he entered, so he rotates his **Damage Gauge** down 2, putting him at -1 ②.
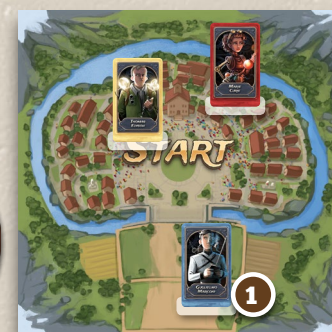
Since it now has an open **Die Slot**, he can activate the *Thermocouple* again with his 5-value Heat die ③, gaining a **Cog** and an Electricity die. He rolls a 1 with it. This die will not provide a sufficient activation power to activate his *Induction Motor* (which requires at least a 3). Marconi could spend his **Cog** to reroll the die in the hopes of getting a value of 3 or more, but he decides he has taken enough damage this turn. He decides to end his **Race Phase** and return the unused Electricity die to the supply (but keeps the **Cog**). The other players concurrently finish their 🎲 **Race Phase**.

### ☀ Damage Phase

Because he is at -1 on his **Damage Gauge**, he must now discard one **Machine Part**. He discards his *Thermocouple* ④, because **Venting** a 5-value die would be too inefficient. He keeps his *Induction Motor* and *Ion Thrusters*, as they will provide his **Invention** with **Motion** in a future round. Then he resets his **Damage Gauge** to 0 ⑤.

End of Round

Before the round ends, Marconi, Edison and Curie all flip their **Light Bulb** tokens to the "On" side ⑥. Marconi flips the **Play Direction** token to the clockwise side. A new round and 🛠 **Draft Phase** begins. If Marconi wants to use his *Ion Thrusters* in the next 🎲 **Race Phase**, he might **Gain Cogs** during the 🛠 **Draft Phase** and use them during the 🔧 **Vent Phase** to discard the dice currently occupying the **Die Slots** ⑦.

George Washington Carver

(c. 1861-1943) Born a slave and granted freedom with the Civil War, Carver wandered Missouri from a young age, determined to acquire knowledge so he could improve the world. Researching and teaching for 47 years at the underfunded Tuskegee Institute made him adept at making the most of minimal resources. He marketed dozens of products utilizing peanut oil and sweet potato, spurred improved farming techniques, and made forays into genetic engineering. Endlessly optimistic, patient and affable, Time Magazine dubbed him the "Black Leonardo." His epitaph reads: "He could have added fortune to fame, but caring for neither, he found happiness and honour in being helpful to the world."

Guglielmo Marconi

(1874-1937) Born a nobleman, Marconi's gentle personality hid a volatile, passionate and intensely loyal man determined to prove the superiority of his nation. Building on the work of Heinrich Hertz and Nikola Tesla, Marconi pioneered long-distance radio telegraphy. Credited by many as the inventor of the radio, in 1901 he transmitted the first wireless signal across the Atlantic Ocean. He shared a Nobel prize with Karl Ferdinand Braun, was appointed Honorary Knight Grand Cross of the Royal Victorian Order and made a marchese and senator by the Kingdom of Italy, and later joined the Italian fascist party.

QUICK REFERENCE – REFER TO FULL RULES INSIDE FOR GREATER DETAIL

ROUND PHASES

DRAFT PHASE
Add **Machine Parts** to your **Invention** / gain dice / gain **Cogs** / **Stash Boost** cards.

- **Construct:** Attach a **Machine Part** to your **Invention**.
- **Generate Power:** Gain the dice shown in the upper-right corner of the card.
- **Gain Cogs:** take **Cogs** from the supply according to the amount displayed in the upper-right corner of the card.
- **Stash Boost:** Gain the **Boost** card and stash it beneath your **Damage Gauge**.

VENT PHASE
Spend **Cogs** to subtract pips from dice currently occupying Die **Slots** on your **Machine Parts**. This phase is skipped during the first round.

RACE PHASE
Roll dice in your **Dice Pool**, then activate **Machine Parts**. Spend **Cogs** to reroll or add 1 pip to dice in your **Dice Pool**.

DAMAGE
If your **Damage Gauge** is below 0, discard **Machine Parts**.

END OF ROUND
After you have completed all four **Phases**, perform **End of Round** tasks; then a new round begins with another **Draft Phase**.

TERRAIN

Whenever you move your **Inventor Pawn** forward on the **Racetrack** and you enter a space featuring a **Terrain** icon (⛰), apply the **Take Damage Race Effect** equal to the number shown on the icon.

RACE EFFECTS

GAIN A DIE
Take a die of the specified color 🔵 / 🔴 / 🟡

DISCARD A DIE
Remove a die of the color 🔵 / 🔴 / 🟡 from a **Die Slot** on your **Invention**.

TAKE DAMAGE
Reduce the value on your **Damage Gauge** by 1.

REINFORCE INVENTION
Increase the value on your **Damage Gauge** by 1.

GAIN A COG
Take a **Cog** from the supply.

MOTION
Move one space forward.

SMOOTH MOTION
Move one space forward, **ignoring** (⛰).

CREDITS

CHALLENGE SPACES / TILES

COAL MINE, POWER STATION, NEWCOMEN ATMOSPHERIC ENGINE
Spend **Cogs** to gain the dice (🔵 / 🔴 / 🟡) shown.

RAILS
Discard the die shown from your **Dice Pool** to gain **Motion**.

STEAM PONY
Discard the die shown to gain **Cogs**. (once per game)

GLACIERS
Discard the die shown to ignore this tile's **Terrain**.

JUMPS
If you end the **Race Phase** here, move backward until you are on a space which does not feature a ⚠ icon.

CROWDS
Gain 5 **Cogs** minus 1 for each incomplete valve connection in your **Invention**.