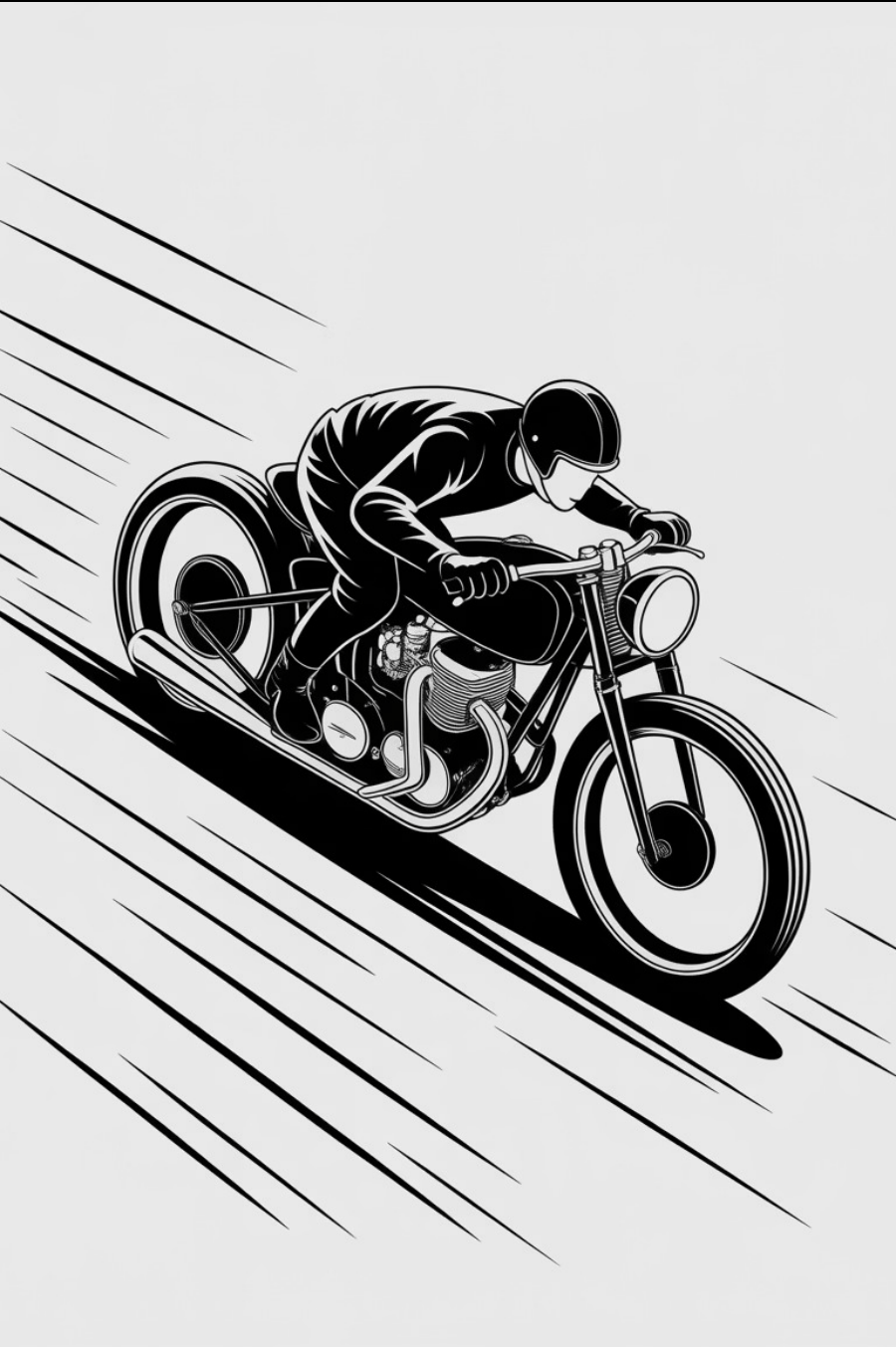
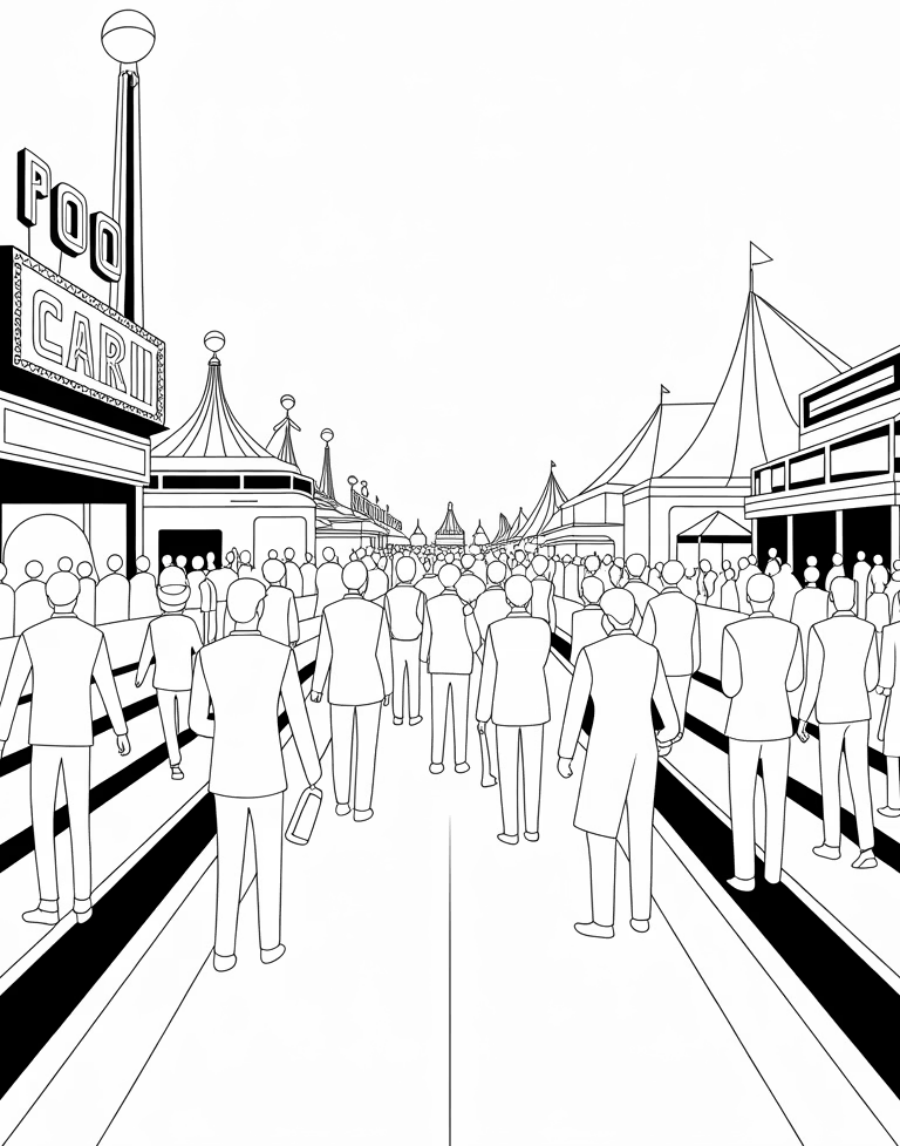




# Defying Death in the Silodrome

A Technical and Historical Examination of Alfred L. Morrell's Career and the Metro Bros. Exposition Shows (1922–1925)



# The Thrill Economy of the Jazz Age

## Post-War Appetite

Public fascination with mechanized danger and adrenaline after World War I drove demand for extreme spectacles.

## Engineering as Entertainment

The Motordrome transformed physics into popular entertainment, marketing the perception of defying gravity.

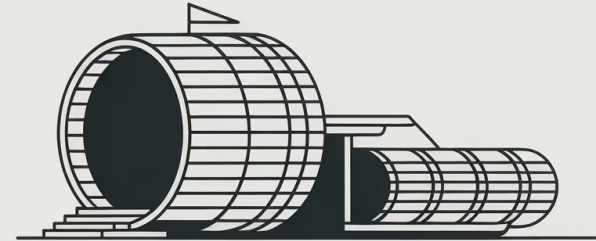
## Premium Attraction

Vertical wall riding became the ultimate draw at agricultural and state fairs across America.

# The Motordrome Phenomenon

The Motordrome evolved from earlier banked tracks into the vertical "silo" or "gigantic wash tub" of the 1920s. This attraction successfully capitalized on the intersection of burgeoning industrial technology and high-stakes spectacle.

Advertised with the provocative tagline: "**Defying Death In Silo Drome**", these performances represented the ultimate expression of the thrill economy.



# Alfred L. Morrell: "Cannon Ball Mack"



## Personal Details

27 years old at death, resident of Norwich, Connecticut. Established professional with three years of documented experience.



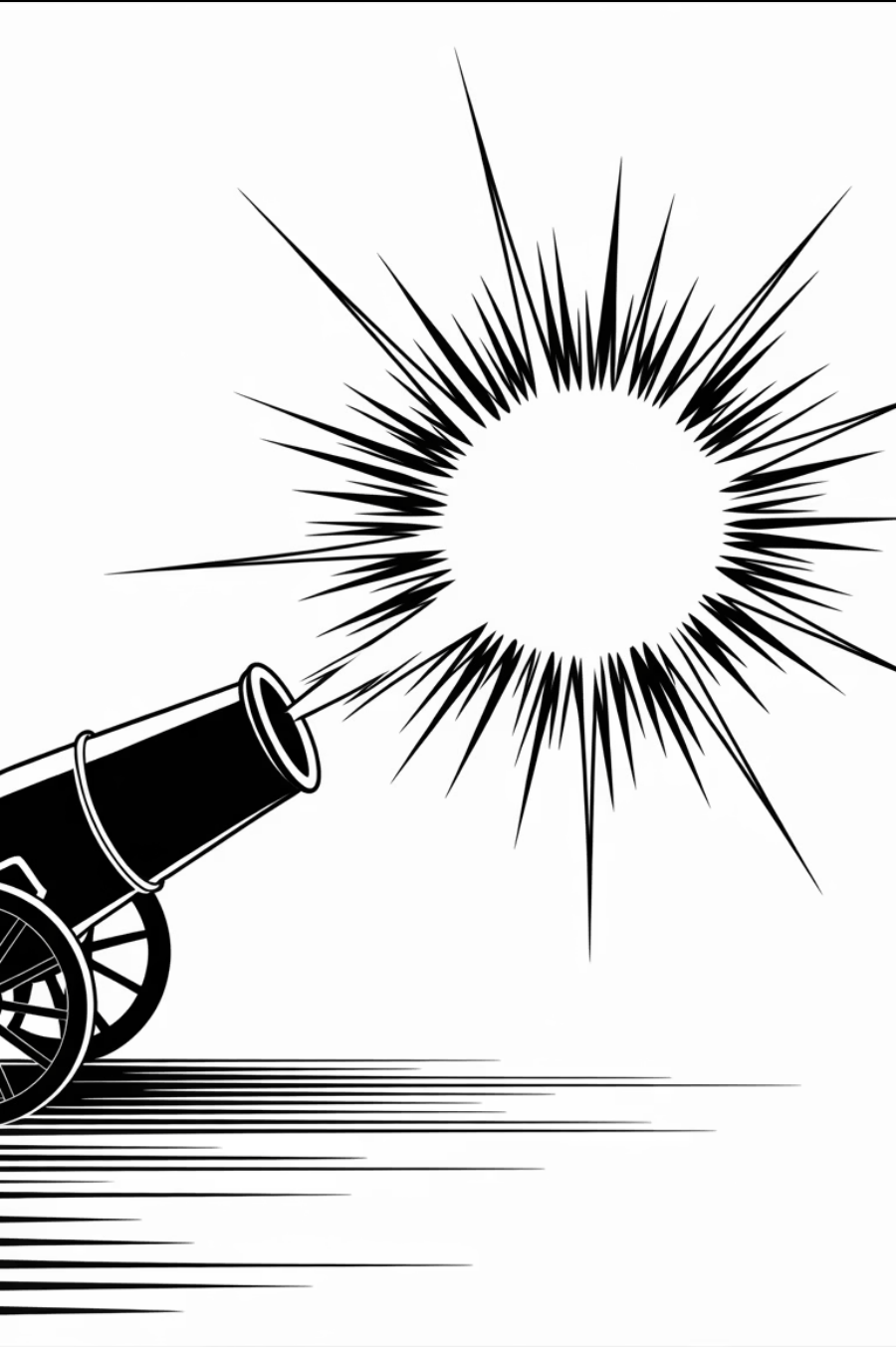
## Professional Identity

Exhibition motorcycle rider specializing in Silodrome performances with Metro Bros. Exposition Shows (1922–1925).



## Stage Persona

The nickname "Cannon Ball Mack" suggested extreme velocity and spectacular force, positioning him as a principal thriller attraction.



# The Name Says It All

"Cannon Ball Mack" evoked projectile motion, uncontrolled force, and maximum velocity. In an industry where branding was paramount to drawing crowds, this moniker reinforced Morrell's role as a key feature performer.

# Metro Bros. Exposition Shows

## Corporate Leadership

### **Thomas Metro**

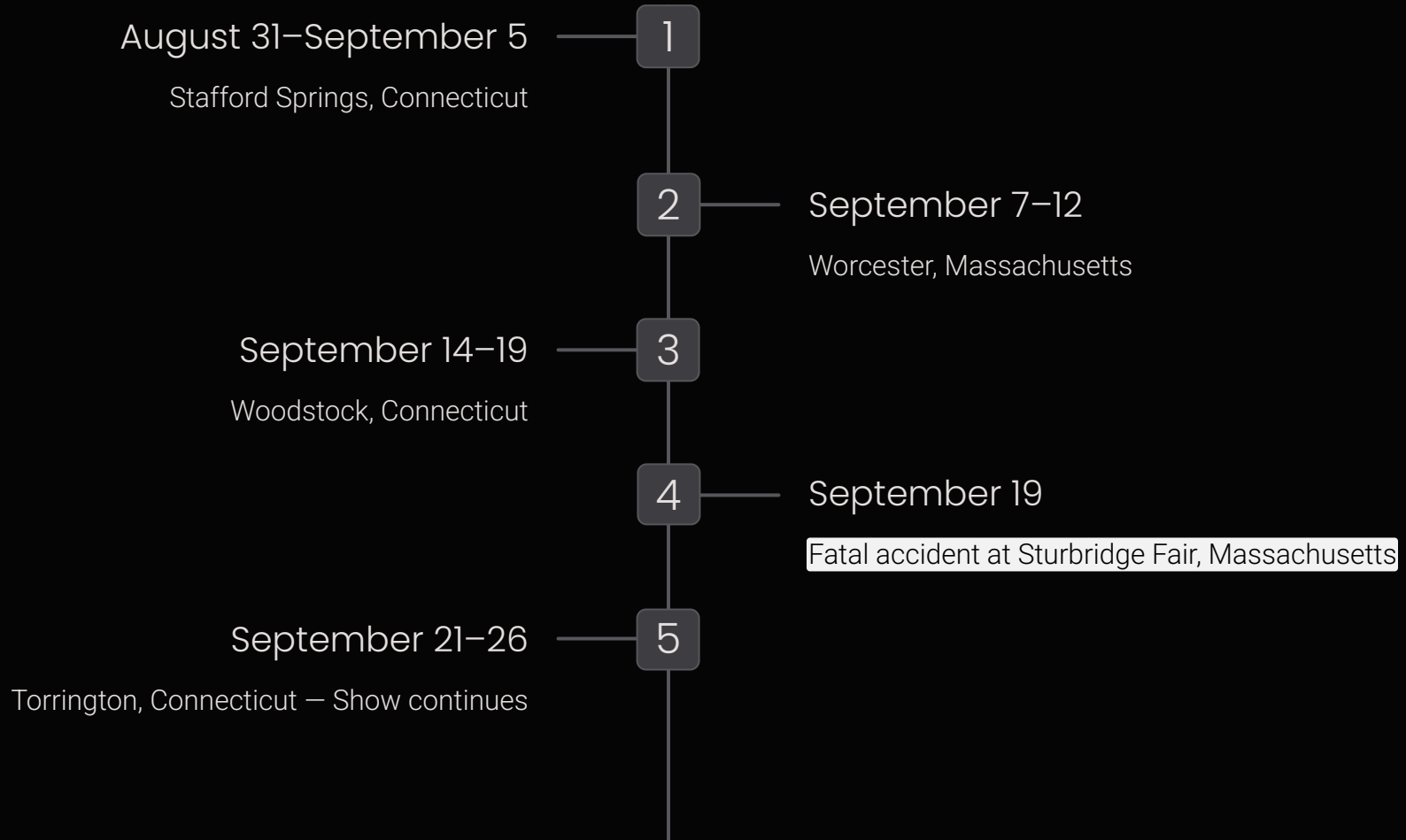
Manager of the Silodrome attraction in August 1925. Direct executive oversight confirmed the Silodrome as a core profit center.

### **Charles Metro**

Co-leader governing the organization's footprint across the traveling fair landscape throughout the 1920s.



# The 1925 Fall Fair Circuit





# The Show Must Go On

Following Morrell's fatality at Sturbridge on September 19, the Metro Bros. Exposition Shows continued their circuit immediately, with the next scheduled date in Torrington, Connecticut (September 21–26).

This immediate operational resilience underscores the unforgiving financial reality: the show must continue despite the loss of a principal performer. The transactional nature of the performer-employer relationship highlighted the expendability of even featured riders in pursuit of profit.

# The Silodrome Act



## The Structure

Marketed as a "straight-walled silo" — a vertical cylinder where riders defied gravity.



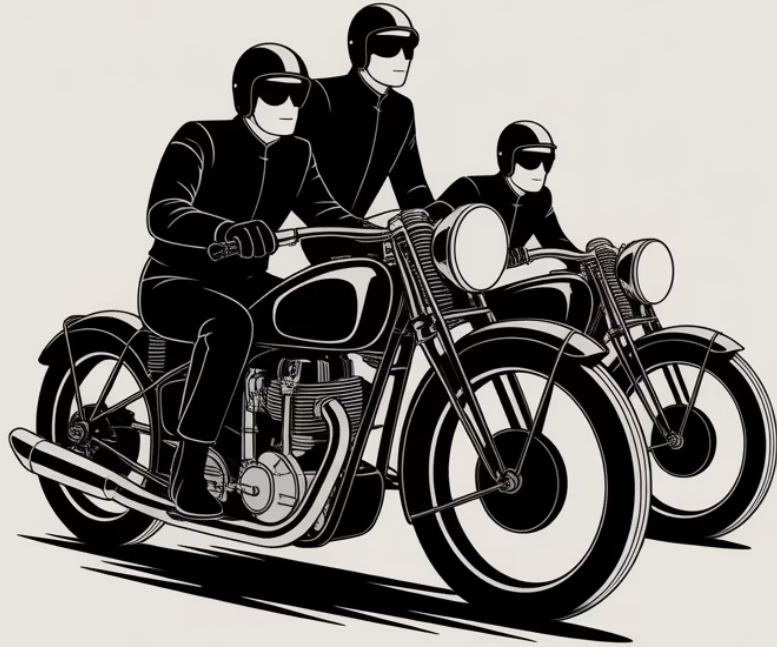
## The Team

Required specialized crew including safety spotters, mechanics, and assistants for operations.



## The Draw

Premium attraction commanding higher admission prices and drawing massive crowds.



# The Drome Rats Community

Morrell was part of a tight-knit, specialized community of performers:

Dare-Devil Lowrey

Pensacola, Florida — Morrell's primary collaborator

Mile-a-Minute Grace

Featured female rider

Daredevil Dot

Contemporary performer

Gunboat Jack

Fellow drome rider

# The Physics of Defying Gravity

Understanding the technical principles that made vertical riding possible — and dangerous.

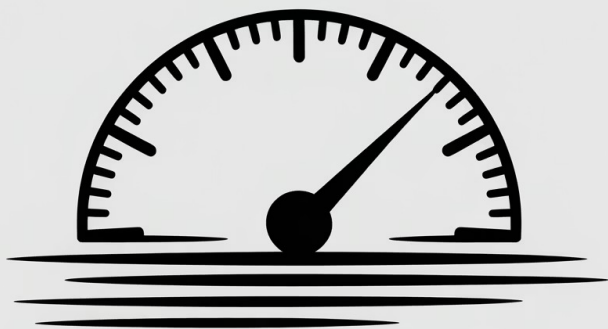
# Centripetal Force: The Core Principle

To ride vertically without falling, the horizontal Centripetal Force exerted by the wall must equal or exceed the gravitational force acting downward on the combined mass of motorcycle and rider.

$$F_c = \frac{mv^2}{r}$$

Where  $v$  represents critical velocity and  $r$  is the radius of the drome structure. Velocity is the key variable — speed must be high and aggressively sustained.

# The Velocity Imperative



To counteract gravity's constant force, riders needed sustained high speeds. Friction between tire and vertical wall prevented sliding, generated by outward Centripetal Force.

This constant outward pressure placed immense lateral strain on wheel bearings, spokes, and frame junctions — stresses motorcycles were never designed to handle.

# Mechanical Stress Factors

1

Smaller Radius

Demands disproportionately higher speeds

2

Higher Speed

Reduces margin for error exponentially

3

Increased Strain

Accelerates mechanical fatigue and failure

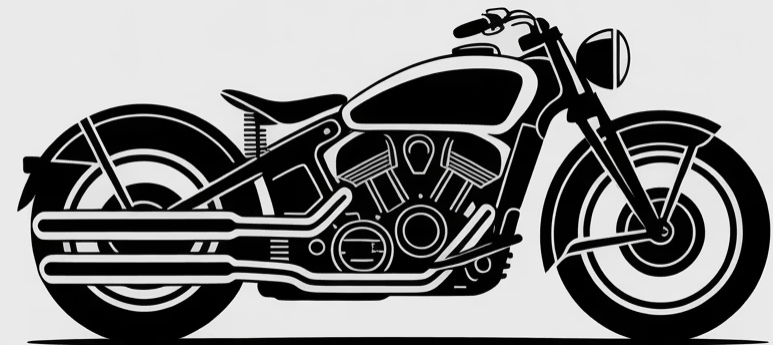
# Technical Parameters

| Parameter         | Formula/Description          | Riding Stability               | Mechanical Stress                     |
|-------------------|------------------------------|--------------------------------|---------------------------------------|
| Centripetal Force | $F_c = mv^2/r$               | Minimum speed to stay vertical | Constant lateral strain on components |
| Critical Velocity | $v_{crit} = \sqrt{gr/\mu_s}$ | Prevents wall slippage         | Requires robust high-torque engines   |
| Radius            | Defined by structure         | Impacts speed requirements     | Smaller radii increase fork torsion   |
| Engine Type       | High torque, heavy flywheel  | Maintains consistent speed     | Heat buildup, clutch stress           |

# The Machines: Indian Scout and Harley-Davidson

## Why These Models?

- Superior torque for sustained power
- Robust construction for stress cycles
- Heavy-duty American engineering
- Reliable performance under extreme loads



# Critical Modifications for Drome Use

01

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## Suspension Elimination

Forks filled with heavy oil or solid struts to achieve maximum rigidity. Any "give" could cause catastrophic loss of wall contact.

02

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## Low Final Drive Gearing

Essential for rapid acceleration and maintaining sustained low-speed power delivery on vertical walls.

03

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## Steering Geometry Alterations

Modified rake and trail for stability on vertical surfaces, making conventional riding highly unstable.

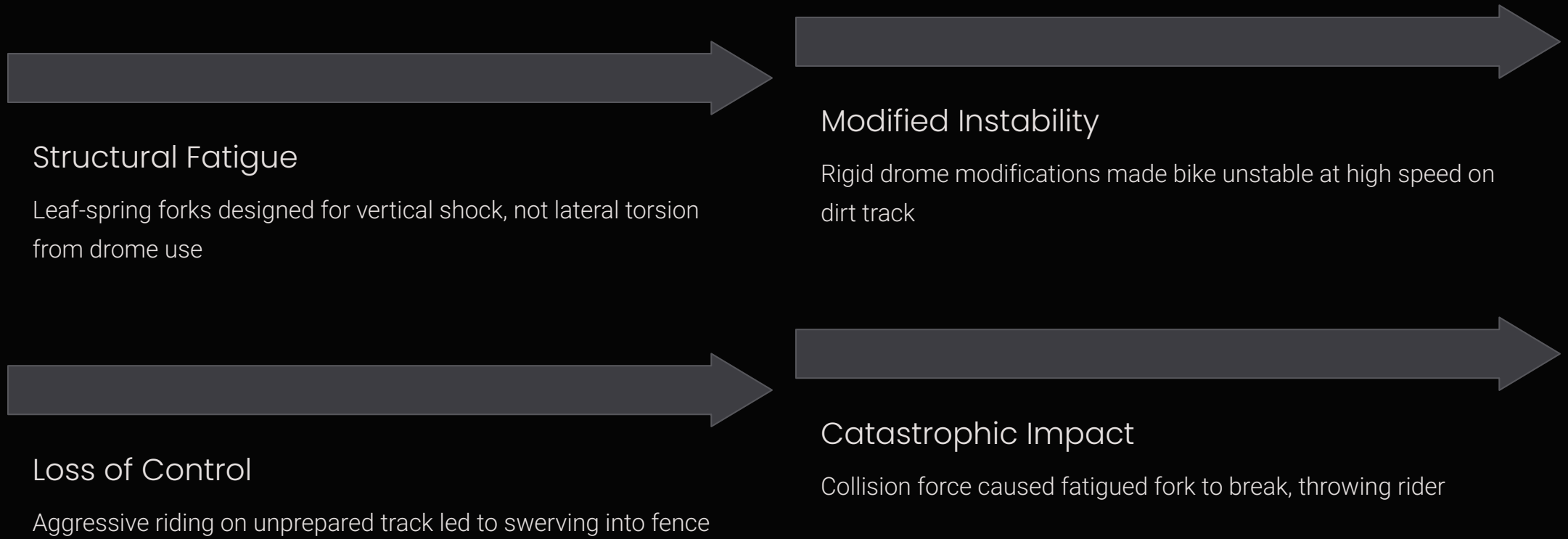


# The Fatal Contradiction

Motorcycles optimized for vertical wall riding became inherently dangerous on conventional tracks. The very modifications that enabled the spectacle created deadly vulnerabilities in routine operations.

# The Front Fork Failure Hypothesis

Documentation presents conflicting accounts: mechanical failure ("breakdown of the front fork") versus rider error ("lost control at high speed"). Technical assessment suggests these causes were sequential, not mutually exclusive.



# The Drome Rat Lifestyle

## Nomadic Existence

Weekly movement between fairs demanded unstable, transient living. Riders shared boarding houses or rail cars, fostering tight professional fraternity.

## High Risk, High Reward

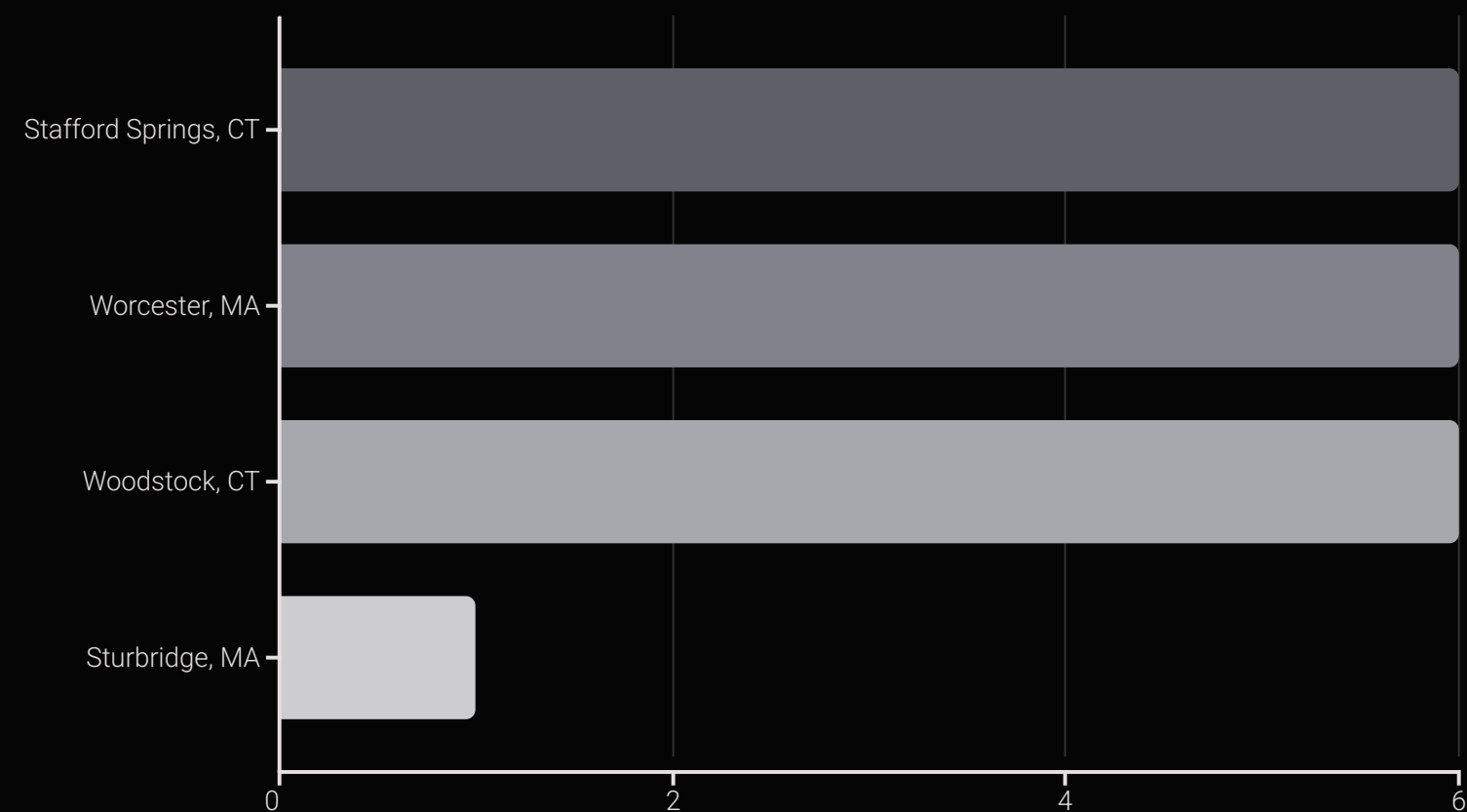
Feature riders earned higher income through wages plus percentage of receipts, but faced constant threat of injury ending income flow.

## Rapid Replacement

Small community meant high turnover. Emotional detachment was necessary when accidents occurred — and they occurred frequently.

# The Weekly Grind

The 1925 route reveals the relentless pace that defined Morrell's final weeks:

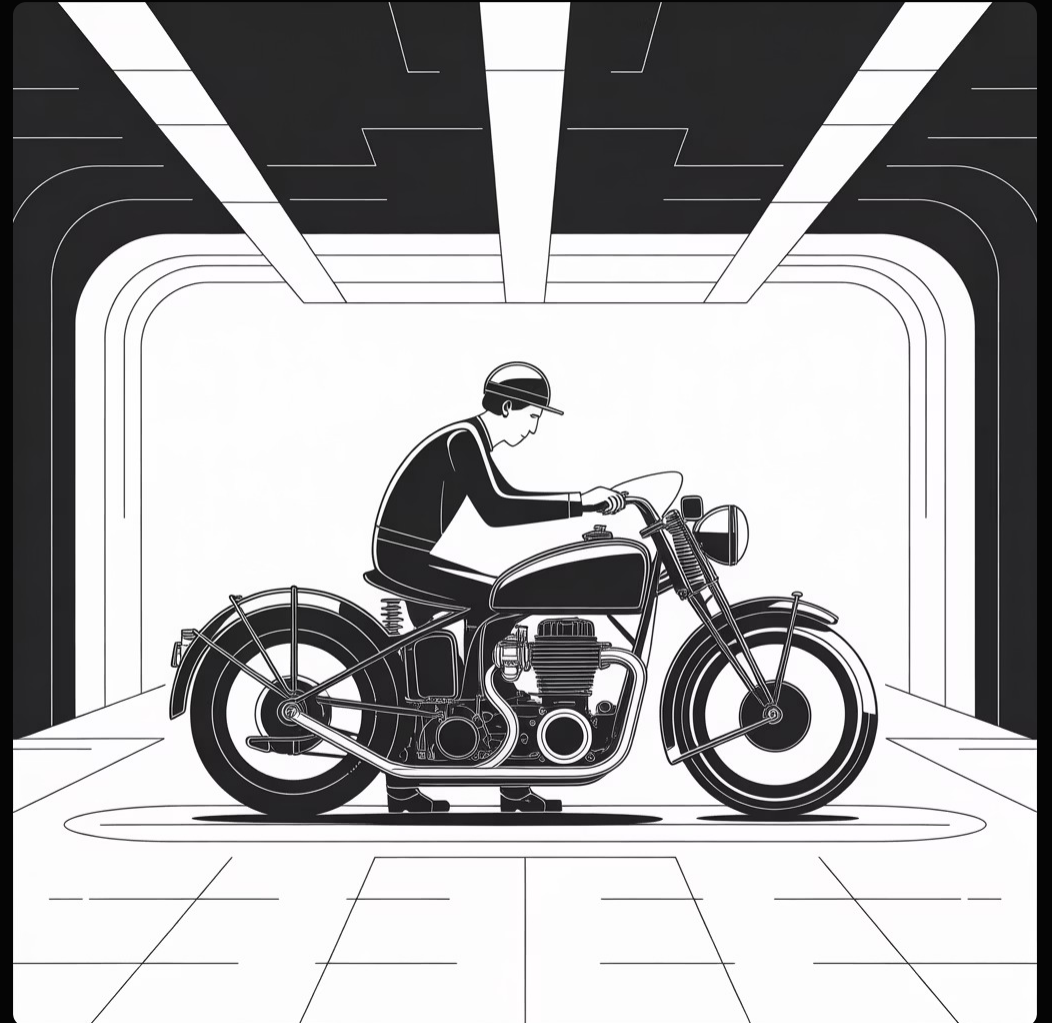


Constant setup, performance, teardown, and travel left little time for rest or proper equipment maintenance.

# Dual Role: Daredevil and Mechanic

Feature performers weren't simply actors — they were personally responsible for handling, maintaining, and moving highly specialized equipment.

This dual role dramatically increased total time spent in high-risk scenarios beyond the short, advertised performance windows.

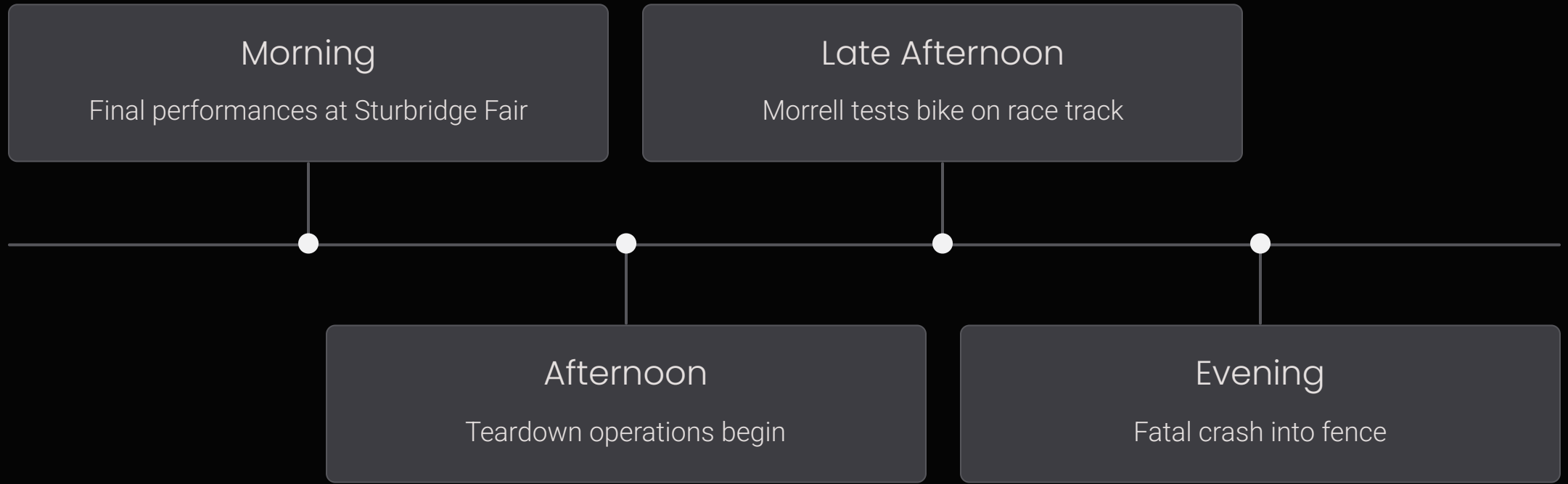


# The Invisible Danger

The highest risk arose not from the planned defiance of gravity inside the Silodrome, but from essential, mundane duties of the traveling show — testing equipment, moving bikes, preparing for transport.

# September 19, 1925: The Final Day

The accident occurred at Sturbridge Fairgrounds, Massachusetts, during the tear-down phase after performances had concluded. Morrell was preparing his motorcycle for transport to the next venue.



# Conflicting Accounts

## Account 1: Mechanical Failure

One report cited "breakdown of the front fork" as the primary cause of the crash.

## Account 2: Rider Error

Competing account claimed Morrell lost control while negotiating a curve "at a high rate of speed" and swerved into a fence.

The ambiguity in reporting was common in high-risk fatalities. Management preferred narratives of rider error to avoid liability; initial reports highlighted dramatic mechanical failures.

# Forensic Reconstruction

**Modified Bike**  
Drome-optimized machine inherently  
unstable on dirt track

**Fatal Injuries**  
Fractured skull and internal injuries

**Fork Failure**  
Fatigued component breaks under  
impact force



**High Speed**  
Aggressive riding during logistics testing

**Loss of Control**  
Instability leads to swerving on curve

**Fence Impact**  
High-momentum collision with  
stationary obstacle

# The Severity of Impact

Morrell sustained catastrophic injuries consistent with high-momentum impact against a stationary obstacle:

## Fractured Skull

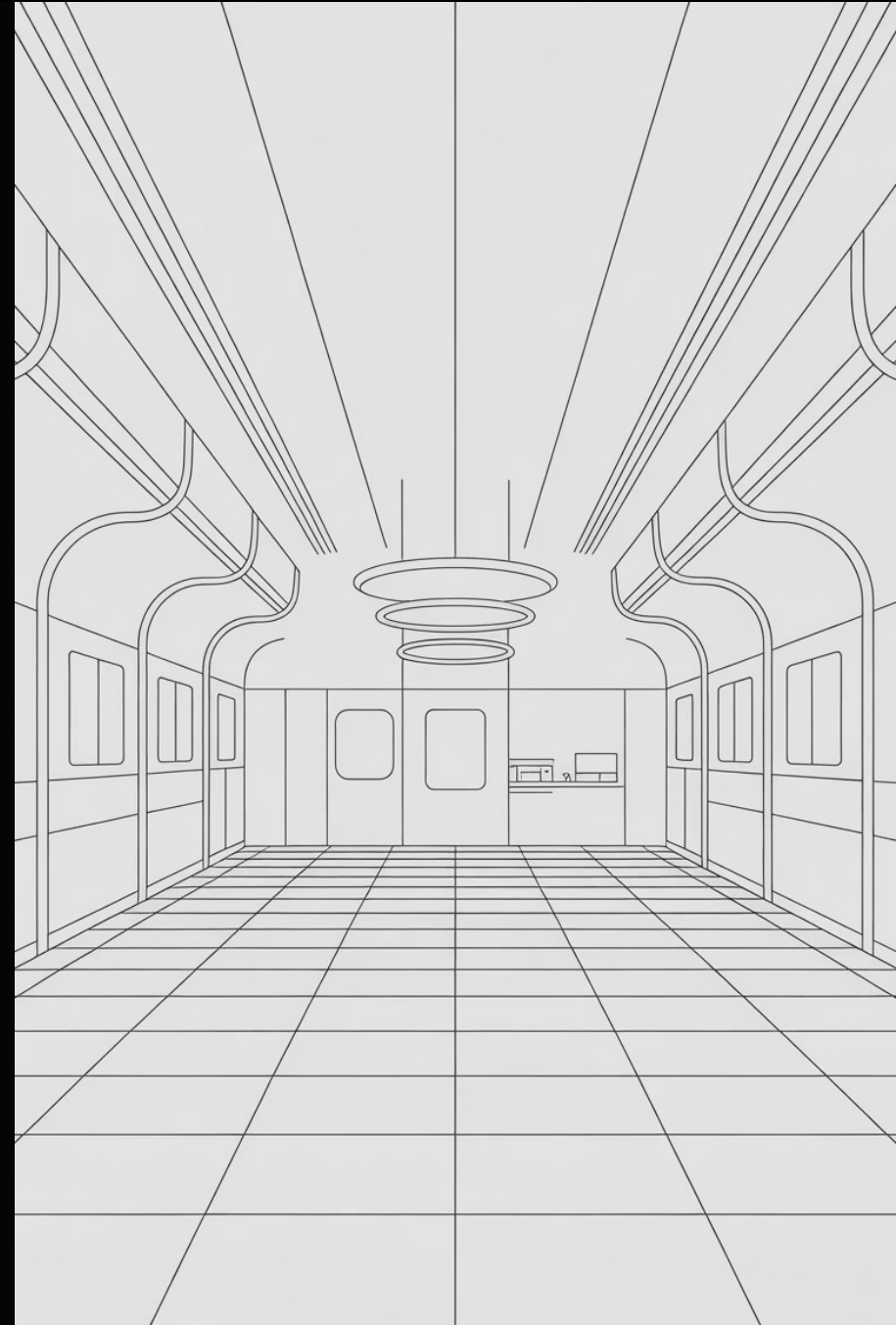
Severe head trauma from being thrown from the motorcycle

## Internal Injuries

Massive internal damage from the force of collision

## Unconscious State

Found unconscious at the scene, never regained consciousness



# Witness Accounts

The incident was not initially witnessed by the public. Eyewitnesses only saw Morrell swerve on the track before the impact. The distinction between the enclosed drome and the accessible racetrack reinforces this was an operational hazard, distinct from staged performance risk.

# Transport to Worcester Hospital

Morrell was transported unconscious to a Worcester hospital following the crash. Despite medical intervention, he succumbed to his injuries later that night on September 19, 1925.

He was 27 years old, with three years of professional experience as a featured Silodrome rider — a career cut short by the very equipment and modifications that had made his performances possible.



# Organizational Response



## Show Continues

Metro Bros. maintained schedule, moving to Torrington, CT on September 21



## Moral Obligation

Reynold Uppgard accompanied Morrell's body back to Norwich, CT



## Complex Culture

Mix of commercial ruthlessness and personal connection among crew

# The Economics of Risk

Understanding the financial pressures that drove performers to accept extreme danger.

# Compensation Structure



## Base Wage

Small daily wage for all performers

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## Performance Bonus

Percentage of Silodrome gross receipts

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## Feature Status

Higher compensation for principal riders like "Cannon Ball Mack"

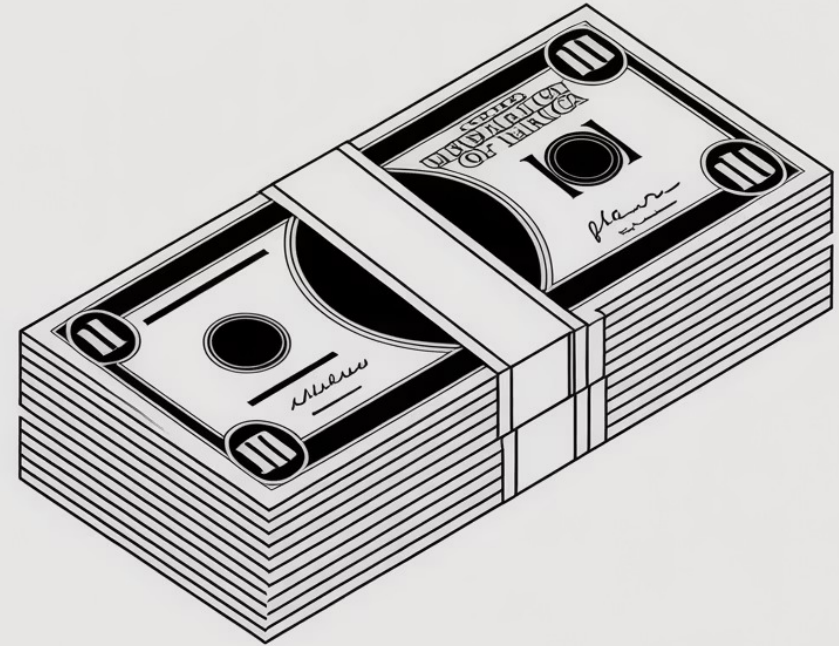
# Financial Volatility

## Income Threats

- Rain cancellations
- Mechanical failures
- Injury or death
- Seasonal work gaps

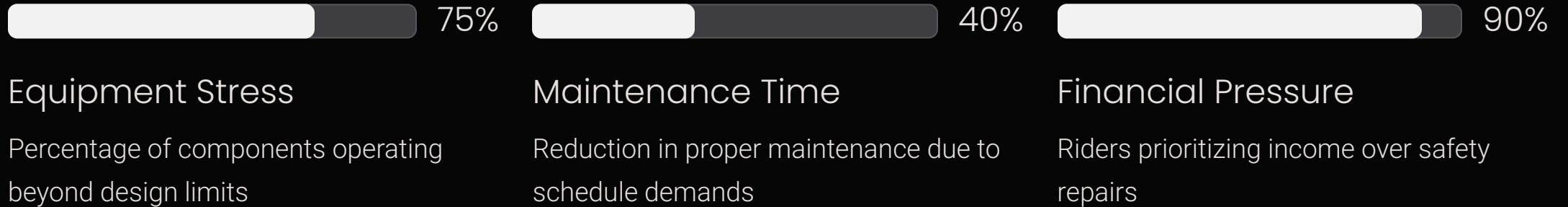
## Pressure to Perform

High pay counterbalanced by extreme volatility. Strong financial motivation to perform despite risk, equipment issues, or fatigue.



# The Cost of Replacement Parts

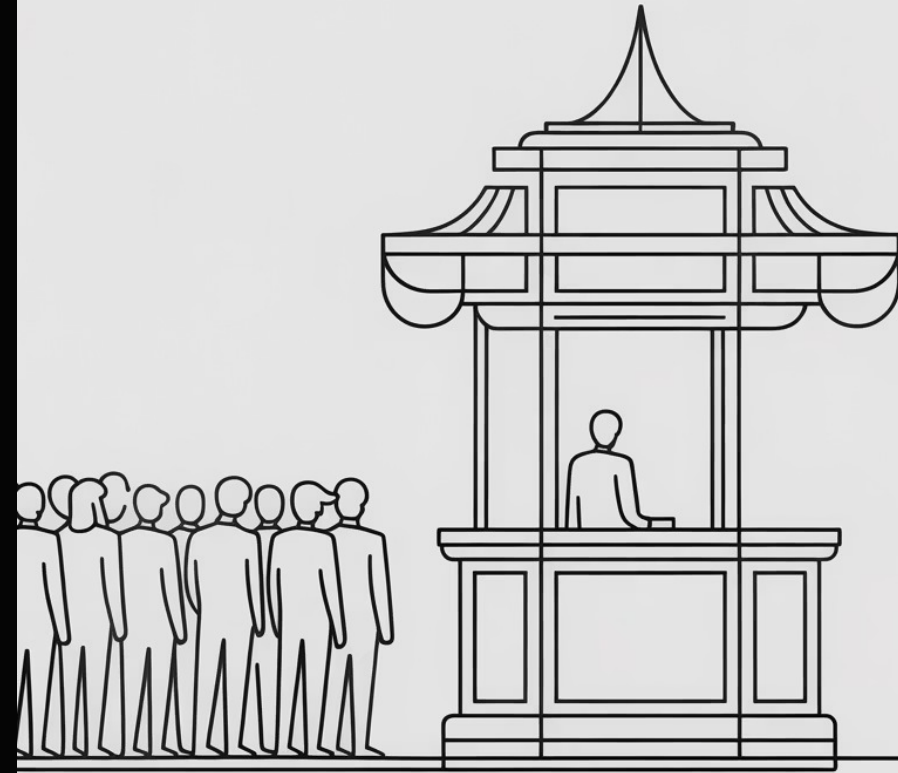
High cost of motorcycle components and constant touring schedule created dangerous incentives. Riders often continued using structurally fatigued equipment rather than losing performance time and income for repairs.



# The Silodrome as Profit Center

Thomas Metro's direct management of the Silodrome in August 1925 confirmed its status as a core, high-value profit center within the Metro Bros. Exposition Shows.

The inherent risks and technical demands required constant executive attention. The Metro Bros. brand was deeply connected to the success — and operational status — of this specific, dangerous performance.



# Operational vs. Performance Risk



# The Greatest Risk Was Invisible

Morrell's death during routine logistics — not inside the "Defying Death" spectacle — reveals that operational hazards posed greater cumulative danger than the performances themselves.

# The Archival Challenge

Reconstructing the lives of 1920s drome riders faces significant obstacles. Easily accessible information regarding specific rider schedules, technical modifications, or detailed biographies is scarce.

- ❏ Preliminary review of specialized digital resources, such as the Vintage Wall of Death site, confirms the absence of readily available documentation. This reinforces the requirement for rigorous, expert-level archival investigation.

# Outstanding Research Avenues

01

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## Trade Publications

Intensive search of *Billboard* and *The New York Clipper* archives (1920–1926) for route lists, advertisements, and financial articles.

02

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## Local Records

Norwich, CT newspapers for obituaries and personal details;  
Worcester/Sturbridge, MA papers for accident reports and eyewitness accounts.

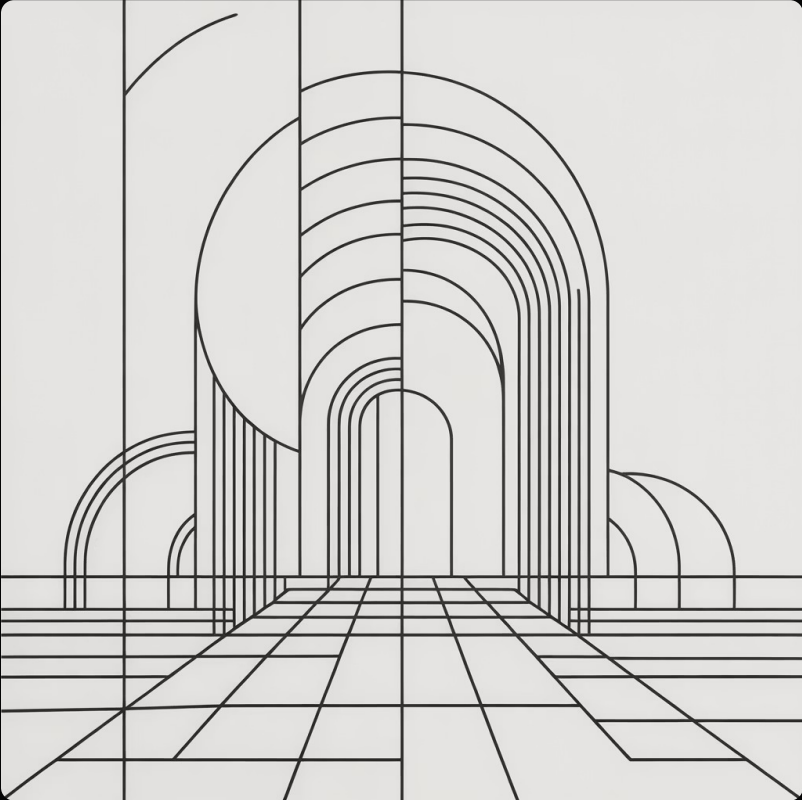
03

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## Descendant Contacts

Genealogical search for descendants of Dare-Devil Lowrey, Daredevil Dot, and Reynold Uppgard for anecdotal accounts.

# The Value of Trade Press



Trade publications like *Billboard* and *The New York Clipper* documented the carnival industry comprehensively, including:

- Complete route schedules
- Performer advertisements
- Corporate financial news
- Accident reports
- Industry gossip and personnel changes



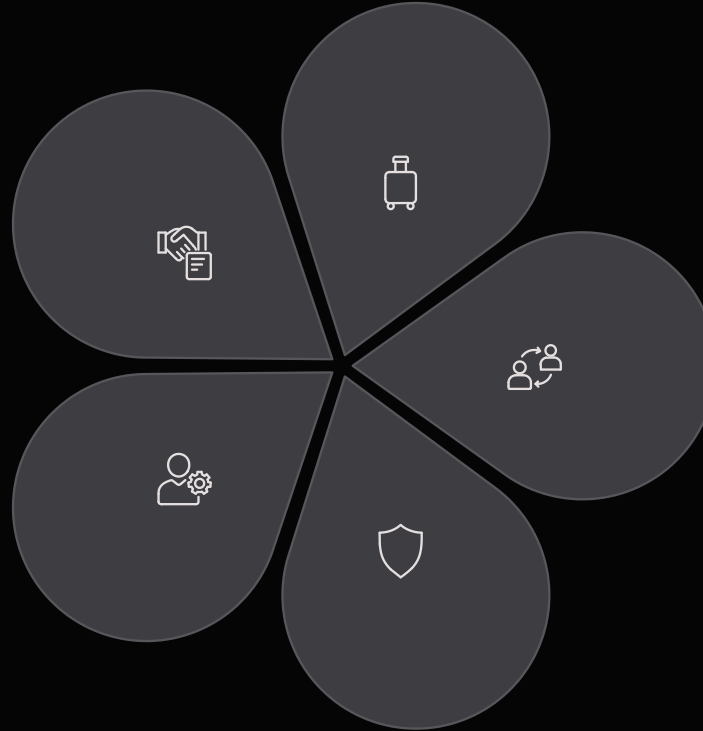
# Legacy of Technical Limitations

Morrell and his colleagues rode highly stressed, minimally sprung machinery requiring constant maintenance and precise skill. The intersection of structurally fatigued equipment and operational necessity highlights the fundamental sacrifice made by performers who literally rode on the edge of structural failure.

# The Drome Rat Community

**Mutual Reliance**  
Tight fraternity born of shared danger

**Specialized Skills**  
Unique technical expertise



**Transient Lifestyle**

Weekly movement between venues

**Rapid Turnover**

High replacement rate after accidents

**Emotional Detachment**

Necessary survival mechanism

# Three Years of Defying Death

3

Years of Service

Morrell's documented tenure with Metro  
Bros. (1922–1925)

27

Age at Death

Young life cut short by operational hazard

100+

Performances

Estimated shows completed during  
career



# The Contradiction of Safety

The very modifications that enabled riders to defy gravity inside the Silodrome — rigid suspension, altered steering geometry, specialized gearing — created deadly vulnerabilities during routine operations outside the performance arena.

# Cultural Significance

## Engineering Spectacle

Transformed physics principles into mass entertainment, demonstrating public fascination with technology.

## Risk Economy

Established precedent for monetizing extreme danger in American popular culture.

## Working-Class Heroes

Drome riders represented skilled laborers risking everything for entertainment and livelihood.

# The Metro Bros. Business Model



# Lessons from Morrell's Career



## Hidden Operational Risks

Greatest dangers often lie outside the advertised spectacle



## Equipment Specialization

Optimization for one purpose creates vulnerabilities in others



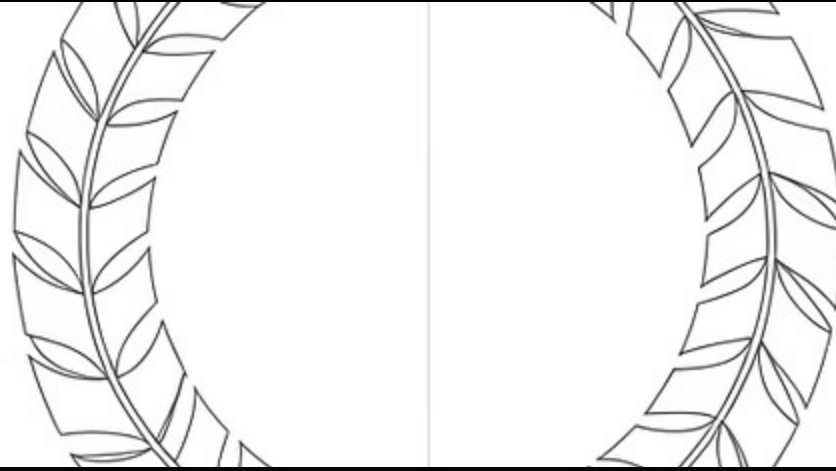
## Economic Pressure

Financial incentives can override safety considerations



## Cumulative Exposure

Time spent in operational duties exceeded performance time

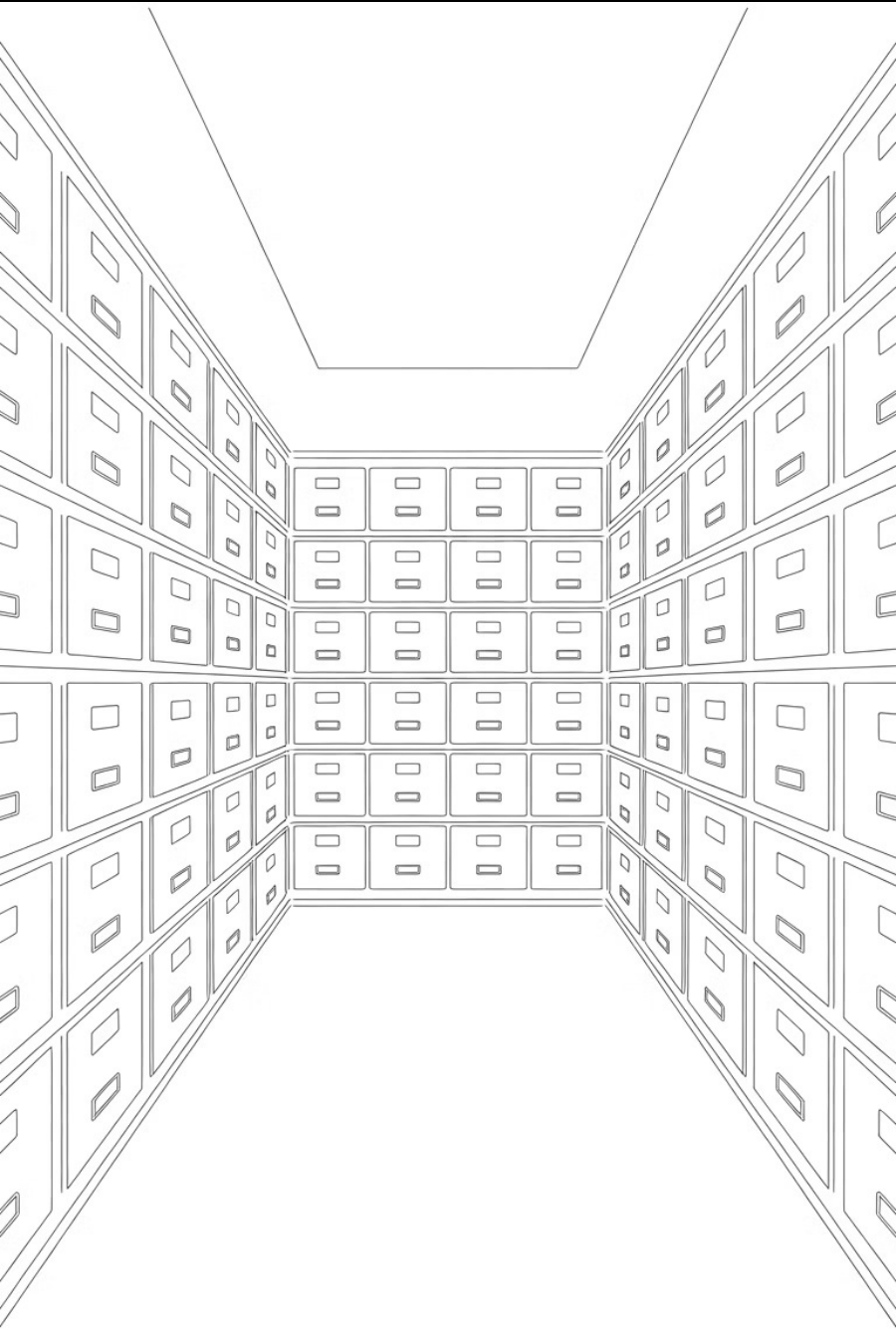


# Remembering "Cannon Ball Mack"

Alfred L. Morrell's three-year career with the Metro Bros. Exposition Shows contributed directly to solidifying the Silodrome as a key feature of the 1920s thrill economy.

His professional identity as "Cannon Ball Mack" — evoking velocity, force, and spectacular danger — positioned him as a principal attraction who pushed the limits of vertical climbing and speed.

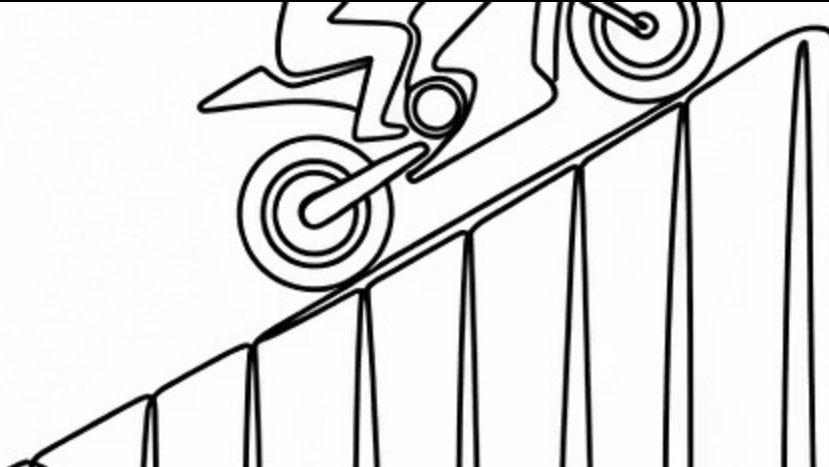
His tragic death at age 27 illuminates the fundamental sacrifice made by these specialized performers who literally rode on the edge of structural failure to entertain the masses.



# The Enduring Mystery

Much about the daily lives, personal motivations, and technical innovations of 1920s drome riders remains unknown. The scarcity of archival documentation means that figures like Alfred L. Morrell exist in historical shadow.

Future research into trade publications, local newspapers, and descendant accounts may illuminate the full story of these remarkable performers who defied death weekly for the entertainment of Jazz Age America.



# Defying Death

The story of Alfred L. Morrell — "Cannon Ball Mack" — represents the intersection of technological innovation, economic necessity, and human courage in 1920s America. His legacy endures as a testament to the specialized skills and immense risks inherent in the early Motordrome industry.