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KOLORED,  
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PINEWOOD DERBY  
RACING AND THE  
DADS WHO JUST  
CAN'T GET ENOUGH

DEFINITELY

AROUND

BY  
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THE BEND





# DAN INMAN HAD ANTICIPATED THIS MOMENT FOR MONTHS.

**It was the first Saturday of December 2018**—tournament day—and he thought the cars he'd built could outperform anyone's. They were compact. Sleek. Speedy. He watched anxiously as his pinewood derby racers took their spots at the top of a long, sloping aluminum track. When each heat began, they whizzed down the gleaming course. In the other lanes, the competition hopelessly gave chase. Inman's entries finished at the front of the pack in two key rounds, and a thought slunk into his mind: He might just be the champion.

Then officials brought out the scales. Pinewood derby competitions are organized by class, like in boxing, and each has different rules. The categories Inman had won require that each wheel weigh a certain number of grams—because the lighter the disk, the faster the car. Break the rules, and you're disqualified.

A referee carefully plucked one from each winner. Both registered two-hundredths of a gram too light. Inman was out.

"I was sick to my stomach," he says. "The experience wasn't just heartbreaking—it was embarrassing." He'd have to wait 12 months for another shot at becoming a national pinewood champion.

Anyone who was a Boy Scout probably knows what a derby car is. Most likely your parents helped you fashion blocks of pine or balsa into a light, four-wheeled racer, usually about the width and length of an iPhone. You made them to win merit badges. For many, the experience is merely a cherished childhood memory.

But some adults never outgrow their derby days. These fathers are über-obsessed, similar to the guys who gush over model trains or miniature rockets. Inman, a 62-year-old U.S. Navy vet, is one of about 40 competitors in the National Pinewood Derby Racing League. Founded in 2008, it's one of the longest-running such circuits in America, where about 10 pro leagues operate today. Having assembled the racers as kids

and guided their own children through the sport, these grown men now want to earn their own bragging rights.

We're talking middle-aged dudes with serious big dad energy who go to great lengths to craft the perfect car—forget prefab kits. Bandsaws shave the frame components down to a quarter of an inch wide; precision lathes trim acrylic wheels; syringes grease nail axles with synthetic oil. All to cross a tiny checkered line just one ten-thousandth of a second quicker. "We're all geeks, you know," Inman says.

Every year, it all comes down to the Man of the Mountain race in December—basically the league's Super Bowl. Besides the title, almost \$2,000 in cash is up for grabs. As Inman learned, though, it's not just about who finishes first.

**Inman's dedication presents itself** as soon as you near his home in southern Maryland. His pickup and his wife's sedan

jockey for space on a sliver of driveway, the garage long ago ceded as a private workshop. Inman calls it his man cave. Instead of a big-screen TV, he has a long workbench loaded with wheels, screwdrivers, scales, and a magnifying lamp. Instead of pleather recliners, drill presses and a miter saw.

Clean-shaven and with closely cropped hair, Inman is nothing if not deliberate—a holdover from his 28 years in the navy. A stack of more than a dozen yellow legal pads, filled with handwritten performance notes on 50 cars, sits on one shelf. He even insulated the garage door to keep the cold winter air from chilling him during the hours he spends tucked into the workbench.

In 1963 Inman's dad took him to his first pinewood derby event. "I couldn't wait for my own kids to get of age," he says. In 1999 he got his chance: His three sons participated in a local league run by Awana, an organization of evangelical Christians that, like the Boy Scouts, hosts races.



BETH PAKRADOONI (PROP STYLING)



Starting that year, Inman became a local legend. After a meet, he went up to a mom whose son's car didn't even make it across the finish line and offered to help out. Word of his acumen spread, and soon kids filled his garage for several months every year. He once hosted 17 boys from a local Scout troop; their cars wound up placing first through 17th in a field of 67.

"It got to a point where it was expected," Inman says. "You go to Dan's workshop, you'll have a winning car." He also competed in occasional adult races staged during the kids' competitions. Soon he found himself dominating those events too.

By 2016, he was burned out on the amateur scene, and another dad urged him to try going pro. An online search led him to the National Pinewood Derby Racing League.

The move came naturally. He already knew from the lessons he taught in his workshop that maximizing potential energy (power stored in a car that carries it forward) and

minimizing friction were the keys to victory. To boost potential energy, he affixed tiny blocks of dense tungsten around the center of his cars' rear axles: More weight in the back equals more forward *oomph* pushing the car down the hill. To cut friction, he polished the axles—special derby-grade stainless steel nails—by wet-sanding with paper up to 12,000 grit, which might as well be cheese-cloth, and oiling them to ensure they spun quickly inside the wheel hubs.

Inman's major breakthrough, though, was how he constructed the bodies. Instead of starting with a solid block of wood, he built the frames from quarter-inch-wide sticks,

making the insides hollow. This allowed him to add more tungsten blocks near his back axles while keeping the vehicles under the league's maximum weight of 143 grams. By January 2017 he had assembled a fleet for four of the six different race classes.

Still, at the outset of that first season he finished consistently near the bottom. Besting dads who were building cars for maybe the first time in their lives had been easy. But league racers employed the same techniques that Inman had used in amateur matches—and more advanced ones, like slightly bending their axles to make their cars zippier. "I was humbled," he recalls. "So after my first race, I decided to roll up my sleeves, get busy, and figure out how to be competitive."

Inman had only to look as far as his day job. He's a contractor at Naval Air Station Patuxent River on the Chesapeake Bay. While not strictly an engineer—his college degree is in aeronautics—he works on testing manned aircraft. If a plan requires that a

cargo jet detect radar signals at a certain altitude and speed, for example, it's Inman's job to juggle the mission, maintenance, and testing schedules to make sure the right model of aircraft is available to engineers at the right time. "I knew how to isolate and set up a test, so I just applied that knowledge toward my approach in pinewood derby," he says.

To pick an oil to use on his axles, Inman purchased a bunch from multiple online derby shops, set up his own league-regulation aluminum track, and created an elaborate two-car test. For his control, he applied Krytox lubricating oil, a standard in many Scout competitions, to the axles. He then ran each vehicle down the track 18 times. The first six runs settled the fluid and stabilized the racers' speed; the next 12 runs determined the Krytox's effectiveness. Then he'd rinse and repeat by cleaning off the old lubricant, applying a new one, and going through the whole 18-run process all over again. He threw out the slowest and fastest times for each oil and averaged the remaining 10, repeating the process with 10 different products. After a couple weeks, he found the one that gave both cars their best lap times.

"Through a ridiculous amount of testing, I started to figure things out and improve," Inman says. By the last race of the season, in November 2017, his cars were winning. He earned rookie of the year. The next month, at Man of the Mountain, he was runner-up.

### Racers compete for pinewood glory

at Joel Redfearn's modest rambler house in St. George, in southwestern Utah. Redfearn owns and operates the league and was once just like Inman: a dad whose three sons participated but who didn't want to stop once they did. When the outfit's first owner moved east five years ago, Redfearn stepped in.

"I was one of those obsessed racers who didn't want to see it go anywhere," he says. In December 2019, Redfearn, 43, quit his job as a Toyota mechanic to manage the operation as well as two derby-parts businesses full-time.

He stages monthly competitions in his basement. The wooden tracks of a bygone era have been replaced: Redfearn's races happen on a slick 42-foot aluminum runway with a computerized lane timer. As many as 40 people enter, and Redfearn says usually 100 to 140 cars will glide down his four-lane course.

Since all the events happen here, most contenders race by proxy, shipping their carefully packaged fleets to Utah.

Matches themselves are fairly straightforward. There are now 10 different championship-series classes, each with its own construction guidelines. Four categories, for instance, have strict rules about how much wheels must weigh; another one limits vehicle length to 4 inches. People can send in as many cars and enter as many classes as they like. (Racers pay a fee for every vehicle they enter, starting at \$10 and gradually dropping the larger the fleet.) Some guys attempt just a handful of classes. Others, like Inman,

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try all 10. And it is, for the most part, guys.

Racers earn points at each competition, a structure borrowed from motor-sports racing leagues like Nascar. The higher you place, the more you win. Get enough by year's end, and you'll find yourself battling the best of the best at Man of the Mountain.

Meticulous only begins to describe participants' fanaticism. "Just prepping one set of wheels for one car can take several hours," Redfearn says, "and that's not even the axles. We're fighting for every ten-thousandth of a second, and lots of times we have races decided on that fourth digit."

In his rookie year, Inman regularly lost

to Brian Crane, a veteran who had risen through the ranks to become one of the league's most formidable competitors. But over time, Inman discovered how to build faster models. He started using lighter one-eighth-inch sticks for the body so he could add more metal and potential energy. He also began slightly bending his axles to create what racers call steer. Center-lane rails on the track keep cars from flying off, but bumping on and off them can also make vehicles wobble and slow. Inman instead makes his cars ride on the rail the whole way down, which generates less friction than the alternative. "It's those little details that started making all the difference," he says.

As he learned in 2018, even a slight tweak can turn what would otherwise be a sweet victory into an agonizing defeat. When he raced his way back to Man of the Mountain that year, Inman was confident he'd win. But he'd blown his chances by shaving too much plastic from his wheels, making them just a hair too light. "I immediately went out and got a high-end scale that measures one one-thousandths of a gram," he says. "Yeah, it gets that anal at times."

Despite a disqualification costing him the top spot, Inman still earned enough points that year to repeat as runner-up. He lost, as he had in 2017, to Crane.

### Almost two weeks. That's how much

time Inman took off work to get ready for Man of the Mountain 2019. By late November, he'd selected the 18 cars he would enter in 10 classes. These were the ones that had run the fastest throughout the season, and the ones he thought gave him the surest shot.

Prepping his chosen fleet for race day entails a process the derby world calls tuning: oiling the axles to enhance speed and bending them to create steer. After a thorough polishing, Inman coats his nails with Jig-A-Loo, a silicone-based lubricant. They dry overnight underneath plastic containers to keep out dust. Afterward he applies two types of oil. When the axles finally make it onto the car, Inman achieves steer with a screwdriver, twisting the nails until they position the nose of each car two inches to the left so it rides the center-lane rail the length of the track.

He's just as careful with his wheels. A friend in Virginia who competes in a



the overall effect. “There’s all these little aspects that can help or hurt you in speed, and that’s the frustrating part,” Redfearn says.

**On the first Saturday of December** 2019, Inman’s 18 cars join another 124 from 26 competitors across America to vie for the title of Man of the Mountain.

First-place finishers in the different classes win \$100 each. At the end of the day, Redfearn will calculate annual points totals, and the racer at the top becomes champion and wins an additional \$500. Redfearn mans the track while his wife, Ronda, runs the camera down at the finish line. They live-stream every race, which enables Inman to watch from his workshop.

Just after 1 p.m., he finds out if his preparation paid off. It’s time for the semifinals of BASX Pro. Not only is it the most competitive class—more people race in it than in any other—but it’s also one of the two in which Inman was disqualified last year.

A slim little racer—shorter than a deck of cards, painted pink, and called Humble Pie—idles behind one of four starting pins. When the pins fall, Humble Pie goes sailing down the silver-white track, the only audible noise a gentle whirring of plastic wheels. As it accelerates, it flies past the entries in the other three lanes, finishing in 2.9512 seconds.

Humble Pie advances to the BASX Pro finals, where it wins the day’s opening round. This time, when Redfearn measures a wheel, it makes weight. By the end of the afternoon, three of Inman’s other entries have taken first in three other classes, which is how he finally earns \$900 and the ultimate prize, the title.

Yet as he savors his victory, Inman can’t help but recall last year’s lesson: It’s never entirely about who crosses the finish line in front, especially when some cars don’t even have the chance to get there. The fleet from Crane, the racer who bested him the previous two years, fell to the worst of all things that can go wrong in pinewood derby racing—a shipping delay. “I love having the victory,” Inman says. “But it was somewhat hollow without actually beating the best, head-to-head.”

So for another year he’ll toil away in his workshop. Bending axles. Waxing wheels. Waiting in hushed anticipation for a chance to defend his title. Eagerly chasing every ten-thousandth of a second.

different league custom-cuts each set of four. Inman’s touch is a quadruple layer of Icon car wax (\$300 a bottle) anywhere the disk touches the track or the axle. Each coat dries for up to eight hours in a small oven—the kind nail salons use to cure polish. Afterward he weighs the wheels to ensure he won’t be disqualified again.

Still, there are variables he can’t control. Competing by proxy is risky, because he doesn’t know until race day how his fleet fared in transit. If the shipping box gets turned on its side for too long, axle oil will drip. If the package loiters on a hot tarmac, the fluid might evaporate. And once the

contest begins, even a perfectly engineered vehicle can’t avoid “dirty air,” the breeze generated by the competition passing on the left and right. Enough of it can wiggle a winner right out of first place—though each class runs multiple heats, giving every contender a chance to race in all four lanes and mitigating

