

The official newsletter
of: Revs Institute
Volunteers

Revs Institute
2500 S. Horseshoe Drive
Naples, Florida, 34104
(239) 687-7387

Editor:
Eric Jensen
eric60@gmail.com

Assistant Editor:
Morris Cooper

*Inside this
Issue:*

April Members Meet	2
Events Calendar	3
Tappet Trivia	3
Cars & Coffee	4
Vero Beach Trip	6
MythBusters Part IV	8
Amelia Island	12
Mercedes 28/95 AAC	15
In Our Grasp	21
Tappet Tech	23
Adopt-A-Car	27

*Thank You to
this month's
contributors:*

- Max Trullenque
- Bill Vincent
- Joe Ryan
- Eric Judson
- John Wharton

TAPPET CLATTER



Volume 28.9

May 2023



Editor's Notes

By Eric Jensen

As April 2023 comes to a close, I find myself working on the last *Tappet Clatter* issue for the 2022/2023 season. This is my third year producing the Revs Institute Volunteers' newsletter. It has been quite a lot of fun. But this is not the work of just one person. It is a collection of contributors writing about Volunteer events, museum events, history, personal experiences, technology, artistry and anything else the writers would like to share.

And share they did! Bill Vincent has been loading my inbox each and every month with interesting articles on a wide range of topics. Minutes after a new issue releases, Bill sends me a new article. Thoughtful, well researched articles from Morris Cooper fill many pages. Joe Ryan's trivia questions add knowledge and a bit of fun to the pages each month. This month's Tappet Trivia has a bit of a twist, don't miss it!

Lauren Goodman, Fernando Lipicoli, Chuck Shapiro, and Larry Gleason all contributed articles this season, including John Wharton's Mythbusters class notes we edited into four articles. Pictures worth a thousand words were contributed by Mark Ghorayeb, Max Trullenque, Damian Buerer and, of course, the Revs Institute Digital Library.

The Adopt-A-Car reports provided interesting articles from Todd Murvine, Frank Brown, Shawn Schroeder, Scott Crater and Eric Judson.

(Continued on page 2)

Editor's Notes... continued

(Continued from page 1)

Thanks to the former editor, Brian Lanoway and his team, for promoting the Adopt A Car program and vetting some terrific reports. His team makes my job easier filling up the queue with great articles.

We reprinted a great report on carbon black in tires written by Joe Hauser for the benefit of our newest Volunteers. There is a strong library of articles worth revisiting.

Also thanks to our Chairman, Chip Halverson, Membership Chair, Tom Dussault and Volunteer Coordinator Whitney Herod, all of whom I pester each and every month for their *Tappet Clatter* columns to keep the Volunteers informed.

Since we can never have enough material waiting for another issue, I encourage ideas for articles from new authors. Don't worry if you are not the best writer, we can help smooth the rough edges before release. Keep track of the time spent researching and writing so Whitney can add them to your total volunteer hours.

Even though the museum will be closed in August and September, expect a *Tappet Clatter* issue in your email in-box in September.

Thanks for another great season..... *Eric Jensen*

April Members Meeting

Our featured speaker, Diane Parker is extremely passionate about the brain science associated with the power of storytelling. This meeting is most difficult to describe in writing. You really needed to be in attendance to get the full effect. Diane told the members her own story to illustrate the power of storytelling to convey a message.

How many times have we observed the "ah-ha!" moment in our guests' faces when we use a story to connect people to a car on display? Explaining the GT40 Gurney bump to illustrate Dan's height, or the 1914 Simplex's connection to Barron Collier, or Briggs Cunningham's refusal to take a shovel on track with him help bring the displays to life for our guests. An irresistible story captures hearts by first attracting the brain.

The audience was clearly captivated by Diane's ability to tell a story. Hopefully we can convince Diane to return for another session for those volunteers that did not have the ability to attend.



Events Calendar

Event	Date	Info or contact
Tour Assistant Training	May 10 @ 10:00 am	Sign up on VicNet
Wildcat Run Country Club	May 12 @ 10:30 am	Sign up on VicNet
Top Gear Club Tour & Luncheon	May 17 @ 10:30 am	Sign up on VicNet
Cape Coral Social Club	June 1 @ 1:30 pm	Sign up on VicNet
Seaman Corp Reception	June 5 @ 5:30 pm	Sign up on VicNet
Cypress Cove Tour	June 15 @ 1:30 pm	Sign up on VicNet
<i>For a full list of daily tour groups and events, go to the 'Calendar of Events' on VicNet.</i>		

By Joe Ryan

T

APPET

RIVIA

This section is devoted to questions about the Miles Collier Collections cars or cars of the same period. Some of the questions might be a bit (very) obscure or (impossibly) tricky. Test your knowledge and *have fun!*

The month of May is dedicated to the Indianapolis 500, one of the world's three great races. The Indy 500 also is a significant theme in the Revs gallery. We have 5 questions this month. The last question has a twist. See the answers later in the issue for the twist

1. **Question:** What was the original surface of the track for the Indianapolis race track?
2. **Question:** How many bricks were used to pave the Indianapolis track?
3. **Question:** How many times did Harry Miller developed engines win the Indianapolis 500?
4. **Question:** How many times did the cars powered by Miller or Offenhauser win the Indianapolis 500?
5. **Question:** Lewis Strang Won the pole for the first Indianapolis 500. What kind of car, and what company manufactured the car that sat on the pole of the 1st Indianapolis 500 in May, 1911?

The answers appear later in this issue

Cars and Coffee

By Eric Jensen

Once again, Revs Institute's Cars and Coffee covers the museum grounds with great cars, interested spectators, enthusiastic museum guests and souvenir hunters. Saturday April 15th was the day for all volunteer and staff to be *all-hands-on-deck* to greet and direct the show cars to the best spot we have available. The theme this year was "Celebrating 75 Years of Porsche." As fitting the occasion, two Porsche clubs were parked on prime real estate in the grass area directly in front of the museum. I believe the staff managed to park a total of 47 car on that prime spot.

The total car count was 605—the best attendance of the three events. 449 of the attendees purchased admission to the museum with \$5300 in gift sales. The Revs Institute staff and Volunteers really showed how a cars and coffee should be organized!

For those seasonal Volunteers that missed the event, plan on enjoying a bit of our fall weather by being in Florida for the Cars and Coffee event being planned for November this year.



*Maximillian Trullenque Photos
Courtesy of Revs Institute*

Cars and Coffee...continued



Trip to the Vero Beach Museum of Art

By Eric Jensen

When the Vero Beach Museum of Art planned an exhibit titled *Rolling Sculpture: Streamlined Art Deco Automobiles and Motorcycles*, their Docents were rather concerned about their ability to present automobiles rather than paintings or sculpture. I think “terrified” was the word they used!

Since two of the exhibits were coming from the Miles Collier Collections, the Volunteers stepped up to help. Our Coordinator, Whitney Herod, arranged for a group from the VBMA to visit Revs Institute and be “tutored” by a few of our Docents about how to speak to automobiles. As docents, we were challenged to describe the artistry of the exhibits rather than technical details. This successful meeting was reciprocated by the grateful VBMA staff.

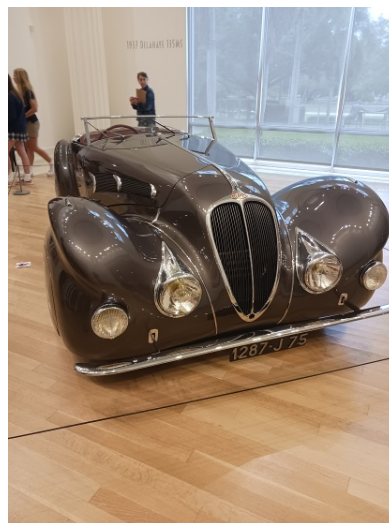
A group from Revs Institute visited the VBMA in April. Two brilliant docents toured two groups through the various automobiles in the exhibit. The Delahaye (*above*), greeted visitors. Each automobile, curated by former Peterson Museum Director,

Ken Gross, was an example of Art Deco design.

The museum display is quite different than Revs Institute. Several of us were surprised

by how different the Delahaye's color looked in a different light. Or how similar the Airflow (*above left*) was to its neighbor, the 1934 Bendix SWC Sedan (*above right*). And then there was the 1925/1934 Roll-Royce Phantom I Aerodynamic Coupe. This is a very large car stretching 20 feet long (*upper right*). Presented in this display, the car appeared massive! The display also featured a Tatra T77A (*lower right*), the successor to the T77.

Eric Jensen Photos



(Continued on page 7)

Vero Beach Museum of Art...continued

(Continued from page 6)

Once the tour was completed we got to see a behind the scenes look at how the automobiles were received and sent to display. As you might imagine, the VBMA was not developed to receive cars. Delivery trucks were threaded into the dock, handrails removed to accept the wide autos. The overhead ceiling was a bit too low for at least one transporter. That car was shifted to a roll-back truck to be ferried into the dock. Then the turns required wheel lifts such as we find in the Revs Institute garage to maneuver the cars into place over a floating wood-plank floor. There were a few “break-throughs” that needed to be repaired after and maybe a few more when the cars are removed.

The staff expressed thanks for the hospitality Revs Institute provided to their staff in a visit to Naples where our group gave them a design perspective of the Miles Collier Collections autos as well as the stories we share with our guests. No top speeds or engine sizes were discussed, only design. That put the group at ease about sharing this exhibit with their guests.



We expressed the same admiration for the terrific presentations from their Docents. Storytelling was a big part of their presentation as well as asking for thoughts about the various design elements.

The exhibition has been a great success for the VBMA with very high attendance plus a complete sell-out of the exhibition book, which can be viewed by clicking [here](#). If you did not get a chance to attend by the time you read this, the exhibit will have concluded and the cars sent on their way to their respective homes.

Of course no “road trip” activity can be complete without a group lunch at a local restaurant, the Riverside Café. Clearly a good time was had by all. Much thanks to Whitney Herod for arranging this with the VBMA staff.



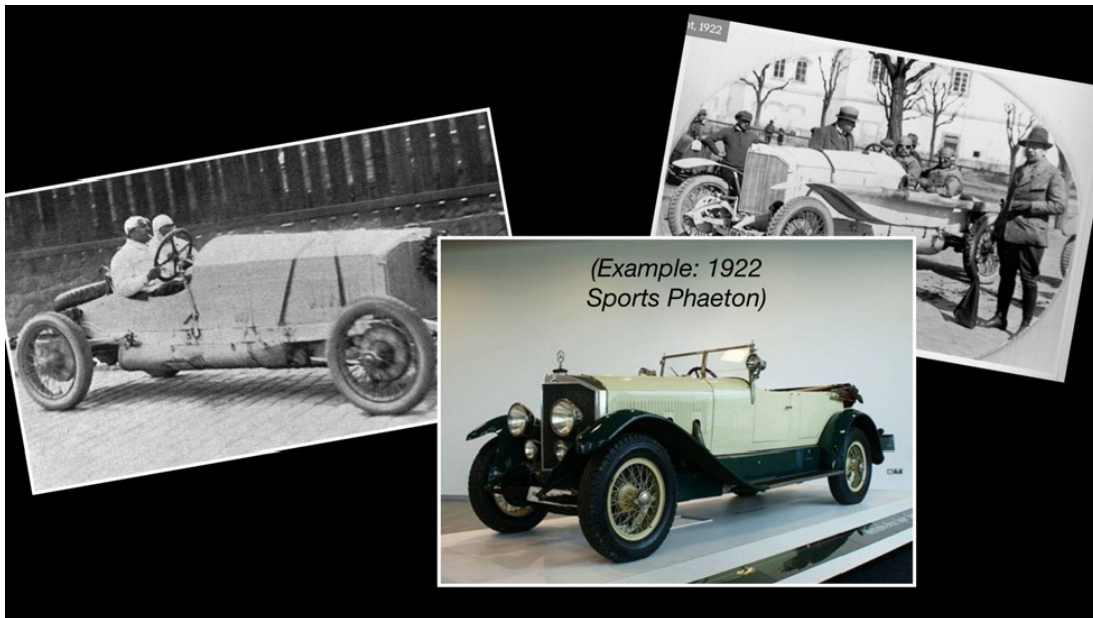
MythBusters Part IV

By John Wharton

The MythBusters class for Revs Institute Volunteers is an effort to identify and eradicate outdated, misunderstood or just plain wrong information about the cars of the Miles Collier Collections. This month we conclude with the fourth and final installment from the class, Part IV — Archeological Automobiles.

The Mercedes Targa Florio that isn't

Here's a good example of some automobile archeology, in keeping with the theme of Mr. Collier's book. Credit our own Eric Judson and Paul Kierstein with helping to uncover more history about this car, when researching it in the Revs library last year for an Adopt-A-Car report.



Photos from Mercedes-Benz Public Archives

Confused by chassis serial numbers for two known 1923 Targa Florios that were much later in sequence than the car at Revs, Eric turned to archival records from Mercedes-Benz that concluded the car in this collection is actually a 1921 Mercedes 28/95 Sport model.

Mercedes-Benz noted that the car was a first place winner in a hillclimb race near Prague in April 1922, driven by factory racer Otto Salzer. The company archives further reported that this car was exhibited in May 1922 at the Amsterdam Auto Show, and then shipped to New York in 1924. At this time, Mercedes equipped the car with a four-seat sport body. The ownership trail cooled at this point, until Briggs Cunningham bought the car from a friend in West Palm Beach in 1947.

(Continued on page 9)

MythBusters...continued

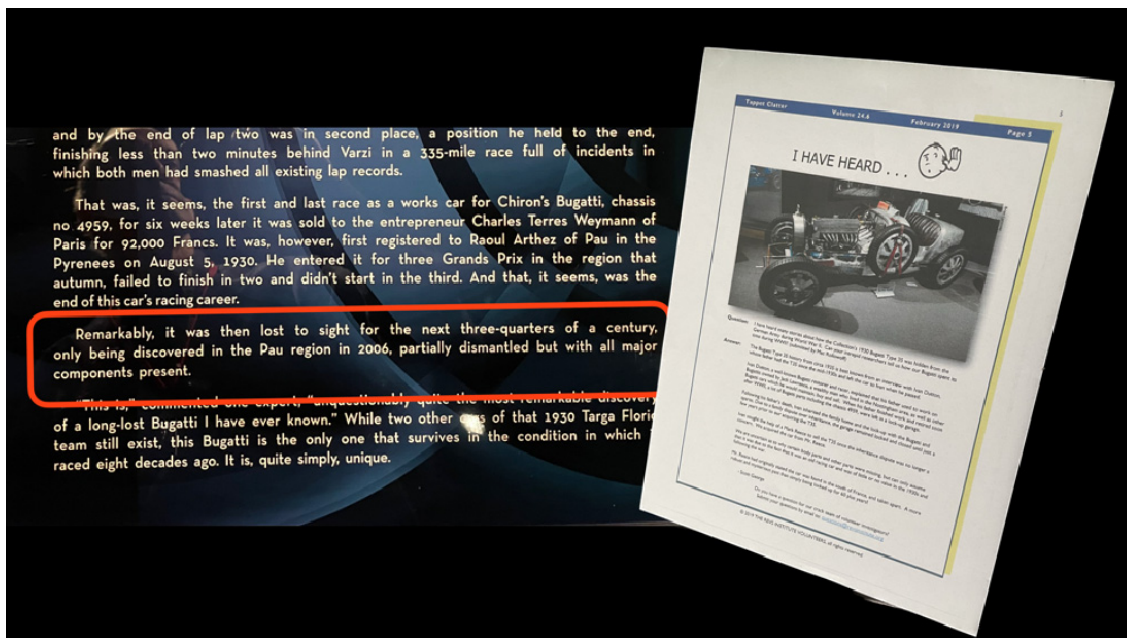
(Continued from page 8)

He refreshed the car to its current form and it joined his collection. It's not known at what point the car's year and model became confused.

So, the car isn't a Targa Florio and was never an Indianapolis 500 support vehicle. But, it does have something of a racing history, and it speaks to the archeological nature of car collecting. See the full story later in this edition.

Bugatti Type 35; Not to ruin a good story, but...

The text panel for the Type 35 Bugatti refers to the car being uncovered in the Pau region of France, where the story has grown, through embellishment and creative storytelling, that it was taken apart and buried away from the Nazis.



Photos By John Wharton Courtesy of Revs Institute

The real story has since been found to be that, after its distinguished pursuits at Targa Florio with Louis Chiron at the wheel, the car ended up in England. It was eventually found north of London where it had been in a lock-up garage since shortly after WWII. It then became part of a family inheritance dispute, and the Type 35 was acquired from the person hired to sell the car for the family.

A little digging through records subsequently supplanted the sexier but bogus story, which appears to have been presented by the family's agent. For details, you need go no further than the February 2019 issue of Tappet Clatter. A great example of how deeper examination uncovers hidden secrets.

(Continued on page 10)

MythBusters...continued

(Continued from page 9)

The Ballot Indianapolis Car; Not what Briggs thought it was

We conclude with a testament to digging deeper, interpreting evidence and setting the record straight. Miles Collier has recognized the 1919 Ballot as the “fastest, most technologically advanced racing car” of its time. It was certainly one of the most audacious, as it and three sister cars were quickly built by an engine company that had never before created a car of any kind, to compete in the high-profile reset of racing after World War I, the 1919 Indianapolis 500 Mile International Sweepstakes. After 1919, rules changes hobbled the car’s ability to compete in the 500 and other top races, though the car at Revs soldiered on racing through into the 30s.

Briggs Cunningham then acquired, restored and displayed this Ballot, and Mr. Collier bought it along with Briggs’ collection in the late 80s. At that time, it was painted a dark blue and wearing #33, one of the numbers assigned to a quartet of Ballots built for the 1919 Indy 500.



Courtesy of Revs Institute

Almost a decade ago its Adopt-A-Car report, based on the available and trusted evidence of the time, noted it as serial number 1001, the car that had a wheel hub separate mid-race and crashing it out of the 500.

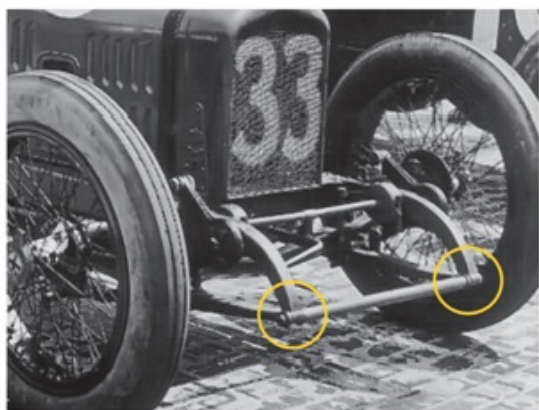
But, deeper digging by restorer Eddie Beresfield and Mr. Collier uncovered the truth about the car. As detailed in Mr. Collier’s book, *The Archeological Automobile*, his Ballot had telltale signs differentiating it from the real 1001 car, and showing it actually to be the serial number 1003 car *(next page)*.

(Continued on page 11)

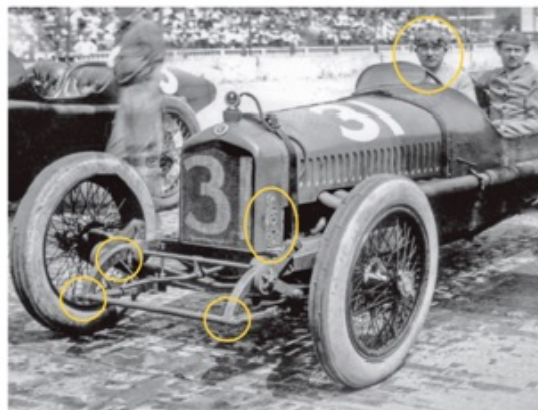
MythBusters...continued

(Continued from page 10)

This was the car assigned to Rene Thomas, the 1914 500 winner and the guy who had partnered with none other than Ernst Henry to convince Ballot executives to build the world's most advanced race car of the day. In it, Thomas shattered the track record for the pole, led the race early, but had to ease off to an 11th place finish once the wheel problem cropped up, brought on by the brutal condition of the previously-mothballed track.



Chassis #1001



Chassis #1003

Courtesy of Revs Institute

With the earlier myth about this car having been busted, the Ballot's most recent restoration and display in its true 1919 Indianapolis configuration is joined by a display noting the train of clues that revised its narrative. This not only makes for a great story, but it reminds those of us who interpret this collection to constantly be vigilant in seeking accuracy and authenticity.

And so we've reached the end of this first MythBusters class. Please continue to embrace accuracy and seek to eradicate myths as you present the history. Make use of our fantastic library and resources. Read the insightful articles in each issue of *Tappet Clatter*, and share your knowledge by submitting an article. Always be learning!

CORRECTION: In MythBusters Part I, February 2023 Tappet Clatter, Lucy O'Reilly Schell was said to have made "a break for America when the Nazis took Paris" weeks after the 1940 Indianapolis 500. This is incorrect. As pointed out by Lauren Goodman in her excellent Tappet Clatter articles about O'Reilly Schell, Lucy actually fled to Monaco.

Amelia Island 2023

By Eric Jensen

A Newbie's Experience

Long on my "bucket list" was a trip to The Amelia, the gathering of amazing automobiles for show and auction. This event is usually held from Thursday until Sunday the first weekend in March. This was *the* year this "newbie" was to be guided by an experienced attendees, Lodge McKee, Lodge's friend Bill Klerk, and Pete Cheheyal.



The Amelia was created by founder, Bill Warner, back in 1996 at the request of the Amelia Island Ritz-Carlton. It grew to be the east-coast equivalent of the Pebble Concours d'Elegance with some of the finest collector automobiles on Earth. In 2021, The Amelia Island Concours staff joined the Hagerty team that produced this year's event.

Volunteers Pete Cheheyal, Lodge McKee and I set out early on Thursday morning on the drive to Amelia. The early morning launch allowed us to visit the first of four auctions being held in conjunction with the event. First up was Bonhams. The list of cars spanned from a 1967 Autobianchi Panoramica to a 1963 Facel Vega II to a Bugatti Type 57S Sports Tourer. For those keeping score, that is a range of cars from \$10,000 to \$10 million.

Next on the agenda was the Gooding and Company auction. The first Anglo-American Racers Dan Gurney Formula 1 car was up for auction. This is an aluminum bodied, 4 cylinder powered racer that preceded the magnesium bodied, V12 powered car that won at Spa. Up for auction included Duesenbergs, a Cord, Chryslers, Packards, and more.



If not for Lodge's experience with Fernandina Beach and Amelia Island, I likely would not have seen as much as I did. And it is still Thursday!

Friday morning saw us make our way over to visit the nearby RM Sotheby's auction. It seemed as if every auction house had Jaguar E-Types, a Ferrari F40, Porsche 356's and 50's Thunderbirds for sale. I am certainly not complaining, just making an observation. Each auction house clearly understood the market from low to high price offerings. We

were also greeted by a beautiful blue Tatra T77. The very same car now sitting in the Automobility gallery on display to preserve this unique bit of automotive history. Read its auction listing linked [here](#).

All Photos by Eric Jensen

(Continued on page 13)

Amelia Island ...continued

(Continued from page 12)

We stopped at Broad Arrow Auctions within the Ritz-Carlton. More vintage classics, more modern supercars, and a few newly collectable modern classics like a 2002 Honda S2000 (estimated to sell for \$30 to \$50,000) and a 1994 Mazda RX-7 Touring. Also present were a few American muscle cars such as an AMC AMX and a 1974 Super Duty Pontiac Trans Am.



Saturday was an invitation-only Cars and Coffee held on the concours grounds. Nearby was RADwood, featuring more modern cars. RADwood is a collection of 90's cars deemed (sometimes loosely) collectable to enthusiasts of JDM classics and "malaise era" automobiles. Right beside was the Concours de LeMons, a collection of automotive frugality combined with peculiarity. LeMons is a concours created by the founders of the LeMons endurance racing series for \$500 crap-can cars. It is hard to imagine what was on display; a car made from a Port-a-Potty, a cremated Dodge Dart donated to the owner after it burned up on the side of the highway and a Betty White themed VW Golf (left). Others included strange French, Italian, British and American cars on display.



The main Cars and Coffee attendees included a range on wonderful cars of all types and years. As impressive a display as you will see anywhere. This included CH Motorcars' Bill Blum and Pedro Vela with the Revs Institute's Fiat Multipla.

We had very convenient parking 3 blocks away provided by long time friend of Lodge's, Barbara Crisp. Connections and experience made the event so much better! And we are not yet to the main event! Lodge and his Amelia attendees have been parking in the Crisp yard for many, many years! To the right is the yearly group picture. From left to right; The author, Bill Klerk, Lodge, Barbara and Pete.



(Continued on page 14)

Amelia Island ...continued

(Continued from page 13)

Later in the day, we sat in on the auctions. As exciting as it may look on television, the in-person experience was much better.

Sunday early entry made all the difference. In the gate before the big crowds allowed a nice walk-through of the various classes. Revs Institute brought the Miller board track car, the Porsche 908/2 and 917/PA to display. Classes included a fiberglass class with custom bodied cars like Victress which sold fiberglass bodies then placed on various donor frames. These home-made cars were popular in the late 50s and early 60's.



The Concours included a custom car class. Custom cars from the late 40 and 50s known as "lead sleds." The Hirohata Mercury custom (left) was right there on the lawn. A car I'd drooled over only in pictures for 50 years, live, in person, and restored to its original beauty.

Of course there were some exquisite classics from Rolls Royce, Packard, Delahaye, BMW, Talbot and even an unrestored 1911 Mercer 35 Runabout (right). It looks good for 112 years old.

A brace of Le Mans winners were together on the grounds. This included the number 21 Ferrari 250 LM that was the last Ferrari to win at the great race in 1965. Also in attendance were all three of Briggs Cunningham's 1960 Le Mans Corvettes, reunited for the event (car #1 below).



The event exceeded my expectations in all respects. Quality cars of all eras and even the whimsy of the Concours de Lemons. While we all tired after 4 days of events, it was well worth the effort. But I will say the experience was made all that much better by going with experienced attendees. Many thanks to Lodge McKee and Pete Cheheyal.

1921 Mercedes Sport 28/95

By Eric Judson

A surprising reveal:

Since its acquisition from Briggs Cunningham in 1985, it has been our belief that the Mercedes 28/95 in the Miles Collier Collections was a "1923 Mercedes Targa Florio." The Cunningham Collection history that accompanied the car described it as such and indicated that the car was purchased by Briggs Cunningham in 1947 from Charles J. Kubin, a fellow member of the Everglades Club: an exclusive, invitation-only club in Palm Beach, Florida. There was no information about how Mr. Kubin came to obtain the car.



*Peter Harholdt Photo
Courtesy of Revs Institute*

In 1947 or 1948, Cunningham hired Charles Stitch, a New York-based restorer of exotic foreign and domestic cars, to refresh the car. A document in the Cunningham records indicates that Stitch replaced the original engine with a "crate" engine, since his restoration firm had three spare engines at the time. Consequently, it is safe to assume that the engine installed in the car is not original.

As we all know, the story on record of the Miles Collier Collections' "1923" Mercedes is that it was a support vehicle for the Mercedes effort at that year's Indianapolis 500 race, and was subsequently left in the USA after the event. Although various attempts have been made through the years to confirm the provenance of the vehicle, none were brought to a conclusion because the records in the vehicle's files are at odds with the established narrative.

In an effort to complete this research, a closer look at the Daimler Chrysler AG archival records reveals that the Miles Collier Collections car is actually a 1921 Mercedes Sport model: Chassis #26854, Engine #54148, Com-book-no. 28841. Further research shows that this car was a first place winner in a hillclimb race in Konigssaal-Jilowischt, near Prague in April 1922, driven by Otto Salzer. The car was never an Indianapolis support vehicle.

Given that the chassis number of our Mercedes significantly precedes the two known 1923 Mercedes Targa Florio cars, which carry chassis serial numbers of 28704, and 28764, it is reasonable to conclude that the collection car is a 1921 Mercedes 28/95, not a 1923 Targa Florio.

(Continued on page 16)

1921 Mercedes Sport 28/95...continued

(Continued from page 15)

Background: The Daimler engineering and manufacturing company.

Daimler-Motoren-Gesellschaft (DMG) was a German engineering company and later an automobile manufacturer that was in operation from 1890 until 1926. Founded by Gottlieb Daimler (*upper right*) and Wilhelm Maybach (*lower right*), it was first based in Cannstatt (today Bad Cannstatt, a city district of Stuttgart). After Daimler died in 1900, the business moved in 1903 to Stuttgart-Unterturkheim. The factory was then destroyed by fire and moved again to Berlin in 1922. Other DMG factories were located in Marienfelde (near Berlin) and Sindelfingen (next to Stuttgart).

Once the enterprise began to produce petrol engines, Daimler sold manufacturing licenses throughout the world to companies located in France, Austria, the UK, and the United States. Curiously, the American license was with the New York piano maker Steinway.

Heinrich Steinway had been so impressed by the Daimler engine during a trip to Germany that he obtained the manufacturing rights and established the Daimler Motor Company in the US.

The first DMG automobile sale took place in August 1892 to the Sultan of Morocco. This vehicle is still registered today.

In 1892, while working from temporary premises in the unused Hermann Hotel in Cannstatt, Gottlieb Daimler, his son Paul, and Wilhelm Maybach designed the Phoenix engine. It amazed the automobile world with:

Four cylinders placed vertical and parallel (a first for an automobile engine).

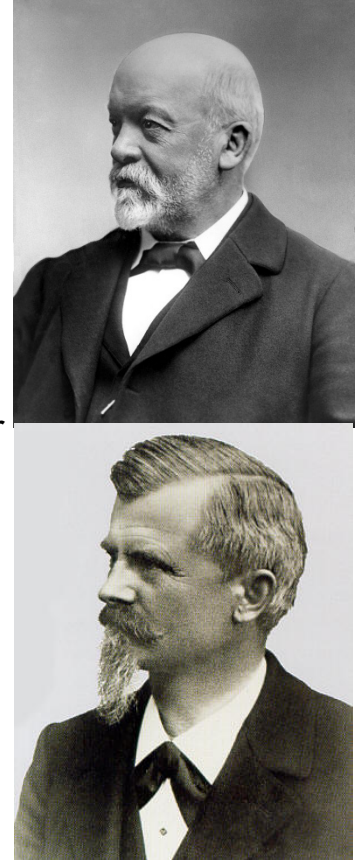
Camshaft-operated exhaust valves.

A spray-nozzle carburetor (patented by Maybach in 1893).

An improved belt drive system.

This engine powered all DMG automobiles until the "Mercedes" car of 1902.

Daimler-Motoren-Gesellschaft also produced commercial vehicles using the Phoenix engine. The first truck of 1.5 tons payload was sold to London's British Motor Syndicate Ltd. on October 1, 1896.



(Continued on page 17)

1921 Mercedes Sport 28/95...continued

(Continued from page 16)

Its rear-mounted Phoenix engine produced 4 hp at 700 rpm. The company began serious production of light commercial vehicles, known as “business vehicles”, in 1897. These models were very successful in the UK. At the first Paris Motor Show, in 1898, a five-ton truck was displayed with a front-mounted engine.

The man responsible for the name Mercedes - Emil Jellinek:

Emil Jellinek was the best, but likely also the most difficult customer encountered by DMG.

Jellinek was a successful businessman and insurance agent in Vienna. His business activities were so profitable that he was able to set up a second office in Nice, France.

His affluence allowed Jellinek to closely follow the early advances in motoring. In 1897 he traveled to Cannstatt to order his first Daimler. When the car, a 6 hp belt-driven car with a 2 cylinder engine, was delivered in October 1897, Jellinek was disappointed. With a top speed of only 24 km/h, Jellinek felt the vehicle was far too slow. Jellinek demanded 40 km/h and ordered two more cars to be delivered in September 1898. The resulting Daimler “Phoenix” cars (*below*), with front mounted 8 hp engines, were the world’s first road vehicles with four cylinder engines.



Jellinek immediately began to use his influence as a businessman to advertise and sell Daimler automobiles to society’s highest circles. By 1899, Jellinek had sold ten cars, and in 1900, he had placed orders for 29 more.

Jellinek demanded ever faster and more powerful cars from DMG and entered them in race events to promote the DMG automobile. The most

important event was a week-long event in Nice, France, where he would race under a pseudonym: he used the given name of his daughter from his first marriage, Mercedes, who was born in 1889.

Jellinek’s pseudonym “Mercedes” became commonly known in motoring circles. In April 1900, when Jellinek ordered more DMG vehicles, the agreement included ‘Mercedes’ as the product designation. For this order, it was decided that a new engine would be developed which would “bear the name Daimler-Mercedes.” The order was significant.

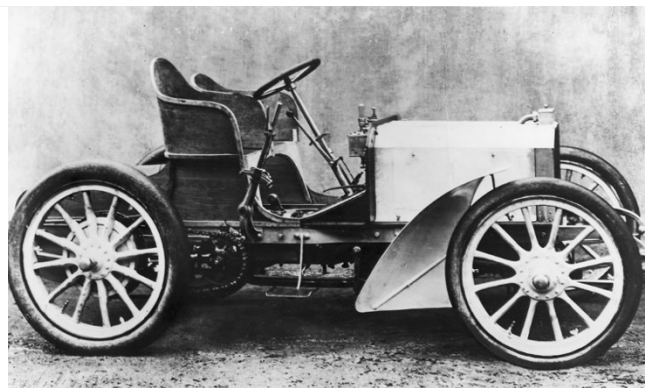
(Continued on page 18)

1921 Mercedes Sport 28/95...continued

(Continued from page 17)

Jellinek ordered 36 vehicles at a price of 550,000 marks, which was truly a huge order given the circumstances of the time. Several weeks later, he placed an additional order for 36 more vehicles.

The first vehicle to be fitted with the new engine, a 35 hp racing car (*right*), was sold to Jellinek on December 22, 1900. This first "Mercedes", developed by Wilhelm Maybach, the chief engineer at DMG, caused quite a stir. With its low center of gravity, a pressed steel frame, a light and high-powered engine and honeycomb radiator, the Mercedes contained numerous innovations and it is regarded today as the first modern automobile.



The new Mercedes was entered at Nice Week in March 1901 and its success was unparalleled in practically every category, giving Jellinek and Mercedes extraordinary publicity. In March and August 1901, the 12/16 and the 8/11 hp models appeared. Due to Jellinek's orders, the production capacity of the Daimler plant in Cannstatt was now full.

Mercedes ultimately became DMG's main automobile brand name. There were some small exceptions such as the Mercedes Simplex of 1902-1909: a name indicating that it was easy to drive; and, the Mercedes Knight of 1910-1924, which featured the Coventry Daimler version of Charles Yale Knight's sleeve valve engine.

On June 23, 1902, the name "Mercedes" was announced as a trademark and was legally registered on September 26 of that year. In June 1903, Emil Jellinek changed his surname to Jellinek-Mercedes. Jellinek later commented that "This is probably the first time a father has taken his daughter's name".

Mercedes 28/95 Model:

The 28/95 designation was the result of a policy adopted in Europe to tax automobiles based on their horsepower. Countries such as Belgium, France, Britain, Germany and Italy instituted these policies. The tax horsepower rating was not computed from actual engine horsepower, but by a simple mathematical formula based on cylinder dimensions.

(Continued on page 19)

1921 Mercedes Sport 28/95...continued

(Continued from page 18)

At the beginning of the twentieth century, tax power was reasonably close to actual horsepower. As the internal engine developed, real power became larger than normal taxable power, by a factor of ten or more.

Tax horsepower was introduced in Germany on June 3, 1906. It was based on the number of cylinders in the engine, multiplied by the cylinder bore squared, multiplied by the piston stroke. Thus it took into account the engine displacement from the outset. The actual horsepower was the "95" in the designation.

In use from 1914 until 1923, the 28/95 HP engine created the foundation for DMG's reputation as a purveyor of exclusive and powerful top automobiles. Some are still viewed as the best of the times; including the K, the S, SS, SSK and SSKL automobiles, later followed by the 8-cylinder model 500K and 540K models.

The Miles Collier Collections' Mercedes 28/95 was equipped with the characteristic V-shaped radiator (*below*) and flexible outboard exhaust tubes. These features broadcast that the automobile was a Mercedes.



Peter Harholdt Photo Courtesy of Revs Institute

The technical design of the 28/95 engine was also remarkable. For the first time, a Mercedes production car was equipped with an overhead camshaft and valves arranged in a 'V' configuration. This engine design was based on the Daimler aircraft engine DF-80, which finished second to Benz for the best aero engine in 1912.

Also utilized for the first time were the use of separate engine cylinders formed from steel, which were in turn surrounded by a cooling water jacket made from sheet steel. Compared to conventional cast cylinders, the spun steel cylinders were lighter in weight while having a higher load capacity.

Production of the 28/95 was interrupted by the World War in 1914 and 1915, but after the war, production was restarted with further engine modifications: the cylinders were now cast in pairs and the exposed valves were now encased within light-metal valve covers.

(Continued on page 20)

1921 Mercedes Sport 28/95...continued

(Continued from page 19)

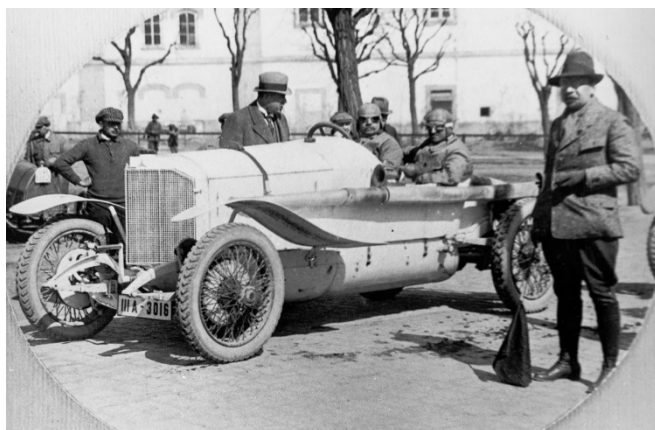
All in all, nearly 600 units of the 28/95 HP engine were produced until it was discontinued in 1924.

Ownership of the Miles Collier Collections' 1921 Mercedes:

The author's research indicates that the Miles Collier Collections' Mercedes 28/95 was initially a "works" sports racer once driven by Otto Salzer (*below left*), a Mercedes team driver.

Salzer, a notable Daimler race driver, progressed from shop floor foreman, to test driver, to factory race driver for Daimler in 1903. He contested, and at times won, races such as the 1906 race at Ardennes, the 1907 Kaiser Paris race, the 1907 and 1908 competitions at the Grand prix de l'ACF in Depeppe and the 1913 Grand Prix de France at Le Mans.

Salzer was a member of the Mercedes team that shocked France in 1914 by finishing a dominant 1-2-3 at the XIV Grand Prix de l'Automobile Club of France at Lyon. The pre-war tensions were so high at the race, the host nation refused to play the national anthem of the German victors. After WWI, Salzer continued to race for Mercedes and is on record for winning the first Solitude hill-climb in 1927 in front of 100,000 spectators.



Daimler archival records indicate that Otto Salzer won (and set a new record) in Miles Collier Collections' Mercedes 28/95 at the Bergrennen Konoigsaal-Jilowischt hill-climb in Prague in April, 1922 (*left*). The next month, the car was exhibited at the Amsterdam motor show.

In 1924, the factory re-bodied the car as a 4-seat sport-phaeton and shipped it to New York. Its later

history remained unknown until Briggs Cunningham purchased the car from Charles Kubin in 1947. Miles Collier acquired the 1921 Mercedes Sport as part of the Cunningham collection on December 31, 1986.

While the results of this research are surprising, the truth can be revealed with careful study of the subject. There are still questions about the origin of the car's current 2-seat body in contrast to the factory records showing a 4-seat re-body. The investigation continues.

In Our Hands' Grasp

By Bill Vincent

It has been said: "The final adjustment in any car - is the nut behind the wheel!"

Diving into the evolution of those "nuts" would only open up a bottomless pit, involving Sociologists, Psychiatrists, and who knows what. So we'll stick to the "wheel" itself, as the Revs Institute gives us a great opportunity to follow its evolution - without the headache and stress of the other.

Steering a vehicle has been a challenge since the horse and buggy days steering with leather straps, known as "reins"! The first horseless carriages borrowed steering technology from the marine world, to guide the front wheels. The use of a "tiller", that on a boat would turn the rudder (*right*), would come to be used to turn the front wheels.

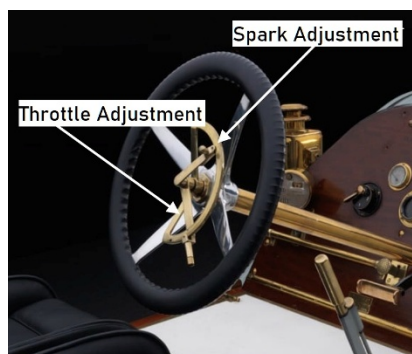


A classic example of that is found with the 1896 Panhard et Levassor Wagonette, the oldest vehicle in the Revs' collection. It was simple, direct, and did nothing else but turn the wheels in the direction that aforementioned "nut" wanted to go (*left*). Within the Miles Collier Collections, the first steering wheel appears on the 1902 Mors Type Z Racing Car.

Beside steering, that wheel also represents the beginning of steering wheel mounted driver distractions with the ignition spark adjustment

being added to the wheel. By 1912 the steering wheel had acquired a throttle adjustment along with the ignition spark adjustment, as exemplified by the 1912 Mercer Model 35-C Raceabout (*right*). The number of controls grew to as many as four as on the 1939 James Young Bentley with the choke, spark timing, throttle and shock absorber adjustment.

Steering wheel controls, such as these, pretty much continued into the thirties, where engine systems had begun to advance to the point where controls like that were no longer needed. Giving us clean, simple designs like the 1938 BMW Type 328 Roadster.



Things then remained pretty stable for the next six decades, or so, before *feature creep* started with radio controls, cruise controls, and such, started cluttering our steering wheels again.

Bill Vincent Photos unless other wise credited

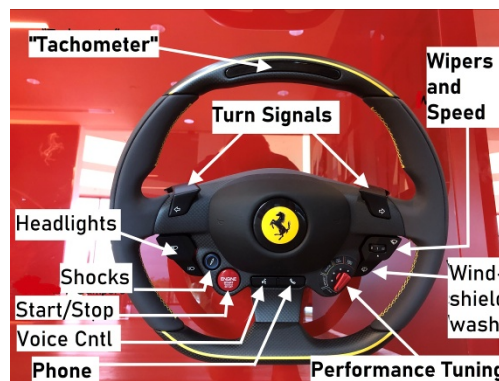
(Continued on page 22)

In Our Hands' Grasp... continued

(Continued from page 21)

Here's an example of one of the latest Ferrari road car steering wheels that are available. The photo (*right*) shows all that's happening on a modern steering wheel - except the gear change paddles which would be behind the steering wheel.

The "Tachometer" in the top of the steering wheel is more like *Shift Warning Lights*, that start out green



on the left then turn to red as they sweep to the right, to indicate the need to up-shift. Gear shift paddles (*left*) are placed behind the steering wheel near the fingertips. The gear change is made by just pulling back on the paddle, with your fingers. Right side paddle, for an "up shift." Left side paddle, for a "down shift."

Race cars were not immune to all this "feature creep" either. Here's the 1967 AAR Eagle Gurney Westlake Mk-1 Formula 1 wheel (*right*):

Uncluttered - with the sole purpose of guiding the car wherever Mr. Gurney wanted!

We have the current Dallara Indycar (*next page*); now a myriad of controls and adjustments surround an Info Screen in the middle of the wheel. (*That's also not really a wheel anymore*)

Starting from the top and working counter clockwise:

Shift Lights - Much like the Ferrari, the lights across the top advise when to up shift.

Alarm LEDs - Alert the driver of an "issue". Details shows up on the screen.

Left Weight Jacker - Raises the right rear suspension for cornering on ovals.



*Peter Harholdt Photo
Courtesy of Revs Institute*

(Continued on page 23)

In Our Hands' Grasp... continued

(Continued from page 22)

Overtake - Otherwise known as "Push-to-pass" provides a temporary horsepower increase to make a pass, or defend against one.

Radio - Two-way communications with the driver's pits and course spotters.

Reverse - Allows the driver to engage reverse gear.

Multi - - Decreases information on the screen.

Engine Mapping - Engine performance / tuning adjustments, fuel economy, etc.

Multi Function - Predetermined Team Preferences.

Dash Switch - Changes "pages" on the screen.

Purple Rotary - Fail safe / backup engine management system choices.

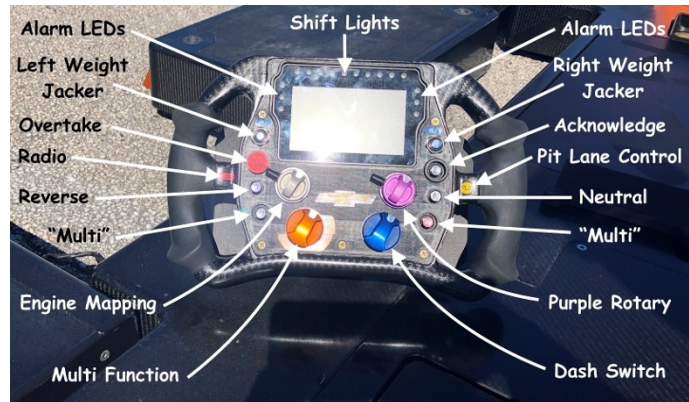
Multi + - Increases information on the screen.

Neutral - Allows the driver to engage neutral.

Pit Lane Control - Set to control pit lane speed. (*Varies between different tracks*)

Acknowledge - Allows the driver to respond to his pit without having to talk.

Right Weight Jacker - Lowers the right rear suspension for cornering on ovals.



The back of the steering wheel has the wheel release (*to remove the steering wheel*), gear shift paddles, and hand clutch (*operable from either side*). Note: The clutch is only really used when moving the car from a dead stop, leaving the pits, etc.

The current Indycar steering wheel even has its own built in multifunction computer! So, besides guiding the car where they want, against their competitors - the driver also has their pit crew in their ear directing them to make whatever adjustments deemed needed. All while covering the length of a football field in less time it takes to snap your fingers! A tad more stressful than when we get that grocery list texted to us, on our way home from work.

And here I thought "technology" was supposed to make our lives "simpler"!

Special thanks to Dagney Wyson, Marketing Manager for Ferrari Of Naples, along with Felix Rosenqvist, Ben, and the rest of the Arrow McLaren Indycar Team - for access to take photos of their steering wheels.

TAPPET TECH

The Mid-Engine Advantage

By Eric Jensen

When we speak to the three red GT cars in the Revs Institute lobby, we point out the different engine placement utilized in each car. We can point to the Porsche as the "best" configuration because of the mid-engine, but why is that true?

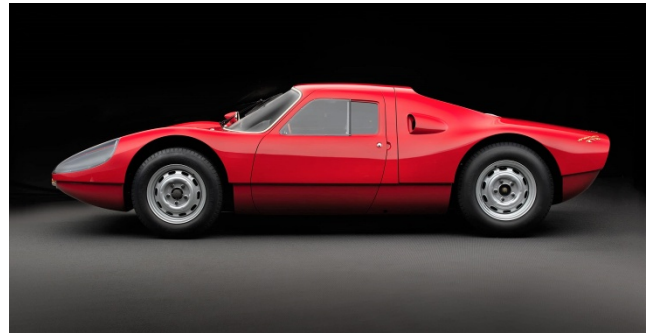
Racing cars need to turn, accelerate and brake before any consideration of how much luggage will fit, or carrying a basketball team, or whether they can carry a 4 by 8 sheet of plywood. Racing cars are minimal machines created for maximum performance. The red "triplets" in the Revs Institute lobby were all road cars bred for racing but use different configurations to solve the problem of turning, accelerating and braking.

Let us start with turning. Race cars need to be able to turn with a minimum of effort to battle twisty courses such as the Targa Florio. I'll use a common story used by some Docents to explain. Picture a figure skater in a pirouette, spinning arms outstretched. When the skater pulls in their arms, they spin faster. The weight and distance of their arms from their body affect the speed of the pirouette. Arms-out is slower, arms-in is faster.

Now consider a car's engine, the heaviest single piece of a car. If we put it in the middle instead of the front or rear, that centralized weight will allow the car to turn more quickly. If we move it forward, that weight slows the turn. If we move it rearward, it also slows the turn. Placing the engine out behind the rear axle, however, acts like swinging a sledgehammer; Once it is moving it does not want to stop! Porsche 356 and

911 owners know this all too well as that rear engine wants to *keep* turning after the corner is finished!

In both the mid and rear engine placement, at least the front tires don't have to work so hard to turn the car. If we have a front-engined car, it will tax the front tires with both turning *and* carrying the engine's weight into the turn.



*All Photos Courtesy of Revs Institute
Peter Harholdt Photos*

(Continued on page 25)

TAPPET TECH

The Mid-Engine Advantage ...continued

(Continued from page 24)

If we look to accelerating, the engine in the middle puts a lot of weight over the rear tires for traction. A rear engine car does the same although somewhat better since the engine is farther back. When accelerating, some weight is shifted to the rear to further help traction. The front engine placement will suffer from the lower traction more than the other two simply by having less weight at the rear to start. If we have a racing car with a powerful engine, traction becomes a bigger concern than a low horsepower car. Being able to accelerate harder out of a corner makes the race car much faster down the straights so rear and mid-engine cars are preferred for acceleration.

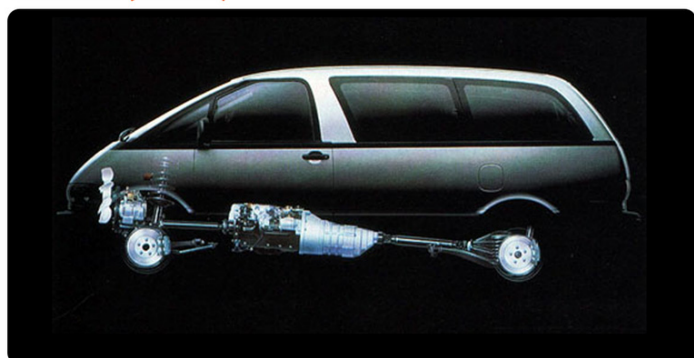
Braking is just the reverse of acceleration. When we brake hard, some of the weight of the car shifts forward allowing the front brakes to do more of the work than the rear brakes. In a well balanced car, the magical 50/50 weight distribution (hello, Miata!) would force the front brakes to do about 70% of the work. If we shift the weight backwards to create a mid-engine car, that 60% of the weight is now on the rear. The front brakes only need do about 55% of the work. If we shift the engine to the rear, the front brakes may only need to do about 45% of the work. Equalizing the braking forces makes for stronger and more reliable braking.

The result is that a mid-engine car turns more quickly, accelerates harder and distributes the braking loads more equally. This is why Porsche chose a mid-engine placement in the 911 and Ford did so with the GT40 as did the latest Corvette C8.

This is not to say you can't build fast cars in any of these three configurations. There are bad mid-engine cars (I'm looking at you, Pontiac Fiero!), great front engine cars (Ferrari GT0) and very successful rear engine cars (Porsche 911, of course). It all depends on the execution.

So to summarize, if we want to accelerate quickly, brake harder and turn faster we want the engine moved to the middle. But you won't find many 4 passenger mid-engine cars that can carry a 4x8 sheet of plywood inside! Well, maybe one; The original mid-engine Toyota Previa van.

PREVIA VAN (ORIGINAL)



TAPPET RIVIA

By Joe Ryan

And Now The Answers.....

1. **Q:** What was the original surface of the track for the Indianapolis race track? **Answer:** The track was paved with crushed stone and tar. This made for a very dangerous surface. The first race on the track was a motorcycle race on August 13, 1909. The race was a disaster. The track was so abrasive that everyone was blowing tires. Drivers were covered in oil and goggles were shattered, along with bloody cheeks. Drivers were heard to say, "*This track was like flying through a meteor shower.*"
2. **Q:** How many bricks were used to pave the Indianapolis track? **Answer:** The number was 3.2 Million Bricks weighing 10 pounds each! For a total weight of 32 million Pounds. Completed on December 14, 1909. Bricks were manufactured by five companies, one of which was Wabash Valley Clay Company in Veedersburg Indiana.
3. **Q:** How many times did Harry Miller developed engines win the Indianapolis 500? **Answer:** Miller engines won the Indianapolis 500 ten times! Six of those were Miller engines in Miller designed cars.
4. **Q:** How many times did the cars powered by Miller or Offenhauser win the Indianapolis 500? **Answer:** The Miller/Offenhauser motors won the Indianapolis 500 29 times.
5. **Q:** Lewis Strang Won the pole starting position for the first Indianapolis 500. What kind of car, and what company manufactured the car that sat on the pole of the 1st Indianapolis 500 in May, 1911?

Answer: Here is the twist! The first person that emails Joe Ryan at grr8gto67@aol.com with the answer and the *source of the answer* will win a \$20.00 gift certificate to the Revs Institute Gift Shop.

*1911 Indy 500 Winner Ray Haroun's Marmon Wasp
Bruce R. Craig Photograph Collection
Courtesy of Revs Institute*



Adopt-A-Car Program

Available Adopt-A-Car Automobiles and Engines

Alfa Romeo Guilietta	Simplex	C-6R Offenhauser engine
Alfa Romeo AutoDelta	Stutz Black Hawk	Cadillac OHV V-8 engine
Ardent Alligator	Vauxhall 30-98 Type OE	Chrysler Hemi (C-3) engine
Bugatti Type 55 Super	Waymo Firefly	Duesy Sprint Car engine
Cisitalia SC	Abarth 1000-TC-R engine	Ford GT-40 Transaxle engine
Cunningham C-3	Alfa Romeo GTZ engine	Ford Turbocharged Indy
Fiat Abarth TCR		Gurney Eagle GP engine
Jorgensen Eagle		Jaguar XK120 Series engine
Maserati Tipo 60		Meyer-Drake Turbo Prototype
Mercer Raceabout		Porsche Type 901/20 engine
Miller board track racer		Porsche Type 901/22 engine
OSCA Sports Racer		Porsche Type 908 engine
Porsche Elva		Porsche Type 916 engine
Porsche RS-61L Spyder		Columbia Three-Track
Scarab Sports-Racer		Humber 58" Ordinary Bicycle
		Velocipede Bicycle

To adopt a car or engine, contact: Brian Lanoway, Adopt-A-Car Chair
at blanoway@shaw.ca

The *Tappet Clatter* is the official newsletter of Revs Institute Volunteers of Naples, Florida. Its intended purpose is to inform, entertain and promote camaraderie for our members.

The editor is Eric Jensen, eric60@gmail.com. Although email is preferred, correspondence can be mailed to: The *Tappet Clatter*, 2500 South Horseshoe Drive, Naples, FL 34104.

The *Tappet Clatter* welcomes contributions from all sources. Contributions are subject to editorial review and enhancement. The editor may use third party input to confirm content. Authors can have the right to review and approve the final version of their article before publication. All ideas and opinions are those of the writers. Neither the *Tappet Clatter* editor nor the Board of Revs Institute Volunteers assumes liability for the information contained herein.

The *Tappet Clatter* respects the copyright of all sources. However, the *Tappet Clatter* may choose to use copyright material if that use meets all four factors of the [Fair Use exception](#) identified in [United States copyright law](#). Unless otherwise noted, photo sources can be identified by clicking on the photo.

The *Tappet Clatter* is not to be reprinted or electronically distributed beyond the membership of The Revs Institute Volunteers without prior written permission. Rights of reproduction, in printed or electronic media, are retained for any text or photographs submitted. The *Tappet Clatter* reserves the right to refuse publication, edit, or modify any material and hold such material for an indeterminate period.