STUDENTS' NIGHT AT SHOW

MANY SEEKERS AFTER MECHANICAL KNOWLEDGE.

Factory Experts in the Grand Central Palace Busy Explaining the Workings of Automobiles—More Attention Paid to Springs and Upholstery.

It was "Students' Night" at the international automobile show of the American Motor Car Manufacturers Association in the Grand Central Palace last evening and while there were a lot of students of both sexes in the building during the afternoon and evening the younger visitors were far outnumbered by their elders. The students for whom the night was named were the pupils at the various technical schools in and around this city and a great many of them took the opportunity to enlarge their mechanical knowledge by asking numberless questions of the factory experts at the different stands.

The exhibitors were unanimous in declaring they were very much pleased with the success of the show last night, and quite a few cars were sold yesterday, while demonstrations were arranged that will undoubtedly result in many more new cars being purchased within the next few weeks. There were many visitors in the building yesterday who were having their first look at the new cars, as they had been out of the city on New Year's Day and only returned to their city houses yesterday morning.

It was noticed that more and more attention is being paid to the springs and upholstery of the cars shown than has usually been the case at former automobile shows. The women visitors especially ask many questions as to how easily a car will ride over rough roads and if the springs of the seat cushions will remain in proper condition after a car has been used extensively for a year or so. The younger women, who have been on trips in cars when they had to sit in folding seats, are showing the most interest in the seating question and are asking more questions than those who have been accustomed to occupying the back seats in the tonneau.

The accessory exhibitors are doing very well at the show, particularly those who are showing anything that helps to make winter automobiling more comfortable. It appears from the inquiries made of the accessory men that owners are getting over the former habit of putting their cars up for the winter, which was the general rule a few years ago and is still followed by many automobilists. As drivers become better acquainted with the workings of their cars they become loath to give up the joys of motoring during the entire winter, and many of them have told stand attendants they would keep their cars going the year around.

Men who drive and care for their own autos are especially opposed to being without their cars during the winter, and even though they may not drive them every day they like to keep them so commiss on so as to take advantage of all the mild days. By fitting wind shields, cape tops and foot warmers to their cars the rigors of driving on cold days are materially abated, especially for the occupants of the tonneaus. The old fear that the radiator of a water cooled car will freeze does not deter drivers from using cars in the winter as much as formerly, as wood alcohol or glycerine put into the water tank will lessen the dangers of cylinders being cracked by frozen water.

The beauty of the decorations continues to excite very favorable comments from visitors of an artistic turn of mind. The Palace is admittedly a very hard place to decorate, as the ceilings are so comparatively low everywhere except in the court in the centre of the building. "I did not think it was possible to do so much toward making the place beautiful," is an expression heard many times a day by the attendants at the stands in the centre of the main floor. The old English inn on the second balcony floor is also favorably commented on, even though the waiters are mostly without any trace of what might be termed an English accent.

The exhibitors of the high wheel motor cars—or "buggyabouts," as they are generally called—say they are receiving an unusual amount of attention, and add that all of their inquiries do not come from persons who live on farms, even though this type of car has been termed the "farmers' automobile." It seems as if many men who have always driven horse drawn vehicles are taking to the high wheel motor cars because they have become accustomed to that sort of vehicle. The fact that most of these machines are quite simple, so far as their mechanism is concerned, is another factor that makes them popular with men who have not heretofore showed much interest in motor vehicles.

One exhibitor of these vehicles said last night that he had been surprised at the interest shown in his machines by men who live in different small cities within a hundred miles or so of New York. He stoutly maintains that his machine is practically as good for short trips as any of the more celebrated and higher priced American or imported cars, and was really better for some men, because they could not exceed the speed limits of their cities with a high wheel car as easily as with a regular automobile with its great power and pneumatic tired wheels.

The boy visitors yesterday were much disappointed when they were told that it had been impossible to secure for exhibition the Fiat racer with which Wagner won the Automobile Club of America's Grand Prize at Savannah. They consoled themselves, however, by making very extended examinations of Hemery's Benz, which finished in 58 seconds slower time than the Fiat and the Lancia "Lampo" that won the light car race at Savannah the day before the big contest. The wire screen on Hemery's Benz aroused their curiosity and most of them wanted to sit in the driver's seat, and find out for themselves if they could look through the screen that was put on to protect Hemery's face and eyes from flying stones.

A great many of the stand attendants, especially the younger ones, stopped extolling the merits of their wares a bit before the regular closing time last night, so they could go to the smoker at the clubhouse of the Automobile Club of America in Fifty-fourth street, west of Broadway. The hospitality of the Automobile Club was very largely accepted, and there were several hundred guests present before the vaudeville programme had been started.

TRAP SHOOTING.

Dr. De Wolfe High Gun in New York A. C. Meet—Other Results.

Six events were run off at the Travers Island traps yesterday and a big crowd of members of the New York A. C. had a lot of visitors. Dr. De Wolfe was the high gun of the day, as he made three wins, one being the first leg on the January cup. In this event he shot from the three target mark and after a close race he tied with Louis Greif, who had the same allowance. Both hung up strings of 22. The doctor's handicap was reduced to 2 in the shootoff, and he won out by one target. The Sauer trophy was won by Dr. De Wolfe with the perfect score of 25, and he still shot from the same mark. For the Stevens trophy the doctor tied again, but that time with A. J. Elias, the latter having an allowance of 2, while Dr. De Wolfe was reduced to 1. In the shootoff he went back to scratch, Elias shooting from his original mark. The doctor won, though the total was not very startling.

C. W. Billings accounted for the Holiday cup after a tie with G. M. Thomson, both having tallies of 24. It was Billings's third win for this trophy and according to the conditions governing the prize it becomes his permanent property.

G. Fred Pelham won the last event of the day—a trophy shoot. On the first race he tied with Dr. Crowe, both returning perfect scores. Pelham was put back to the handicap of 1 in the shootoff, but he won.

S. H. Hendrickson of the Bergen Beach Gun Club, winner of the amateur championship three years ago, was among the prominent visitors. He shot from scratch, but, of course, did not count for any of the trophies. He made 23 three times, and that was his best. J. A. Henderson of the Wykagyl Country Club was another visitor, but he did nothing very remarkable: 22 out of 25 was his best.

Following closely on top of a holiday it was natural to expect that there would be only a few gunners at the Bay Ridge traps of the Crescent Athletic Club yesterday. Most of the regulars were out, however, and as the conditions were excellent the scores were high and the shooting close and interesting.

With an interclub shoot against the New York Athletic Club scheduled for Saturday the New Moon nimrods discarded fifteen "bird" events and spent the afternoon in banging away at strings of twenty-five.

Ties were the order of the afternoon, and with the exception of the January cup and the team race shootoffs were required to find the different winners. M. Stiner took the first leg on the monthly cup with a card of 24 out of a possible 25 targets. D. T. Leahy and G. G. Stephenson, Jr., won the team race.

D. T. Leahy was in exceptionally good form. In the scratch shoot he tied with F. B. Stephenson with a full card, but lost the shootoff by a single "bird." Mr. Leahy divided a trophy shoot with J. H. Ernst and lost another one to Dr. Adams after a shootoff in which M. Stiner also competed.

The clay pigeon shooters turned out in large numbers to-day, no less than sixteen facing the traps. Prominent among them were John Phillip Sousa, Dr. D. L. Bulver and J. Fanning. The following is the result of the different competitions:

Trophy Shoot: 25 Targets; Handicap—Col. Hugh O'Donohue, 19, 12, 22; G. W. Church, 18, 6, 21; J. P. Sousa, 7, 10, 17; John Fanning, 19, 0, 19; J. L. O'Donohue, 18, 12, 28; J. J. O'Donohue, Jr., 16, 10, 26; George Bechtel, 21, 0, 21; B. S. Bottome, 17, 3, 20; J. Fanning, 19, 0, 19; L. Piercy, 18, 0, 18; G. W. Lembeck, 17, 0, 17. Won by J. J. O'Donohue, Jr.

Monthly Cup: 25 Targets; Handicap—Col. Hugh O'Donohue, 13, 12, 25; A. W. Church, 20, 10, 20; G. F. Hutchings, 17, 8, 25; J. E. O Donohue, 15, 12, 27; J. J. O'Donohue, 15, 10, 25; J. Fanning, 22, 0, 22; Dr. D. L. Bulver, 21, 0, 21; J. P. Sousa, 8, 10, 18; G. H. Piercy, 20, 0, 20; B. S. Bottome, 13, 3, 16; G. W. Lembeck, 15, 0, 15; George Bechtel, 14, 0, 14. Won by G. F. Hutchings.

Pick Up: 25 Targets; Handicap—J. E. O'Donohue and Col. Hugh O'Donohue, 20, 6, 26; Dr. D. L. Bulver and G. H. Piercy, 23, 0, 23; A. W. Church and J. P. Sousa, 15, 5, 20; B. S. Bottome and G. W. Lembeck, 17, 2, 19; J. Fanning and G. F. Hutchings, 16, 3, 19. Won by J. E. O'Donohue and Col. Hugh O'Donohue.

Fox Hills Cup—25 targets, scratch—J. Fanning, 19; George Bechtel, 19; G. W. Lembeck, 19; J. J. O'Donohue, Jr., 18; J. P. Sousa, 18; B. S. Bottome, 18; Col. Hugh O'Donohue, 17; A. W. Church, 16; J. F. O'Donohue, 16; J. Mayer, 15. Won by J. Fanning.

Clifton Trophy—25 targets, scratch—Dr. D. L. Bulver, 21; J. Fanning, 21; G. W. Lembeck, 20; G. H. Piercy, 20; J. Elmer O'Donohue, 19; A. W. Church, 19; J. P. Sousa, 18; E. Morrison, 17; G. F. Hutchings, 16; J. M. Ayer, 16. Shootoff won by Dr. D. L. Bulver, 24.

O'Donohue Cup—25 targets, scratch—G. W. Lembeck, 25; George Bechtel, 24; J. Fanning, 24; J. J. O'Donohue, Jr., 23; B. S. Bottome, 22; A. W. Church, 22; J. P. Sousa, 21; H. O'Donohue, 20.

Nine gunners were all that reported at the Jamaica Bay traps of the Bergen Beach Gun Club yesterday. Several practice events at 25 targets were decided and H. D. Bergen did the best work, breaking 117 out of a possible 150 targets.

The Essex County Country Club held a New Year's Day shoot, the big event being the president's cup, which was won by W. K. Fowler, who with a handicap of 4 made 24 out of 25 clay rocks. Yesterday for the Pearsall and Daly trophy the winner was James A. Hart. F. R. Coffin won the January cup with a total of 24, aided by a handicap of 2. The Taylor cup was won by Mr. Daly with a total of 22, his handicap being 2.

DORANDO STOPS AGAIN.

Italian Collapses in Nineteenth Mile and Tom Longboat Wins.

BUFFALO, Jan. 2.—Tom Longboat ran Dorando Pietri off his feet in the twenty-five mile race in the Seventy-fourth Regiment Armory here to-night. Dorando collapsed at the end of the nineteenth mile and was led from the track by his trainers.

The first mile was made in 5 minutes 7 seconds, more than 7 seconds faster than the first mile of the New York race. In the second mile Longboat struck his leg against a timber and it bled some. In the first lap of the third mile he fell and the Italian was a score of yards ahead before the Indian sprang to his feet. With a burst of speed Longboat closed the gap and the Canadians who were present in great numbers roared and cheered.

The time at the end of the five miles was 27 minutes 32½ seconds, almost a minute better than the time at the same distance in New York. The time for the ten miles was 56 minutes 31 1-5 seconds.

Dorando continued to sprint in the thirteenth and fourteenth miles, at times taking a lead of ten to fifteen yards. The Indian sprinted in the last lap of the fifteenth mile and finished the mile with a lead of two yards. Then he let Dorando pass him and set the pace again. The time at the end of the fifteenth mile was 1 hour 23 minutes 34 2-5 seconds.

Longboat took the lead in the fifth lap of the sixteenth mile. In the fourth lap of the eighteenth mile Dorando again took the lead and the Indian let him keep it. The time at the end of the eighteenth mile was 1 hour 46 minutes 1-5 second, 4 minutes and 2-5 second ahead of the time of the New York race.

In the nineteenth Dorando tried several times to run away from the Indian, but Longboat stuck close. It was the Italian's last effort. In the sixth lap he began to stagger and when he neared the finish line he stopped.

Longboat finished the distance in 3 hours 3 minutes 31 2-5 seconds.

HORSE SHOW IN NEW HANDS.

Talk of Old Management Quitting and Formation of Another Association.

H. H. Hollister, treasurer of the National Horse Show Association, declined last night to deny or affirm a rumor that has been gaining ground that the recent horse show in Madison Square Garden was the last to be held under the auspices of the present association. Mr. Hollister said that many of the Horse Show Association stockholders had made it plain that they didn't want to run the risk of losing any money.

In view of the understanding at the end of the last horse show that the association had $250,000 in the treasury this statement by the treasurer is taken to mean that the stockholders feel that now would be an auspicious time to get out. If that is the case the sentiment of the association has apparently changed since the last show opened, for at the annual luncheon preceding the opening the statement was made that the show would be continued so long as there was a dollar in the treasury. It is generally conceded that the stockholders have lost money in the last two years.

If the National Horse Show Association quits there is no doubt that a number of wealthy horsemen who have been conspicuous in the past more as exhibitors than as horse show promoters will form a new association and conduct a show that will be equal in every respect to the old one, and may be on an increased scale. Alfred G. Vanderbilt will probably be at the head of the new organization, and associated with him will be Reginald C. Vanderbilt, William H. Moore and others equally well known for their interest in horses and their ability to carry out anything of the kind that they might undertake.

Judge Moore, long one of the leading exhibitors at the local show, had no horses here the past season preferring to ship six carloads of horses, wagons and appointments to Chicago to participate in the Chicago International show. The latter show, although an innovation, was a conspicuous success and in that respect was in striking contrast to the local exhibition.

Twenty-five Cars Finish Endurance Run.

PHILADELPHIA, Jan. 2.—The New Year's endurance auto run of the Quaker City Motor Club to Wilkesbarre and return came to an end this afternoon when twenty-five of the thirty-two cars which started in the run finished in this city. Up to a late hour to-night the officials were unable to make any announcement regarding the winning cars, stating that nothing definite would be known until to-morrow.

Yacht Racing Association Meeting.

The adjourned October meeting of the Yacht Racing Association of Long Island Sound will be held at the Hotel Astor, Broadway and Forty-fourth street, on Thursday, January 7, at 8:30 P. M. The report of the proceedings of the Atlantic Coast Conference of Yacht Clubs, with the amendments to the rules approved by the conference, will be presented for consideration and action. The committees to nominate officers and members of the executive committee to serve for the year 1909 will be elected.

BODY BUILDING OF AUTOS

AN IMPORTANT PART OF THE INDUSTRY.

Careful Selection and Seasoning of the Wood Necessary—Painting and Varnishing Require Delicate Manapulation—The Adjustment of Springs.

One of the most important branches of the complex automobile industry is undoubtedly that connected with the body. When the first gasolene machines made their appearance the question of comfort, appearance and durability in body work was relatively neglected. There were a few American carriage builders with sufficient foresight to perceive the trend of events, banish their prejudices and meet the demand of the automobile manufacturer and user more than half way, says a report of the mechanical branch of the Association of Licensed Automobile Manufacturers.

Wood still plays an important part in high class automobile body work. And if satisfaction is to be given it is essential to employ none but carefully selected and thoroughly dried pieces. For the making of automobile wheels on the artillery plan only the most carefully dried wood, without flaw of any description, should be considered. One firm claims that up to the present time no accident arising from a faulty wheel produced by it has been reported.

All the wood is many years old. It is stocked in buildings, ventilated by a special system, and packed layer on layer with joists between, in order that the drying process can continue evenly. The entire stock is examined every year and turned. At least five years elapse from the entry of a piece of wood into the factory before it is cut up for use. It is interesting to go through the various departments from the designing rooms to the varnishing hall with its even temperature, excellently arranged lights and dustproofness.

There is nothing mysterious in good coach work, although it is surprising to find the great number of parts required to build up a limousine or landaulet, the strength of the ironwork and the tremenduous number of coats of paint. The paint on a large limousine body weighs much more than the average man would say—as much as seventy-five pounds and more. The painting and trimming of the car are in material degree specialized work. Good painting cannot be done on other than a good foundation with the proper graduation of the several coats of paint and varnish.

The strains to which the motor car body is subjected are greater than and considerably different from those in the case of a horse drawn vehicle. No one engaged in making cabinets, furniture, house or other stationary fittings could have any knowledge derived from the practice of his own business of what is necessary for the automobile. The framing of the timber, the use of panels not merely as enclosures but as trusses supporting the external framing, the hanging of the doors, provision for the clearance for paint, &c., have to be studied specially. The supposition that springs can give ease of riding when comparatively little attention has been paid to the form or material of the body and its trimmings is responsible for much discomfort.

The mechanical branch of the Association of Licensed Automobile Manufacturers has held meetings with representative carriage makers to see whether the latter can reduce the weight of bodies to any extent and to interchange ideas on other interesting subjects on which the automobile engineer and the body maker are working. The Carriage Builders National Association was founded thirty-five years ago and over twenty-five years ago established a technical school in New York for the instruction of carriage draughtsmen. The idea of this school is to turn out men who can take a draught and work from it or go back to the bench as workmen, their wages being increased by their technical knowledge, or later on perhaps secure employment as draughtsmen distinctively.

You can take two men and put them side by side in construction. Let one man know his business, understanding just how the thing should be proportioned. He will turn out a body that will be stronger and better than that of the man at the next bench and there will be from one hundred to one hundred and fifty pounds less weight in the product of the good man. One serious thing that the automobile and the body maker have been up against is the man who wants to have a body built that will carry one person with the springs riding easily into which he can pile eight or ten people and have the springs ride just as easily; which is somewhat like making a linen duster and a fur coat out of the same cloth. The makers of wood automobile bodies will not acknowledge that bodies made of aluminum are lighter than those of wood, but maintain that the real state of facts is the reverse. By the use of templets practically some excellent bodies are now being turned out with great rapidity.

The question of metal panels on bodies has another feature besides weight. One of the things that has troubled the carriage manufacturer is cracks and splits in the panels, which aluminum or sheet metal construction eliminates. The extreme heat and cold of a country are factors to be considered. A body built, for example, in England, France, Germany or Austria, which have moist climates, different from ours, may last there for years, and give trouble here in steam heated garages, &c., by what is called "opening up." This is one reason why it is customary to kiln dry lumber here, whereas abroad anything but air dried lumber is rare or unknown. Moreover the kind of wood generally used in this country has a lower coefficient of contraction and expansion besides being stiffer. Some body makers use aluminum coated steel for panels, to avoid checking in painting and what is known among painters as "graining out."

As a rule automobile bodies are lighter than a corresponding body on a horse drawn vehicle. For example, the rocker plate and sills of an ordinary landau, which weigh 180 pounds, are eliminated in an automobile body. No doubt people who have built metal automobile bodies up to the present time will in the future use increasingly processes not dreamed of a short time ago for welding parts to make them integral, doing away with the use of rivets, screws, etc. Of course there has been much development in the use of cast aluminum for bodies.

The American carriage builders are now thoroughly aware of the changing character of their trade and welcome the automobile. They appreciate keenly the business of automobile factories and are willing to work with them in every way. The members of the Licensed Association are pioneers in this cooperative work, as in many others. When the automobile started the average carriage maker pooh poohed it and would not take hold. In Europe no automobile maker has ever built a body, probably, except one German firm which builds a low priced body.

NOTES OF THE PALACE SHOW.

That the show is not all fuss and feathers and decorations but a solid business proposition is shown by the remarkable attendance of out of town automobile dealers who have come not to look things over simply but to buy. Not only have the trade orders exceeded the expectations of the manufacturers but the sales of cars to individuals during the first two days have broken former records.

The Fiat Import Company, which handles one of the highest priced cars in the show, reports the sale of four cars, including a 25 horse-power four seated runabout, a 25 horse-power landaulet to H. Melown Twombly, an 18 horse-power town car to Jacob Werthner and a 50 horse-power limosine to James C. Brady.

Another sale recorded was that of a sixteen passenger Rapid bus to Dietz Bros. of Corona, Smith, Mack Bros. of Allentown, Pa. sold their fifteenth car to the Hackett Motor Express Company, while the Reliance Motor Truck Company has disposed of six of its vehicles to individual buyers; the Logan Truck Company also sold six of its trucks for export to Germany.

There was also a tremendous demand on the part of dealers for Fords, Reos and Maxwells, which it is claimed totalled sales of 1,500 cars.

Charles P. Skinner, manager of the New York sales agency of the Mitchell Motor Company, reports that the five cars which constitute the exhibit of his concern at the Grand Central Palace show are stock cars in every particular, nothing having been added in the way of trimming, fancy work or improvement of any nature. These cars will be offered at the show at the same prices as any other car of the same make. The exhibit consists of one "40" seven passenger model L, a $2,000 car; two types of the celebrated $1,500 model K car, one a touring car, the other a surrey, and two styles, a runabout and a roadster of model L, at $1,000.

Although the Mitchell Motor Company has contracted with its various agencies for every car the factory can possibly turn out the coming year all of the various officials from the home office in Racine will nevertheless put in an appearance throughout the week of the Palace show. J. M. Cram, assistant sales manager, says the Mitchell theory is that this is the least the home office can do in support of the efforts of its agents. During the show William Mitchell Lewis, John W. Bate, J. W. Gilson and the entire Racine contingent will be at the exhibit.

Thomas P. Myers made the trip from Pontiac, Mich., to New York, a distance of 955 miles, through snow, ice, mud and sand in seventy hours of actual running time in a Rapid motor truck. The truck was equipped with Goodyear tires and loaded with 100 Goodyear air bottles, which will be used at the two automobile shows in this city.

When Charles Measere, the Goodyear manager in this city, examined the tires on Mr. Myers's arrival he wired the factory in Akron, Ohio, that the tires were in excellent condition after the severe test. Mr. Myers said no trouble from creeping, no splintered rims, no breaking loose of the rubber from the retaining wires and no losing of tires. He considers the performance of the Goodyear tires remarkable and assigns it to the firm vulcanizing of the soft rubber tread to the hard rubber base and casing for the wires, making it practically a one piece tire. Not a single replacement was required during the entire trip.

College men made long halts at the Moon exhibit at the Palace last night. There was a particular attraction for them at the Moon space, because for the first time in the motor car's history "college cars" were on exhibition. There is a trio of them, representing Yale, Princeton and Dartmouth. It is said that a Harvard car was built for the occasion but that there was not room enough for it on the stand. The Yale cars are painted Yale blue, with running gear of white. The Princeton Moon is colored a pale orange and Dartmouth black, while Dartmouth embodies green and white. True, white predominates in the latter's painting, but the upholstery and trimming paint is of a good old Hanover green.

A distinct innovation has been made by the Continental Caoutchouc Company at the Palace show. Daily contests are held, open to any chauffeur, automobile owner or any prospective owner, a cash prize of $5 being offered each day for the best time made in changing a ready flated tire on Continental demountable rim. Applicants who wish to try for these daily prizes can do so at the Continental show space, No. 150, any day during show hours.

In addition a cash prize of $20 will be given to the person making the quickest change during the entire week. The wheel upon which the change will be made will be mounted on the regular Continental display stand. Each contestant will be privileged to make two trials for the prize money. It is hoped by this competition to show the superior qualities of the Continental ready flated tire equipment.

The Bosch Magneto Company will exhibit at Grand Central Palace and at Madison Square Garden the most complete line of high tension and low tension magnetos ever shown. A portion of the exhibit has been imported from the European shows, where it was acknowledged to be the most comprehensive exhibit of the season. Of further interest will be the new Bosch spark plug, of which several will be on view.

The R. M. Owen Company shows at the Palace a unique novelty in the form of a scenograph. This is a moving panorama showing the big Reo factory at Lansing [illegible] actual operation by day and night. The reproduction is lifelike, even down to the miniature cars and drivers speeding around the testing track and up and down the 35 per cent. trestle. It stands out prominently as one of the cleverest achievements in panoramic realism of modern times. Thousands of show visitors made special efforts to witness this beautiful spectacle during the week.

The Badger Brass Manufacturing Company will "show the way" at both the shows with their 1909 line of headlights, tail lamps and generators. A special feature will be the Solarclipse headlight, which permits the driver of the car to cut out the blinding rays of headlights in city streets from the dash. The "Solar" exhibit will be larger than ever before and comprises many new models at a great range of price. R. H. Welles of the Badger Brass Manufacturing Company has made a trip East in order to be at both shows.

The Palace exhibit of Marmon cars, manufactured by Nordyke & Marmon Company, Indianapolis, is located at space N-4, main floor. The types shown include a Marmon "Fifty" seven passenger touring car painted pea green, striped in black and gold, upholstered in Spanish mission leather with door rails and seat panels in oak, early English fashion; one Marmon "Thirty two" five passenger touring car, body in black, running gear in English vermilion; one Marmon "Thirty two" two passenger roadster in black and yellow; one Marmon "Thirty two" two passenger coupé with controls inside. This type of car is particularly suitable for physicians and regular town use.

A chassis of the regular Marmon "Thirty two" stock car is also shown. This is the newest Marmon model, a car of 32 to 40 horse power, weighing complete with body and equipment 2,100 pounds. The four cylinder motor is water cooled, has 4½ inch bore and stroke with valves on opposite sides and is mounted within the frame on three point support. The Marmon system of automatic force feed lubrication is used. The clutch is a leather faced cone. The rear axle and three speed selective transmission are single unit. The housing of the axle is of the new type in that it is of pressed steel—combining lightness with strength. The differential and also the transmission gears are removable directly through the rear of the axle without disassembling the axle or disturbing other parts.

Large double internal expansion brakes in pressed steel brake drums are used. A novel feature of the brake is the new worm and segment adjustment, a simple and effective device for adjusting the brakes without adjusting the brake rods. The frame is of the latest type, with rise over the rear axle, bringing the centre of gravity low without reducing road clearance. The body is of sheet metal. The ignition system consists of a Bosch high tension magneto, Bosch single coil and a battery—called the dual system. It is in effect two separate systems of ignition, with one set of spark plugs over the intake valves. It does away with the usual timer and quad coil.

The superior appointments of the 1909 shaft drive Fiat town cars are attracting attention at the Grand Central Palace show. The essential features of a vehicle for city use—flexibility, silence, ease of operation and control are found in these Fiat cars, with many novelties calculated to enhance the beauty of the car and the pleasure of the occupant. The bodies are of special design, some being duplicates of lines discovered abroad in old coaching prints. This type of body is well adapted to the special chassis with dropped frame, which with a unique triple mud guard makes access to the car easy and absolutely clean. The bodies are upholstered in special imported fabrics, including Bedford cords, laces, &c., and the seats are cleverly arranged from a standpoint of comfort. The chasses are made with 12, 18 and 25 horse-power motors.

AUTOMOBILES. AUTOMOBILES. AUTOMOBILES. AUTOMOBILES.

You Who Know All About Automobiles—

You who know all about carburetors—magnetos—transmissions—lubricating systems—Do you know *all* about *tires?* If you lack proper tire knowledge, your tires are apt to cost you more than your engine—more than your gasoline—more than all the other outlays your motor car demands. Read below and learn how tire nuisance may be avoided—how tire up-keep can be reduced to a pleasing minimum.

Please understand, first, the difference between a *moulded* tire and a *wrapped tread* tire.

The moulded tire is built up, layer by layer, on an iron core. Over it is clamped an iron mould. And when the heat of the curing process is applied, that rubber expands—and, in expanding, forces a perfect union between the various layers of rubber and fabric.

But in building up that tire on the iron core, a skilled workman lays fabric on fabric, rubber on rubber. It is a feat of dexterity.

Yet, skilled as he may be, he cannot wholly avoid wrinkles, irregularities, unevenness, which, under the pressure of curing, multiply themselves into *hidden* weaknesses and defects.

Some tires, instead of being cured on an iron core, are cured on an *air bag*, which is really only another name for an extra strong inner tube.

When the air bag has been inserted in the built-up tire, strong tape is wound around it, and then it is cured in live steam.

The advantage of the wrapped tread process is that the air bag, full of compressed air, smooths out those wrinkles and irregularities and prevents those hidden weaknesses and defects.

But this advantage of the wrapped tread tire is more than offset by the fact that the tire made by this process does not get the *terrific squeeze* that the moulded tire gets when the heat expands it between core and mould—the squeeze that forces the rubber into the fabric, making a perfect union between fabric and rubber.

Obviously, the tire you ought to have is one that is built up on an iron core—*squeezed* the same as a moulded tire—and finished on an air bag to smooth out the irregularities.

Such a tire would be costly to its makers. It would combine the costs of the moulded and wrapped tread tires.

Yet in spite of the added cost, there is one tire made in just this way—*only one.* It is the Goodyear Quick Detachable.

The Goodyear Quick Detachable costs *you* only a trifle more than the common moulded tire with its inevitable hidden defects—only a trifle more than the wrapped tread tire, with its inevitable weakness.

The Goodyear Quick Detachable, because it combines the best of the two processes, and does away with the shortcomings of both, will cost you less per mile to run than any other tire which can be made.

As evidence, note this conclusive proof:

GOODYEAR

There are in New York City 1,000 taxicabs.

More than on any other one thing, the profit of the taxicab business depends on keeping down tire expense.

The owners of the 1,000 taxicabs in New York City tried all the experiments possible to try. They measured the values of the tires they tested purely by the cost per mile of the service they gave.

And the result of this cold-blooded test is that:

Today, 800 out of the 1,000 taxicabs in New York, operated by several competing companies, have contracted for Goodyear tires to be used exclusively.

And what is true of the taxicabs of New York is equally true of the taxicabs of practically every large Eastern city where taxicabs are used.

Eight out of every ten of them are using Goodyear tires exclusively.

Think of that, you who have blindly groped at the tire problem—you who have bought tires wholly by hearsay.

Don't you see, now, that there is more to be known about tires than about carburetion, ignition, transmission, lubrication?

A hundred times more about tires than can be explained in an ad like this will be told you if you will stop at our booth at either show: New York—Space 109, Gallery, Palace Show; Space 103, Elevated Platform, Garden Show. Chicago—Gallery, Coliseum, Spaces 51-52.

The Goodyear Tire & Rubber Co., 64th Street and Broadway, New York City