Seagrave Aims To Attain 240 Miles an Hour

"Golden Arrow" Will Race Over the Ormond-Daytona Beach Course March 1-15

Tests Show Giant Power

British Driver Will Compete With Previous Victor

Major H. O. D. Segrave, of London, will attempt to drive his new super-speed racing car, the Golden Arrow, at 240 miles an hour on Ormond-Daytona Beach, Fla., sometimes between March 1 and March 15. He will leave London with his car and a party of friends January 30.

This is at a rate of four miles in one minute, or one mile in fifteen seconds, or 356 feet per second, a velocity which was undreamed of four years ago. It was not thought then that tires could be made to stand the heat and friction or that cars generally could be built to stand up under the mechanical strain.

But after deducting the possible loss in ground speed through slippage, friction and wind resistance, which, in the case of the Golden Arrow, has been ascertained by careful wind tunnel tests, the car is believed capable of making a maximum ground speed of 246 miles an hour.

New Marks Are Expected

Since each additional mile in speed when high velocities are reached means increased peril to the driver, why, we may ask, does Major Segrave plan to attempt such a great increase over the present world's record of 207.55 miles an hour?

The answer is that many would not be surprised to see the present record topped by a wide margin not only on the showing of the last few speed contests, but also because of the great improvement in high velocity cars and a better understanding of the problems encountered, particularly those of wind resistance, vacums, upward thrusts, wheel suction, and other uncertainties of aerodynamics which often develop phases in actual trials which have been unforeseen in theortical estimates.

Opposed to the Golden Arrow in its attempt to take the speed crown back to Great Britain will be J. M. White's mighty 36-cylinder Triplex racing car. Last week the contest board of the American Automobile Association, meeting in New York, decided that the provision as to reverse gearing would not apply in the forthcoming trials. As Mr. White has only one gear ratio in the Triplex, that is, high gear, he will not be obliged to install a reverse gearing in his big car. The Triplex is equipped with three Liberty airplane engines, one of which is in front of the driver's seat, the other two being set side by side behind the driver's seat. During the last trials the Triplex missed fire on some of its cylinders when at high speed. Mr. White, therefore, is planning to install one new Liberty motor and perhaps three in the Triplex.

The Triplex, therefore, will presumably go into the race with a higher potential speed than ever.

High Powered Rival

Major Seagrave's car will have a high engine turnover, attaining about 900 horsepower at 3400 revolutions of the engine per minute. This is not as fast as Frank Lockhart's car, which was driven by an adapted Miller engine, which had sixteen cylinders in two banks of eight, at fifteen degrees off verticle, set in the same crank case and was able to turn over from 7,200, and perhaps up to 7,800 revolutions per minute, but much faster than J. M. White's three-engined Triplex, which won the world's record, with Ray Keech driving. For the Triplex reached its highest speed at 2,300 revolutions per minute when, barring slippage, it was estimated to have a potential speed, though on a preliminary trial Keech's tachometer showed between 2,200 and 2,300 revolutions, and he estimated his speed for part of a mile at above 240 miles an hour. After reaching 2,300 revolutions per minute the Triplex would begin to lose power, which shows the advantage of the small cylindered faster revolving engine, which continues to increase in power, to "wind up" as the saying goes.

Opposition to Wind

Major Seagrave's new car will present an opposition to the wind of but twelve square feet, equal to a frontal area of three by four feet being shoved through the air at terrific speed. In fact, the theoretical speed of the new car, based on the engine speed, is given at 246 miles per hour. The engine is a private cylinder Napier. No doubt the new car possesses the same fine qualities as Captain Malcolm Campbell's Blue Bird, which was fitted with a Napier Lion engine, and kept "winding up" and increasing in speed, always, indeed, seeming to have a little extra in reserve.

Coupled with this great reserve of power, which will provide continued acceleration until the maximum is reached, is the design of the Golden Arrow to encounter a relatively low wind resistance, and the fact that the big car weighs two and one-half tons and is less than four feet high, sitting close to the ground. These qualities make for high speed and stability.

Air tunnel tests have demonstrated that the Golden Arrow meets practically its greatest speed possibilities, while the safety margin against possible instability is said to be even greater than that of Major Seagrave's huge mystery S, with which he drove at a rate of 203.79 miles an hour in March, 1927.

In low gear Major Segrave's highest speed will be eighty-one miles an hour, in scond 166 miles and in high 246 miles.

The new car is especially designed to meet the problems of aero-dynamics which face drivers who have ascended into the new plans of extreme speed. They find strange equations introduced into the guidance and reactions of an extreme high velocity car.

The Golden Arrow cannot combat all of these aero-dynamic problems, for much still remains to be learned by experience.

The engine of the Golden Arrow weighs almost a thousand pounds. The steel frame is enormously strong. The car will be gilded, hence its name.

The springs are very stiff so that they will not give should the car leap on striking some slight irregularity in the sand. Because it is expected to go at a rate of 355 feet a second, Major Seagrave has an aiming device to keep the car on a straight course. There is a stream-lined projection at the front of the car, joined by a black band along the top of the hood to the rear sight, which is immediately in front of Major Seagrave. This should be a tremendous help in keeping the car on a true course between the ocean on the one hand and the sand dunes on the other.

Car Aimed at Objective

Nerve impulses in the human body travel almost too slowly for modern high velocity drivers. By the time a man's eyes told him he was on the wrong course he might be seventy-five feet out of line. It would be too late! Hence the modern driver looks a quarter of a mile ahead, at which distance, despite his speed, he can clearly see the way he is going. Some drivers have even proposed to lock their steering gear, but Majojr Segrave's plan to aim his car as one would aim a giant gun possesses great advantages over the locked gear. As a whole, the car is cigar shaped and with its long projecting tail, has an over-all length of twenty-six feet. The wheel base is thirteen and one-third feet and the distance between the wheels is five feet. The minimum clearance is seven inches.

As already mentioned, the engine is of the same type as that in the Blue Bird, Captain Malcolm Campbell's famous racer. The twelve cylinders are arranged in three rows of four each and at angles in the crank case to give an even thrust. The cylinders are five and one-eighth-inch bore and five and one-half-inch stroke and, therefore, give much greater power than the Lockhart car and probably greater power than Major Seagrave's Mystery S.

In Major Seagrave's "Golden Arrow" we find a car of much greater cylinder capacity, coupled with a high turn, and many developments equal or perhaps exceeding that of the Lockhart car, but, as a while, on a much larger and heavier scale.

Also the rated horsepower is in excess of the rated power of the Blue Bird which, ohwever, developed about 900 horsepower. So the power of the Golden Arrow is presumably greater than that of any other racing car in the extreme velocity class except the Triplex. That enormous power plant on wheels was equipped with three Liberty airplane engines, one in front of the driver's seat and two, side by side, behind. Each of these engines had a rated power of 450 horsepower.

The Triplex weighs 8,000 pounds. The Mystery S weighed 6,000 pounds. The Golden Arrow weighs about 5,000 pounds, but she is very carefully designed and calculated to keep on the ground and she has a tremendous reserve of power in relation to her weight. Major Seagrave is one of the world's most skillful and experienced drivers. It is the car that best hangs to the ground that stands the best chance of winning. The new car has been so carefully tested in wind tunnels, and has been constructed with such meticulous care, that hope is high, and not without reason, that the gallant British sportsman will hang up a new world's record.

Reaching Your Goal

Favored by Fate? Smiled on by Chance?
Is that what you think of the winning man?
Then stop, my friend, another glance
And you'll sense the race he ran.

Oh, men by him, as men by you,
And all of them striving to win the race,
But he, among the very few,
Found and stuck to his pace.
Work, hard work, through the long, hard hours;
Oh, dreaming and planning for more work, too;
Plodding along through the hardest showers—
In such manner fortune grew!

There's work for all, for you—for me—
And the chance to make, within each soul,
Ourselves, our slaves, ah—then you'll see
The reaching of—your goal.

—By Katharine Haviland Taylor.

IVY

Seven-year-old Ivy of Addelstone was selected by Queen Mary as her protege under the adoption scheme of the Princess Mary Village Homes.

Cabinet Crisis In Albania Laid To Budget Issue

Difficulty Said to Indicate Change in Tirana's Relations With Italy

Tirana, Albania.—The latest Cabinet crisis here indicates a change in the intimate relations between the Governments of King Zogu and the Italian Premier, Benito Mussolini. The Cabinet resigned on Jan. 12 because of budget difficulties. The State plainly needed more money. But all members of the Cabinet were not able to agree on methods of securing it. Much of the money used in the new Albanian kingdom comes from Italy. The Albanian national banks are in Italian hands. Most Albanian concessions go to Italians.

Naturally it is to the interest of Italy to keep Albania going, so undoubtedly the Government of Tirana could get more money from home. But the Albanian Government does not want to become too deeply involved, because among the Albanian people Italy is unpopular. The Albanians resent Italian encroachment. So the Government wants and retains as much independence as possible. Therefore, some members hesitated to accept the conditions Italy laid down regarding forthcoming loans or advances, and the Government resigned.

However, in the cabinet appointed three days later every minister received his old post back, except Elian Bey Vrioni, the Foreign Minister, who is replaced by Raoua Bey Fico. Thus it was not the Minister of Fnance who was eliminated by the crisis over the question of finances. In other words the finances are clearly tied up with the question of foreign relations.

The dismissal of Mr. Vrioni is no ordinary matter, since he has long been one of the strong men in Albania, closer to King Zogu than any other, and his unwavering supporter from the first. Vrioni has also been an enthusiastic admirer of Italy and an ardent upholder of the Italian-Albanian alliance.

Pleasure in Work

"I can't abide to see men throw away their tools i' that way, the minute the clock begins to strike, as if they took no pleasure i' their work and was afraid o' doing a stroke too much. I hate to see a man's arms drop down as if he was shot before the clock's fairly struck, just as if he's never a bit o' pride and delight in 's work. The very grindstone'll go on turning a bit after you loose it."—George Eliot, in "Adam Bede."

Success Ideals

Why this longing, thus forever sighing,
For the far-off, unattained and dim,
While the beautiful, all around thee lying,
Offers up its low, perpetual hymn?

Purchase not friends with gifts; when thou ceasest to give, such will cease to love.—Fuller.

Good Advice

Ford Shows How to Prevent Waste in Trade and Finance

New York.—Reformation of the "money system" of the United States takes an important place among the new book entitled "My Philosophy in topics discussed by Henry Ford in a Industry," published by Coward-McCann.

Mr. Ford propounds a hypothetical question in finance and then proceeds to answer it. He shows how a $300,000,000 public improvement bond issue is financed by the Government, the security for which "is nothing more or less than the energy of wealth in its most productive form; i.e., natural resources."

"Suppose we borrow $30,000,000 and pay 120 per cent. interest, we literally have to pay $66,000,000 for the use of $30,000,000," he says. "That is, we pay $30,000,000 for the public improvement and $36,000,000 for the loan. And it was the government's money to begin with. It seems like a very childish and unbusinesslike method.

"Suppose, for example," he says, "we decide to relieve unemployment by carrying on some necessary improvment and to do this the Government needs $30,000,000. That's 1,500,000 $20 bills or 3,000,000 $10 bills. The Government can issue these against the value of the thing in prospect and with them pay every expense connected with the work, then put the plan in operation and out of its earnings retire the entire $30,000,000 worth of currency which has been issued. Economists no longer question that method of doing things. Indeed, it looks as if financial engintering will come round to something very like it. We shall see great improvement when we apply engineering methods to finance."

"The more alert financial men of this country are thinking of these matters on broader lines than ever before, and that is very heartening for, after all, financial problems will have to be handled by financial minds. The rank and file of our people are able to see how things ought to be, but the specialists will have to create the methods by which the 'ought-to-be' will actually come into practice."

War will not be abolished until its roots are cut, Mr. Ford holds, and "one of its main roots is a false money system and the high priests thereof."

Mr. Ford characterizes farming as "the first important industry," and envisages the passing of the small farmer and the advent of "large corporations, whose sole business it will be to perform the operations of plowing, planting, cultivating and harvesting.

Mr. Ford sees a gap between the people and political leaders, and he holds that nowhere is it more riscernible than in the matter of liquor.

"The United States is dry, not only legally, but by moral conviction," he continues. "The American home is dry, and the American Nation gets its tone from the home and not from the wet propaganda."

Mr. Ford pays a striking tribute to machinery, which "is accomplishing in the world what han has failed to do by preaching, propaganda or the written word."

Dipping briefly into foreign affairs, Mr. Ford asserts that "both Russia's and China's problems are fundamentally industrial and will be solved by the application of . . . right methods of thinking, practically applied."

Science might rest up a bit about the origin of man, and determine what his finish is to be.

Rhodesia Reports Good Strike of Tin Near Salisbury

Joint Operations Developing Tanganyika, Dutch and Belgian Companies

FOREIGN NOTES

London.—Cables from Rhodesia report a promising tin strike near Salisbury, and another is about to be explored at Shamva. Meanwhile, the joint operations of the Tanganyika Company and the Dutch and Belgian companies in developing the tin fields of Uganda and that part of the Belgian Congo adjacent is now actively starting. It is on the Congo side that the richest section of the field seems to lie.

It is understood here that the negotiations for acquiring the necessary steamers for the passenger, fruit and cargo service between Jamaica and London (to be put in operation by the Jamaica Banana Producers' Association) are now completed, and that these will start early in the New Year.

The Governor of Uganda has just announced that large areas of that central African colony are now being actively prospected for oil, and there was every hope of these efforts being rewarded. The Anglo-Persian Oil Company has the sole right to prospect and develop oil products here. Tin is being exported in increasing quantities, he remarked, and copper is shortly to be developed. Contrasting their cotton exports he mentioned that in 1925 the export was 196,000 bales, valued at £4,686,000. In 1927, 131,000 bales were exported, and in 1928 up to the end of July, 127,000 bales had been exported. For the whole year the total cotton exports should be 136,000 bales, valued at £2,430,000.

The British Government has just authorized the extension to British subjects in Morocco of the tax on vacant land sites which the French Government of Morocco has just imposed on its nationals. H. B. M.'s Consular Court in Morocco has the sole authority to make British subjects in Morocco obey such "dahirs."

The important railway between Casablanca, the commercial metropalis of French Morocco, and Marrakeesh, the great southern capital, at the foot of the Atlas Mountains, has recently been opened by the boy Sultan. In fact, he insisted on riding in the first train. This length of line is 160 miles, but, as the vicinity of the southern terminus has recently been found to be so heavily mineralized, it will probably become the first section of an important system opening up that part of the country. For the moment, its usefulness lies in handling produce and accommodating tourists. Marrakeesh, perhaps, more nearly resembles the Bagdad of the Caliph Haroun al Roschid than any other city on earth, and is an increasing lure for tourists. When the section of railway on the northern system between Fez and Oudja is completed, it will be possible to travel by train from Marrakeesh to Tunis, without changing, a distance of 1,650 miles.

Railway Branch Line Programs

Saskatoon Star-Phoenix (Lib.): There is every indication that the heads of the two companies have not as yet been able to get together on the question of branch line construction, but it may be hoped that before the Railway Committee of the House of Commons, which will have the final say, gets down to business, compromises will be suggetsed which will satisfy not only the railway heads, but, more important still, the people who will be affected by the lines in question.

The Tariff Threat

Winnipeg Tribune (Ind. Cons.): Congress is now preparing to increase the United States tariff protection with particular relation to agricultural products. Actually, though not in form, the purpose is to shut out more of the farm products from competition with the products of the American farmers. Whatever effect these measures have upon our export trade will be felt directly by the farmers and indirectly by every business interest in the Dominion.

Gypsum in Nova Scotia

Gypsum was mined in Nova Scotia as early as 1829, but it is in recent years that the industry has had its most remarkable expansion. The present output of over 800,000 tons annually is more than three time that of all the rest of Canada.

An Economist

The man who explores the depths of natural science and revealed truth, bringing forth that which advances the prosperity of his species, and making the world the richer that he has been born into it, is the true economist.—Stephen Bourne, F.S.S.

Self-Government

The necessity for external government to man is in inverse ratio to the vigor of his self-government. Where the last is complete, the first is least wanted. Hence, the more virtue the more liberty.

A Sport Fast Growing in Popularity

SKI-JORING IN THE ALPS

Ski-joring behind a horse is one of the popular winter pastimes of those who take a winter holiday in the Alps, and it is a great sport. Near Toronto on North Yonge Street it is not unusual to see ski-iers towing behind motor cars.