

THE FIRST RACES AND RECORDS ON THE NEW WEYBRIDGE TRACK.

BY THE LONDON CORRESPONDENT OF THE SCIENTIFIC AMERICAN.

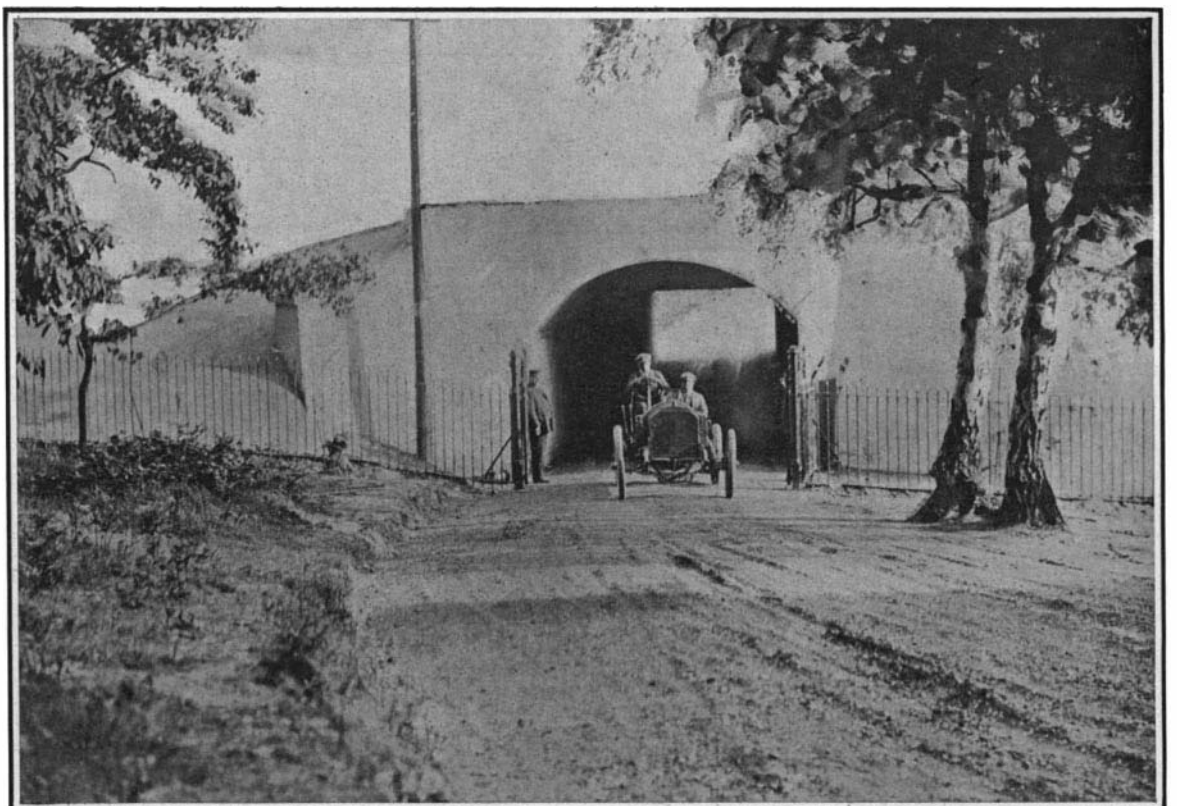
The opening meet of the Brooklands Automobile Racing Club at the newly-constructed course near Weybridge on Saturday, July 6, would certainly go to indicate that motor racing as a sport will become very popular in Great Britain. There were six distinct races, some of them having to be run in heats on ac-

upon it day and night. They removed 200,000 cubic yards of earth, felled 300 trees, diverted the course of the River Wey for a considerable distance, and laid a concrete track five inches thick of the length already mentioned. The total cost is put down at \$750,000. In the monster amphitheater no fewer than 30,000 people can be comfortably seated to watch the races, while half a million can be accommodated with standing room. Around the course are placed sentry boxes,

and Clemens. Mr. Edge started his ride at 6 o'clock on the Friday evening, finishing it at the same time on the following day. He was accompanied by two cars of similar build to that which he drove, viz., a 60-horse-power six-cylinder Napier. The two cars that followed him were each driven by two men, one car being painted white and the other red. The official measurement of the track is 2 11-16 miles to the lap, the measurement being taken 50 feet from the inside



The Circuit Counters and Scoring Board.



View of Subway by Which Cars Leave the Track.

count of the numerous entries, while nearly \$25,000 was offered in prizes as well as a gold cup.

The track, which is the only one of its kind in the world, is situated at Weybridge, some 19 miles from Waterloo Station, in Surrey. It is nothing less than a huge pear-shaped cycle track, 100 feet wide and $3\frac{1}{4}$ miles in length measured on the outside curve, and banked in parts to such an extent that it would be impossible to walk up the track higher than about 15 feet from the top. It is the largest circular track in Europe, if not in the world. It is designed so that motorists may attain a speed of one hundred and twenty miles an hour with perfect safety. Indeed, over one hundred miles an hour has already been accomplished on the course.

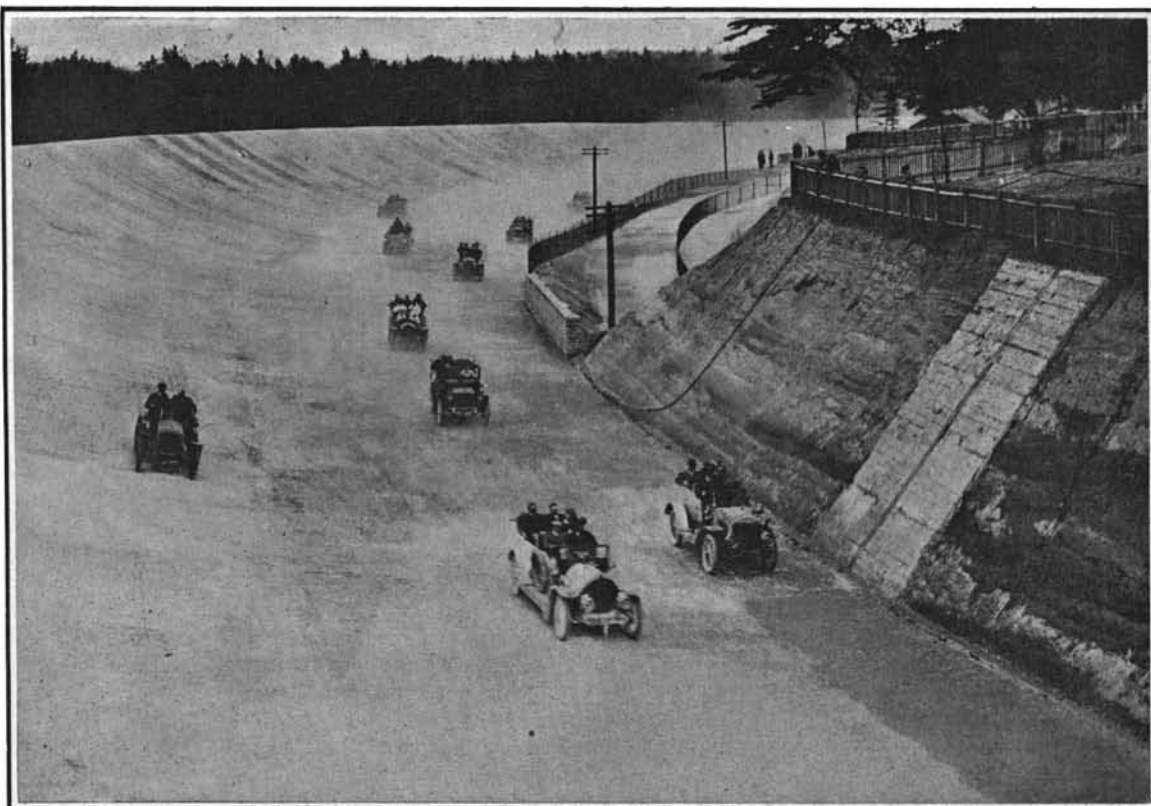
It was built in the incredibly short time of twelve months. During that period 1,500 men were engaged

each giving a full view of the complete circuit. These are fitted with telephones, so that, in the event of a breakdown or an accident, the sentry in the nearest box, after first hoisting a flag and ringing his electric bell which signals to the sentries on either side of him, can telephone to the head exchange in the official building facing the winning post for what is required. It may be mentioned that a special staff, ambulance car, and breakdown gang are in attendance at all races.

It was on this track that Mr. S. F. Edge, the well-known racing motorist, a week previously established a wonderful record by driving a car 1,581 miles in twenty-four hours, or at an average speed of over 65 miles per hour. The best-known performance for twenty-four hours, prior to this feat, was 1,096 miles, accomplished two years ago at Philadelphia by Merz

edge. So that there should be no question as to his covering the full registered distance, Edge had the 50-foot border marked during the night by red hurricane lamps, outside which the cars kept. The checking and time arrangements were in the hands of the officials of the Automobile Club.

In the first two hours Mr. Edge covered 140 miles. He drove his car throughout the twenty-four hours entirely by himself, though he was accompanied by J. Blackburn as mechanic, who had just returned from India. His principal duty was to feed his companion with sandwiches and meat tabloids. The first 100 miles was reeled off in 1 hour, 25 minutes, 13.25 seconds. All the three cars suffered very badly from tire trouble, but detachable wheels had been fitted in anticipation of this, and the changes were quickly effected; indeed, on several occasions a new wheel



Cars Racing Round One of the Turns.

All the turns are steeply banked, making possible a speed of 100 miles an hour and over with complete safety.



S. F. Edge Going at 65 Miles an Hour in His 24-Hour Speed Trial.

He covered 1,581 miles. Note the small glass wind-shield in front of the driver.

THE FIRST RACES AND RECORDS ON THE NEW WEYBRIDGE TRACK.

was fitted in thirty seconds. Stops for other reasons were very few. During the early part of the performance the white car had to have a new spark plug fitted in addition to changing a tire, these operations causing a delay of eight minutes. In less than an hour, in the middle of the night, Edge had to change two wheels, back and front. At 1,000 miles Edge, who had completed that distance in 14 hours, 15 minutes, and 2-5 of a second, had beaten Merz and Clemens's record by no less than 7 hours, 3 minutes, 43-5 seconds.

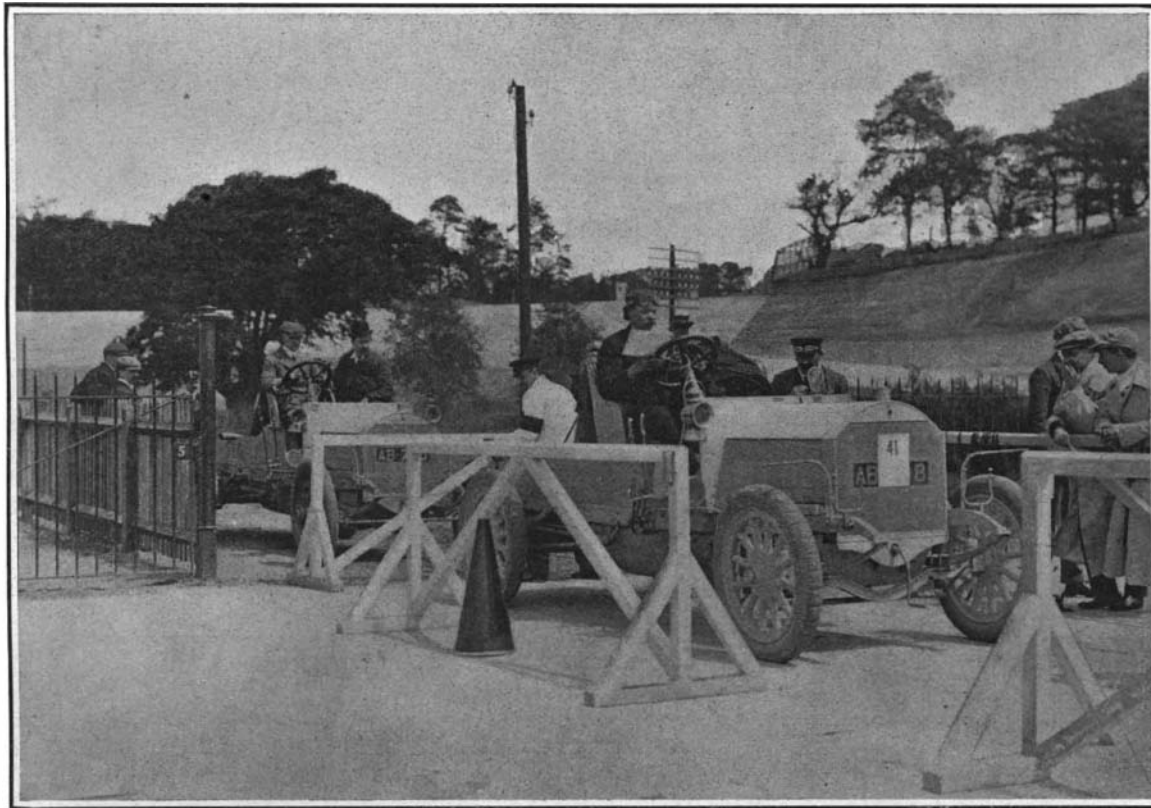
The drive proved to be a very severe trial for the track, the cement surface of which was broken in several places. After he had been driving seventeen hours, Edge changed his clothes, and appeared quite fresh and well. The track by this time showed signs of crumbling away at various points, the cars scattering dense masses of dust on passing over the defective places. On one occasion, while going at over 70 miles an hour, Edge had two tires burst, the report being heard right across the track. The wheels whirled round on their rims for a considerable distance, fortunately without serious results. Edge eventually finished his ride with 1,581 miles 1,310 yards to his credit. The white car covered 1,538 miles 160 yards, and the red car 1,521 miles 80 yards.

This performance by Edge naturally attracted public attention to the course and to the first meet. Indeed, over 10,000 persons traveled down from Waterloo to witness the races. As already stated, there were six distinct contests or races. Before each race the cars were lined up, in order to make certain that they complied with the conditions, such as size, cost, and class. They were sent down the course to the starting point at the fork, where they looked like a battery of artillery enveloped in smoke. The ringing of a bell announced that they had started. Round and round the cars went, now high up on the bank, now low down; now forging ahead till the race became a procession, or dropping out altogether when a tire came off, as it did on one occasion, or when something happened to the machinery, which was not uncommon.

The first race was for the Marcel Renault Memorial Plate of \$2,750 distributed in three prizes, for motor cars propelled by means of internal combustion engines having a cylinder bore of from 85 to 110 millimeters (3.346 to 4.330 inches) and a weight of not over 3,000 pounds. The distance was 12 miles. Fourteen cars took part in this race, necessitating two heats and then a final. The winners were Mr. H. C. Tryon on a Napier car, Mr. A. Clifford Earp on an Iris, and Mr. A. Huntley Walker on a Darracq. The last named would have done better had he not lost half the rubber tread of his nearside driving wheel during the first round. A Darracq car came in first in the second race, namely, for the Horsley plate, a Daimler coming

in first in the third race for the Gottlieb Daimler Memorial Plate.

The most exciting race of the day was that for the Byfleet Plate, which resulted in a dead heat between Mr. Charles Jarrott on a 60-horse-power De Dietrich car and Mr. F. Newton on a 45-horse-power Napier. The distance was three times round the course and finish down the five-furlong straight. Newton on the Napier got off best at the start, and held a lead of a



Weighing and Checking Cars and Giving Them Their Numbers on Entering the Inclosure.

THE FIRST RACES AND RECORDS ON THE NEW WEYBRIDGE TRACK.

couple of lengths over Jarrott for the first round, when Jarrott, who was on the outside, passed him on the high banking, to be caught himself and held for the next round, which they ran bonnet to bonnet, amid intense excitement from the crowd of spectators. Up the long straight course the two cars came, the De Dietrich having an advantage of inches only. When a yard or two from the finishing line, the Napier leaped forward like a shot from a gun, and they passed the winning post together, wheel to wheel, traveling at the rate of between 75 and 80 miles per hour.

The other two races were for the Montagu Cup and the Stephenson Plate. The winners of the first named were Mr. J. E. Hutton on a Mercedes car, Mr. K. Okura on a Fiat, and Mr. F. R. Fry also on a Mercedes. In the Stephenson Plate the first three were Mr. A. Huntley's Darracq car, Mr. C. Sangster's Ariel-Simplex, and Capt. Owen's Junior.

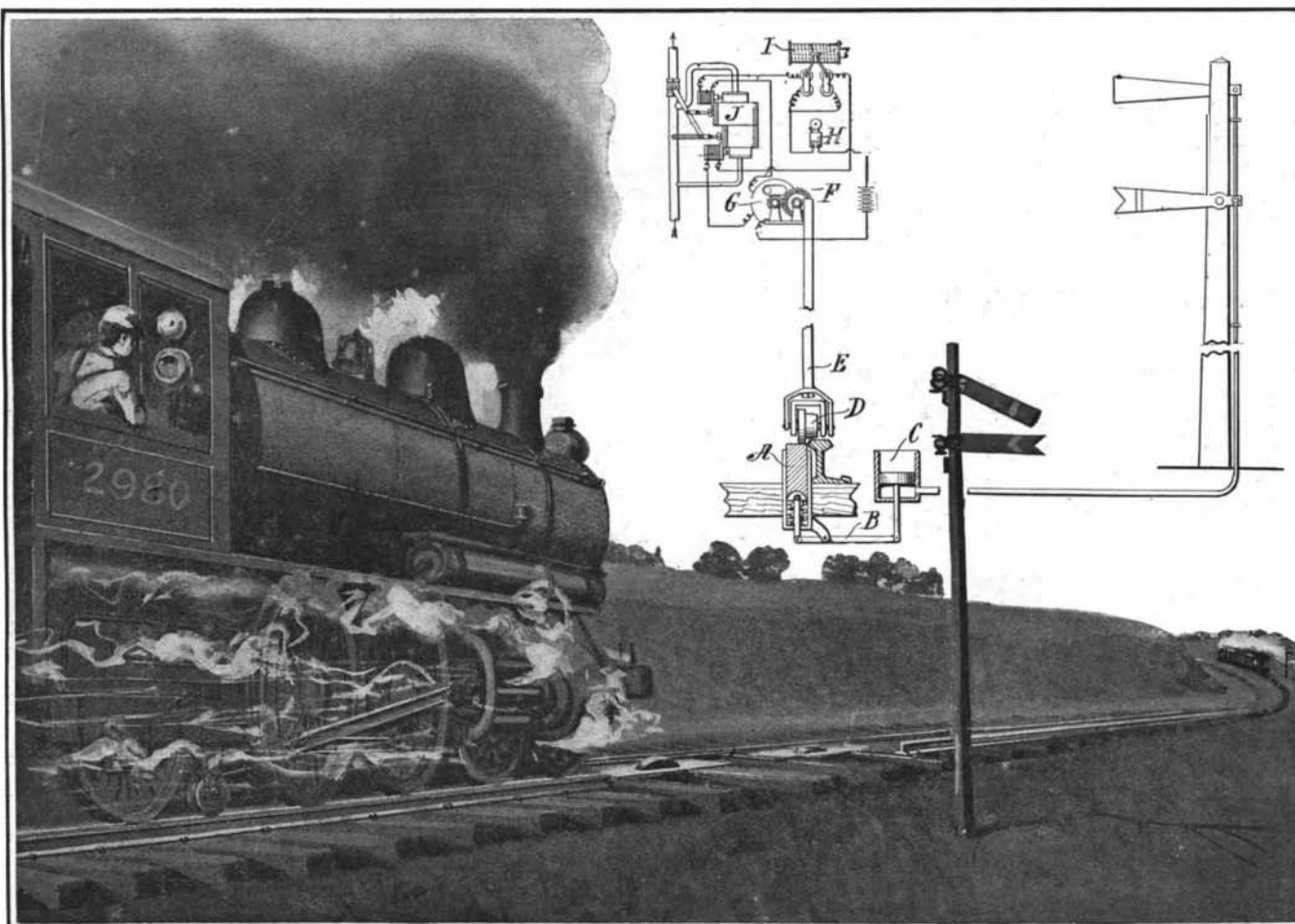
Several bookmakers were present on the course, and many bets were taken. The drivers wore colors, so that some of them, with their goggles, presented fantastic images as they hustled by. As in the beginning of every great undertaking, the management discovered that complete as were their arrangements, a few alterations will be necessary for the next meeting. The times occupied in finishing the races were not given. As the Brooklands Automobile Racing Club

hope to permit successful handicaps, they are keeping this information for the present to themselves, in order to get statistics for these performances. When these are complete it is expected, and it is really desirable, that the times will be hoisted on the number board with the winner's name, as it will lead to a number of misleading statements of a car's performance if the official times are not given. On the whole, the first meeting passed off very satisfactorily. Races every fortnight will now take place for some little time to come, and during the season some \$75,000 in money prizes will be competed for.

The 24-hour race has become very popular in America during the past few months, and at such a race held at Detroit on the 21st and 22d of June, a new record was made, which superseded that made by the National car in 1905. In this race each car was allowed two drivers, who could take turns at the wheel, and it was also permissible to change the cars in case of an accident, or if found desirable. The new record is 1,135 miles, made by Messrs. Kulick and Lorimer on a 6-cylinder Ford car, while Herbert Lytle, with a Pope-Toledo, was second, scoring 1,109 miles. C. A. Coey, with a 40-horse-power Thomas, was third with 990 miles. During the course of the race a Wayne car and Lytle's Pope-Toledo both went through the fence. The former was only slightly damaged, and within 20 minutes a new axle and wheels had been put on and the car set running again, the result being that it obtained fourth place with a score of 958 miles. The Pope-Toledo was badly damaged, but Lytle took a substitute car, with which he finished the race. Two Ford 4-cylinder runabouts obtained fifth and seventh places with scores of 798 and 728 miles respectively. A Buick car was sixth with 752 miles, and a Stevens-Duryea eighth with 713 miles. Several of the drivers completed the 24-hour test without being relieved by a substitute.

BLOCK SIGNALS IN THE CAB OF THE LOCOMOTIVE.

Although automatic railroad block-signal systems have been developed to the highest degree of efficiency, they cannot yet be relied upon entirely to prevent accident; for collisions continue to occur even on our most elaborately equipped railroads. Investigation into a number of accidents which have happened in recent years has shown that the signals were in perfect working order,



A MECHANICAL SYSTEM FOR REPEATING BLOCK SIGNALS IN THE LOCOMOTIVE CAB.

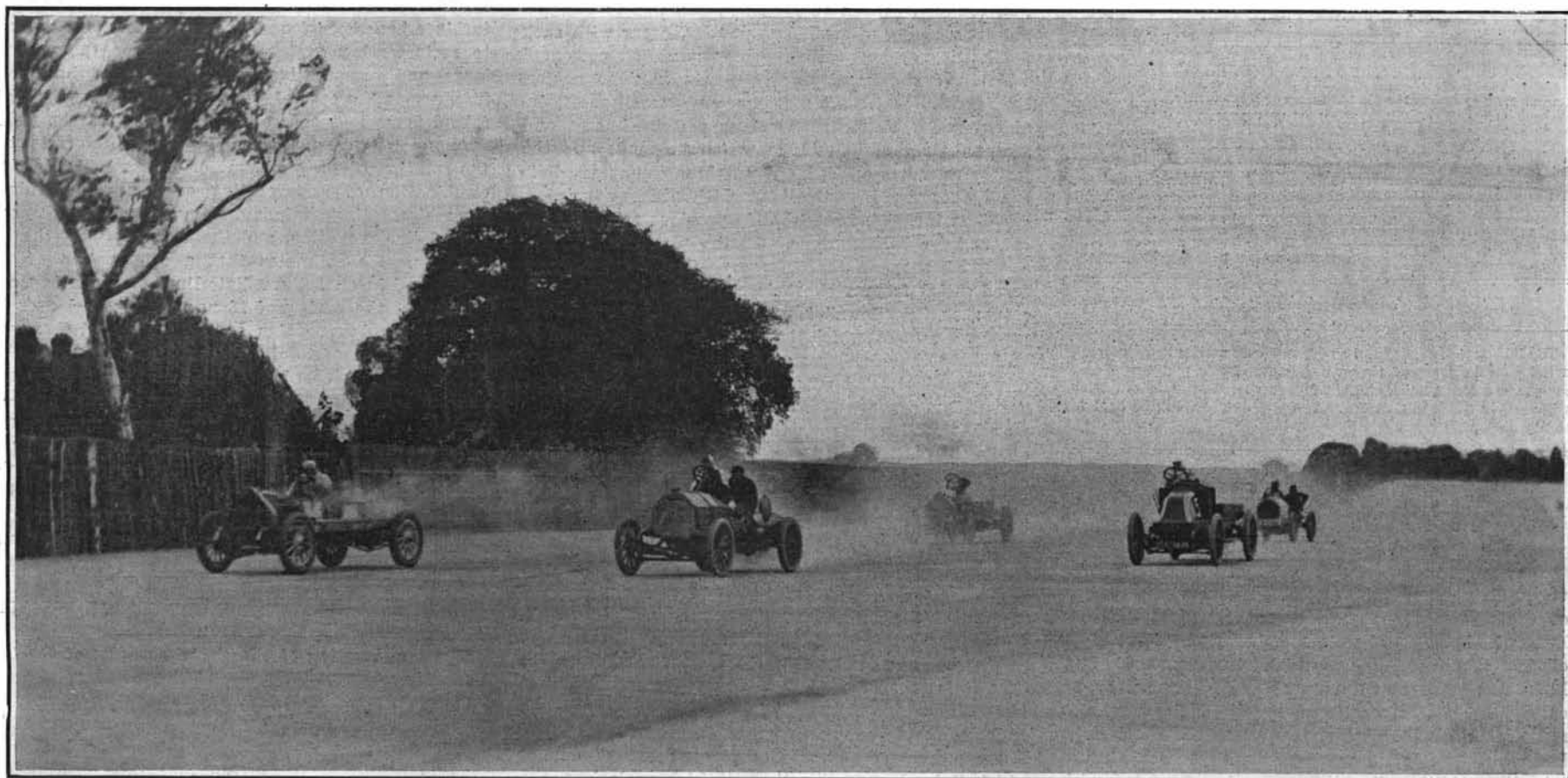
SCIENTIFIC AMERICAN

[Entered at the Post Office of New York, N. Y., as Second Class Matter. Copyright, 1907, by Munn & Co.]

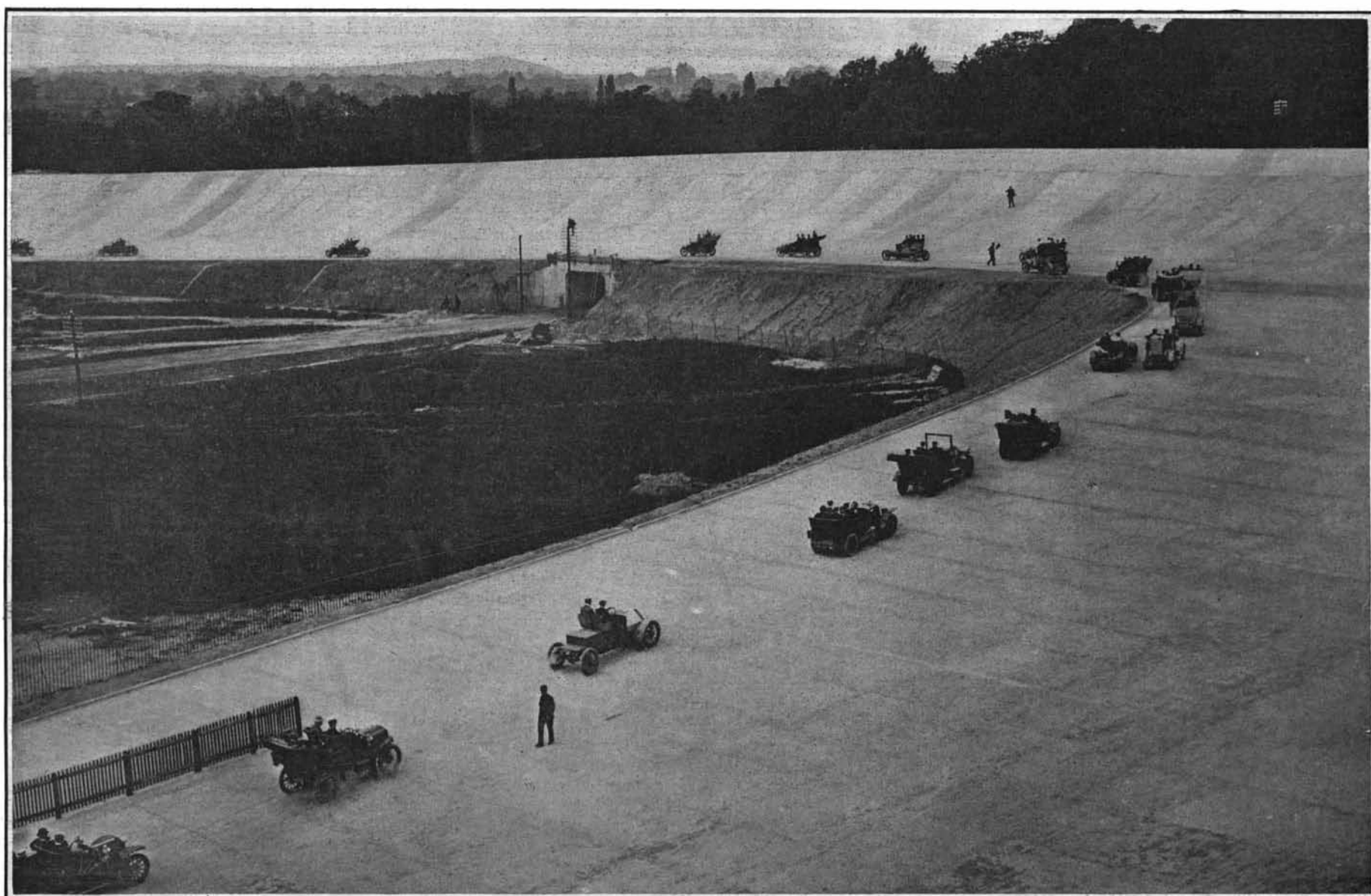
Vol. XXVII.—No. 4.
Established 1845.

NEW YORK, JULY 27, 1907.

[10 CENTS A COPY
\$3.00 A YEAR.



The Finale of the Race for the Renault Memorial Plate.



Procession of Cars Around the Track.

THE OPENING RACES AND SPEED TRIALS ON THE NEW CEMENT TRACK OF THE BROOKLANDS RACING CLUB AT WEYBRIDGE, ENGLAND.—[See page 60.]