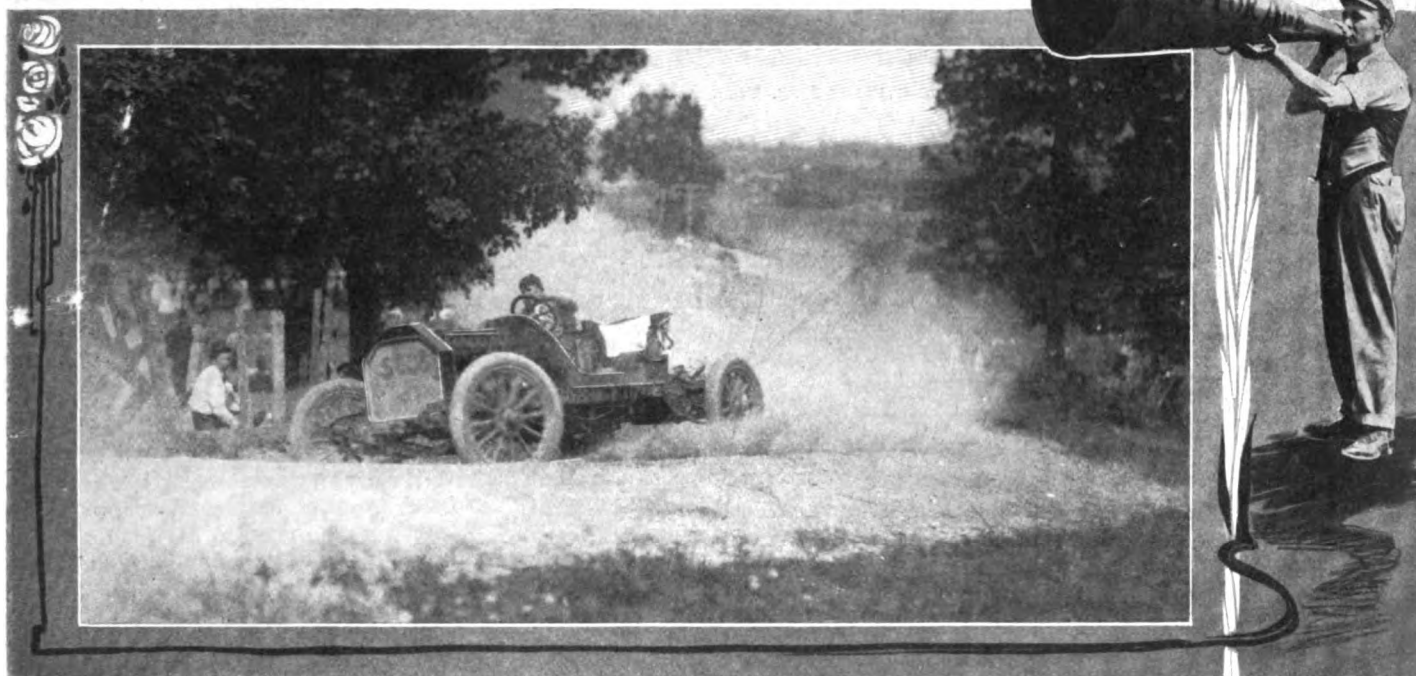


MOTOR AGE

SIXES STARS AT ALGONQUIN

Stearns Six Captures Time Trophy



LELAND IN STEARNS SIX TAKING THE FIRST TURN ON PERRY HILL. SCENE OF STANDING START CLIMB

CHICAGO, Aug. 15—Throwing caution to the winds, opening his throttle to its widest, taking all sorts of chances and risking his life on hooking the left rear wheel of his Stearns six-cylinder stripped chassis in a narrow rut near the top of Phillips hill and which swung around a most dangerous turn, Frank W. Leland yesterday climbed the famous slope, an even $\frac{1}{2}$ mile, in :29%, thereby beating his old rival, George Salzman, of Thomas Flyer fame, and winning the first leg on the Algonquin cup, which was hung up as the time prize in the third annual hill-climb of the Chicago Motor Club, postponed from last May because of the rainy spell.

Leland had to hit that narrow rut in order to win. It was a desperate chance, for the turn was a bad one. One man already had failed to hold it and had dashed into the crowd, injuring three spectators, and more than one star driver had shut off power before swinging around the corner. But Leland found himself in a

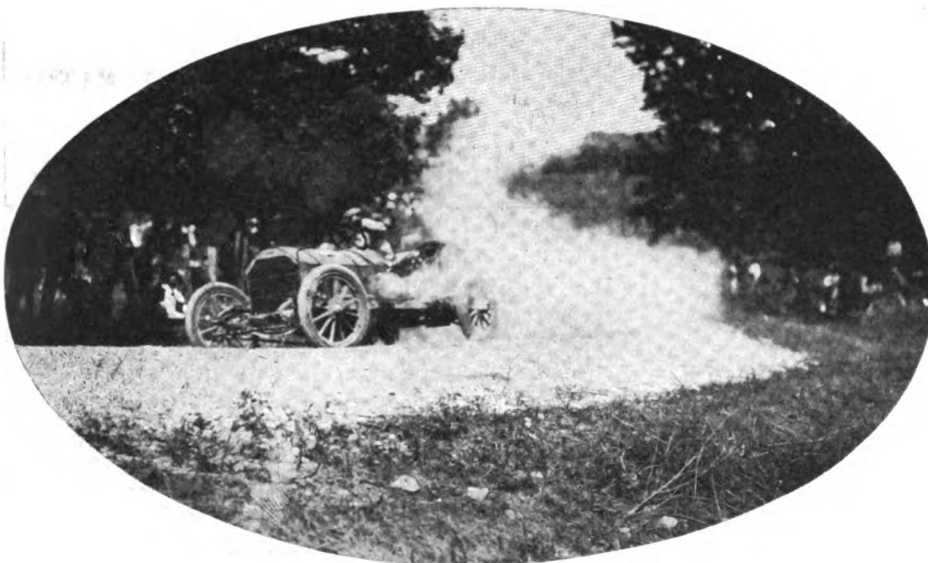
ALGONQUIN CLIMB RESULTS

Class A, handicap		
Winner of class	- - - - -	Holsman
Best total time	- - - - -	Bendix
Class B, handicap		
Winner of class	- - - - -	Brush
Best total time	- - - - -	Chalmers-Detroit
Class C, handicap		
Winner of class	- - - - -	Apperson
Best total time	- - - - -	Corbin
Class D, handicap		
Winner of class	- - - - -	Cleveland
Best total time	- - - - -	Thomas-Detroit
Class E, handicap		
Winner of class	- - - - -	Pierce-Arrow
Best total time	- - - - -	Apperson
Class F, free-for-all		
Winner of class	- - - - -	Stearns Six
Class M, free-for-all		
Winner of class	- - - - -	Knox
Class J, amateur handicap		
Winner of class	- - - - -	Thomas-Detroit
Class I, amateur free-for-all		
Winner of class	- - - - -	Thomas-Detroit
Records Established		
Perry Hill		
Knox, No. 50	- - - - -	:24 1-5
Apperson, No. 36	- - - - -	:24 1-5
Phillips Hill		
Stearns, No. 43	- - - - -	:29 2-5

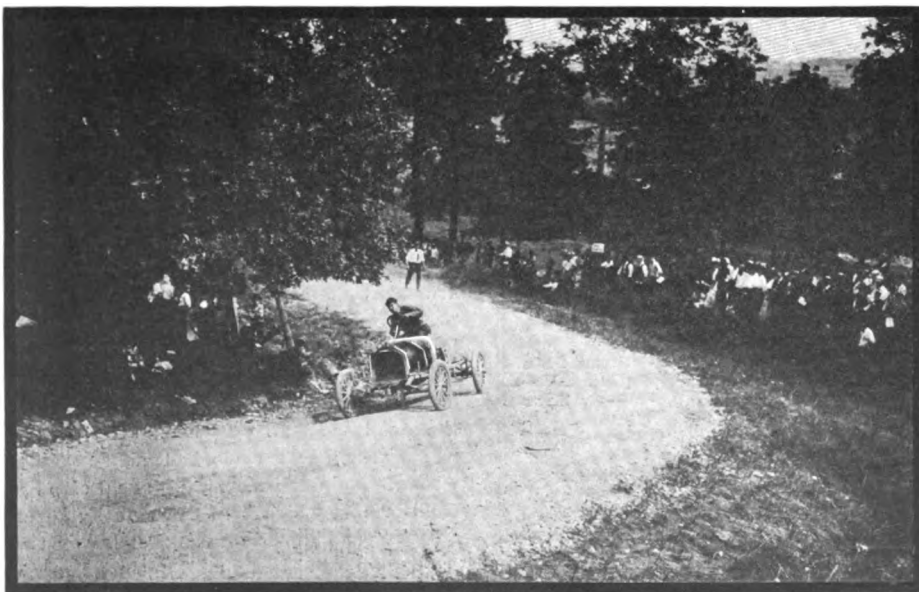
position where he had to break a record in order to win. Salzman, a few minutes before, had gone up in :30, exactly 60 miles an hour, and the Algonquin cup seemed as good as won. Leland never had equalled that mark even in practice and it seemed a forlorn hope, for his rival had tied him in the morning on Perry hill and that :30 looked as fast as a streak of lightning. But Leland was game. He knew there was a little rut swinging around that bend that would hold the Stearns six in check if he only could hook it with his left rear wheel. With the rut holding the rear of the car, Leland knew he could hold the front and whiz around the bend with all power on. He struck it and the big car clocked :29%. This, with :24% in the morning, gave Leland a total of :54, which beat Salzman by $\frac{1}{2}$ of a second and gave him the first leg on the Algonquin cup, hung up by the villagers as a challenge trophy and which has to be won three times by one car.



THOMAS-DETROIT BLUEBIRD HOLDS THE PERRY HILL TURN WELL



APPERSON BIG DICK, EDGAR APPERSON AT THE WHEEL, ON PERRY HILL



BUICK RUNABOUT WHICH CLIMBED THE TWO HILLS IN 78-2-5 SECONDS

It was a battle of the sixes, a glorious struggle, too, in which two of the best drivers in the country renewed an old fight and in which one of them turned the tables on his antagonist. It was a renewal of that famous race at Savannah last spring in which Salzman, driving a Thomas Flyer, had defeated Leland in a Stearns six in the race for that class of machines. Salzman piloted the car which he drove to victory in the south, while Leland was in one of the same type which he had at Savannah. It was the first time since that contest that the two had hooked up and it was a battle for blood. The rivals had broken even in the morning at :24% on Perry hill and so it was up to the afternoon event to decide honors between the two. The Apperson, which had tied with the Knox at :24% on Perry, had had its trial and had done :31 on Phillips, and with the little Knox was still a big factor, their time in the afternoon making both Salzman and Leland shudder a bit. Leland wasn't ready when his turn came and so Salzman shot the hill before his rival. He had done :30 in practice and in his class, which was run a short time before the free-for-all, which decided the Algonquin cup, he had clipped the record to :30%. Knowing what his car could do, Salzman made his trial with all the confidence in the world. He didn't have any private rut and he had to take desperate chances on the turn. He struck the bumps on the bend, the big Thomas jumped around like a kernel of corn on a hot stove but Salzman weathered this motoring Cape Horn in daring fashion, whizzing across the tape like a shot and with all the ear marks of a record-breaker and a cup winner. He had touched :30 and the trophy seemed his.

Last in his class, Leland then went after the cup. Away to a beautiful start, he scrambled up the hill as if it was level ground. The turn loomed up ahead of him but he never shut off. He was playing for that rut and he hooked it. As the car steadied down, Leland's face lost the look of desperation and a grin of joy illumined his features as he came around the bend as smoothly as if he had been going only 25 miles an hour instead of 60. Indeed, so well did he navigate this danger point that he did not seem to be moving at the speed of Salzman. But the watches told the story—Trego's automatic timing device had clocked :29% and by the scant margin of $\frac{1}{2}$ second Leland had avenged Savannah and had come out of the ruck the hero of the day, holder of the Algonquin cup and winner of the big free-for-all. It was a glorious windup of a thrilling day.

Subordinated by this cup struggle but none the less interesting because of this, the other events on the big card brought about close and thrilling contests. Five of the classes were run under a handicap formula which brought out motor efficiency, the results being reached by mul-

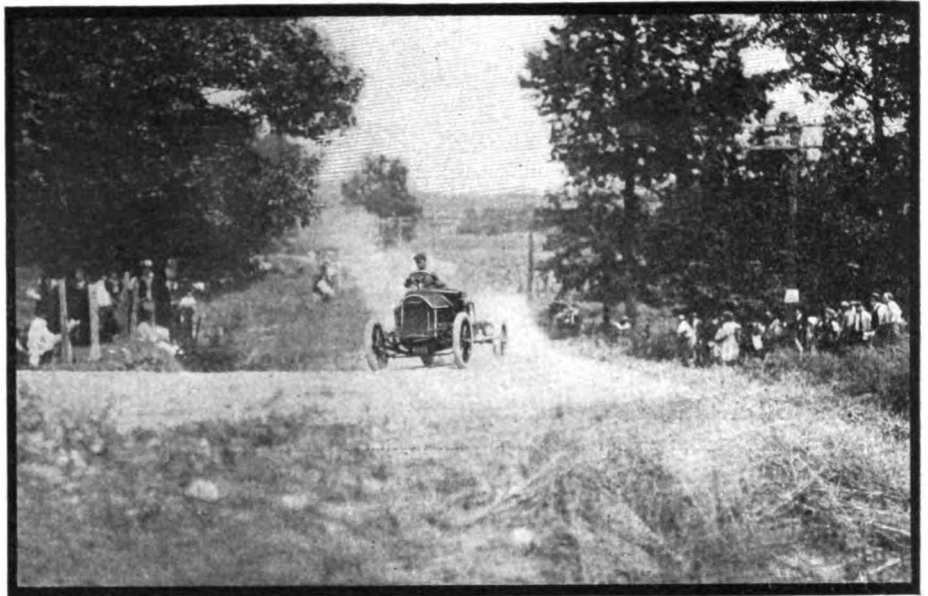
tipling the piston area by the time and dividing by the weight of the car with driver. Then there were two free-for-alls, one for cars over 90 inches piston displacement and the other for those under. In these only time figured.

Two amateur events were carded but these were shot to pieces by scratches which left Arthur W. Grenier as the only candidate for the honors. He got both the handicap and the open through walk-overs, but the fact he had no opposition did not prevent him from trying his best in his Thomas-Detroit. And at that he made corking good time, getting :26 $\frac{3}{4}$ in the handicap on Perry hill and doing :25 in the free-for-all on the same slope. He was not permitted to try Phillips hill in the afternoon because of the danger of running into the crowd. His two events were last on the card and by that time the spectators had swarmed onto the course, so Chairman Root of the contest committee refused to let him go up, giving him the cups without finishing the work on the hills.

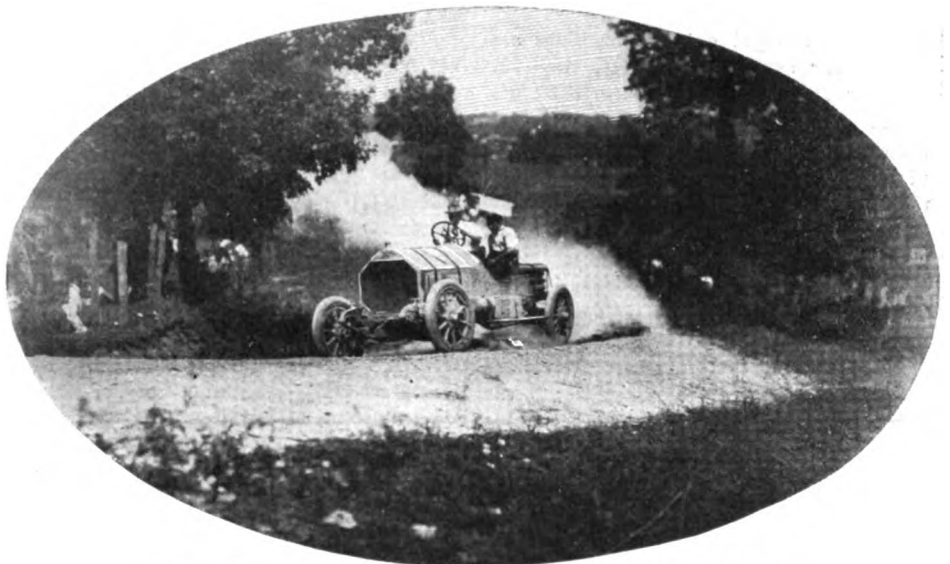
Under the formula the Holsman was returned a winner in class A, the Brush in class B, the Apperson in class C, the Cleveland in class D, and the Pierce-Arrow in class E. The class F free-for-all went to the Stearns and class H free-for-all to the smaller of the two Knoxes.

The motor club played in luck so far as the weather was concerned. For several days before there was rain and immediately following it started up again. But Friday was the one bright spot in the week. It was a glorious morning, not too hot for comfort and with the skies absolutely cloudless. The two hills were in fine shape, not so good perhaps as last May, but still fast enough to make it absolutely certain that records would be broken. Thursday was a good day for the trials and in these more than half a dozen cars had shown that their speed was limited only to the ability of the drivers to take the turns. Therefore, it was a joyous crowd that retired late Thursday night, everyone satisfied with the weather conditions, the hills and the world in general.

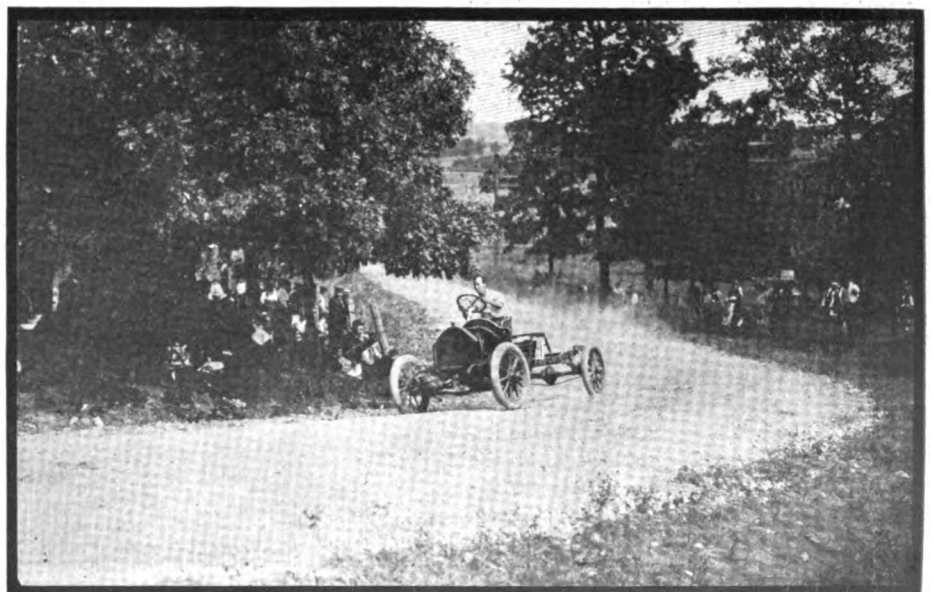
The sunrise gun did not bring out many for practice as it had done in previous years. Evidently the drivers had learned the hills and were willing to wait for the official climbs. Consequently there was not much doing in the early hours. The weighing-in started at 8 o'clock and then the cars lined up as usual at the bottom of Perry hill, the standing start incline with its awkward turn near the bottom and another near the top, a slope that will test the hill-climbing ability of any car because of the necessity of starting from a standstill. It was 10 o'clock before the first event was started and at that time the top of Perry hill was black with people and cars. It was the greatest turnout that ever witnessed the climb. There must have been at least 5,000 people and 300



PIERCE-ARROW, WINNER OF CLASS E; TIME ON TWO HILLS, :61 2-5



SALZMAN, IN THOMAS FLYER, RUNNER-UP FOR THE ALGONQUIN CUP



NEW CHALMERS-DETROIT WHICH MADE THE TWO HILLS IN 75 1-5 SECONDS

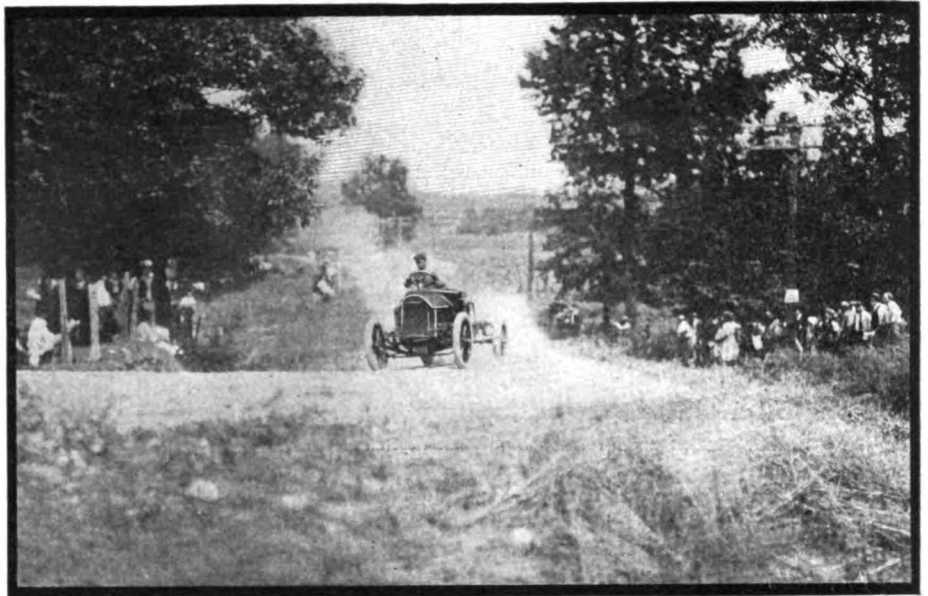
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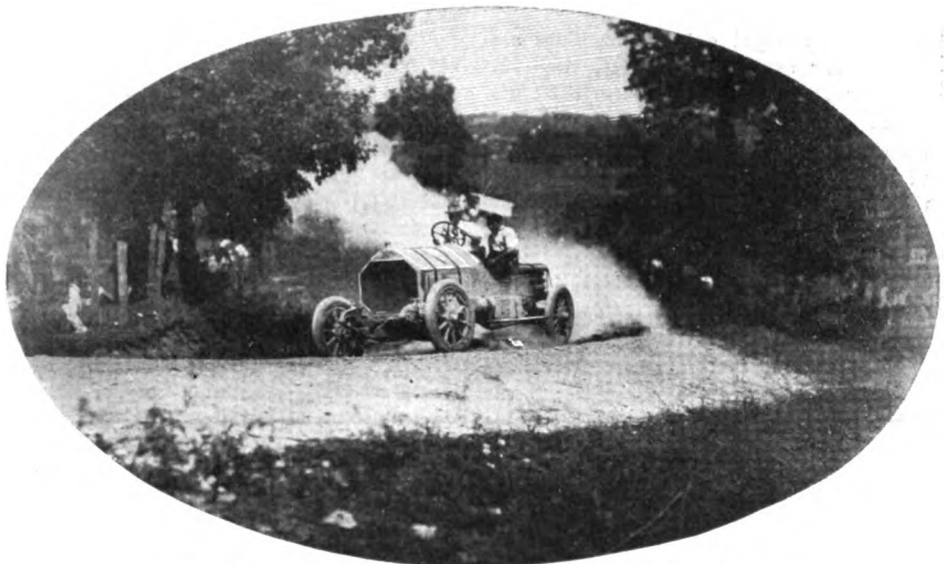
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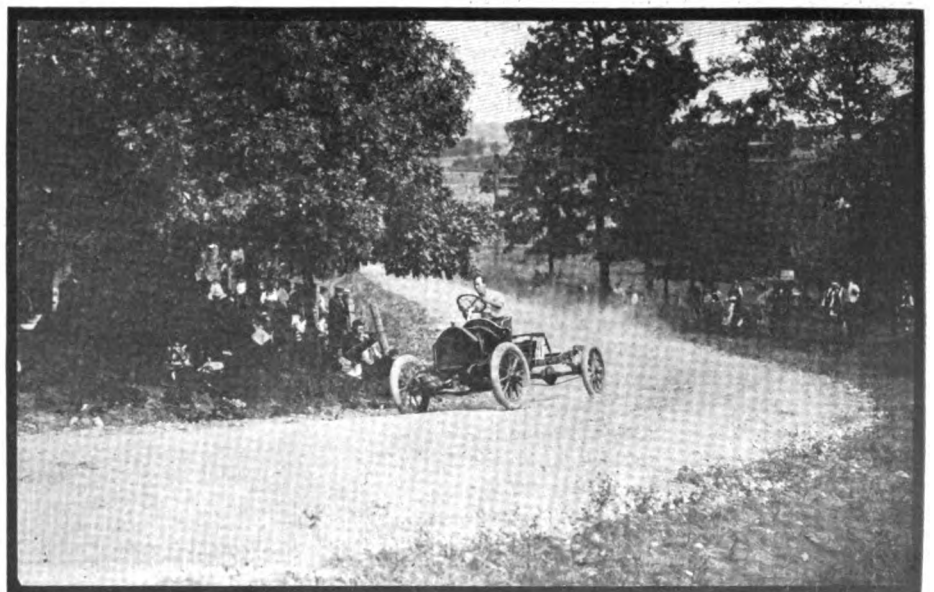
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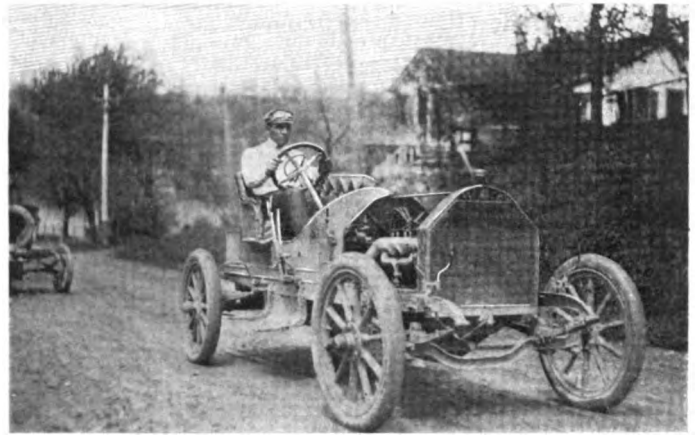
SALZMAN, IN THOMAS FLYER, RUNNER-UP FOR THE ALGONQUIN CUP



NEW CHALMERS-DETROIT WHICH MADE THE TWO HILLS IN 75 1-5 SECONDS



MOTOR AGE MEGAPHONE AFTER IT WAS HIT BY THE JACKSON



A. W. GREINER IN A THOMAS-DETROIT, WINNER OF AMATEUR EVENTS

Paxson himself escaped unhurt but three of the onlookers were injured, none of them seriously, though. The car had broken a wheel and damaged axle and frame.

Analyzing the performance of the forty-one different cars that competed in the time trials it is most interesting to note that in the majority of cases the drivers got every bit of speed out of the machines that they were capable of giving. The performance of different cars of the same maker and power which climbed the two hills at different times and with different drivers is phenomenal in that they made the two ascents in practically the same time. The three Thomas-Detroit machines came close together in this respect; No. 54 taking 58 $\frac{1}{2}$ seconds, No. 29 58 $\frac{1}{2}$ seconds and No. 32 59 $\frac{1}{2}$ seconds. These are three interesting performances, different cars of the same make climbing two hills in the same time and another in but 1 $\frac{1}{2}$ seconds more. The three trips two Stoddard-Dayton cars made up the hill were equally noticeable—No. 27 in :63 $\frac{1}{2}$, No. 55 in :63 $\frac{1}{2}$ and No. 47 in :63 $\frac{1}{2}$ —only $\frac{1}{2}$ second between one performance and the other two, which were alike. The Diamond T car made an ascent in the formula events and also in the free-for-all and its totals differed by but $\frac{1}{2}$ second, the times being 64 $\frac{1}{2}$ and 65 $\frac{1}{2}$ seconds. The Tincher car

in its double performances made one in 62 $\frac{3}{4}$ seconds and the other in 63 seconds.

Surveying the work of the many cars on both hills it is very apparent that many of the cars that were properly geared for the morning hill with its standing start lost out on the long afternoon hill with its flying start. When the average is taken it is shown that it took the majority of the cars approximately one-third longer on the long hill than on the short one; and that where the difference is greater than this it was due to improper gearing for the hills. The highest-powered cars lost out on the morning hill in which the records were set by the little Knox and the small Apperson jackrabbit at 24 $\frac{1}{2}$ seconds, beating the big Stearns and the Thomas Flyer that performed so wonderfully on the long hill. Then again both the Apperson and Knox lost out a little during the afternoon climb undoubtedly because their cars were too light to take the dangerous turn without shutting off or letting the clutch out, whereas the Stearns and Thomas had sufficient weight to make the turn without resorting to either tactics. The motor buggies all lost on the afternoon hill, their performance on the morning hill being by far the better.

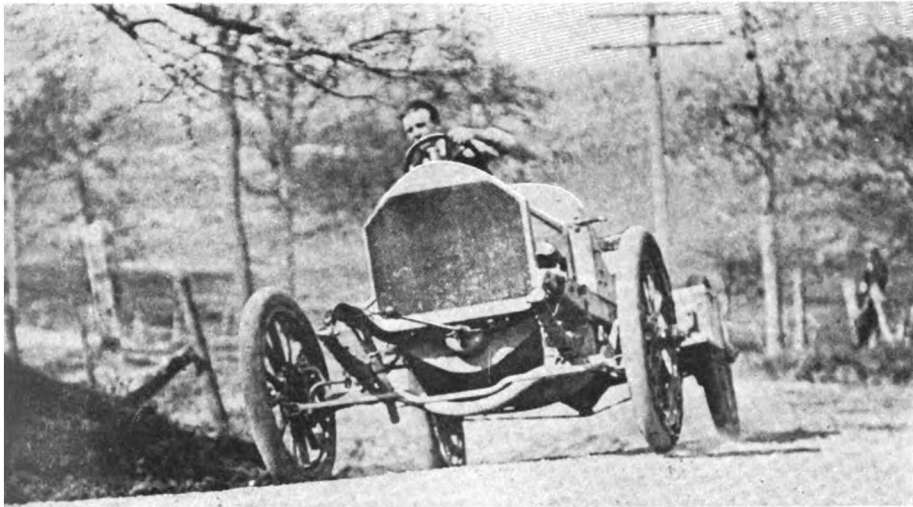
The performance of the twenty-eight cars that contested under the club formula

la makes it an unmistakable fact that some of the recently-bought-out small cars are better balanced machines than not a few of the heavily-powered vehicles. Notable in this class was the work of the Apperson car whose performance shows up exceptionally well in the climb because it ran on both hills with its full touring equipment whereas the others performed as stripped chassis. The formula is intended for cars with touring bodies and touring equipment and the many that stripped off body, fenders, brakes, dash and everything else suffered a little. In spite of this the work of the small Buick, the Corbin and the Chalmers-Detroit which follow the Apperson is particularly pleasing in that these cars are setting the pace in their particular line. The work of the Brush which stood second to the Apperson is not classed here because it is a one-cylinder machine and is not in the competing field with the other cars enumerated. The Buick, Chalmers and Corbin are among the lightest cars in their class, a fact which proves favorably the claim often advanced that the formula is not in favor of the heavy machines but rather those cars that have a motor well balanced in power to the chassis and body weight as well as the passenger load the car is made to carry. The work of the Cleveland and Buick No. 24 was also meritorious.

The formula events showed that many of the big cars are greatly overpowered, that in fact the motors have sufficient to carry the cars much faster than the cars are capable of going. From the work of not a few of the machines it was apparent that the motors were run at their extreme crankshaft speed throughout the entire length of both hills and that no matter if more stripping had been done the car would not have been able to make any faster time on both hills. This also provokes the suggestion that the cars would have made just as fast time on the hills if they had carried more weight, because the motors had sufficient combustion chamber space to have maintained the same crankshaft speed with more weight. This suggests the query as to what is the proper proportion between motor power and car



TIMERS' STAND AT BOTTOM OF PERRY HILL, NADALL IN CHARGE



LITTLE KNOX WHICH MADE TWO HILLS IN 55 1-5 SECONDS

TIME HISTORY OF CLIMB

Forty-one entries were represented in the Algonquin climb by thirty-five cars, twelve of the nominations being scratched. Of the forty-one the best aggregate time for the two hills was made by Leland in the Stearns six, who averaged 46 miles an hour on the two grades. Of course his greatest speed was shown on Phillips hill, which is exactly $\frac{1}{2}$ mile from tape to tape and on which a flying start was permitted. On this Leland showed better than 60 miles an hour. On Perry hill, just 1,000 feet long and on which the cars were given a standing start, the Stearns did not do 30 miles an hour, which gives an idea of the severity of the climb. Leland's hardest opponent was Salzman in the Thomas Flyer, whom he beat $\frac{3}{4}$ second.

No.		
43—	Stearns	54
34—	Thomas Flyer	54 3-5
50—	Knox	55 1-5
36—	Apperson	55 1-5
39—	Thomas Flyer	56
48—	Thomas-Detroit	57
42—	Apperson	57 2-5
40—	Knox	57 3-5
34—	Thomas-Detroit	58 2-5
29—	Thomas-Detroit	58 2-5
32—	Thomas-Detroit	59 4-5
24—	Bulck	60 4-5
18—	Corbin	61 1-5
35—	Pierce	61 2-5
52—	Tincher	62 3-5
38—	Stearns	62 3-5
31—	Tincher	63
27—	Stoddard	63 1-5
53—	Stoddard	63 1-5
47—	Stoddard	63 2-5
21—	Wayne	64 2-5
49—	Diamond T.	64 3-5
28—	Diamond T.	65 1-5
30—	Cleveland	66
19—	Apperson	70 1-5
11—	Chalmers-Detroit	75 1-5
16—	Maxwell	77 2-5
46—	Bulck	78 2-5
9—	Bulck	78 3-5
17—	Mollne	88 2-5
20—	Grout	90 1-5
10—	Jackson	98 3-5
12—	Mollne	99
1—	Bendix	113
4—	Holsman	127
5—	Black	131 1-5
8—	Jackson	137
2—	Holsman	139
3—	Kiblinger	144 3-5
6—	Kiblinger	151 3-5
7—	Brush	212 3-5

load, a fact which can only be determined by careful calculation and experiment.

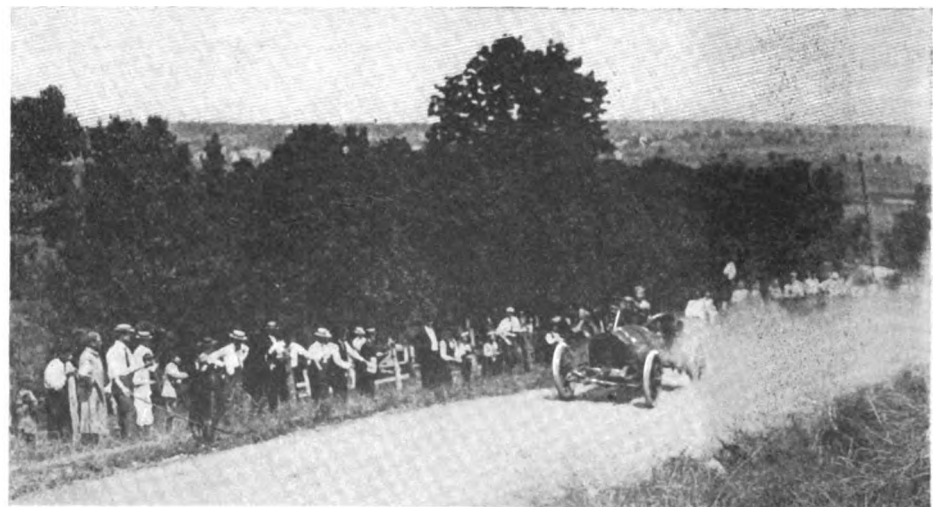
The amount of weight that the several cars carried per cubic inch of cylinder capacity may assist in arriving at conclusions along this line. The following table shows the cylinder capacity in one column, the car weight in the next and in the last column the number of pounds per cubic inch of cylinder capacity:

Car	Cyl. cap.	Weight per cu. in.
Apperson	300	3020
Brush	59.26	1240
Corbin	270.36	2035
Bulck	165.4	1520
Chalmers	212.27	1855
Cleveland	392.7	3085
Bulck	336	2340
Stoddard	354.4	2560
Maxwell	241.23	2045
Pierce	453.26	3170
Thomas-Detroit	373.06	2450
Thomas-Detroit	373.06	2365
Diamond T.	392.7	2745
Wayne	333.9	2265
Jackson	216.47	2250
Tincher	470.4	2860
Grout	318.08	3005
Apperson	474	2555
Mollne	212.27	1860
Jackson	157.08	1860
Mollne	309.31	2380
Thomas Flyer	784.01	3595
MOTOR BUGGIES		
Holsman	100.53	1330
Holsman	100.53	1395
Bendix	201.16	2265
Kiblinger	100.23	1280
Kiblinger	100.23	1255
Black	168.34	1365

MOTOR EFFICIENCY STANDING

The model O Apperson, winner of class C, had the lowest percentage of the twenty-eight cars that participated in the handicap events, which gives the Kokomo concern additional honors—first place in the motor efficiency test, which is the fundamental principle upon which the handicap formula is based. Compared with last year when the 29-horsepower Columbia led in this division, this most recent addition to the Apperson family made a better showing according to the official figures than did the car from Hartford. The single-cylinder Brush, which was second in this rating, also performed in a sensational manner. The accompanying table on motor efficiency brings the alphabet into the limelight, the first three cars being the Apperson, Brush and Corbin—the A, B, C of the hill-climb. For that matter, the first seven cars in this table of efficiency are among the A, B, C's. The rating on percentage is as follows and shows just how each motor performed in the double climb of the Chicago Motor Club:

No.	Car	Percentage
19—	Apperson	6.42
7—	Brush	7.1
18—	Corbin	7.19
9—	Bulck	7.28
11—	Chalmers	7.52
30—	Cleveland	7.73
24—	Bulck	7.83
29—	Stoddard	7.92
4—	Holsman	8.05
16—	Maxwell	8.08
35—	Pierce	8.09
32—	Thomas-Detroit	8.21
29—	Thomas-Detroit	8.27
2—	Holsman	8.41
28—	Diamond T.	8.5
21—	Wayne	8.52
1—	Bendix	9.03
38—	Apperson	9.16
3—	Kiblinger	9.38
10—	Jackson	9.48
31—	Tincher	9.48
20—	Grout	9.54
12—	Mollne	9.89
6—	Kiblinger	10
8—	Jackson	10.13
17—	Mollne	10.34
34—	Thomas Flyer	11.37
5—	Black	13.55



APPERSON JACKRABBIT. TOTAL TIME, 55 1-5 SECONDS, TYING THE KNOX

RESULTS OF CHICAGO MOTOR CLUB'S THIRD ANNUAL ALGONQUIN HILL CLIMB

CLASS A—MOTOR BUGGIES, WHEELS 36 INCHES OR OVER, SOLID TIRES

No.	Car	H.P.	Bore	Stroke	Piston area	Weight	Driver	Entrant	A. M. time	A. M. per cent	P. M. Time	P. M. per cent	Total per cent
4	Holsman	12.8	4	4	100.53	1,330	J. M. Renegar	Holsman Automobile Co.	:48 1-5	3.03	1:19 3-5	5.02	8.05
2	Holsman	12.8	4	4	100.53	1,395	E. A. Fairbrother	Holsman Automobile Co.	:53 1-5	3.22	1:25 4-5	5.109	8.419
1	Bendix	25.6	4	4	201.16	2,265	O. M. De Launty	Bendix Co.	:42 4-5	3.404	1:10 4-5	5.63	9.034
3	Kiblinger	13.6	4 1/4	3 3/4	100.23	1,280	J. H. Spanberg	W. H. McIntyre	:51 4-5	3.362	1:32 4-5	6.02	9.382
6	Kiblinger	13.6	4 1/4	3 3/4	100.23	1,255	A. D. Himes	W. H. McIntyre	:55 1-5	3.64	1:36 2-5	6.36	10.00
5	Black	18.6	4 3/4	4 3/4	108.34	1,365	S. S. Scott	Black Mfg. Co.	:54 3-5	5.642	1:16 3-5	7.91	13.552

CLASS B—TOURING CARS, ROADSTERS, TOURABOUTS OR STRIPPED CHASSIS, PISTON AREA UNDER 50 SQUARE INCHES

7	Brush	6.4	4	4	50.26	1,240	B. Lobdell	Frank Briscoe	1:26	2.87	2:06 3-5	4.23	7.10
9	Buick	20	3 3/4	3 3/4	165.4	1,520	J. R. Burman	Buick Motor Co.	:32 2-5	3.039	:46 1-5	4.28	7.319
11	Chalmers-Detroit	24	3 3/4	4 1/2	212.27	1,855	L. B. Lorimer	Chalmers-Detroit Co.	:33 1-5	3.325	:42	4.20	7.525
10	Jackson	22	5 1/4	5	216.47	2,250	E. F. Schieffer	Jackson Auto. Co.	:39	3.75	:59 3-5	5.73	9.48
12	Moline	24	3 3/4	4 1/2	212.27	1,860	O. E. Thorne	Moline Automobile Co.	:37 3-5	3.757	1:01 2-5	6.136	9.893
8	Jackson	20	5	4	157.08	1,860	M. A. Holmes	Jackson Auto. Co.	1:03 2-5	4.688	1:13 3-5	5.443	10.131

CLASS C—TOURING CARS, ROADSTERS, TOURABOUTS, OR STRIPPED CHASSIS, PISTON AREA OVER 50 AND UNDER 65 SQUARE INCHES

19	Apperson	30.6	4 3/4	5	300.6	3,020	Edgar Apperson	Apperson Bros. Auto. Co.	:30 1-5	2.76	:40	3.66	6.42
18	Corbin	32.4	4 1/2	4 1/2	270.36	2,035	W. G. Bird	Bird-Sykes Co.	:26 1-5	3.081	:35	4.11	7.191
16	Maxwell	28.9	4 1/4	4 1/4	241.23	2,045	C. W. Kelsey	Maxwell-Briscoe Co.	:32 3-5	3.405	:44 4-5	4.68	8.085
21	Wayne	32.4	4 1/2	5 1/4	333.9	2,265	G. Schoeneck	H. P. Branstetter	:28 1-5	3.72	:36 2-5	4.80	8.52
20	Grout	32.4	4 1/2	5	318.08	3,005	H. E. Halbert	H. E. Halbert	:38 2-5	4.064	:51 4-5	5.483	9.547
17	Moline	26.4	4 7-16	5	309.31	2,380	C. H. Van Dervoort	Moline Automobile Co.	:40	5.37	:42 2-5	4.96	10.33

CLASS D—TOURING CARS, ROADSTERS, OR STRIPPED CHASSIS, PISTON AREA OVER 65 AND UNDER 90 SQUARE INCHES

30	Cleveland	40	5	5	392.7	3,085	J. I. Miller	Cleveland Motor Car Co.	:27 2-5	3.21	:38 3-5	4.52	7.73
24	Buick	34.2	4 3/4	5	336	2,340	J. R. Burman	Buick Motor Co.	:26 4-5	3.40	:34	4.37	7.86
27	Stoddard-Dayton	36.1	4 3/4	5	354.4	2,560	C. A. Englebeck	McDuffee Auto Co.	:26 4-5	3.36	:36 2-5	4.56	7.92
22	Thomas-Detroit	40	5	4 3/4	373.06	2,450	L. B. Lorimer	Thomas-Detroit Co.	:24 4-5	3.408	:35	4.810	8.218
29	Thomas-Detroit	40	5	4 3/4	373.06	2,365	W. R. Burns	Thomas-Detroit Co.	:25	3.58	:33 2-5	4.73	8.31
28	Diamond T.	40	5	5	392.7	2,745	C. A. Tilt	C. A. Tilt	:28 1-5	3.68	:37	4.82	8.50
31	Tincher	40	5	6	470.4	2,860	C. Rayfield	Tincher Motor Car Co.	:26 3-5	4.00	:36 2-5	5.48	9.48
26	Jackson	36.1	4 3/4	4 3/4	336.68	2,155	C. D. Paxson	Jackson Auto. Co.	:26 2-5	3.67	Upset		

CLASS E—TOURING CARS, TOURABOUTS, OR STRIPPED CHASSIS, PISTON AREA OVER 90 SQUARE INCHES

35	Pierce-Arrow	48.6	4 1/2	4 3/4	453.26	3,170	P. Hofmann	H. Paulman & Co.	:27 1-5	3.59	:34 1-5	4.51	8.10
36	Apperson	48.4	5 1/2	5	474	2,555	N. B. McLain	J. F. Gunther Co.	:24 1-5	4.06	:31	5.10	9.16
34	Thomas Flyer	72.6	5 1/2	5 1/2	784.01	3,595	G. Salzman	Walden W. Shaw Co.	:25 2-5	5.16	:30 3-5	6.21	11.37

CLASS F—FREE-FOR-ALL, STRIPPED CHASSIS, AND RACING CARS, PISTON AREA 90 SQUARE INCHES OR OVER

43	Stearns	69.3	5 3/4	5 3/4	136.2	3,720	F. W. Leland	Western Motor Car Co.	:24 3-5		:29 2-5		Total time :54
39	Thomas Flyer	72.6	5 1/2	5 1/2	784.01	3,595	G. Salzman	Walden W. Shaw Co.	:24 3-5		:30		:54 3-5
42	Apperson	62.5	6 1/4	5 1/2	129.8	2,900	Edgar Apperson	J. F. Gunther Co.	:26 2-5		:31		:57 2-5
40	Knox	48.4	5 1/2	5 1/2	95	2,590	A. E. Denison	Knox Automobile Co.	:26 1-5		:31 2-5		:57 3-5
38	Stearns	46.2	5 3/4	5 3/4	90.8	3,060	F. W. Leland	Western Motor Car Co.	:26 3-5		:36		1:02 3-5

CLASS H—FREE-FOR-ALL, ROADSTERS, STRIPPED CHASSIS OR RACING CARS, PISTON AREA UNDER 90 SQUARE INCHES

50	Knox	38	4 3/4	4 3/4	74.70	2,160	W. A. Bourque	Knox Automobile Co.	:24 1-5		:31		:55 1-5
48	Thomas-Detroit	40	5	4 3/4	78.52	2,450	L. B. Lorimer	Thomas-Detroit Co.	:25 1-5		:31 4-5		:57
54	Thomas-Detroit	40	5	4 3/4	78.52	2,365	W. R. Burns	Thomas-Detroit Co.	:25 2-5		:33		:58 2-5
52	Tincher	40	5	6	78.52		C. Rayfield	Tincher Motor Car Co.	:27		:35 3-5		1:02 3-5
47	Stoddard-Dayton	36.1	4 3/4	5	70.88	2,560	A. C. Miller	McDuffee Auto. Co.	:28 1-5		:35		1:03 1-5
53	Stoddard-Dayton	36.1	4 3/4	5	70.88	2,495	C. A. Englebeck	McDuffee Auto. Co.	:28		:35 2-5		1:03 2-5
49	Diamond T.	40	5	5	78.52	2,745	C. A. Tilt	C. A. Tilt	:27 4-5		:36 4-5		1:04 3-5
46	Buick	22.5	3 3/4	3 3/4	44.36	1,520	J. R. Burman	Buick Motor Car Co.	:31 3-5		:46 4-5		1:18 2-5
51	Cleveland	40	5	5	78.52	3,085	J. I. Miller	Cleveland Motor Car Co.	:27 4-5				

CLASS J—AMATEUR HANDICAP

57	Thomas-Detroit	40	5	4 3/4	78.52	2,405	I. A. W. Greiner	I. A. W. Greiner	:26 3-5		Awarded medal		
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CLASS I—AMATEUR, FREE FOR ALL

59	Thomas-Detroit	40	5	4 3/4	78.52	2,405	I. A. W. Greiner	I. A. W. Greiner	:25		Awarded medal		
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DEMOUNTABLE RIMS—THE MOTORISTS' SALVATION

IN 5 YEARS, perhaps 3, many of the leading American manufacturers of motor cars will be fitting demountable rims as regular equipment and not making any extra charge because of them. At present makers of demountable rims fit them to cars at \$100 per set and up, and some of them do not make much out of each set fitted at that price; but this condition will change: First one maker will adopt as standard a certain type of demountable, soon another maker will follow the lead, and as has been done with acetylene headlights, generators and gas tanks within the last couple of years, all will be compelled to either give such option or follow the route laid out by competitors.

A Mighty Conservator of Time

THE demountable rim is a mighty conservator of time, physical energy, patience, good nature and health, and as such deserves adoption. With any of the present half dozen styles of demountables it is possible when traveling along the road and a puncture or blow out occurs for two men with ease to stop the car, make a change of rims, replace the tools, strap the removed tire in place on the car and be off again in 3 minutes. To do this the two men have not to work extra fast—just a moderate pace, and in the task none of the work is physically hard, such as to cause excessive perspiration. Removing half a dozen nuts with a breast drill, jacking up a car and taking an inflated tire and rim from the side of the car are not to be compared to removing a heavy clincher tire or putting one on.

Human Economy Important

THE time saved in case of puncture or blowout with a demountable is one great consideration but the human economy is a much greater item. Two years ago a well known car driver in the middle west after beating off a heavy attack of sickness took a short drive on a cool spring day; a puncture occurred. In making the replacement with a standard clincher tire he got overheated. On resuming the trip he was chilled, new complications set in and he died in less than 10 days. This is but one of many similar cases that Motor Age is aware of having happened within the last 3 or 4 years.

Quick Detachable Is Good

IT IS true that the quick detachable rim and the air bottle have robbed the tire change of many of its horrors and that with them a new casing can be fitted in 6 or 7 minutes, but with these the work is much more severe than with the present demountable. The recent action of the A. L. A. M. in adopting a standard quick detachable is a most commendable act of approval and it will be interesting to await the time when this or other motoring organizations will adopt a certain make of demountable as standard for all cars built by the several members of its organization.

AS PROVEN by the grand prix race this season speed in changing, while a great consideration in a demountable rim is not the only one. Reliability and safety are great factors. Some cars in the grand prix made fourteen changes of rims, not because of punctures and blowouts, but because many of the rims rolled off during the race. This rolling off was an exceedingly dangerous feature and one which should be a primary consideration in demountable rim design. The rims rolled off for two reasons, either the nuts holding them on loosened, or the wedges between the permanent and demountable rims cocked with the tightening of the nuts and assisted in prying the demountable rims out of proper position.

Variety in Principles

IT IS not for Motor Age at this time to say which principle of attaching a demountable rim is correct and which is not, but it appears from recent tests and road races in which demountables figured that where nuts are used to secure a rim some means of locking these nuts should be used. At the Algonquin hill-climb a week ago one driver of a contesting car fitted with demountables had to tighten every nut holding his rims on before trying the hill. In the demountable rim contest conducted by the Chicago Motor Club a fortnight ago of the five competing cars in which nuts, without locking means, were used to hold the demountable rims in place, 60 per cent of the nuts loosened in a 75-mile test run at speeds of 15 to 40 miles per hour over good roads. Such a test is an easy one compared with the trials of a road race where cars travel as high as 100 miles an hour, where they average 60 miles an hour for successive hours, and where the rims are given a supreme test in taking corners and curves.

Combination System Wanted

A PRESENT argument against demountables is the length of time required to change a casing on a rim at the end of a day's run or during a day's run, when more punctures occurred than the number of extra rims carried. At present it is hard work making a change with a straight clincher because of the trouble securing the nuts to the short lug stems and the trouble of getting the beads out of and into the clincher lips with little leverage as compared with when a rim is on a wheel. This criticism is just. There is a solution and that is the using of a quick detachable flange on a demountable rim. There is no reason why this cannot be done, in fact, one of the newcomers in the demountable field has a rim sufficiently universal in its nature

that any style of quick detachable or mechanically fastened tire may be used on it. This happy combination together with the air bottle constitutes a trio that should rob the demountable of most of the defects critics have declared it contains. The three will add materially to the joys of motoring in any land.

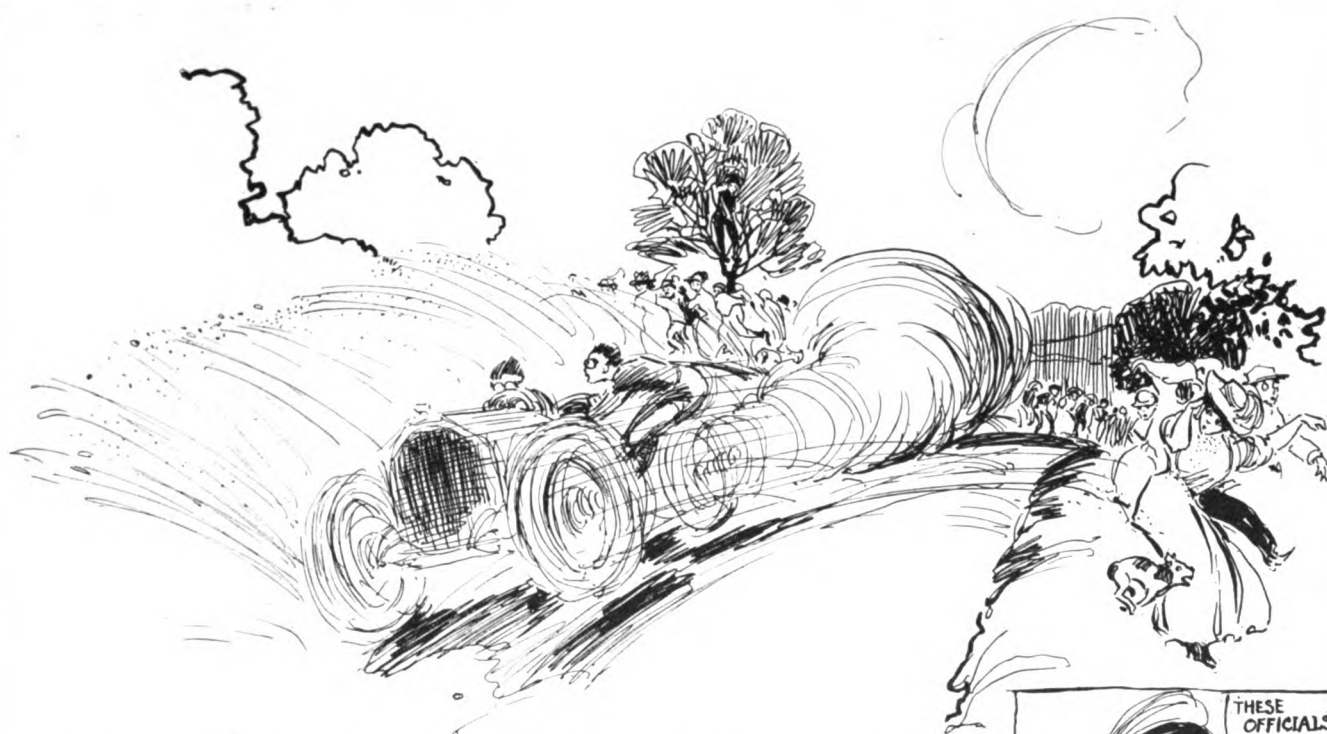


KNOX MAKING FAST TIME ON PHILLIPS HILL IN ALGONQUIN CLIMB

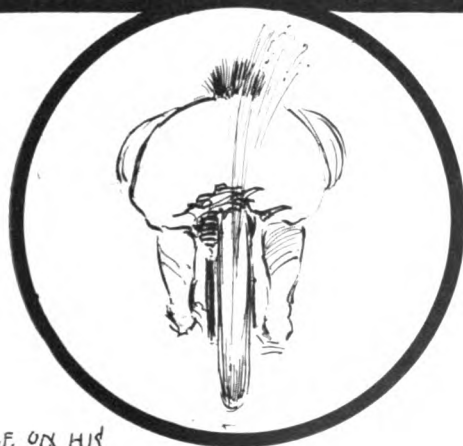


AT ALGONQUIN

THE WAY THEY LOOKED AS THEY CAME OVER
THE TOP OF THE HILL



THE PEOPLE STOOD BACK ALL RIGHT WHEN THE CAR CAME ALONG



VAN SICKLE ON HIS
INDIAN, GOING AFTER
THE RECORD



CAR COMING LADY
PLEASE STAND BACK

