Motorcycle Expert Groes value able Suggestions to Riders.

## ULES FOR INDIANAPOLIS AUTO SHOW WEEK

to be held at the Indianapolis speedway during the Indianapolis oile show week, which begins These contests and the floral

are to be the red letter events. The officials for the conshow. ere announced yesterday: Low Wainwright.

Charles C. Hanch, H. O. Smith, owse, J. A. Allison, of course—George Dickson. nt clerks of course-J. A. Barclay, ammond. Harry Stutz.

Will Enforce Rules.

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to tall, he scores. Entries accompanied by \$5 entry

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but not broken or dislodged from norage will count as a miss and

e a penalty of ten points.

Circus Ring-A ring two feet in r will be suspended five feet above ids of the contestants, and the lon of each contestant passing der will be required to remove when approaching the ring.

ules were made yesterday for the again. Failure to throw the hat through, three points penalty; striking the ring and not putting the hat through, four points; failure to catch cap going through ring or not, five points.
Sec. 3. Juggling Contest—Contestants

must drive on high gear in a course marked by confetti and leading between

obstructions, the driver's companion to hold a ball in a receptacle provided by the committee. Each contestant who successfully carries the ball to the finish will be given ten merit marks. Each obstruction hit in this contest will give one

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demerit mark. Sec. 4. Cane Rack-Suitable pins will be placed at intervals along the course and the companion of the contestant will be given five rings, and while passing these pins at a given distance from them

will be required to throw the rings separately, with the object of hanging as many on the pins as possible. The pins will carry values of 1, 2, 3, 4 and 5, and fallure to place a ring on each will result

in a penalty equal to the value of the pin.
Sec. 5. Potato Race Each contestant
will be given ten potatoes. There will be distributed along the course ten receptacles, and the companion of each con-

testant will be required to deposit one potate in each receptacle as the car is passing. Failure of the potato to reach or remain in this receptacle will count as one demerit mark for each of said failures.

Sec. 6. Teeter Board-This event will consist in balancing the car on a teeter board twenty-four feet long and six feet wide, resting on an eighteen-inch fulcrum. Car will drive on to teeter board until the forward end touches the ground, then reverse until the rear end touches

ground, then go forward to balance, balancing thirty seconds; then drive ahead. One point penalty for each second over thirty seconds in which contestant fails to balance. Each contestant has two minutes from time front wheels rest on teeter board to do this section in. throw it through the ring and catch it

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Entries for the ited to gasoline ca Entries will be who are subscrib Indianapolis Auto tion, or from priv

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tries. All cars entere cars and carry equipment throug

Contests begin and contesting one-half hour ea tions and get offi Drivers must

each section. Cars must be all contests excep ers must have fe pedals or levers. No reversing o test except in th

Each contestar six sections in su Disqualification 25 points. No advertiseme

cial numbers, a strator's name p Contesting cars of passengers, b will be the active ed beside the driv contest, when dr

Winner to be merit marks or

The entrant m releasing the In way and the Trade Associatio or liability is cas

dimensions of the motor being 3x3. The admit the vapor freely and wil through small

d much more closely resembled the present day. doneers in American motorcycle sture were the Thomas, Mitchell ent Companies. The first Thomas ofe closely resembled the Euro-

comparative weakness of these engines will be readily understood from a moment's consideration of the belts used valve must be her transmission purposes. They were free and almost ordinary out leather belts, such as are burning varve.

# RULES FOR INDIANAPOLIS AUTO SHOW W

The rules were made yesterday for the contests to be held at the Indianapolis Motor Speedway during the Indianapolis, automobile show week, which begins

March 28. These contests and the floral parade are to be the red letter events. The officials for the conof the show.

tests were announced yesterday: Referee-Lew Wainwright.

Judges-Charles C. Hanch, H. O. Smith, B. C. Dowse, J. A. Allison.
Clerk of course-George Dickson.
Assistant clerks of course-J. A. Barclay.

Harry Hammond. Starter-Harry Stutz.

#### Will Enforce Rules.

without favor; any contestant disobeving the order of the starter, or any of his assistants, or the committee's representatives, will be subject to immediate disqualification. The winner will be announced by the committee as soon as it is e to tally the scores.

The contest committee will enforce rules

Entry Entries accompanied by \$5 entry fee, which will be returned if car starts in competition, must be made on regular

forms and forwarded to F. L. Moore, 400 Capitol avenue, on or before March 26. Sec. 1. Balloon Contest-Ten toy balloons will be anchored to the track at

varying intervals, half being on one side and half-on the other side of the course. It will be the duty of the driver to run over and burst each of these balloons. Those placed on the right side to be broken by the right front wheel; those

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will have a penalty of ten points. Sec. 2. Circus Ring-A ring two feet in diameter will be suspended five feet above the heads of the contestants, and the

companion of each contestant passing thereunder will be required to his cap Whien approaching

gine and much more closely resembled those of the present day.

The ploneers in American motorcycle manufacture were the Thomas, Mitchell and Orient Companies. The first Thomas motorcycle closely resembled the European Werner with a midget motor secured to the lower frame tube. The Mitchell

was almost identical except, in size, the

again. Failure to throw the hat through, three points penalty; striking the ring and not putting the hat through, four points; failure to catch cap going through ring or not, five points. Sec. 3. Juggling Contest.—Contestants

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demerit mark. Sec. 4. Cane Rack-Suitable pins will be placed at intervals along the course and the companion of the contestant will be given five rings, and while passing these pins at a given distance from them will be required to throw the rings sepa-

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will carry values of 1, 2, 3, 4 and 5, and failure to place a ring on each will result in a penalty equal to the value of the pin.

Sec. 5. Potato Race—Each contestant will be given ten potatoes. There will be distributed along the course ten receptacles, and the companion of each contestant will be required to deposit one

passing. Failure of the potato to reach or remain in this receptacle will count as one demerit mark for each of said failures.

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Sec. 6. Teeter Board-This event will consist in balancing the car on a teeter board twenty-four feet long and six feet wide, resting on an eighteen-inch fulcrum. Car will drive on to teeter board until the

forward end touches the ground, then reverse until the rear end touches the ground, then go forward to balance, balancing thirty seconds; then drive

ahead. One point penalty for each mec-ond over thirty seconds in which con-testant fails to balance. Each contestant has two minutes from time front wheels rest on teeter board to do this section in. throw it through the ring and eatch it

dimensions of the motor being 3x3. The comparative weakness of these engines will be readily understood from a moment's consideration of the belts used for transmission purposes. They were fer transmission purposes.

ordinary cut leather belts, such as are commonly used on sewing machines and similar light machinery; in fact, the maximum power of the little Thomas motors could seldom exceed five-eighths to three-quarters mechanical horse power.

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The Mitchell motor, being a little larger, was slightly more powerful, but the ma-chines exceeded the Thomas in weight

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### IANAPOLIS AUTO SHOW WEEK CONTESTS.

the again. Failure to throw the hat through, three points penalty; striking the ring and not putting the hat through, four points; failure to catch cap going through ring or not, five points.

Sec. 3. Juggling Contest-Contestants must drive on high gear in a course marked by confetti and leading between obstructions, the driver's companion to hold a ball in a receptacle provided by the committee. Each contestant who successfully carries the ball to the finish will be given ten merit marks. Each obstruction hit in this contest will give one demerit mark.

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In this section the driver must use his own judgment as to gears used and slipping of clutch, as well as use of brakes. No passengers can be carried in this sec-

#### General Regulations.

Entries for these contests will be lim-

ited to gasoline cars.

Entries will be received from dealers who are subscribers to the fund of the Indianapolis Automobile Trade. Association, or from private owners recommended by such subscribing dealers, the committee reserving the right to reject entries.

All cars entered must be strictly stock cars and carry at least full catalogue

equipment throughout the contest.

Contests begin promptly at 2 o'clock contesting cars must be on hand one-half hour earlier to receive instructions and get official numbers.

Drivers must sit in seats throughout

each section.

Cars must be driven on high gear in all contests except teeter board and drivers must have feet off clutch and brake pedals or levers.

No reversing of car in any part of the

test except in the teeter board.

Each contestant must go through the six sections in succession.

Disqualification in any section counts

25 points.

No advertisement, other than the official numbers, and the negular demonstrator's name plate must be used.

Contesting cars may carry any number of passengers, but must carry one who will be the active participant and be seated beside the driver, except in tester board contest, when driver only will be allowed in car.

Winner to be contestant with most merit marks or fewest demerit marks.

The entrant must sign an entry blank releasing the Indianapolis Motor Speedway and the Indianapolis Automobile Trade Association from all responsibility or liability is case of accidents.

dimensions of the motor being 3x3. The comparative weakness of these engines will be readily understood from a moment's consideration of the belts used for transmission purposes. They were ordinary cut leather belts, such as are commonly used on sewing machines and similar light machinery; in fact, the maximum power of the little Thomas motors could seldom exceed five-eighths to three-quarters mechanical horse power. The Mitchell motor, being a little larger, was slightly more powerful, but the machines exceeded the Thomas in weight

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admit the vapor charge to the cylinder freely and without too rapid through small passages. The exhaust valve must be large enough to allow the free and almost instant emission of the burning vapor. Delay in this inevitably results in overheated motors, pitted valves and numerous troubles resulting from these conditions.

An essential feature is the correct timing of the exhaust valve. It must open sufficiently before the piston reaches the end of its stroke to allow pressure in the cylinder to drop to zero by the end of the

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