

FASTEST CAMERA REVEALS SECRETS OF AUTO MOTORS

5000 Pictures a Second Show What Happens in Combustion Chamber—Plan New Engine Designs

By HOWARD W. BLAKESLEE
Associated Press Science Editor.

KANSAS CITY, April 16.—(AP)—With a new kind of camera geared to the crankshaft and taking 5000 pictures a second General Motors is laying the basis for redesign of auto engines.

The camera takes pictures of the entire explosion in a cylinder. The explosion lasts a 250th part of one second, and in that flash the camera takes 50 photographs.

Reveals New Facts.
It reveals facts never guessed and others guessed but never verified. The new photography and its results were described to the American Chemical society by Dr. Gerald M. Raasweiler and Lloyd Withrow of the company's research laboratories in Detroit.

The camera set up looking directly into a quartz window in the engine's firing chamber, is rigid, but its lenses move. They travel past its "eye" on a wheel, geared to the crankshaft. As each lens passes it momentarily focuses on moving film in the camera an image of the explosion at that instant.

To prevent blurring, the light of the explosion passes through a fixed lens before it reaches the traveling lenses. This makes all the rays parallel.

Clear photographs result, no matter how fast the film and lenses move.

Starts at Spark Plug.
The first surprise seen was around the region of the spark plug. That is where the explosion starts. It spreads in a wave like a grass fire. This behind the wave, in the burned area, the "ashes" or "products of combustion" remain.

The forward speed of the spreading fire wave sets up back pressure which heats these "ashes" hotter than the flame itself. The temperature of the sparkplug region rises to 5300 Fahrenheit. Some of the "ashes" there, the carbon dioxide, gets so hot it gives momentarily more light than the burning gas.

The second thing hitherto suspected, but never verified, is a backfire set up to meet the "grass fire" explosion wave. The forward movement of this wave compresses the gas at the opposite end of the chamber so high and hot that it explodes and rushes to meet the main explosion. This back fire is the familiar "knock."

ROSEBURG DIVIDED ON HIGHWAY REROUTING

ROSEBURG, April 16.—(AP)—The state highway commission will announce, probably about the first of May, its decision regarding the proposed relocation of the Pacific highway through the city of Roseburg. It was stated here this morning following a formal hearing where arguments both for and against the change were heard.

Expressions of sentiment were about equally divided in the statements made to the commission.

Weather.
Northern California: Increasing cloudiness tonight and Friday, with rain on south coast late Friday; little change in temperature; moderate southerly winds off the coast.

Oregon: Cloudy tonight and Friday, with rain probable west portion Friday; cooler interior or west portion Friday; increasing southeast wind off the coast.

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WAIFS OF THE STORM



Waifs of the tornado at Gainesville, Ga., are these two little girls who are recuperating from their injuries at an Atlanta hospital. Above, a four or five-year-old child, known to hospital attendants only as Lillian. Below, a baby girl of about 18 months, whose identity was a complete mystery. They were brought to Atlanta on a "mercy train" transporting storm casualties. (Associated Press Photos)

DISINCORPORATION OF CRESCENT CITY BEATEN BY VOTERS

CRESCENT CITY, Cal., April 16.—(AP)—A proposal to disincorporate the city was defeated in a special election, 351 to 235, and sponsors of the movement today renewed warnings of an impending financial crisis.

Had electors approved the measure, Del Norte would have become one of the nation's few counties without an incorporated municipality.

Petitions were circulated several months ago, demanding the special election. The measure's proponents said evident inability of property owners to meet annual payments on street improvement bonds would plunge the city into financial chaos.

The bonds, authorized in 1928 and 1929, under the Mattoon act, totaled \$405,640 last July 1, with \$45,708 delinquent. Tax receipts to apply on interest and principal were only \$17,849, with \$26,384 due as payments. The delinquency thus was about 60 percent.

There also was a delinquency in the city's general fund of \$6,589.

The measure's advocates contended that, upon dissolution of the city government, about \$10,000 spent yearly for salaries and expenses thus would remain in the taxpayers' pockets and become available for bond assessments.

They argued too, the city's streets would become county road districts and as such would receive a greater share of state gasoline tax money.

The city bears 40 percent of all taxes in the county, yet receives only \$2,000 of the county's \$35,000 state gas tax funds.

With defeat of disincorporation, re-funding plans probably will proceed looking to consolidation of all bond issues.

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OREGON ENRICHED FIFTEEN MILLION BY CCC WORKERS

Over 13,000 Enrollees Have Served Since Establishment of Camps in State — Boys Also Benefit

PORTLAND, Ore., April 16.—(AP)—The CCC tree scoopers have enriched Oregon more than \$15,000,000 through their maintenance work and improvement projects, Fred H. Brundage, associated regional forester, said today.

"This dollar estimate, however, does not represent the true worth of the CCC accomplishments," said Brundage, citing benefits to the workers themselves.

Since the start of the program, more than 13,000 enrollees have served at one time or another in Oregon CCC camps. The present enrollment is about 3500, most of whom come from other states.

Many Accomplishments.
Brundage listed as accomplishments the construction of 124 lookout houses and 82 lookout towers, 2630 miles of telephone lines, 2700 miles of truck trails, 708 miles of horse and foot trails, 2650 acres of planting, 176,550 man days of fire fighting, 451,000 acres of tree insect control, 775 acres intensive public camp development, 171,000 fish stocked, 197 miles of stream development and 609,000 acres of rodent control.

He said there was equally as constructive work remaining to be done which would keep CCC boys busy the next 20 years, if the program continued.

Relief Needs Aided.

Besides the CCC activities, carried on by young men, others taken from relief rolls under the emergency conservation program built 500 acres of fire breaks, 70 miles of telephone lines, developed 20 camp grounds for public use, planted 145 acres, carried on rodent control on 1000 acres, built 38 miles of truck trails and 50 miles of horse trails, devoted 1700 hours on fish and game care and 13,500 man hours on fire suppression.

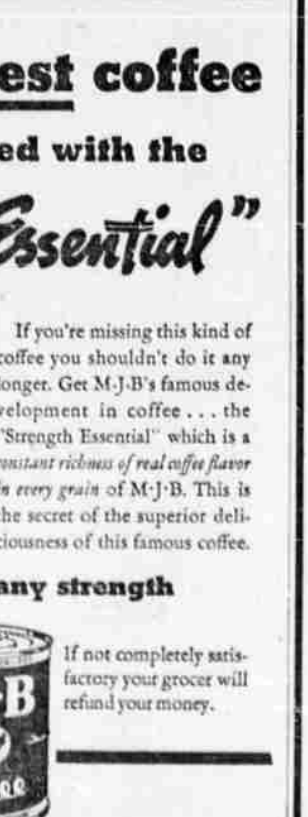
"The fire season of 1935 was one of extreme hazard, with low atmospheric humidity and long dry spells," Brundage said, but "fire losses were kept to the lowest level since 1907."

DETROIT, April 16.—(AP)—Harry Fleisher, former member of the notorious purple gang here, his brother, Sam Fleisher, and two other men were fined \$20,000 each today and sentenced to serve eight years in the Leavenworth federal penitentiary for illegal manufacture of liquor.

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RONALD E. JONES
Ronald E. Jones, who served his first term in the legislature in 1935, represented Marion county in the lower house. He is manager of the Lahish Celery Growers' Co-operative association and has a celery ranch north of Salem.

GRANGERS SELECT APPLIGATE SITE

BIG APPLIGATE, April 16.—(Spl.)—Looking well into the future in regard to developments in building a grange hall, the Upper Appligate grange hopes to have their building sufficiently near completion to hold a Fourth of July celebration.

This announcement comes as a result of definite selection of a building site at the regular meeting Saturday, when members voted to accept donation of a building spot from Albert Young. The land given by Mr. Young adjoins the forest service camp ground at the west end of the McKee bridge. Jim Winningham, assisted by eight volunteer workers, is making shakes for the building this week, and when a survey of the ground has been made, work will begin on the hall.

At the meeting Saturday three applicants, Mr. and Mrs. Albert Collins and Gerald Buck, were accepted for membership. The program was in charge of Mrs. Orville Mayfield, chairman.

TALLOWBOX LOOKOUT STATION IS MANNED

BIG APPLIGATE, April 16.—(Spl.)—With a minor forest fire resulting Saturday from slash burning Elliott creek, Tallowbox lookout station was placed on duty this week. Orval Crane and an assistant, both

LUMBER ACTIVITY STARTING SOON IN ASHLAND VICINITY

ASHLAND, April 16.—(Spl.)—Lumber operations that will bring nearly \$300,000 into Ashland and vicinity during the coming season will be started at the Moon Lumber company's sawmill in the Bellview district about May 1.

The mill, which has a cutting capacity of 100,000 board feet a day, has been operated under lease by the Timber Products company for the past two years, but a semblance of returning prosperity in the lumber business has influenced the company that built the mill in 1929 to run it this year. Logs will be purchased to supply the mill.

Construction of a new planing mill on the city airport property, and installation of equipment, has been nearly completed and the plant will be in operation by June 1.

The planing mill will be fed from the large Bellview sawmill and three smaller mills in the Dead Indian district about 20 miles from Ashland. One will be operated by S. L. Maybon, who cut logs at a mill 12 miles from Lake of the Woods last year. His new plant is being installed this week.

C. G. Hockett of the Hockett Lumber company in Portland will set up a mill near the Mayben plant in the near future. Mr. Moon said. The two small mills will cut between three and four million feet during the season.

The Lost Lake Lumber company will also operate its mill in the Dead Indian district, which will deliver its product to the new planing mill on the airport site.

About 100 men will be employed in the Bellview mill, and 35 more in the Mayben plant.

PEAR MARKET YESTERDAY

CHICAGO, April 15.—(AP-USA)—Pear auction: Two cars Oregon arrived, 2 on track. No Oregon sold.

NEW YORK, April 15.—(AP-USA)—Oregon D'Anjou 2,364 boxes extra fancy \$1.95-2.20, average \$2.26; 529 boxes fancy \$2.10-2.40, average \$2.23.

Nellis, 504 boxes extra fancy \$1.55-1.82, average \$1.71; 774 boxes fancy \$1.45-1.60, average \$1.54.

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FREE METHODISTS IN QUARTERLY MEETING

The third district quarterly meeting will open tonight at the Free Methodist church, corner South Ivy and West Tenth, and continue over Sunday. Rev. R. J. Milton, district elder of Salem, will be in charge of all services.

MORATORIUM GRANTED IRRIGATION DEBTORS

WASHINGTON, April 16.—(AP)—President Roosevelt signed a bill today to grant one-year moratorium on 50 per cent of the debts of reclamation farmers and Indian irrigation projects to the government.

The act also provided for a nationwide survey of the financial conditions of all existing projects with a view to establishing a foundation for a new plan of reclamation repayments to be proposed to the next congress.

MANY LIQUOR ITEMS SHIFTED BY CONTROL

PORTLAND, Ore., April 16. (AP)—The Oregon liquor control commission ordered 43 items of liquor discontinued in state stores and added 19 others at a meeting here today.

The action was to eliminate brands which sell poorly and to conform to new federal regulations governing the labeling of straight whiskies.

Numerous brands of wines were among the discontinued merchandise.

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