

Straight Eight Smoothness Due To Refinements

Years of specialized research and experimentation in the design of intake manifolds and cylinder heads has developed the smoothness requisite for the present straight eight type of power plant, says an official bulletin from the engineering department of Dodge Brothers just received by L. C. Smith, local Dodge dealer.

Here while the "one-lungers" were chugging and jerking about the streets at the dawn of the industry, engineers were at work on plans for converting the single-cylinder hammer blows of the one-cylinder power plant into a series of lighter taps that would give the same force but with less shock, the bulletin states.

"The four, six, eight and 12-cylinder engines followed in rapid succession. But merely dividing the force of one great explosion into a series of lesser explosions was not the complete answer. Greater smoothness required, it is true, but then it became necessary to evolve a system of distributing the work more equally among the larger number of cylinders. This proved an intricate task. Research finally centered around the cylinder head and the manifold, especially the latter. The correct design and proportion of these units necessitated an appraisal of the entire store of knowledge concerning the internal combustion engine. It required practically all that science and mathematics had to offer to arrive at the state of perfection attained in the new Dodge Brothers eight-cylinder.

"Due to the perfected manifold, each cylinder receives the requisite amount of vaporized gasoline. The combustion chamber head in each cylinder is held to such close limits in design and machining that the compression in all cylinders balances. It is measured accurately with a gauge such as is used to check the air pressure in tires. With each cylinder doing an equal share of work, the resulting power application may be likened to the smooth, even flow of water over a power dam.

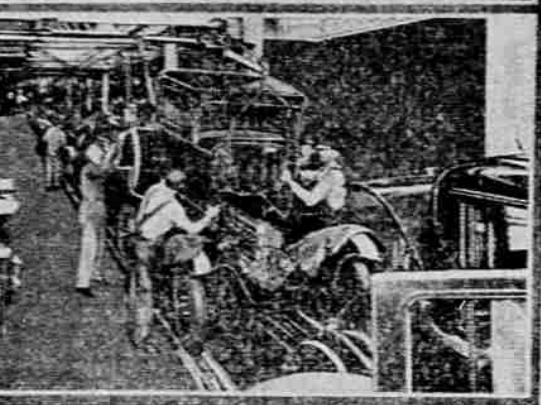
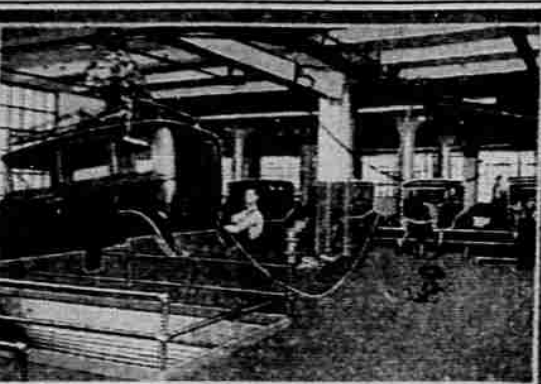
"A technical description of the mathematical process of arriving at the correct design of manifold and cylinder head construction would be unintelligible to the average layman, but a comparison of the Dodge eight-cylinder engine with the crew of a racing shell illustrates the point," said Mr. Smith.

"In the shell the 'pull' of each of the eight oarsmen must be even and equal in order to win races. It is obvious that a motley crew composed of giants and pygmies in a rowing shell could not achieve anything in the way of speed, nor could they even keep a straight course. Likewise, an engine in which each cylinder did not do a proportionate share of the work would not only be 'rough' but also wasteful of fuel and lacking in power."

Owens Masonic Relief

WAREHOUSE POINT, Conn. (AP)—A Masonic apron worn at the funeral of George Washington is owned by Mrs. Katherine H. Walker. Her great grandfather wore it.

Perfect Timing Necessary In Factory



The picture shows a Chevrolet body ready to be dropped through the "well" to the completed Chevrolet chassis waiting below. Perfect timing is necessary to have the body built, upholstered and ready to meet the completed chassis moving along the assembly line below. The job requires complete and perfect timing throughout the factory.

New York Police Trained In The Fundamentals of Automobiles

New York, the world's largest city, boasts a police force of more than 18,000 men that is second to none. Everything has been provided to give this alert army all the training and equipment needed for all branches of the service to patrol the city and combat organized crime. The latest weapon, the fastest motor car, even airplanes are necessary for the constant war on lawlessness. A police college with 2,000 students is maintained where experts in all lines are trained.

One of the most important branches of the college is the motor transport school where more than 1,500 men are enrolled. The course covers everything that should be known about the handling of equipment and repairs. In the ten weeks' training of three and one-half hours each week, the department cars are taken apart and reassembled. Lectures are given on each component part, pointing out the functions each part fills in the operation and performance of the car. Motion pictures are used to illustrate other features.

Twelve Chrysler "70" sedans were recently added to the motor fleet of the police department, and cooperating with them in every way, the Chrysler corporation has detailed representatives to the motor transport school to instruct the men on the use and operation of these latest models.

Equipment placed at the disposal of the police department by the Chrysler corporation and other motor car manufacturers has been most helpful in making this body of men the finest trained motor transport unit in the world. The equipment of the school includes all types of motor units used in police work. Not only the complete car, but models of the chassis and engine have been cut out to show the construction and operation of the various parts.

This knowledge of automobiles helps the police department in many ways. In the first place, police cars, trucks and motorcycles are maintained at the highest operating efficiency, and graduates of this school become experts in identifying the peculiarities of the cars they are called upon to examine in line of duty. Another important result of this training has been the material saving in the cost of operation of cars for lubrication and mechanical details are checked regularly.

In the eleven schools of the Police college, 2,000 men are regularly

ed for instruction, the motor transport school being the largest. The alumni of this unique college constitute one of the most interesting bodies of men in the world. Through the microscopic examination of a bullet, some can tell every characteristic of the gun that fired it, and if the gun is found can positively identify it as the weapon that fired the missile.

Others are experts in traffic and the complicated problems developed by the travel of millions of vehicles and pedestrians through the streets of the city. Among the graduates of this college are men who have specialized in fingerprint, gangsters and gunmen, crime prevention, the drug problem, the gathering of evidence, bootlegging, law, marksmanship, aviation and other phases of police work.

There is a vast organization behind the patrolman on his beat or the detective who lurks in the shadows of a great city. This organization can not hope to operate smoothly without efficient training, and hence the police college.

The motto of the college is "Enter to Learn—Go Forth to Serve," and with the equipment and instruction at the disposal of the police force, the citizens of the world's greatest city are better served by this institution.

Several Arrests Made In May Day Demonstrations

NEW YORK, May 2 (AP)—Red in the face from the heat and with red sashes around their waists and red banners in their hands, an estimated 25,000 communists crowded into the plaza north of Union Square yesterday and shouted defiance at the press and the police and the bosses.

They took the place in the square of the Veterans of Foreign Wars who, an hour before, had shouted defiance at Soviet Russia, the third international and the local communists. There were approximately 1500 veterans in the parade and the speeches of their leaders were heard by a crowd which at times reached an estimated 15,000.

The main address was by Hamilton Fish Jr., a New York representative in congress, who said communists who did not care to abide by the laws and conditions in this country should return to Russia.

OAKLAND, Cal., May 2 (AP)—Four alleged communists were taken to the Oakland emergency hospital yesterday with injured heads after 20 policemen directed by Chief of Police James T. Drew had charged and dispersed more than 50 men and women parading under communist banners. Three women, Sonia Balaban, a Holby and another unidentified, were taken to police headquarters for questioning after attempting to harangue the crowd.

The men injured gave their names as Nick Sopoff, Jack Reed, Gus Yantus and F. C. Westlake.

LOS ANGELES, May 2 (AP)—Police picked twelve persons, including two women, out of a crowd which jammed the city plaza in an attempted May Day demonstration yesterday. Two of the arrested men had attempted to parade with red banners reading "Freedom for the Unemployed."

RIGID FRAME CONSTRUCTION IN NEW, ESSEX

An entirely new frame built to accommodate the large 112 inch wheelbase gives the new Essex Challenger roomier bodies and enhances the distinction of the sweeping stream line of the car. The double drop center, which lowers the car one and one-half inches, without sacrificing road clearance, also helps greatly in establishing the low slung, sleek look which characterizes this year's edition of the Challenger.

Six sturdy cross members, with box construction features, give greatly added strength. These cross members are gusseted, making the structure very rigid laterally, while the side members are non-weld type with reinforcing lower flange. These features combined with the patented Essex construction give exceptional roadability, freedom from sway on turns or rough roads and riding ease at high speeds.

CHANGES ARE IN STORE FOR BRANCH LINE

HANKIN, Ore., May 2 (Special)—That important changes are in prospect for the branch line of the Union Pacific from Huntington to Homestead became virtually certain today although in the absence of a statement from railroad officials the nature of them could not be ascertained.

One story is that the company wishes to abandon the entire line. This rumor has been in circulation in Pioche valley for several days. Acting on R. The Democrat-Herald asked the Associated Press to request the U. P. R. & N. headquarters in Portland for a statement. This was done and the company spokesman said there was nothing for publication. He refused to either confirm or deny the report, giving the impression that something was "in the air," but that the road was not ready to announce it.

Washington—Senate defers discussion of confirming Parker for supreme court to Monday, with opponents claiming votes enough to defeat him.

Columbus—Governor's board of inquiry blames prison fire which cost 216 lives on officials' negligence.

PESSIMISM IS GERMAN HANDICAP

Country Held Back, Says Banker—Much Progress Actually Made

By Wade Wernier
(Associated Press Staff Writer)

BERLIN (AP)—That Germany's chief handicap today is a deep pessimism which obscures in the popular mind the great achievements over post-war obstacles, is the diagnosis given by Jacob Goldschmidt, executive director of the Darmstadt and National Bank, one of Berlin's chief private financial institutions.

Herr Goldschmidt wrote this in the annual report of the bank. He said that the burdens placed on the loser of the world war have been so great that the nation is blindly staring at a blank wall, overlooking the breeches that have already been made in that barrier to progress.

"The depression of the spirit of a great people is one of the most serious consequences of the critical year 1919, and is perhaps more worthy of attention than the material changes which the year has brought," he says. "The hard fate of the German people cannot be mastered and overcome if its vigor and strength, and the creative and constructive impulses which are the expression of that strength, are nullified by a spirit of crippling pessimism and hopeless resignation."

"Our people must not be depressed, on top of the great material losses to which the past year has once again given prominence, of the principal asset which it has had hitherto in the reconstruction of all that defeat has shattered, namely, its optimism and will to work."

"From faith in ourselves and in the organic soundness of our national and economic system, we must draw the energy which we need more than ever since, in the domain of foreign policy, the past year destroyed the great hopes we had placed in the transformation of the Dawes plan into a new and fundamental contractual regulation of the relations of Germany with the other partners to that settlement."

Observing that practically no one in Germany is really satisfied with the reparations solution embodied in the Young plan, influenced as it was by the "tendency to lose sight of all but purely material requirements," Herr Goldschmidt points out that there is nevertheless nothing to do now but fulfill its obligations to the uttermost and then "learn to wait" for the economic reaction.

"In the life of individuals, and still more in the life of peoples," he goes on, "the policy of waiting is often more fruitful than continuous activity, and need in no sense imply mislaying the moment for action when it comes."

What Germans are constantly overlooking in their present pessimistic mood, continues the report, is Germany's actual progress during 1929. It was precisely during the unsettled Young plan negotiations at Paris and The Hague that the American stock market frenzy was sucking the world's money into Wall street and making it almost impossible to raise money for industry in Germany.

Yet a survey of the past year in its political and economic aspects reveals clearly the exceptional achievements of Germany in the period of transition between the Dawes and Young plans, in fighting her way through a severe crisis without any possibility of recourse to the capital market at home or abroad. That is a circumstance which justifies resolute opposition to the atmosphere of mistrust.

"The technical and administrative foundations of German production are sound," asserts the banker. "In this connection the favorable trade balance is remarkable. Germany became in the course of the past year the second largest exporter in the world."

"The significance of this achievement is the greater when it is borne in mind that these exports consisted mainly of finished products which thus proved their ability to compete on the world market in spite of all tariff restrictions."

"On the whole," he adds, "the after-effects of the Wall street collapse have been favorable for us. It has at last made possible a rational return to the normal conditions and relations of the international money market, and above all, has set Germany with her intense demands for capital and credit free from the dangerous competition of the unreasonably high rates for money on the New York market."

New Uniforms To Be Of Blue Gray

SALEM, Ore., May 2 (AP)—Confusion caused by drivers for stage lines and other concerns operating motor vehicles being dressed in uniforms similar to those of traffic officers will be eliminated in some extent by Sept. 1 when all employees of Oregon Stages, Inc., will be equipped with blue gray attire. R. W. Lemen, president and general manager of the company, has informed Secretary of State Howe of the pending change.

The Newberg chamber of commerce recently started a campaign for this reform. Lemen says the change to be made by his company is not in response to the Newberg move, but is a policy adopted by the company several months ago.

The cap to be worn by the stage employees also will be different from that of the traffic officers. The same brown but will remain

Auto Production Still Below 1929

DETROIT, May 2 (AP)—Lagging motor vehicle production in March resulted in a drop of 184,077 cars from last year's figure. Factory sales of passenger cars totaled 215,739, where a year ago there were 311,344, and trucks dropped in number from 70,932 to 64,208.

Vehicles produced in the first three months of the year totaled 598,566. Last year the total for the period was 1,452,910 cars. The figures are based on reports from 144 manufacturers.

RACING CAR KILLS BIRDS IN SPEED RUN ON BEACH

AUCKLAND, New Zealand (AP)—In making his record-breaking dash of 147.607 miles an hour

for 10 miles along Ninety-Mile beach here, Wizard Smith in his racing auto, "The Anzac," killed seven big sea birds.

The car was too fast for the birds. One 10-pound carcass struck Smith in the face, nearly blinding him and causing him to lose control of the car temporarily. The machine skidded dangerously before Smith regained control.

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