The passenger ship is equipped with five twelve-cylinder 400 horsepower Meybach direct reversing motors which will drive it at a top speed of 75 miles an hour, whereas the five six-cylinder 250 horsepower Packard engines of the Shenandoah give it a top speed of 60 miles an hour. At 75 miles an hour, the ZR-3 can go 4,000 miles without refueling and at 60 miles an hour can go 6,000 miles. She carries a crew of 44 beside her twenty passengers. The Shenandoah has a crew of 31.

INSULIN HELPS THIN BABIES RECOVER WEIGHT

Insulin injected into the blood stream of an undernourished infant will help it to utilize the sugar in the food given it, Dr. W. K. Marriot of St. Louis has reported to the American Medical Association.

A malnourished child needs more food in proportion to its weight than normal children but sometimes the malnourished child lacks the ability to take care of all the food it should gat, so heroic methods to help it are resorted to. Glucose, the sugar of corn syrup, is injected into the veins along with considerable insulin. That the child makes good use of the food thus strangely taken in is indicated by the increase in weight. The weight gained is not later lost when the treatment is discontinued.

Dr. Marriot used insulin in these cases as a result of the observation that diabetic patients on insulin treatment often gain weight at a phenomenal rate even when their food intake is not excessive.

Dr. Marriot uses his insulin treatment only in the very worst cases of malnutrition. In some of his examples he felt that had it not been for the injection the infant would have died.

"FAT" SPARK NO BENEFIT, SAYS BUREAU OF STANDARDS

The U. S. Bureau of Standards has just given another cherished belief of motorists an impartial shove toward the limbo of discarded notions. A "fat" spark gives no better ignition, no more power, no more "jazz" to motor performance than a "lean" one.

Their suspecions of the correctness of the accepted doctrine were aroused by experiments in Germany, where engines tested with various kinds of sparks failed to show any differences in power developed, so long as the spark was able to cause any ignition at all.

But an engine is a complicated mechanism, and there are many factors besides the quality of the spark that might affect the final resutl. The Bureau engineers therefore decided to use apparatus as simple as possible, which would at the same time permit them to see the explosion as it occurred and to take high-speed photographs of it.

They caged their gas mixtures in soap bubbles, and later in glass globes under pressure, and fired them by means of various types of electrodes, with "juice"

generated in various ways. A special motion picture film was used to record the results.

They found that when the spark was fired, the gas nearest it ignited, and the flames spread in the form of a hollow globe, growing larger and larger until it had used up all of themixture. They found also that the shape of the electrode did not make any difference, and that the spark from the feeblest flivver coil was exactly on a par with a spark from the most expensive magneto, so far as the rapidity of spread of the explosion was concerned.

DEATH RATE LOWEST ON RECORD DURING FIRST HALF OF YEAR

The first half of 1924 has probably registered a lower death rate than was ever experienced for the first six months of any year in the history of the United States and Canada. This is indicated by the mortality records of the industrial policyholders of the Metropolitan Life Insurance Company, as announced by its statistical department which has just completed an analysis of the data.

After an uninterrupted rise for four years, a decline in the diabetes death rate began coincident with the increasing use of insulin in 1923. For the first six months of 1924, the fall amounted to 27.5 per cent. among the white policyholders and to more than 10 per cent. among the colored. Although there is, as yet, no positive proof that the reduction is the direct result of the increasing use of insulin, there is good reason to hope that the two phenomena are connected.

The cancer death rate was a little lower than that in evidence at this time last year. The death rate from alcoholism declinedslightly. Deaths from acute poisoning by wood and denatured alcohol appear to be decreasing in the industrial population. Fatal accidents showed a little more satisfactory record. The death rates from automobile fatalities continued to increase - only slightly among the whites but about 10 per cent. among the colored. There have been fewer suicides.

The tyhoid fever rate is still falling and there is promise that a new minimum will be registered in 1924. Diphtheria mortality in the industrail population has been runninglower than ever before. Scarlet fever and whooping cough, it is true, show practically the same death rates as for the corresponding period of last year. However, this really indicates improvement, in view of the much greater number of infant lives exposed to risk and covered by the data this year. There has been no general prevalence of epidemic influenza thus far. The mortality from lobar pneumonia decreased markedly among the white policyholders and slightly among the colored. Bronchial pneumonia caused more deaths than during the same period of last year; but this, again, was due to the relatively high number of infants concerned. An increase in the rate for diarrheal disease is explained on the same ground. The mortality from diseases incidental to pregnancy and childbirth declined among white women, but this improvement did not obtain for colored women.

In the Northwest Territory of Canada six game refuges with a total area of 261,800 square miles have been set aside for the exclusive use of Indians and Eskimos.
