

PUBLIC HEALTH

Predicts Starvation Dropsy Will Soon be Widespread

Will Soon Spread in Europe If Not Already Prevalent; Occurs Frequently Among the Poor in United States

STARVATION dropsy, also called famine edema, war edema and hunger swelling, will soon be widespread on the continent of Europe if it is not already prevalent in the occupied regions, Dr. Rupert E. Arnell, of Louisiana State University School of Medicine, predicted at the meeting of the Central Association of Obstetricians and Gynecologists in New Orleans.

Hunger swelling can also occur in the absence of famine, often in the midst of plenty. It is so frequent among the poorer classes in the United States, Dr. Arnell declared, that many workers in the field regard it as a real public health problem.

Expectant mothers frequently have the

watery swelling known as edema. Heart disease, kidney disease and the toxemias of pregnancy can cause it. Recent investigations have shown that deficiency of protein food such as meat in the diet can play an important, sometimes the chief, part in producing the swelling.

With Dr. William F. Guerriero, Dr. Arnell investigated the diet and nutritional state of 100 consecutive pregnant women admitted to the prenatal clinics of Charity Hospital in New Orleans. Protein deficiencies "nothing short of startling" were discovered. The highest protein intake was considerably less than the optimum for expectant mothers. The average was less than half the optimum intake and more than two-thirds of these

expectant mothers were getting much less than the safe minimum.

When these women were treated by replacement of the missing proteins, by better diet and by transfusions of whole blood and plasma, they all promptly improved. The swelling or dropsy disappeared and the women lost weight enormously, due to excretion by the kidneys of the retained water.

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ENGINEERING

Mechanical Brains May Do Future Auto Gear Shifting

AUTOMOBILE gear shifting may some day just happen when required under the direction of a "brain" of steel and wire. The autoist will merely have to make the momentous decision as to whether he wants to go forwards or backwards—and then just step on the gas.

Present trends are all in this direction. So says Harold E. Churchill, Studebaker engineer, in a report to the Society of Automotive Engineers. He traces the history of how one function after another that had to be executed by the driver has been taken over by automatic devices, from cranking the engine, advancing and retarding the spark (remember?), to the present day fluid drive.

But even this last great improvement still requires the driver to change the gear ratio to what, according to his judgment, it should be under the circumstances. The shift is merely gradual and continuous instead of by sudden jumps.

Mr. Churchill instead has in mind a mechanism by which the gear ratio will be automatically changed without the attention of the driver, according as the speed and pull (torque) of the engine require it. He has it more than in his mind, for such mechanisms have already been constructed and tested in actual use. His report deals with these tests. He is not altogether satisfied with them.

He points out a few defects. For instance, he says that the frequent automatic shifting of the gears in traffic is apt to be disconcerting to the driver. Something must be done about this. He recommends other improvements.

However, the mechanism in the main is here and only needs the removal of kinks, as disclosed by actual use, to become regular equipment of future cars.

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SUPERCHARGERS

These oxygen boosters for Uncle Sam's fighting airplanes are being turned out by General Electric by hundreds each week. They feed extra oxygen into carburetors, maintaining sea level atmospheric pressure at altitudes of five miles or more, and allowing the motor to deliver full power at 25,000 feet instead of being cut from 1,000 horsepower to less than 400.