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REPORT OF THE TECHNICAL COMMITTEE ON MEDICAL CARE

A LIFE-SAVING plan was presented to the National Health Conference at its meeting at Washington, D. C. This plan is the program for providing adequate medical and health care to the entire population drawn up by the Technical Committee on Medical Care of the Interdepartmental Committee to Coordinate Health and Welfare Activities. Members of the Technical Committee are: *chairman*, Miss Martha M. Eliot, of the U. S. Children's Bureau; Dr. I. S. Falk, of the Social Security Board; Dr. Joseph W. Mountin, George St. J. Perrott and Dr. Clifford E. Waller, of the U. S. Public Health Service.

The Technical Committee states that "A major reduction in needless loss of life and suffering, an increasing prospect for longer years of productive, self-supporting life in our population will be achieved by this plan within a decade." The maximum cost to federal, state and local governments of the first three features of a five-point plan is estimated at $850,000,000 every year for ten years. The committee believes it will take ten years of gradual expansion of medical and health services for it to become fully effective.

The first recommendation of the Technical Committee is to expand general public health services with the hope of eradicating tuberculosis, venereal diseases and malaria, controlling deaths from pneumonia and cancer, and fighting mental diseases and industrial diseases more effectively. This part of the program is expected to cost $200,000,000 annually, half of this sum to be borne by the Federal Government. In addition, the committee recommends expanding material and child health services, with the object of making "available to all mothers and children of all income groups and in all parts of the United States minimum medical services essential for the reduction of our needlessly high maternal mortality rates and death rates among newborn infants, and for the prevention in childhood of diseases and conditions leading to serious disabilities in later years." Annual cost: $165,000,000.

The second point in the committee's plan provides for 360,000 hospital beds, in addition to those already in existence, in general, tuberculosis and mental hospitals and in rural and urban areas, and for the construction of 500 health and diagnostic centers in areas inaccessible to hospitals. These new hospitals and clinics would require financial assistance for the first three years of operation. Averaged over a ten-year period, the total annual cost is estimated at $146,050,000, half of this to come from federal funds.

The third point in the plan is for providing medical care to the medically needy. Starting with $50,000,000 the first year, this part of the program, it is suggested, should be gradually expanded till it reaches the estimated level of $400,000,000 which would be needed to provide minimum care to the medically needy groups. The Federal Government to meet one half the annual costs.

The fourth point in the plan is for reducing the burdens of sickness among self-supporting persons. It is suggested that this can be done "without great increase in total national expenditures" by devices for distributing these costs among groups of people over periods of time. Suggested methods of financing would be either by general taxation or special tax assessments, or specific insurance contributions from potential beneficiaries, or both. The rôle of the Federal Government, the committee states, "should be principally that of giving financial and technical aid to the States" for development of sound programs of their own choice.

The fifth and final point recommends providing insurance against the loss of wages during sickness.—JANE STAFFORD.

THE GEOGRAPHIC DISTRIBUTION OF HOSPITAL SERVICE

IN the United States 98.5 per cent. of the people live within thirty miles of a hospital. A map showing the geographic distribution of hospital service is published in the *Journal* of the American Medical Association. Statistically there are 9.3 hospital beds for each thousand of population, but since many of these beds are for patients with mental disease, the ratio is cut to 4.6. Such ratios, the medical journal states in an editorial, do not suffice to answer the question as to adequacy of hospital service.

Much depends, an editorial states, on whether the population is rural or urban, on the type of housing which prevails, on the availability of servants, on the habits of the people and the degree to which they have become accustomed to the idea of hospitalization for minor illness. In 1937 those states which had the highest occupancy of hospital beds were the states that had the highest bed ratio, while the states that had the smallest number of hospital beds had the largest percentage of unoccupied beds. This is interpreted as an indication that hospitals have been built where they were needed and have not been built where they are not needed.

In commenting on the study, Alden B. Mills, Chicago, managing editor of *The Modern Hospital* and author of a recent study on "The Need for More Hospitals in Rural Areas," pointed out that there is an important distinction between the true need of any given population for hospital care and the amount of care that they may be able to buy under present conditions. Many of the registered hospitals in the areas of greatest need are small proprietary institutions that can not afford to do any charitable work since they must pay their bills entirely out of their earnings. "Obviously this is quite a different situation from that found in large cities where there are large city or county hospitals as well as voluntary institutions for the care of those who can not pay."

TRAVELING CLINICS FOR AUTOMOBILE DRIVERS

MOUNTED in a delivery truck, a clinic for "unhealthy" automobile drivers has been visiting some sixteen states

under the auspices of the Harvard Bureau of Street Traffic Research in the interests of safer driving. Accident repeaters and traffic law violators are surprised to receive an invitation from police officers to appear voluntarily for tests and personal advice. Newspaper publicity leads many others to the clinic for testing.

The tests showed that eight out of ten drivers are prudent, conscientious and proficient and are proud of their driving. Accidents are caused by a small group, less than five per cent., who can pile up an amazing record of trouble over a period of years. The safest age for drivers is in the 40's and 50's. Individual defects account for some accidents, and some of these can be remedied once the driver is aware of them.

Dr. Harry R. DeSilva and Ralph Channell reported to the *Journal of Applied Psychology*, in describing these traveling clinics, that in the California clinic it was found that fully a fifth of all drivers in fatal accidents had poor vision in one eye. "The seriousness of this condition was accentuated when it was found that in every case the accident occurred on the side of the weak eye."

Amusement is sometimes provided by the tests. "In Vermont a patrolman brought in an intoxicated driver he had picked up a few blocks from the clinic. The inebriated driver welcomed the opportunity to prove that he was in perfect fettle. To his discomfiture he found himself utterly unable to carry out simultaneously the several activities demanded by our vigilance test. After watching a normal person make a good score on the test he confessed his amazement at the demonstrated deterioration of driving ability from alcohol and vouchsafed that he would never again drive after drinking."

Occasionally superior ability may get a driver into trouble. "A salesman came in bragging of his fast reaction time and efficient booster brakes. His score on the braking reaction test confirmed his statement. A study of the motor vehicle department records indicated, however, that he had been the victim of seven rear end collisions. After the supervisor pointed out the disadvantage, in his case, of a faster than normal reaction time and super brakes, he went away vowing never again to brag about or get into trouble as a result of his supernormal ability to stop quickly."

GOLD IN NEVADA

DISCOVERY of high-grade ore running up to $2,000 a ton in value on new claims has precipitated a gold rush to Cimarron District, 29 miles north of Tonopah, Nev., opening up a new field destined, perhaps, to create a boom camp equal to the old days. Since E. M. Booth made the rich strike last month between 500 and 600 claims have been staked out over a mineral range four miles long.

The range is part of the geological upheaval which made Tonopah and Goldfield such fantastically rich gold camps. Surface showings of the new strike are so phenomenal that ore with values up to $2,000 a ton is being encountered 20 feet below the surface of a 7,500-foot peak. Shrewd and conservative mining men predict that the strike could easily surpass Goldfield and Tonopah, both teeming mining camps in their heyday, producing some $500,000,000 in gold together.

Nevada has not had a strike in more than a decade that has created so much excitement as have values uncovered in the Cimarron District. Less than a month ago 12 of the 16 claims staked out by prospector Booth and his wife were purchased by Pacific Butte Mines Company for $185,000, in addition to other considerations.

The company, headed by Fred Vollmar, veteran Silver Peak mine operator, now is driving a 500-foot cross-cut tunnel through the center of the rich claims which cover an area of approximately one mile square. This tunnel is now over 75 feet long. Booth panned a wide section of the mineral range and believed that he staked the heart of the district which he named Cimarron. The cross-cut is being driven into the mountain 200 feet below the high-grade strike, much of which is free gold, and within a few feet of where Mrs. Booth struck a vein that assayed $168 a ton. From surface showings, Booth has concluded that the cross-cut will tap five veins, and possibly two more that he suspects exist.

The purpose of this tunnel is to determine the width and depth to which the veins go into the earth. Should the cross-cut verify surface showings officials plan immediate construction of a mill capable of handling 2,000 tons of ore daily, making it the largest gold operation in the state.

Twisting roads to the diggings are now being scraped and graded so that mining equipment may be brought in. A tri-weekly air service is being started between Los Angeles and Tonopah to carry interested mining operators. Five tons of mine rails, large air pipe, ties and lumber have already been carried into the region from Tonopah, indicating that extensive work is under way.

THE CONTROL OF GRASSHOPPERS

POISONED bait—180,000 tons of it—is joining with the long wet spell of the early spring and summer to keep grasshopper-fighters abreast of these costly insect pests so far this season, according to a statement made by officials of the U. S. Department of Agriculture.

Through the great central area of the Middle West, Iowa, Wyoming, Nebraska, Illinois and South Dakota, hatching of grasshoppers has been greatly delayed by the weather. Danger points are in North Dakota, New Mexico, Texas and Oklahoma. The grasshopper picture is changing rapidly, however, and spots which now seem to be under reasonable control may, very shortly, become a battlefield between deadly bait and 'hoppers.

In all it is estimated that there are 15 different kinds of grasshoppers. Each variety has slightly different habits and its own method of control. The cool, wet weather of early spring and summer, for example, has helped the farmer in the case of those grasshoppers which lay their eggs along roadsides. The wet weather has made the grass grow well in these breeding spots. The grasshoppers are thus eating this near-by food before venturing, later, into the neighboring fields. Other grasshopper varieties which lay their eggs in the fields are, in contrast, essentially unaffected by growing grass on roadsides, for their nearest food is the field crop itself.

While cool, wet weather delays hatching and stays, for a time, the danger period for grasshoppers' greatest damage, this delayed hatching taxes the piles of poison

bait. Where hatching comes along quickly and with most of the 'hoppers coming out all at once a single application of bait to the fields may suffice. In delayed hatching the grasshopper colony grows gradually and several doses of the poison are needed for control. The bait consists of a mixture of bran, arsenic and either sawdust or cotton seed hulls.

METHODS OF FLOOD CONTROL

Luther M. Winsor, engineer of the U. S. Department of servation differs markedly from the problems of the East, according to a report to the American Society of Civil Engineers meeting in Salt Lake City.

Luther M. Winsor, engineer of the U. S. Department of Agriculture, Salt Lake City, pointed out that the popular solution of the flood problem in the East is to undertake extensive plantings on the watersheds of streams and thus ease the flow during flood periods. This "upstream engineering" as it is called, with its motto "Stop the Raindrop Where it Falls," is good practice in the humid East with its plentiful rainfall, but it is not good practice in the arid West where water is precious. Water is so scarce in some parts of the West that it would be poor judgment to keep it up on the mountain tops growing trees and vegetation, while the farmers in the valleys are crying for water.

Mr. Winsor pointed out that there can be no blanket rules about flood control, soil erosion and water conservation. Each section of the nation has its own special problems. In the West soil erosion from the rocky, mountainous peaks is sometimes useful for it brings down into the arable valleys soil that is needed. The Bureau of Agricultural Engineering has developed a system of controlling floods in the West and making torrential streams drop their deposits of silt where they will do the most good. The carrying power of a stream varies with the sixth power of its velocity. It can be shown that if a stream can be slowed to half its velocity it will deposit 63/64ths of its load of mud and débris.

As used in many parts of the West, flood control allows the torrential creeks and tiny rivers to flow unchecked down into the valleys and to flatter places where a low barrier wall is set up around an area in which the débris load of the stream is to be deposited. As the stream widens out at this point its velocity decreases and the débris fills in the area. Such structures can be built for only 60 per cent. of the cost needed each year for cleaning gravel and boulders from lateral irrigation canals.

ITEMS

IT is reported in the *Journal* of the Optical Society of America by Dr. E. O. Hulburt, of the U. S. Naval Research Laboratory of Washington, D. C., that by using the fleeting rays of the setting sun investigators have measured the temperature high in the stratosphere, far beyond the reach of any possible balloon ascensions. The temperature from 8 to 35 miles above the surface of the earth comes out to be -50 to -80 degrees Fahrenheit. The measurement of the brightness of the light in the zenith sky an hour after sunset and an hour before sunrise made the findings possible.

SENDING instruments eighteen miles up into the stratosphere, scientists of the California Institute of Technology, headed by Dr. Victor Neher, have just begun the newest study of cosmic rays direction and intensity at Oklahoma City, Okla. Strings of small hydrogen-filled balloons bore aloft the delicate apparatus which will automatically register cosmic ray intensity. The equipment rises until one or two of the small balloons burst and then the rest bring it slowly and safely to the ground, to be returned by farmers for a small reward. Tiny ping-pong balls play an important rôle in the equipment being used to reflect light into a small camera which takes robot pictures of the instrument readings while the flight is in progress.

MARY GOVER, associate statistician of the U. S. Public Health Service, points out in *Public Health Reports*, issued by the service, that during a heat wave a four-fold increase in the death rate over the expected death rate may occur, although not all the excess deaths are due to sunstroke or heat prostration. The heat may be certified as responsible for about a quarter of the excess deaths, as in Kansas during July of 1934, but during a heat wave there are also more than the expected number of deaths from heart diseases, cerebral hemorrhage, kidney disease and pneumonia. It was found that if two heat waves strike a community during one summer, there will not be nearly so many excess deaths during the second one. This may be partly due to the fact that most of the deaths among persons with chronic disease of heart and circulation were hastened during the first hot spell. It may also be due to acclimatization. Sharp increases in mortality related to heat waves occur most frequently in July and in states of Ohio, Indiana, Illinois, Missouri, Iowa and Nebraska. North Atlantic cities are also frequently affected. Least affected are the Pacific Coast and the far South. Miss Gover attributes the few excess deaths in the South to acclimatization. A number of consecutive days of extreme heat have more effect on the death rate than variable temperatures.

A LARGE amount of the hundreds of millions of dollars that annually are spent for federal construction projects is wasted because the United States lacks adequate maps, said Dr. William Bowie, formerly chief of the Division of Geodesy of the U. S. Coast and Geodetic Survey, before meetings in Salt Lake City of the American Society of Civil Engineers. For only a fraction of the cost of the government's projects the whole area west of the Mississippi River could be accurately mapped in five years. Eleven million dollars would be the cost of this job. While the sum seems large it would be returned, many times over, by the prevention of wasteful methods, due to poor maps. While 48 per cent. of the nation is topographically mapped, only about 15 per cent. is adequately mapped. Most of the present maps are too old or on too small a scale to be useful in construction projects. Dr. Bowie said: "Vast amounts of money are spent annually on the public works and yet they are carried on in most instances without a knowledge of the physical facts of the earth's surface, that can be shown on a modern topographic map. The waste involved is enormous and it is inexcusable."