

with thousands of American infants the perils of starting life in an incubator. A large hospital having over a hundred births a month will have about one infant a month that comes into the world so tiny and frail that it must be placed within the mechanical mother to cherish the spark of life within it.

The normal child weighs about seven pounds at birth, and all infants weighing less than five pounds are candidates for the incubator. The Dionne babies were born about two months early, and because there were so many of them they weighed much less than the ordinary premature infants; their combined weight was reported as only 13 pounds, 6 ounces.

Feeding by Drops

Babies in the incubator, as a rule, gain weight rapidly. They are fed on human milk whenever that is possible, and it is dropped into the tiny mouths with a medicine dropper, since they are generally too weak to nurse at first. The total ration is only about two teaspoonsful every two hours at first, yet that is plenty for such tiny mites.

Oxygen must be provided for the breathing of some of the infants. For those who do not require oxygen, ventilation is provided by the open top of the incubator.

The temperature is kept constant by electricity, or by some other means where electricity is not available. The incubator is kept much warmer than the air of the ordinary nursery—from 95 to 98 degrees Fahrenheit is considered just right. This keeps the body temperature of the infant at 98 or 99 degrees.

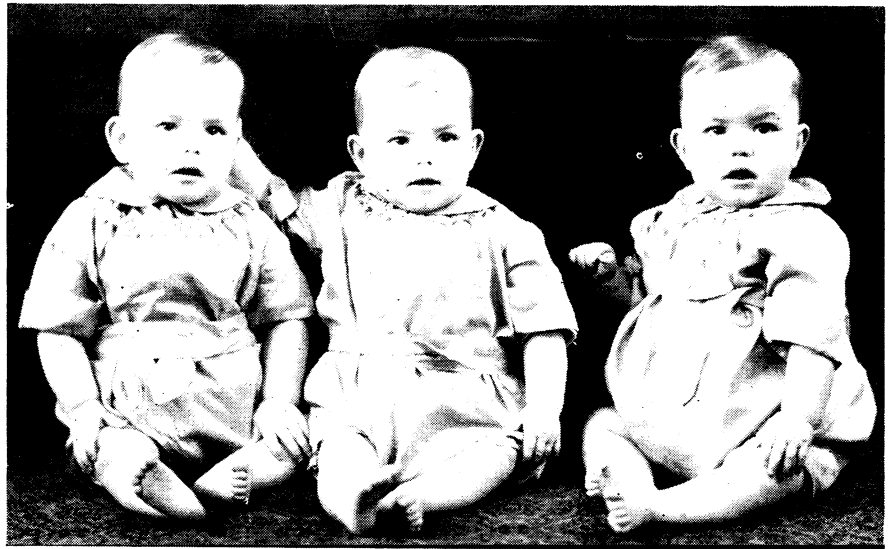
The Climbing Curve

The babies must be turned frequently so that they will not develop pneumonia from remaining too long in one position. Occasionally they must be lifted out of the incubator, but, in general, all the care, bathing, feeding, and changing is done right there in the human nest.

The incubator baby is not weighed every day as is the normal infant, but is weighed every other day, and all those having to do with his care are interested in watching the line on the weight chart turn upward.

Very great success in the saving of precarious lives has resulted from the use of the incubator, which was first designed for use in the Paris Maternity Hospital in 1880.

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OTHER NOTED CANADIANS

This set of identical triplets, born in Canada several years ago, not only look alike but developed alike: they were all left-handed, all slow in learning to walk, and all teething at the same time.

AGRICULTURE

Department of Agriculture Will Not Slacken Research

THE U. S. Department of Agriculture, under the administration of Secretary Henry A. Wallace, has not slacked its zeal for scientific research, and does not intend to do so, even in the face of price-crushing surpluses which the American agricultural plant inevitably produces if left to itself under present world conditions. The answer to the dilemma of the surpluses is not lessened production through inefficiency but controlled production through governed efficiency, Secretary Wallace declares in the new U. S. Yearbook of Agriculture, just issued by the Government Printing Office.

He says: "From its start the United States Department of Agriculture has promoted efficiency on the farm. Efficiency in the old sense of the word, however, is not enough. As farmers well know, profits can not be got just by improving plants and livestock, by fighting disease and pests, or by reducing the wastes of marketing. That alone is not efficient. Ordinary technical efficiency reduces only the cost of production; under present conditions it is necessary also to adjust the output to a changed world market. Low-cost production may mean loss to the farmer if

it is excessive production."

Secretary Wallace points with equal pride to the continued progress of his department in its traditional work of developing better crop plants and fighting pests and diseases, and to the determined new venture into applied agricultural economics, assisting those who wish to cooperate in holding their production at a profit-paying level.

"These two kinds of departmental activity do not conflict but go together," he declares. "Economic adjustment and technical research are necessary mutual supports, particularly just now. Even in normal circumstances it is difficult to prevent a clash between technical efficiency and profitableness in farming. As more and more farmers adopt the latest methods, their aggregate production increases until prices fall below costs. In periods of great overproduction, increased efficiency is a very mixed blessing, if farmers do not counteract its tendency to swamp the market. They can not do so profitably by ceasing to be efficient. Such a course would increase costs more than it would increase prices, and would give an advantage to competing countries. The only workable experiment is economic adjustment.

"Agriculture needs not less science in its production, but more science in its economic life. We may usefully distinguish between productivity and production. Real efficiency increases the former but not necessarily the latter. Farmers can not have too much productivity or production power, provided they keep it under control. High productivity means low unit costs. With

efficient economic as well as efficient technical practice, farmers can make productivity their servant. It is half-science that turns research into a Frankenstein, and leads to demands for a halt in technical progress. Full science, embracing the distribution as well as the production of wealth, reconciles the conflict."

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FORESTRY

Forest Fire Toll Mounts, Influenced by Drought

HIGH on the list of national woes that have arisen from the drought, 6,973 desolate, fire-blackened areas record this year's destruction from forest fires.

This number, just totalled by the U. S. Forest Service, shows an increase of 2,727 individual fires over an average taken for the same period during the last three years.

The area burned is estimated at 183,000 acres, equal to nearly one third of the area of the State of Rhode Island.

Of the total number of fires 3,727, or 53 per cent., were said to be "man-caused." Some were incendiary, but officials of the Forest Service do not know just how many. The rest were the result of carelessness, springing up from burning cigarettes, neglected camp fires, or other such causes.

"Class C" fires, those that burned an area of more than ten acres each, numbered 1,326. Several of these invaded the United States from over the Canadian border, one crossing over the frontier into the Coleville Forest over a three-mile front.

Lookouts Efficient

The "extra-period fires," those that lasted through noon of the day following that on which they were reported, totalled 183. This relatively small number emphasizes the efficiency of the lookouts who scan vast tracts of territory from lonely mountain tops, locating immediately and accurately the first trace of smoke in the unpopulated timberland far below.

Cross-bearings telephoned to other stations are necessary in determining the exact position of a tiny blaze which may soon develop into a roaring inferno. It is then a question of how soon men

can arrive on the scene to check the wall of flame. Armies of more than 2,000 volunteers have a number of times had to battle for days before the last spark was out.

The number of fires increases each day, especially in Washington and Oregon with their huge areas of unpeopled forest. New fires are springing up continually, many of them raging uncontrolled for several days.

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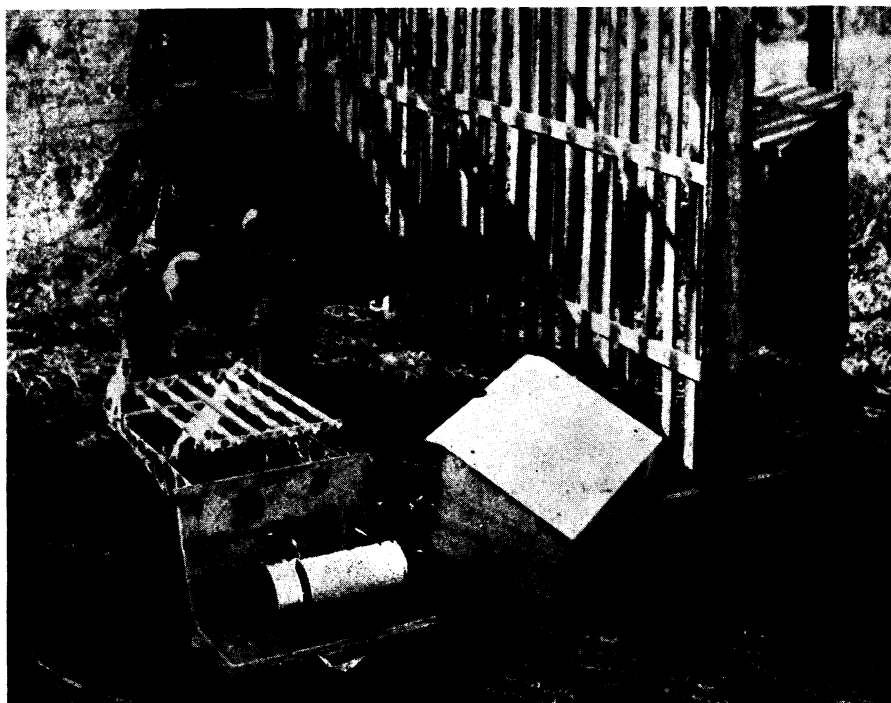
ECONOMIC ZOOLOGY

International War Urged Against Animal Parasites

MEN OF ALL nations should take international action to fight against their nationless foes, the parasites of animals that supply us with milk, meat and clothing. Such a militant league of science was urged upon the Twelfth International Veterinary Congress by Dr. Maurice C. Hall of the U. S. Department of Agriculture.

"The spread of parasites in international trade calls for international action, as Skrjabin has pointed out," said Dr. Hall. "Such international action calls for international cooperation to prevent undue damage to international trade. . . ."

"Unfavorable conditions confronting our program of parasite control include excessive nationalism, the existence of many local governmental units, gaps in our knowledge due to insufficient research, and widespread failure to use control measures already established as of value. The magnitude of our control problems is not yet adequately esti-



NEW FOREST FIRE HAZARD RECORDER

A forest fuel hygrometer, indicating and recording the main factors of forest hazard, has been developed at the U. S. Forest Products Laboratory, Madison, Wis., and has been tested in service at the Northern Rocky Mountain Forest and Range Experiment Station, Missoula, Mont. The instrument records the degree of dryness of forest leaf litter or duff and of the slash or branch-wood that is left after logging, as well as average wind velocities. Since its indications continuously translate atmospheric conditions into a direct gauge of the inflammability of forest materials, this hygrometer is welcomed by forestry officials.