35 per cent. of the population. In 1920 this percentage had decreased to 29, in spite of the loss of men in the war. The number of men in the 20–50 age group was, in 1913, almost 8,500,000, but in 1920 only 7,700,000. The number of children in the 6–15 age group fell from 5,100,000 to 2,770,000. If this rate of decrease continues, five years from now, the percentage of children in the 0–15 age group will scarcely exceed 20, and will doubtless fall below 20 during the years following. On the contrary, as compared with 1917 and 1920, the mortality of children under 6 and of school children has risen for both sexes, and measurements of school children and of minors who have left school prove that there has been a downward trend of bodily health.

THE work which the Bureau of Standards is carrying out on a dictionary of specifications has made good progress. During the past month existing specifications have been collected from more than 75 per cent. of the important national technical societies, trade associations and governmental publishing agencies that have issued specifications. A fairly accurate estimate can now be made of the total number of available specifications for use in preparing the dictionary. Leaving out all duplications, it would appear that about 5,000 specifications are available from the above sources. However, not all of these specifications can properly be classed as related to commodities purchased by the federal, state and municipal governments and public institutions. It is believed that about 20,000 commodities do come within this class and of these more than 75 per cent. of all commodities purchased for government consumption are not covered by available specifications.

THE following resolution was passed at the recent St. Louis meeting of the American Fisheries Society:

WHEREAS, The attention of the American Fisheries Society has been drawn to the very important work on fish diseases and parasites now being conducted by the New York State Conservation Commission; and,

WHEREAS, This society recognizes that such work is fundamental to the future conduct and policy of fish culture; and,

WHEREAS, The rapid growth of population and increase of travel are placing a special drain on fish life; therefore, be it

Resolved, That this society commends especially this research work and expresses the hope that the State of New York, through legislative enactment and financial assistance, when necessary, will continue to carry on this work, which is recognized to be of great benefit to the entire country.

THE *Journal of Industrial and Engineering Chemistry* reports that the largest sale of pulp timber ever made by the United States Forest Service was announced recently. The transaction involves 334,000,000 cubic feet of timber in the Tongass National Forest, Alaska. The buyer, the firm of Hutton, McNear and Dougherty, of San Francisco, has agreed as part of the consideration for the timber to build a pulp manufacturing plant of not less than 100 tons daily capacity, and ultimately with a daily capacity of 200 tons, at the Cascade Creek water-power site on Thomas Bay, 20 miles from Petersburg, Alaska, within the Tongass National Forest. It is understood that the firm plans to install a complete newsprint plant with a daily capacity of 200 tons. According to the plans of the Forest Service for this sale unit, as well as for all pulp timber developments in Alaska, the timber will be cut on a perpetual supply basis, enough seed trees being left to insure complete natural reproduction. The volume of pulp timber and the area of timber-growing land within the unit, reserved from other disposition, are sufficient to afford a permanent source of raw material for this enterprise. Under the perpetual timber supply plan at least 1,500,000 tons of paper can ultimately be produced in Alaska every year. This amount is more than one half of the newsprint now consumed annually in the United States and nearly 20 per cent. of the total consumption of all kinds of paper and wood fiber products. As each new unit of timber and water power is developed in Alaska, the manufacturing capacity will be gauged to the timber supply and growing power of the land so that there will be no depletion of raw material. The Cascade Creek sale is in line with the policy for the development of the national forest in Alaska, which was a subject of special study by President Harding during his trip to the Territory and which received his endorsement.

WE regret that through an error made in the office of SCIENCE a letter from Henry B. Ward, of the University of Illinois, printed in the issue for November 9, was dated from the University of Nebraska.

UNIVERSITY AND EDUCATIONAL NOTES

THE *Journal* of the American Medical Association reports that the Johannesburg town council has given $100,000 to the University of Johannesburg Medical School, South Africa, and $25,000 to the Victoria Hospital. Bids have been received for the erection of the new medical school at Grotte Schuur, near Cape Town, South Africa, at an approximate cost of $500,000.

DR. ERNEST ANDERSON has resigned as head of the general chemistry division at the University of Nebraska to become head of the department of chemistry at the University of Arizona, Tucson.

DR. V. H. YOUNG, professor of botany and plant pathology in the University of Idaho, has been appointed to succeed the late Dr. J. A. Elliott as professor of plant pathology in the University of Arkansas and pathologist in the Agricultural Experiment Station.

STEWART A. KOSER, of the U. S. Bureau of Chemistry, has been appointed assistant professor of bacteriology at the University of Illinois.

JOHN L. BUYS, of the University of Akron, has become professor of biology in St. Lawrence University, Canton, N. Y. A. L. Leathers, Ph.B. (Wesleyan '07), Ph.D. (Cornell '16), will teach zoology at Akron.

CARL GEISTER, of the chemistry section of the Iowa Engineering Experiment Station, has been appointed to the fellowship of the Vitrified Tile Floor Association at the Mellon Institute of Industrial Research.

DR. JOHN RONALD CURRIE, professor of preventive medicine, Queens University Faculty of Medicine, Kingston, Ont., has been appointed Henry Mechan professor of public health at the University of Glasgow, Scotland.

DISCUSSION AND CORRESPONDENCE

THE UNITY OF ENGLISH WEIGHTS

THERE is but one pound in the English system of weights, and that is the standard pound of 7,000 grains. Every weight known to the English system is a multiple of one or the other of these fundamental and invariable units. The multiples of the pound and of the grain which are used in trade have been fixed entirely by custom or convenience, and not by the prescriptions of arbitrary law. What has been established by custom may, of course, be abandoned by custom. That is the way with free men.

But Professor Alexander McAdie in his letter published in SCIENCE of August 24th, last, states: "7,000 grains make a pound, a certain kind of a pound; 5,760 make another kind of a pound."

The Troy pound (which is Mr. McAdie's another kind of a pound) was abolished as a legal weight in the United Kingdom eighty years ago, and the Troy pound is likewise entirely obsolete in the United States. There is accordingly only one pound weight in the United States and the United Kingdom.

The Troy ounce of 480 grains is now confined to use in the weighing of gold and silver bullion. Statistics of gold and silver production, for example, are given in millions of ounces. The Troy ounce, moreover, has been legally decimalized, both as to submultiples and multiples in the United Kingdom. The British statute on bullion weights provides for the division of the Troy ounce into tenths, hundredths and thousandths, and the Board of Trade standards include these decimal sub-multiples, and also standards for 1, 2, 3, 4, 5, 10, 20, 30, 40, 50, 100, 200, 300, 400 and 500 ounce weights of the Troy or bullion ounce. These decimal sub-multiples and multiples of the Troy ounce are in fact the only Troy weights offered to the trade in England or America. In the Assay Office in New York, gold bullion is weighed in the balance against 500 ounce Troy weights, and the intermediate decimal multiple weights are available when required.

The Troy ounce is obsolete as an apothecary's measure. It is the grain (and there is only one grain in the English system) which is the English unit for medical prescription. The ounce of the apothecaries is not the Troy ounce, but the ounce measure or fluid ounce, which in England is the volume of the standard ounce of water, and in America is the sixteenth part of the pint of the old wine gallon of 231 cubic inches. There is some variation here, the American fluid ounce being the volume of 1.042 ounces of water, whereas the British fluid ounce is the volume of an ounce (one sixteenth of a pound) of water, precisely. We ought to adopt the British fluid ounce in this country. Even now it is customary for apothecaries to regard the fluid ounce as the measure of an ounce of water flat.

Drugs and fine chemicals are fast becoming handled in the trade as "ounce goods," and as such are quoted and sold by the hundred or thousand ounces, the British standard or avoirdupois ounce being indicated, and such drugs, purchased by the avoirdupois ounce, are dispensed on prescription by grains weight, when not sold in solutions measured in fluid ounces. The foregoing is in conformity not only to present practice, but also to the recommendations made by the commissioners for the Restoration of the Standards, in their report to Parliament of December 21, 1841, from which the following paragraphs are quoted:

> 41. That the Troy pound be no longer recognized; that the word pound, or any letters or symbols commonly used to denote the pound, as applied to a weight, be always interpreted to mean the pound of 7,000 grains (formerly called the avoirdupois pound).
>
> 42. That the word ounce be always interpreted to mean 1/16th part of the pound, except it be described as the Troy ounce.
>
> 43. That the use of the Troy ounce and pennyweight be confined to gold, silver and precious stones.
>
> 44. That in contracts applying to any other substance whatever (drugs included) no denomination be recognized lower than the pound except the ounce, the grain and the decimal parts of the pound.

The movement to decimalize the standard ounce, just as the Troy ounce for bullion weights has been