



**MAGNETIC MEMORY DEVICE**—Enlarged view of a section of the tiny magnetic cores that store information of the kind used in electronic computers shows their size relative to the head of a paper match (right).

## ELECTRONICS

## Human Brains on "Brains"

Announce the development of ring-shaped magnets woven into a netting of wires to act as storage center or fast-acting "memory" in an electronic computer.

► **HUMAN BRAINS**, 165 of them, cogitated upon electronic "brains" at a recent conference held in Chicago. In discussing automatic digital computers, as the man-made brains are called, new developments in magnetic memory devices, transistors and special computing devices were revealed. Scientists hope to be able to build the complex computers so that they are smaller, more efficient and operate with less heat.

One new machine described at the symposium, sponsored by the Argonne National Laboratory, promises to solve some scientific and economic problems that previously have stumped the big electronic "brains" that man has created to help him with his calculations.

The machine features a fast-acting device that can "memorize" information in a fraction of a second, and that can recall the information at a moment's notice. Furthermore, the new electronic machine can store vast amounts of information indefinitely.

Present machines are limited because they cannot store information if they have a fast-working "brain," Dr. Jan A. Rajchman of the Radio Corporation of America Lab-

oratories division told the symposium. On the other hand, if present machines are good at storing information, they usually are not fast-acting. These failings in science's electronic brain children prevent the machines from being used on many complicated scientific and economic problems.

Designed at RCA's David Sarnoff Research Center, the new machine uses 10,000 tiny ring-shaped magnets woven into a netting of wires. Current flowing through the wires magnetizes the tiny rings so that 10,000 bits of information can be stored in an instant.

If 100 of the machines were connected, Dr. Rajchman reported, the assembly theoretically could store all the information on five solid pages of a newspaper. This would amount to about 1,000,000 bits of information.

Meanwhile, Argonne scientists themselves unmasked what they billed as "the world's fastest high-speed, general-purpose digital computer." Called the Oracle, it was jointly built by Argonne and Oak Ridge personnel. It is slated for installation at Oak Ridge early this fall for use in a mathematical panel.

A modification of a previous "brain," the Oracle is said to be more reliable and easier to maintain. It also works faster than its predecessor.

It can receive, retain and process 2,048 twelve-digit decimal numbers, it can memorize 4,000,000 words, and it can multiply 999,999,999,999 by 999,999,999,999 in less time than it takes a person to bat his eye.

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## MEDICINE

## Anti-Polio G.G. Shots For Alaskan Children

► **CHILDREN AND** probably some grown-ups in Juneau, Alaska, received shots of gamma globulin during the last week in July to protect them, if possible, from paralysis and crippling by poliomyelitis.

The Alaskan capital and surrounding area was the latest region, as of July 30, to get some of the anti-polio material for mass prophylaxis, the Public Health Service, U. S. Department of Health, Education and Welfare, reports.

A total of 17,400 cubic centimeters of the precious material was shipped from Seattle. This was enough to immunize the approximately 2,500 children under 15 years of age in the Juneau area. But because cases of polio there have been scattered through all age groups from one to 49, some 19- and 20-year-olds and perhaps some still older persons may have gotten some of the g.g.

Doses are calculated on body weight and since Eskimos are in general small, the total amount of g.g. sent may have gone further than it would in some other communities.

Juneau had seven cases of polio during the last week in July, and four or five for each of the two preceding weeks. This sounds like very few, but works out to a high proportion of the small population, about 6,000 at the last census.

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## PEDIATRICS

## Do Not Express Pity When Visiting Blind Child

► **DO NOT** express pity if you visit a baby or little child who was born blind. Such a little one does not know what seeing is and he does not know that he is deprived of anything.

This is advice given by the Children's Bureau of the U. S. Department of Health, Education and Welfare, which has just issued a booklet on the pre-school child who is blind (see p. 108).

By the time such a child realizes that he cannot see, the experts explain, he can have grown into a happy person who is meeting life as well as any child. How much unhappiness a blind child and his parents will face is due to "the way the family and the community and the world act toward blindness."

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