

rows from the woods. You sure was lucky it didn't go farther."

The Navy plane overhead circled the farm until farmer Gibbons could be seen clearing a barbed wire fence with the balloon and its precious instrument held high over his head and approaching his home. Then the Navy pilots started to figure out where they were.

The little town of Aquasco appeared on the aerial maps they carried and then by noting the color of the roads, concrete, macadam and mud, and their various turns the pilots believed they could return to the farm by motor.

Quickly they raced back to the Naval Air station and soon were at the Gibbons farm, where Mr. Gibbons said:

"It's all right except for the balloon part. I tied it to a post near the chicken yard there and it went off like a cannon. You should have seen those chickens go—under the house, behind the barn and everywhere. I'm sure sorry they're taking it away, 'cause the kids can't play with it any more."

The playing, it should be explained, consisted of taking power from the tiny 135-volt battery in the device and hooking it on to a small motor designed to be powered by 1.5 volts.

Dr. Curtiss, receiving the instrument, declared it was in the best condition of

all the 12 similar radio balloons which he had released. Eight of them have now been recovered, but none so close to Washington. Some of the balloons have been returned from the state of Delaware.

Because of the great height to which the balloon ascended and its rapid descent, the chance of its being sighted from an airplane was infinitesimally small, said Dr. Curtiss. He congratulated

the Navy flyers on seeing and finding it for him. At the Naval Air Station the feat of spotting the house from the air so that the pilots could later drive right to its door was also commended.

The accompanying pictures show Dr. Curtiss inflating a similar balloon, the Navy flyers who followed it to earth, and Farmer Gibbons holding the "fallen star" of science.

*Science News Letter, August 14, 1937*

PUBLIC HEALTH

## First Two Weeks Are Hardest; Chicago Wants to Know Why

### New Campaign To Reduce Infant Mortality Centers On Newborn; Prematurity and Hemorrhage Responsible

**I**F a baby lives to be two weeks old he will probably live a long time. But it is tough going for the first fortnight.

Chicago, notable for its health activities for infants, has embarked on a campaign to save the newborn.

The death rate for infants from 7 days to 1 year of age, in the United States registration area, has been reduced 53 per cent. during the years 1916 to 1934 inclusive.

During the same period the death rate for infants under 7 days has been reduced only 10 per cent.

If infant mortality is to be further materially decreased, the chief efforts must go to prevent the deaths that occur during the first few days of life, declares Dr. Herman N. Bundesen, president of the Chicago board of health.

Before such an effort can be successful the causes of early infant deaths must be accurately determined, Dr. Bundesen states.

The Chicago plan, which got under way in January, 1936, is to have autopsies performed by competent pathologists on as many deceased newborn infants as possible.

A protocol covering all the facts uncovered by the autopsy is obtained. An investigation is made by trained workers of the clinical history and available laboratory results.

After consideration of the entire record—clinical, laboratory and pathologic—a conclusion is reached as to the most probable cause of death.

Cerebral hemorrhage and prematurity are the two leading causes of death among newborn babies, Chicago has found. Therefore the chief attack will be centered on these two conditions.

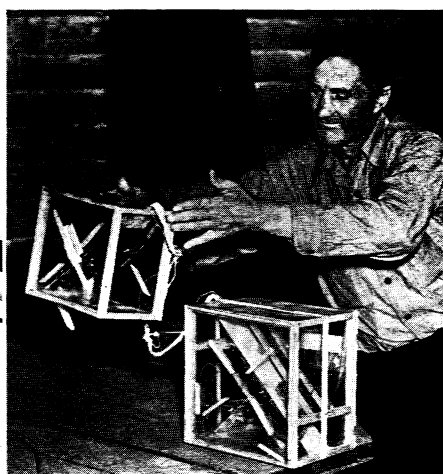
In the *Journal of the American Medical Association*, (July 31) Dr. Bundesen, Dr. William I. Fishbein, Dr. O. A. Dahms and Dr. Edith L. Potter, all of Chicago, discuss the factors responsible for failure further to reduce infant mortality.

Carelessly filled out and incorrect death certificates, and methods of disease classification that emphasize the



SIGHTED

. . . Radioman first class, W. B. Fuller, left, and O. T. Cooper, chief radioman of the U. S. Navy, above, flying a plane from the U. S. Naval Air Station at Washington. The flyers zoomed earthward following the falling balloon and circled until they saw it had landed, to be rescued. Then, spotting the farmhouse where the balloon was taken, they later returned to greet the astonished finder . . .



RECOVERED

. . . Franklyn Irvin Gibbons, Aquasco, Md., tobacco farmer, shown here holding the intricate scientific apparatus, which fell "like a star" in his field. Gibbons tied the balloon to a post in his yard, where it exploded and sent chickens scurrying. Scientist Curtiss reports the instrument was returned in good condition. Says farmer Gibbons: "I'm sure sorry they're taking it away, 'cause the kids can't play with it any more."

secondary and ignore the important and preventable causes of death hinder the reduction of deaths among the newborn, they assert.

They point to the need for further study of the factors responsible for premature births.

At present the principal and most helpful field of endeavor, these doctors declare, is to make certain that the infant is in skilled medical hands.

*Science News Letter, August 14, 1937*

## CHEMISTRY

## Cotton Industry Backward In Applying Chemistry

**M**OST laymen, and too many textile manufacturers also, think of cotton as a finished fiber that nature has produced, and to which man can do but little more than to spin and weave it into fabric. This lack of realization of what chemistry can do to cotton is a sizable factor in the rise of the synthetic rayon fibers. Rayon came out of the laboratory so that chemical treatment of these man-made fibers has been natural. Not so has been the processing of raw cotton into the newer finishes that attract the eye, lend utility and bring new profits.

Mercerizing cotton, for years, was about the only chemical treatment applied to cotton. But cotton treated with a solution of copper oxide in ammonia yields wool effects. A variation of this treatment gives a permanent lustrous finish approaching that of rayon.

Treating cotton with strong sulphuric acid will give either a linen or a parchment-like finish depending on controlled conditions. Even a measure of transparency can be obtained with sulphuric acid applied at low temperatures.

Dr. Walter M. Scott, textile expert of Gustavus J. Esselen, Inc., Boston consulting chemists also points out that the dyeing properties of cotton can be entirely changed and simultaneously special waterproofing effects produced by treating the cotton fibers so that they are partially converted to esters of cellulose. Ordinary cotton dyes do not "take" on such "immunized" cotton but dyes similar to those used for acetate rayon will.

With a few exceptions, Dr. Scott declares, the cotton industry as a whole is backward about using, to full advantage, the chemical knowledge that could aid it.

*Science News Letter, August 14, 1937*

## DOCUMENTATION

# American Delegation Goes to World Documentation Meet

**A**MERICAN science, scholarship and libraries will be represented when the World Congress of Documentation convenes in Paris August 16 to discuss how the written and pictorial records of the world can be more efficiently organized.

An official delegation has been appointed by the United States, headed by Watson Davis, director of Science Service and president of the newly-organized American Documentation Institute.

Other members of the delegation include:

Miss Claribel R. Barnett, Librarian, Department of Agriculture; Dr. William Warner Bishop, Librarian, University of Michigan; Rudolph Block (Bruno Lessing) New York City; Dr. Worthington C. Ford, Honorary European Representative of the Library of Congress, Paris; Herman H. Fussler, Microphoto-

graphic Laboratory, University of Chicago; Miss M. Alice Matthews, Librarian, Carnegie Endowment for International Peace; Miss Margery Quigley, Librarian, Free Public Library, Montclair, N. J., Miss Sabra M. Vought, Librarian, United States Office of Education; Prof. Douglas Waples, Graduate Library School, University of Chicago.

One of the subjects that will be most widely discussed is the use of microfilms in making available the literature of the world that can not be distributed in any other way because of the cost of printing and other methods of duplication. Microfilms are small photographs of books, manuscripts, photographs, and other material, each page or sheet occupying less than a square inch on what appears to be ordinary motion picture film. The cost of microfilm is only about a cent a page.

*Science News Letter, August 14, 1937*

## DOCUMENTATION

# Scholars Form American Documentation Institute

**T**HE AMERICAN Documentation Institute, organized this year on behalf of some 60 national scholarly, scientific and informational organizations and institutions, is a creation of the intellectual world fashioned to attempt the solution of some of the problems that surround publication, bibliography, library facilities and other phases of documentation in the fields of research, education and learning.

It will give special attention to such new tools in documentation as microphotographic duplication. It will encourage, cooperate with and in some cases operate Bibliofilm Services (services for copying on microfilm) in libraries and elsewhere in order that the world's great store of recorded knowledge may be most easily accessible to those who need to use the literature for research purposes. It will cooperate with existing journals and institutions in publishing through microfilm essential research material that is not required in large editions.

In fields less new the American Documentation Institute will be able to act as an operating agency that can cut across different intellectual fields. Projects under investigation include document preservation, cooperative publishing by offset lithography, etc.

By establishing relations with similar organizations in other countries and through participation in international efforts in documentation, the American Documentation Institute will be able to facilitate world interchange of literature and information.

The documentation activities of Science Service, the institution for the popularization of science, developed during the past two years became a nucleus for the American Documentation Institute. Such a national organization was foreseen as an outcome of Science Service's documentation activities when they were begun in July, 1935, implemented with grants from the Chemical Foundation and conducted with the cooperation of