MEDICINE

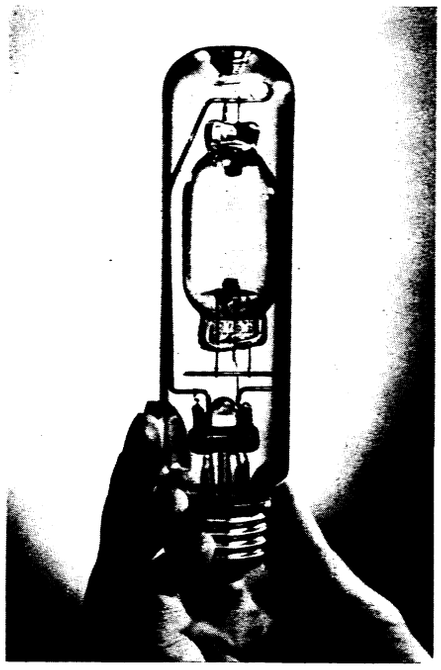
Better Pneumonia Serum Obtained From Rabbits

New Weapon Against the Pneumococcus More Effective Because Antibody Molecules Smaller; Is Also Cheaper

A NEW and better way of making serum to cure pneumonia was described by Dr. Rufus Cole of the Hospital of the Rockefeller Institute, New York City, at the Conference of State and Provincial Health Authorities of North America.

Using rabbits instead of horses, two associates of Dr. Cole, Drs. Kenneth Goodner and Frank I. Horsfall, were able to make a serum that is more effective and cheaper to produce. Greater effectiveness results from the fact that the antibody molecules produced in the rabbit's body to fight the pneumonia germs are smaller than the horse's antibodies and consequently spread more rapidly through tisues infected with pneumonia germs. Fighting pneumonia due to the pneumococcus depends on getting as many of these fighting antibodies into the patient's body as possible. The patient produces some himself, but the serum gives him a big extra force. For this reason Dr. Cole advocates large doses of serum, given as early in the disease as possible.

Science News Letter, April 17, 1937



LAMP WITHIN LAMP

A new 100-watt lamp-within-a-lamp developed by Mazda gives as much light as the ordinary 200-watt bulb. Compact and using mercury vapor, the double walled bulb is still in the experimental stage but promises usefulness in those fields where economy is the watchword and where the color of the light rays is immaterial.

ASTRONOMY

More Elements Discovered in Cold of Interstellar Space

DISCOVERY of several new interstellar gases, two of which have been identified as neutral potassium and calcium, has been made by Dr. Theodore Dunham, Jr., noted astronomer at the Carnegie Institution's Mount Wilson Observatory.

Space between stars is filled with atoms of various elements, and Dr. Dunham's research brings the total identified to four, one of which, calcium, appears in two forms.

Ionized calcium was the first interstellar gas to be discovered, and the discovery of neutral calcium by Dr. Dunham is considered remarkable because it is estimated that each cubic yard of space contains but one atom.

Detection of this very faint element was made possible by the development of delicate apparatus and an improvement in photographic plates.

Light from the stars Chi Orionis and 55 Cygni enabled Dr. Dunham to secure spectograph plates of neutral calcium.

Using a new ultra-sensitive infra-red photographic plate at the Coude focus of the 100-inch telescope, the astronomer obtained evidence for the existence of neutral potassium. For this he focussed the world's largest telescope upon Chi Orionis.

Previous interstellar elements detected include ionized calcium, sodium and titanium. Dr. Dunham and Dr. Walter S. Adams (director of Mount Wilson, announced their discovery of titanium last fall, the first new interstellar gas detected since about 1915.

Because the intensity of the lines in the spectrum produced by the newly discovered interstellar elements varies from star to star, Dr. Dunham was moved to remark that this suggests that the distribution of gas throughout intersteller space is far from uniform. In other words, these atoms appear thicker in certain parts of the sky than in others.

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PHYSIOLOGY

Poisons Found in Blood Following Extensive Burns

THE general intoxication or poisoning which follows an extensive burn and may result in shock and death is actually due to toxin in the blood, it appears from studies reported by Dr. Sol Roy Rosenthal of Chicago at the meeting of the American Association of Immunologists.

The poisonous substance, or toxin, was found in the blood after severe burns and an antitoxin which neutralized this substance was found in the blood after recovery from the burns. The poisonous substance makes the walls of small blood vessels more permeable so that blood plasma may leak through and the blood flow through these small vessels is retarded.

Science News Letter, April 17, 1937

NATURE STUDY

Water and Woods Form an Ideal Photograph Subject

See Front Cover

IN EARLY spring, the camera man's fancy turns to scenes of such natural beauty as that pictured on the front cover of this week's SCIENCE NEWS LETTER. It is from the camera of Fremont Davis, Science Service staff photographer.

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