PETROLEUM

Oil Hunters Will Wear Bullet-Proof Jackets

➤ U. S. OIL prospectors in the jungles of Colombia will wear Army bullet-proof jackets for protection from native arrows, the Quartermaster Corps has disclosed.

Doron-armored jackets, that can repel missiles up to and including a .45 calibre revolver bullet, will protect the oil hunters from the primitive arrows that have killed or wounded many employees of an American oil company in the past few months. The armored panels in the coats are made of glass-filament laminated plastic, and they are fitted with a special tail piece containing six plates of armor and suspended from the rear of the jacket.

The scene of the new search will be unexplored country, but similar prospecting in the region has resulted in casualties when parties were ambushed by natives, reported to be accurate marksmen.

Science News Letter, August 24, 1946

PHYSIOLOGY

"Gazelle Boy" Story Believed Only Myth

➤ JESSE OWENS, Gunder Haegg and the other great track stars that own world's running records need not fear for their marks because of a "gazelle boy" reported from Africa, in the opinion of scientists.

The story told in a London newspaper reported a "human gazelle," raised by the animals, eating grass and bounding around with the speed of his foster-parents, something like 50 miles per hour. Hunters have allegedly captured the boy and put him in an African asylum.

But Dr. Dale Stewart, anthropologist at the National Museum, Washington, D. C., warns that these stories of human-animals or animal-humans have "always been on hearsay evidence."

Man, for thousands of years, has been telling stories of humans raised by animals, and they are still being told in today's comic strips. One of the earliest and most famous was of Romulus and Remus, mythical first settlers of Rome, who were said to have been raised by a wolf.

Only five years ago, Kamala, "the wolf girl," was reported from India by a missionary who rescued her from the wolves with whom she had allegedly lived for her first eight years. She died in an Indian orphanage after nine years with humans.

Russia has reported "human bears," and modern literature includes Kipling's Mowgli, but scientists are still skeptical.

"No one has ever brought in proof," declares Dr. Stewart.

Incidentally, if the "gazelle boy" does turn up in a track meet and actually can run at a speed of 50 miles per hour, he'll do the 100-yard dash in about four seconds and the mile run in one minute and twelve seconds!

Science News Letter, August 24, 1946

RADAR

Radar Stations Locate Bad Weather Over Ocean

➤ BAD WEATHER over the oceans, so high that it may never disturb surface conditions, will be located and tagged by radar when a series of storm-detecting stations are completely established by the Army. These disturbances are important in high-flying transoceanic flights.

The application of radar to storm detection is a war development, an unexpected discovery. Pilots of radar-equipped planes in the Pacific area noted effects on their scopes that were at first unexplainable. Later it was determined that they were due to reflections of radar pulses from storm formations ahead, The discovery was valuable. It gave the Army a means of dodging storms in the paths of planes en route to Japan with a cargo of bombs.

Six storm detection radar stations have already been established in the United States by the Army Air Transport Command's air weather service. A total of 35 are planned. These stations can detect thunderstorms within a 200-mile radius. They can follow the storm and observe its rate and direction of movement on the radar scope. This makes it possible to forecast with great accuracy when the storm will arrive at any given point. The program of the Army air service calls also for special investigation of stratosphere weather and for special weather studies in electronics.

Planes equipped for radar observations are now taking off daily from Florida, Newfoundland, the Azores and California to locate bad weather over the ocean. Weather information obtained is reported by radio, and used both by the Army and the U. S. Weather Bureau.

Science News Letter, August 24, 1946

IN SCIENC

ASTRONOMY

Comet du Toit-Neujmin Expected to Return

➤ ASTRONOMERS are resuming their search for comet du Toit-Neujmin, discovered in July, 1941, and due to return to the vicinity of the earth this summer. The comet was believed to have been rediscovered the end of July, but a study of the path taken by the bright object spotted moving across the sky indicates it is probably a minor planet.

Some weeks ago Director Virginio Manganiello of Argentina's National University Observatory at La Plata reported that on July 31 Senor Cecilio spotted a faint object moving across the constellation of Virgo, the virgin. But Dr. Enrique Gaviola, director of Mexico's Cordoba Observatory, has reported to Harvard Observatory that further observations suggest the tiny object is not the comet as first suspected.

Calculations of the path followed by the moving object show it will come within about 279,000,000 miles of the sun on Oct. 13. This brings it between the orbits of Mars and Jupiter. In this region revolve the asteroids, minor planets so tiny they can be distinguished from faint stars by their motion only.

Science News Letter, August 24, 1946

INVENTION

Higher Vacuums Made Possible for Research

➤ WHAT LOOKS like an important new aid to both physical research and industrial technology is offered by three English inventors, J. W. Tills, J. B. Lovatt and F. C. Potts for patent 2,404,997. It is an invention for getting nearer to nothing at all than has hitherto been possible.

With even the most efficient air-pumps it is extremely difficult to obtain a really high vacuum, and the less air there is left in a given space the harder it is to get any more out. The English trio propose to impress electric charges on these last few elusive molecules by means of a beam of X-rays, and then whisk them out of the way by means of an electrostatic field.

Science News Letter, August 10, 1946

E FIELDS

TEXTILES

Ultraviolet Rays Detect Streaks in Textiles

➤ INVISIBLE ultraviolet radiation, which already has many applications in medicine, chemistry and the industries, now helps in a new field, detecting streaks and smears in printed textiles.

Use of ultraviolet for this purpose is among important findings made in the German textile industry by American postwar investigators. A special lamp is used which is called "Flu-Tex." It is an eight-inch quartz light tube, attached to the upper part of a reflector, and can be used in full daylight or in strong artificial light to examine materials. Fluorescent substances are added to the print paste to increase luminescence of certain print colors.

Other German processes in the textile industry were found by the scientists and textile technicians which may have value in the American industry. The Office of Technical Services of the U. S. Department of Commerce has issued a report for those interested.

Science News Letter, August 24, 1946

MEDICINE

Antibiotic, Litmocidin, Reported to Medicine

➤ DISCOVERY of a new antibiotic, or penicillin-like chemical, is announced to American scientists in a report by Dr. C. F. Gause of the Institute of Tropical Medicine, Moscow, in the *Journal of Bacteriology* (June).

The new substance has been named litmocidin because it is a pigment, and like the litmus paper familiar to every chemistry student, turns red in acid and blue in alkaline solutions.

It is produced by an organism found in the soil of southern Russia. The organism, an actinomycete, belongs to the same general group as those that produce streptomycin.

What future the new antibiotic will have is not clear from Dr. Gause's report. It is strongly active against staphylococci, streptococci, tuberculosis germs and cholera germs in the test tube, but has only moderate effect on dysentery germs and practically none on the germs of typhoid fever.

Tried on mice, litmocidin seemed pretty safe but did not work well as a remedy for blood poisoning caused by a strain of staphylococci which were checked by the antibiotic chemical in the test tube.

Details of the purification and chemical properties of litmocidin are given by Dr. M. G. Brazhnikova, also of the Institute of Tropical Medicine, Moscow. It has much in common, he reports, with the anthocyanin pigments of higher plants which are responsible for the colors of such vegetables as red beets and purple cabbage.

Science News Letter, August 24, 1946

AGRICULTURE

Tobacco Curing Is Being Streamlined

➤ SCIENCE IS about to streamline a traditional industry of the old South by introducing pushbutton methods for tobacco curing.

Until recently, bright leaf tobacco, the kind used in cigarettes, was cured just about as it was when great-granddad was in knee pants. Now growers are replacing wood-fire furnaces with automatic equipment which not only promises to improve the product, but will relieve farmers of back-breaking drudgery.

About 30,000 of the approximately 290,000 curing barns in Florida, Georgia, North and South Carolina and Virginia will be converted from wood furnaces to coal stokers and oil burners this season, according to engineers of Minneapolis-Honeywell Regulator Co., who are working with state agricultural experiment stations in introducing the new methods.

Since 1869, when the flue-curing process was originated, farmers have depended upon unreliable wood fires to heat their barns. It requires five days to cure a barn of tobacco and, since proper temperatures must be maintained 24 hours a day, growers were able to snatch only a few winks of sleep during the six weeks' harvest period.

Now, with automatically controlled stokers, it is possible for a grower to set his thermostat at a certain level and not have to check it again until time to change the temperature for another stage of curing. A thermometer installed so readings can be made outside relieves his having to enter the barn except to check moisture content and color of the leaf.

Science News Letter, August 24, 1946

METALLURGY

Boron Used Successfully In Hardening Steels

➤ VALUABLE new information on the use of boron partially to replace molybdenum in hardening steels results from a wartime study now available to the public.

The testing was carried out at the Battelle Memorial Institute, Columbus, Ohio, under the sponsorship of the National Defense Research Committee by M. C. Udy and P. C. Rosenthal. A report prepared by these two scientists is available from the Office of Technical Services, U. S. Department of Commerce.

One hundred boron-treated steels were tested. Nickel-chromium-molybdenum and manganese-molybdenum base steels were used. From the standpoint of hardenability best results were obtained with additions of .0015% to .002% boron, the researchers found. The boron addition had no apparent adverse effect on notch-bar toughness at temperatures down to 80 degrees below zero Fahrenheit.

Boron can be used to replace half the molybdenum in aluminum-killed steels of certain compositions, the report states.

Science News Letter, August 24, 1946

INVENTION

Ball and Socket Joint Compensates for Own Wear

➤ BALL AND socket joints important to users of many kinds of machines, will no longer need frequent replacement if a new joint recently patented lives up to expectations. It is called an automatic wear-compensating joint, the wear being compensated for by a tapering pin that spreads the two halves of the ball.

This ball of the joint is in two semi-spherical parts with curved inner surfaces that form a tapering bore to hold the tapering pin. The smaller end of the pin, projecting through the socket, holds a nut behind which is a spring. The spring tends to draw the pin tighter into the bore, and does so if there is any wear on the outside of the ball or the inside of the socket. This expands the sections of the ball, causing them to fit closely into the socket. A special system of lubrication helps reduce wear.

The patent number for this joint is 2,401,814 and it was awarded to Paul B. Burhans of Fort Myers, Florida.

Science News Letter, August 24, 1946