



POSTWAR COMFORT—A button in the chaise lounge seats designed by Pullman releases a leg rest from the seat ahead, providing full-length comfort.

train to talk with each other at will.

The safe speed of a train depends upon the efficiency of its braking system. Before air-brakes were discovered and put in use on railroad trains, speed was necessarily low. With their installation safe speeds doubled and tripled.

The postwar braking system will be the new automatic and electrically operated type that applies a selective pressure upon the brake shoes throughout the entire stop so that the rate of deceleration is uniform all the way. It is pronounced the fastest, smoothest and safest system ever developed, and with it the present neck-jerking jolts resulting

from manually operated systems will be eliminated.

Hot boxes on the axles of railroad cars have for years been the railroad man's bugbear. New and better lubricants and methods of application help, but a new electrically operated warning system attached to each journal box on the train permits remedial steps before an overheated bearing causes a train to stop. When the heat in the journal box rises above a safe temperature, an electric circuit is activated and lights a red danger signal, ringing a buzzer in the car and in the engineer's cab.

Science News Letter, May 19, 1945

PHOTOGRAPHY

20 Million Photos a Month

► BY MILITARY necessity, the Army Air Forces have become the world's largest users of photographic film, paper, and equipment, reports Maj. Gen. Bennett E. Meyers, director of the Air Technical Service Command at Wright Field. More than 20,000,000 photographs a month are made for military purposes, he revealed.

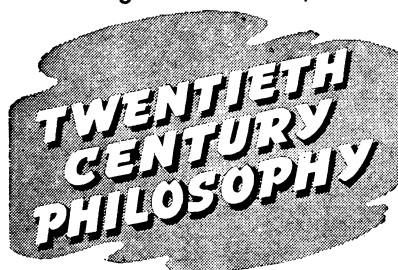
These photographs, many of which are made from airplanes flying over enemy territory on reconnaissance missions, show the enemy's industrial areas, mili-

tary installations, rivers and roads, and deployment of troops. After being analyzed by air intelligence officers, the information contained in the photos is transmitted to our bombing squadrons, land armies, and amphibious forces. Gen. George S. Patton once stated that he would not move a single man unless he had photographs of the place that the man was to move to, Gen. Meyers declared.

Without these photographs, our military forces would (Turn to page 317)



Dagobert D. Runes, Editor



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Distinguished Kinships

► NO MATTER how democratic we may be, any of us is likely to take a second, interested look if a neighbor, who has nothing in particular to distinguish him from the rest of us, is pointed out as first cousin to a Duke, or nephew of a Sultan.

It is much the same way with plants. A rather ordinary-looking wildflower or weed somehow assumes dignity, even glamor, when we are told of its kinship to an important or valuable exotic botanical family.

To most of us, probably, the word "orchid" connotes flowers of strange, almost weird beauty, perched like gorgeous butterflies high on the limbs of jungle trees, to be collected only by daring adventurers at imminent risk of life and limb. When delicate but rather insignificant-looking little wildflowers in our northern woods are pointed out to us as orchids we feel vaguely disappointed, yet somehow thrilled. And when it comes to that, we have at least a few species of our own that need not yield anything to any of their tropical cousins, for the lady's-slippers or moccasin-flowers are members of the orchid family.

Less thrilling, perhaps, is the story of our native plants that are fairly close kin to the Hevea rubber tree, as well as to the flaming, exotic poinsettia of Christmastide. These distinguished foreigners belong to the euphorbia or spurge family, and most of our 30 or 40 native spurges are weeds—poor relations, as it were. Only one or two of them have been considered worthy to occupy even minor places in cultivated gardens.

Perhaps the most interesting of all these connections with noted plant families in foreign lands are to be found

among the aroids. American representatives of this family include jack-in-the-pulpit, its rarer cousin the green dragon, and the too-much-despised but really worthy skunk cabbage. These, as well as two or three other American species, are close cousins to the taro plant, staff of life to thousands of South Sea Islanders, to the delicious-fruited *Monstera* of the tropical Americas, and to such carefully imported ornamentals as calla lily and the caladium or elephant-ear of formal gardens and parks.

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suffer a much larger number of casualties, to say nothing of the valuable planes and equipment, Gen. Meyers pointed out.

One aerial reconnaissance group averages 60 missions a day, with a minimum of 180 cameras used. Each camera carries a 200-foot roll of film, on which 250 pictures can be made. Thus one group alone exposes 45,000 negatives in a single day. Approximately 50 to 60 prints are made from a large proportion of these negatives for distribution to essential persons.

In addition to reconnaissance photographs, other types of pictures are taken including training films and still pictures, still photographs of equipment, artillery fire control pictures, fighter gun camera pictures that reveal new types of aircraft in use by the enemy and the vulnerable points on these planes, and still other types of pictures for use in preparing maps and charts.

In an effort to conserve photographic film and paper, technicians at the ATSC photographic laboratory have produced a new developer that makes it possible to use photographic paper which has become fogged by age. Chemical costing \$1,000 saves over \$100,000 worth of paper that would otherwise have to be thrown away, Gen. Meyers stated.

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An *alligator's ear* is so well hidden by a flap of skin that few recognize it; it is behind the eye and rather high on the head so that it is over water when the alligator lies on the surface; the flap closes tightly when under water.

The quantities of *amino acids* in foods are now determined, using a color-measuring instrument, by the intensity of color produced when a food is combined with certain chemicals; amino acids are "building blocks" in proteins.



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