

ORDNANCE

Plastic Hand Guard Invented for Firearms

► SEMI-automatic and automatic firearms have given trouble through heating up enough to char and weaken the wooden hand guards that cover the barrels of most military rifles. Obviation of this difficulty is offered in a composite hand guard invented by Max Winer of Medford, Mass., and protected by patent No. 2,341,585. The inner part of this guard, which contacts the hot metal, is made of a heat-resistant plastic, preferably one containing a high percentage of asbestos. The outside is covered with a layer of wood, securely bonded on.

The inventor assigns to the government rights to manufacture and use his device, without payment of royalty.

Science News Letter, February 26, 1944

MEDICINE

Ivy Poisoning Can Occur In Old World Tropics

► SOME of the men in our fighting forces in India and other Old World tropical regions may find themselves having a skin eruption just exactly like the ivy poisoning they might have gotten at home. It may be called dhobie mark dermatitis or some other local name but it is the same sort of condition as ivy poisoning, Dr. E. D. Merrill, administrator of botanical collections at Harvard University and director of the Arnold Arboretum, reports. (*Journal, American Medical Association*, Jan. 22)

A report of 52 cases of dhobie mark dermatitis among American soldiers in India has already appeared. Articles of clothing worn by them had been marked, for identification, with the juice of the marking nut, *Semecarpus anacardium*. Articles so marked are said to be dhobie marked because dhobie is the name for laundrymen in India.

The somewhat caustic juice from the fruit walls of the cashew nut is similarly used, Dr. Merrill states.

The skin trouble can come not only from laundry marks on clothing but from other kinds of contact with certain plant species of the Old World tropics. Men felling certain types of trees, for example, may smear themselves with the sap and if susceptible, they will get the skin trouble just as persons susceptible to poison ivy, poison oak or poison sumac get the poisoning from contact with these plants.

All the species of trees in the Old

World tropics which may give trouble belong to the same family as our poison ivy, poison oak and poison sumac, Dr. Merrill states. The active principle that causes the skin trouble is the same in all cases.

Dr. Merrill believes that cases of poisoning by these plant relatives of poison ivy will be rare. If they do occur, the same treatment should be used, he says, that would be given for ivy poisoning at home.

Science News Letter, February 26, 1944

AGRICULTURE—ENGINEERING

Simple Elevator-Conveyor Saves Farmers Man-Hours

► TREMENDOUS savings of man-hours in handling grain, soybeans and similar products on short-handed farms can be saved through the use of a simple, easily made elevator-conveyor powered with a one-quarter or one-sixth horsepower electric motor, J. D. Rankin, farm service adviser of the Detroit Edison Company, pointed out at the meeting of the American Society of Agricultural Engineers in Chicago.

It consists simply of boards nailed together to form a flat-bottomed trough, with a cross-cleated canvas belt running through it over wooden pulleys at either end. The speaker gave credit to the agricultural engineering department of Michigan State College for the development of this highly useful farm aid. He said it could move between 200 and 400 bushels of grain in an hour, and "one might elevate 1,000 bushels of oats for the price of a five-cent candy bar or what used to be a nickel cigar."

Science News Letter, February 26, 1944

AGRICULTURE

Pink Bollworm Pest Found In Louisiana

► PINK BOLLWORM, one of cotton's worst insect enemies (the other is boll weevil) has been found in parts of Louisiana, the U. S. Department of Agriculture states. This represents a new and menacing sortie; hitherto this pest has been known only from portions of Texas, New Mexico and Arizona.

Because of the immediate seriousness of the situation, extension of quarantine regulations to include Louisiana is under consideration. A hearing to consider the matter has been called, to be held in the Federal Building at Memphis, Tenn., on March 1.

Science News Letter, February 26, 1944

IN SCIEN

INVENTION

Post-War Pullmans May Be Triple-Decked

► WHEN you go a-journeying in that dreamed-of post-war time when travel will again be a permissible pleasure, you can expect to find some radical changes in your Pullman. One type of new car, designated as a "coach-sleeper," will have berths crosswise instead of lengthwise as in the present arrangement, and be triple-decked instead of double.

For such cars Basil E. Jones of Flossmoor, Ill., has invented a sofa-like seat on which he has just received U. S. patent No. 2,338,814, which he has assigned to the Pullman Company.

In its day position, the seat is divided by means of arm-rests to accommodate three persons. The back sections can be inclined separately and at any desired angle to suit the individual passenger's comfort. At night, the arm-rests sink flush with the level of the seat, the back is lowered to full horizontal position, bedding and pillows are arranged—and there's your lower berth.

Science News Letter, February 26, 1944

AERONAUTICS

Blimps Maneuverable Despite Great Bulk

See Front Cover

► BLIMPS are frequently likened to elephants; despite their lightness, they somehow seem ponderous. But just as elephants have a kind of heavy agility peculiarly their own, blimps are capable of precision maneuvers when there is occasion for such performances. In the picture shown on the front cover of this SCIENCE NEWS LETTER, nine of the big lighter-than-air craft are shown cruising in line abreast over a valley near the coast of California.

It is not often that blimps congregate in numbers. As a rule they go singly about their job of patrolling the coastal zones for submarines. U-boat commanders hate them because it is possible for a blimp to cut its engines and hover silently, or drift slowly down the wind, giving no warning to the prowlers that have come up for air.

Science News Letter, February 26, 1944

CE FIELDS

ORDNANCE

Heavy Dirt-Pushing Blade Invented for Tanks

► EVERY TANK its own bulldozer, is the objective of a newly patented attachment, constructed by Earl B. Maloon of Alhambra, Calif. It consists essentially of a heavy dirt-pushing blade of the familiar bulldozer type, mounted on a pair of long, stout arms that pivot at a point well back on the tank carriage. Power is supplied from the tank's own stout engines, but for raising and lowering the blade there is a separate small gasoline engine running a pressure pump which in turn operates a pneumatic or hydraulic cylinder.

Although the inventor makes no mention of it in his list of claims, a bulldozer blade might be a good addition to a tank's combat armament. There have been stories in the press about unarmed bulldozers attacking enemy pillboxes and demolishing them by a terrestrial equivalent of the old-fashioned naval tactic of ramming. As shown in the patent drawings, the attachment does not interfere with full use of the tank's fire power.

Rights in the patent, No. 2,341,151, have been assigned to the Southwest Welding and Manufacturing Company of Alhambra, Calif.

Science News Letter, February 26, 1944

ENTOMOLOGY

Some Insect Eggs Depend On Moisture for Hatching

► INSECT EGGS are often highly dependent on the amount of moisture present in their surroundings, Prof. Daniel Ludwig of New York University told his colleagues at a meeting of the New York Entomological Society.

Some species, like the Japanese beetle, lay eggs that soak up moisture as seeds do, and will not hatch unless they get this extra water. Japanese beetle eggs increase to three times their original weight by such imbibed water.

Prof. Ludwig's principal studies recently have been on the water relations of eggs and pupae of the saturniid moths—those gorgeous big creatures that everyone admires, like the Luna, Prometha and Cecropia moths. Their eggs

will take in water from very damp air, but do not need such moisture for their development; they will hatch even in dry air if it is warm enough. However, if the air is either a little too warm or a little too cool, the amount of moisture present will influence the hatchability of the eggs.

As might be expected, there are differences in the behavior of the eggs of different species. Thus, Polyphemus moth eggs will hatch in hotter, drier air than the eggs of other species can endure.

Drying of the pupae during the winter had adverse effects on reproduction after the adult moth emerged in spring, Prof. Ludwig found. In some cases fewer eggs were laid, in others the eggs that were laid failed to hatch.

Science News Letter, February 26, 1944

SOCIOLOGY

Middle Aged Man's Chance Of Remarrying Quite High

► FOR MEN at the ages 45 to 49 the chances of remarriage are about three times that for women of the same age, statisticians of the Metropolitan Life Insurance Company calculate from study of marriage and remarriage rates in New England in 1940.

"At the younger ages, the remarriage rates are astonishingly high," they find. "Among women 20 to 24 years of age and among men 20 to 29, each year not far from half of those previously married undertake another marital venture."

Commenting on the speed with which those at younger ages remarry after the first marriage is disrupted, the report states, "the figures lead one to suspect that a considerable proportion of the divorced among these young people may have had plans for remarriage before they broke their earlier partnership."

At the ages beyond 55 years, the ratio of the male to female remarriage rate is about five to one. Although at these older ages the marriage rate among the single is likewise greater for men than for women, the report states that the disparity between the sexes is not nearly so marked as in the case of remarriage.

Reasons given for the higher remarriage rate among men: the widower's need to have someone take care of his home and children; the handicap to the widow of dependent children; the frequent provision in pension and compensation plans, as well as wills, that benefits to the widow end upon remarriage.

Science News Letter, February 26, 1944

ENGINEERING

New Truck Has Half-Track For Travel on Soft Ground

► FOUR-WHEELED for fast travel where the going is good, half-tracked for getting over soft ground or up steep slopes, a convertible vehicle developed by Philip W. Sloan of Cleveland is one of the outstanding inventions among the 589 on which new U. S. patents were issued in a recent week.

One novel feature in the design, however, is the application of driving power. The rear wheels never receive any of it. When the vehicle is operating as a four-wheeled truck, power goes to the front wheels only; the rear wheels merely trail along, holding up their end of the load. When it becomes necessary to operate as a half-track, the rear wheels are lifted clear of the ground, and power is then applied to the tractor treads as well as to the front wheels.

Rights in the patent, No. 2,341,883, are assigned to the Linn Manufacturing Corporation, of Morris, N. Y.

Science News Letter, February 26, 1944

INVENTION

Improved Wheat-Peeling Obtained by New Method

► AN IMPROVED method for "peeling" wheat, that is, removing the indigestible, corky outer layers of bran without robbing the grain of the proteins in the inner bran, is the subject of patent No. 2,340,313, granted to Theodore Earle of Pacific Palisades, Calif., and assigned by him to the Continental Baking Company.

Peeling wheat is accomplished by what may be described as "gentle violence." The grain is immersed in water to soften the outer coat, then slammed hard against the wall of the vessel to loosen and remove it. This is done by a fast-spinning device known as an impeller. But although the grain is thrown hard, its impact must not be too sharp, so the vessel is lined and the impeller is covered with a thick rubber layer. The "adherent" impact of the grain gives the rubber sufficient grip to pull the outer bran layers off.

The corky bran, coming loose in large, thin flakes, is floated to the surface and kept continuously skimmed off by a motor-driven skimmer. Subsequently the peeled grain is taken out, dried and prepared for grinding.

Science News Letter, February 26, 1944