

For his adopted country he has performed many acts of generosity. A teacher at Northwestern, he gave the university \$26,000 for a high-pressure research laboratory. Besides many individual gifts to talented young chemists, he established a \$35,000 trust fund, the interest of which is being used for prizes to be awarded by the American Chemical Society. In explanation of these gifts, he said, "I should like to feel that I had a part in developing young American chemists."

At the university he is extremely popular as the prof who exults in the triumph of his students, who is perhaps more forlorn than they are when they fail, and who when excited becomes incomprehensible because he forgets his English and talks only Russian.

Each day this erect gray-haired man sets out for a one-hour walk, no more, no less. He is a gentleman of the old school, clicking his heels, and bowing at the waist. His voice is soft and it is rare-

ly raised. To a gathering of eminent scientists honoring him on his 75th birthday, which was also his golden wedding anniversary and the 50th anniversary of the presentation of his first scientific paper, he said simply: "I have lived through several wars and revolutions and I am happy that I have been able to keep my love for my chosen science and that I still retain my physical strength."

Professor Ipatieff's wife is quite as spry as her husband. The old man refers to her as his personal catalytic agent—by that, he explains, he means his inspiration. He added: "On a wife's love and tact depend not only that well-being of her children but the well-being and peace of mind of her husband, without which he cannot work or create. These are the highest aims of a wife and these my wife has fulfilled."

This simplicity is typical of the man who has worked out processes which may well add up to the greatest individual contribution to an Allied victory.

Science News Letter, December 11, 1943

Do You Know?

Gasoline consumption in Denmark is only 1% of the pre-war rate.

Cigarette paper that sheds water, now reported available, will permit soldiers and others to smoke in the rain.

Approximately one-fourth the *copper* mined and smelted in the world in 1938 was produced in the United States.

Common *paperboard* is being made in Palestine from banana and orange peel pulp, cotton waste and banana leaves.

As late as 900 A.D. the Dalmatians and Dacians along the Danube used poisoned *arrows* for hunting and fighting.

New *oil wells* are now in production near Ft. Norman in northwest Canada, only about 100 miles from the Arctic Circle.

An *oyster* pumps through its gills every day about 40 gallons of water, straining out micro-organisms for food and absorbing lime for its shell.

Britain's "*sticky bomb*" is a glass flask filled with a high explosive and covered with a sticky fabric; hurled against the side of a tank, it sticks, then explodes.

The science of electric *arc welding* of metals was known during World War I but relatively little used; now it is used in practically all types of metal construction.

The Federal Bureau of Reclamation has 52 *operating projects* that are providing irrigation, power, or municipal water to western areas with a population of nearly 5,000,000 people.

The 1942 average yield of *potatoes* in the United States was 136 bushels an acre, a 10% increase over the 1930-39 ten-year average, due largely to new varieties which resist disease and give greater yields.

Riveters and rivet-buckers at an aircraft plant use throat microphones to talk with each other; although only a foot or so apart they are separated by a wall of metal through which they can communicate only by telephone.

PHOTOGRAPHY

Rating Film Speeds

Sensitivity characteristics of camera film will be classified by a single system by an American Standards Association book, eliminating present confusion.

► **CONFUSION** created by numerous methods of rating the speed of photographic film will be eliminated when manufacturers publish the American Standards Association speeds for films.

In the past each manufacturer of films and exposure meters rated the many kinds of films now used by photographers with a system of his own. These many different ratings often left the user of film in doubt about the exposure needed for the film he wished to use; or the rating given him would not be the one best suited for the use of his light meter.

The single well-defined system of expressing the sensitivity characteristics of film now adopted will remove this confusion, and manufacturers need publish only one set of ratings.

All standard films will be rated by two methods. One method, called the ASA speed, gives an absolute value, indicating the minimum camera exposure which the film must receive in order to produce a negative from which an excellent print may be made. The other, called American standard speed number, is the number giving recom-

mended exposures for normal photographic practice to yield the highest number of excellent pictures.

The American standard speed number falls approximately halfway between the Weston and General Electric numbers. This makes possible its use with existing photoelectric exposure meters with no change in the dials. The latitude of most film will take care of the difference in the ratings.

Branches of the armed forces are now having meters made with the new numbers on the calculators. After the war probably all meters will use the new numbers.

Film furnished the armed forces has been rated by the new method for some time, but the number is called exposure index and is designed to be used with the *American Emergency Standard Photographic Exposure Computer*, a small book which allows computation of exposure by observation.

The American Standards Association has the cooperation of all leading film and equipment manufacturers, who will publish the film speed numbers.

Science News Letter, December 11, 1943