PHOTOGRAPHY

One Step Makes Pictures

New camera takes and produces finished picture in one minute. Tiny pod between film and paper does darkroom work. Process may be good for motion pictures also.

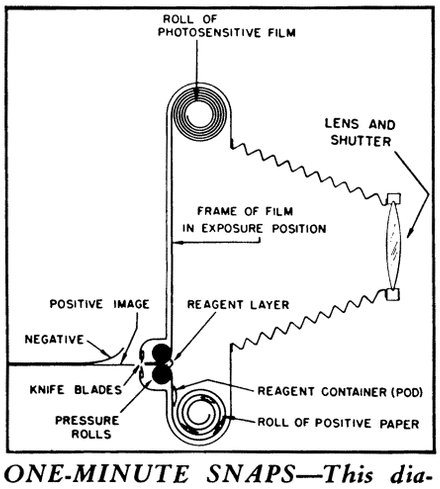
➤ TAKE A SNAPSHOT; turn a knob; and wait one minute. Then you have a finished picture with a new camera demonstrated for the first time to the Optical Society of America meeting in New York.

The camera, which can be made in the shape or size of most modern cameras, gives you a finished, dry picture and completely developed negative in one minute without tanks and darkroom, or several days or weeks of waiting to get your films back from the corner drugstore. If the picture turns out badly, you can "shoot" it again on the spot.

A tiny pod or sealed chamber between the film and photographic paper loaded in the camera does the work of the tank and trays of chemicals in a photographer's darkroom. After a picture is snapped, a knob is turned to send the sandwich of film and paper through a ringer of two small rollers on the camera.

This pressure releases a few drops of viscous chemical and spreads a moist layer between the film and paper. After one minute, you can strip away the film from the completed picture.

Chemical ingredients of the small pod include standard photographic developer, hydroquinone; fixer, sodium thiosulfate or hypo; and a viscous reagent.



ONE-MINUTE SNAPS—This diagram for a camera that produces a picture in a minute was designed by the Polaroid Corporation.

Each tiny container of chemicals contains enough to develop the negative and print the picture in a single-step operation in one minute.

The new process was demonstrated by its inventor, Edwin H. Land, president and director of research of the Polaroid Corporation, Cambridge, Mass. The new cameras are not on the market yet, and Polaroid officials predicted that it will be "several months" before the new development will be available.

In addition to letting the amateur photographer see his snapshot one minute after he has taken a picture, the one-step camera will make it possible to put technical pictures to immediate use without using a darkroom.

The process, which will turn out pictures in temperatures ranging from the heat of midsummer to below freezing, can be adapted to color pictures and motion pictures, Mr. Land told the Optical Society.

In some of several one-step processes he described, the negative can be used to print other pictures, and in all of them copies can be made by photographing the print or re-photographing the scene.

Mr. Land has developed four different methods for producing a finished picture in a single operation. In his soluble silver complex process, the developer and hypo perform twin duty between the film and the paper to utilize silver from the film in printing the picture.

In addition to the developer, fixer and viscous reagent in the small pod between the film and paper, the pod or the paper has other ingredients which control the size of the silver particle to determine the color of the print, control the rates of the various reactions, prevent discoloration of the print, and make the process work in a wide range of temperatures.

Science News Letter, March 8, 1947

BIOLOGY

Dr. Ross G. Harrison Wins John J. Carty Medal

➤ DR. ROSS G. HARRISON, Yale biologist who was chairman of the National Research Council from 1938 until last year, will be given the John J. Carty medal of the National Academy of Sciences at its annual meeting in April.

Dr. Harrison will be honored in part for his researches upon the nervous system which led to tissue culture as now practiced widely in cell growth studies, and in part for his service in directing the National Research Council.

Science News Letter, March 8, 1947

Of the 12 *minerals* required in proper farm animal nutrition, some are called trace minerals because needed in very small quanties; the 12 are calcium, phosphorus, magnesium, sodium, potassium, chlorine, iodine, manganese, iron, copper, cobalt and sulfur.

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