

## PSYCHOLOGY

## Sweets For Flyers May Come From New Research

**S**WEET emergency rations may be carried by pilots of bombing planes to counteract difficulty in reading their brightly lighted instruments, when cruising at 11,000 to 20,000 feet altitude and peering at blacked-out darkness.

This may be concluded from experiments reported by Dr. Ross A. McFarland to the American Psychological Association at Stanford University.

Adaptation of the eye to dark and light is more seriously affected by low-

ered oxygen pressure than it is by a dose of powerful insulin, Dr. McFarland and Dr. W. H. Forbes found at Harvard University. And both can be counteracted by a dose of glucose.

The eye fails to adapt normally because the amount of oxygen in the nervous tissue is decreased. The trouble is in the nerve elements of the retina and central nervous system, not with the photosensitive substances in the eye.

*Science News Letter, October 7, 1939*

## MILITARY SCIENCE

## Newest American Arms To Be Shown At Aberdeen Oct. 12

**N**EWEST weapons for the defense of America will be put through their paces on Oct. 12 at the Army Proving Ground at Aberdeen, Md. The audience will consist of members of the Army Ordnance Association, representatives of the press and newsreels, and other persons receiving permits from the War Department.

In contrast to the hush-hush policy of most foreign nations, the Army is putting its trump cards face up on the table. Only weapons still in the course of development, and not ready for production and use, are being withheld from the demonstrations. Weapons ranging all the way from the infantryman's rifle to the massive 14-inch coast defense rifles mounted on railway cars will be shown, as well as recent models of tanks, searchlights, etc.

Particular interest will center on the new Garand semi-automatic rifle, which can be discharged as fast as the trigger can be pulled, giving the infantryman an almost machine-gun-like rate of fire. None of the nations now fighting or mobilized in Europe and Asia has a weapon like this.

New also is the whippet-like 37-mm. anti-tank gun, which can drive a one-pound armor-piercing projectile like a small thunderbolt through any tank that gets within a thousand yards of it. It has a sister weapon in the 37-mm. auto-

matic anti-aircraft cannon, which works like an outsize machine-gun, sending a close-spaced stream of high-explosive shells high into the air to cancel the schedules of would-be raiding bombers.

Big brother in the field artillery family is the new 155-mm. (6.1-inch) heavy rifle, which can hurl a 100-pound shell to an extreme range of 25,000 yards with deadly accuracy. This type of weapon is designed for action against opposing batteries, as well as to tear up roads and search out supply trains, ammunition dumps, enemy headquarters, etc., far behind the lines.

*Science News Letter, October 7, 1939*

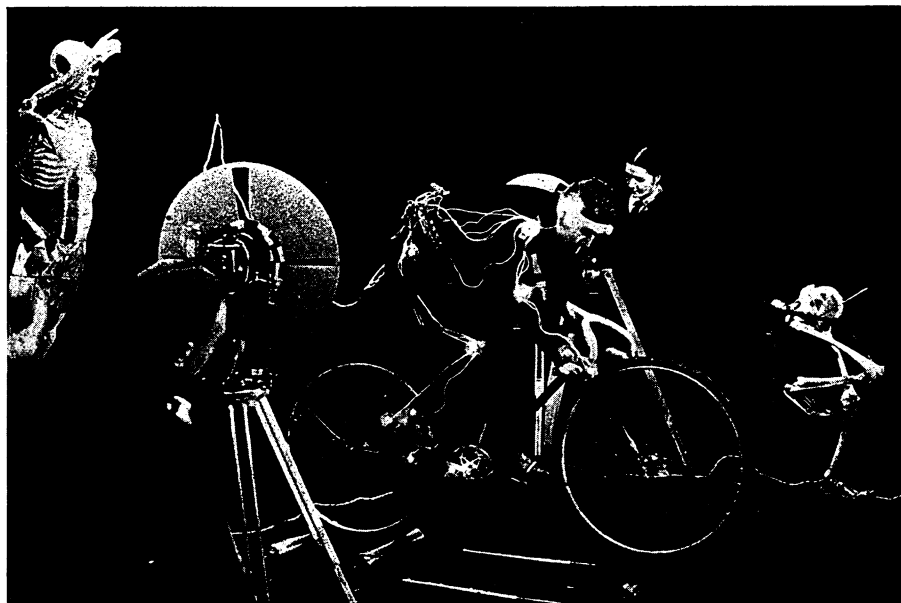
## PHYSICS

## Blood Drops Are Clues In Medico-Legal Research

**B**LOOD will tell. Not a detective story, although it will undoubtedly be used in many, is the clever medico-legal research in Paris on splattering of blood. High speed movies helped the experiments.

The height of the fall of drop of blood can be told from its appearance. From a very low height, to a flat surface, the stain is round. From a considerable height, points appear on the periphery. Blood stains lengthen out when they hit a slanting surface, splashing signs of angle of the object hit and height of fall. Other clues read from blood drops: Whether from wound or coughed up in the dying moments, whether from a corpse or living person, whether the blood is old or recently spilled.

*Science News Letter, October 7, 1939*



### MEASURING MOVEMENT

*The little lamps strapped to legs, arms and head of the cyclist trace on photograph film the path of every movement he makes. This research is being done in the cabinet of bio-mechanics of the Leningrad Institute of Physical Culture and was photographed by Sovfoto.*