INVENTION

Patents of the Week

Blind bowlers will be able to keep their own scores and radar operators detect unidentified flying objects more readily as a result of new patents issued.

➤ A BOWLING ALLEY for blind persons to use without aid from sighted persons won a patent.

Blind persons when bowling usually need assistance in scoring, and also have difficulty in taking the proper position for throwing the ball.

Leon M. Bablouzian of Newtonville, Mass., and George H. Hall of Watertown, Mass., were awarded patent 3,039,771 for a bowling alley overcoming these difficulties. They assigned rights to Arthur D. Little, Inc., Cambridge, Mass.

A magnet in the base of each bowling pin opens or closes a switch in the floor beneath each pin, thus showing whether the pin is properly placed or if it has been knocked down. Each switch is electrically connected to a pin indicator placed near the bowler. The blind bowler can then tell by touching the indicator what pins have been knocked down and the positions of those still standing.

To help the bowler take the best position for throwing the ball, floor guides are used to indicate the distance to the pins, the bowler's location between the sides of the alley, and the center line of the alley. The alley can also be used by persons having normal vision.

Pedal Paddle for Boats

A foot-powered paddle particularly designed for use by fishermen won patent 3,039,422 for James V. Baker of Jackson, Miss. The pedal-paddle units are attached separately on the port and starboard sides, and can easily be removed if desired.

Wide Angle Lens

Dr. James G. Baker of Winchester, Mass., inventor of the wide-eyed telescope, was granted patent 3,039,361 for his method of constructing a lens system having a wide angle, the kind often used in aerial mapping.

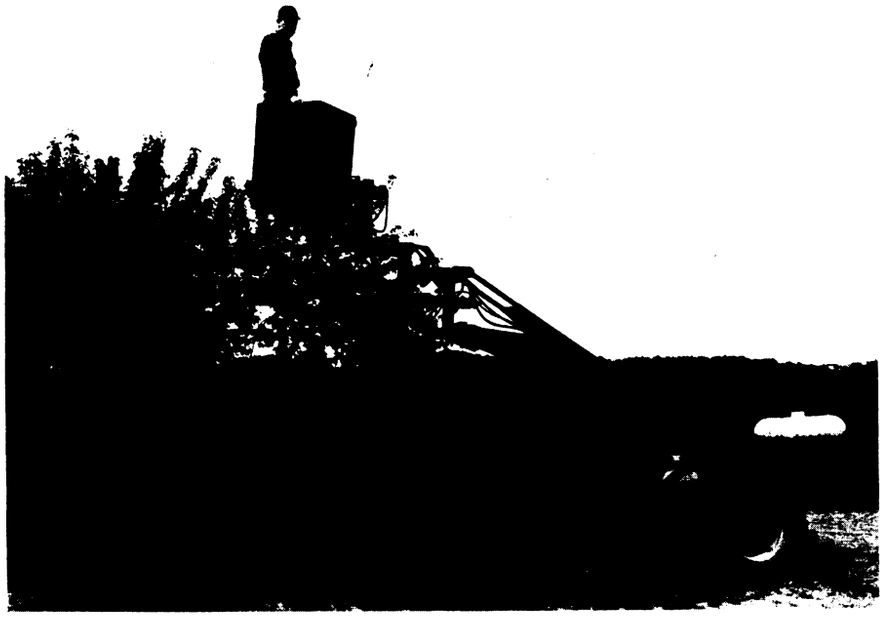
The method allows a fast lens speed without distortion. The wide angle lens can also be used for microscopes.

Changes in Air Moisture

Radar operators will have better chances of detecting unidentified flying objects trying to sneak in close by dodging behind the "shadow zone"' if the system developed by Henry Suter of Hatboro, Pa., is in use.

His method for indicating changes in the so-called "index of refraction" of the atmosphere won patent 3,039,355, rights being assigned to the Government. The index of refraction is the ratio of velocity of light in air to its velocity in a given medium, moisture-laden air in this case.

Radar and radio waves, which travel at the speed of light, form a shadow zone when sent through a cloud bank because of the differing index of refraction of moist air. Mr. Suter devised a method for continuously measuring the moisture in air by means of the light it scatters in his three-barreled instrument. Results are telemetered to earth as the instrument falls through the air, warning radar operators when possible shadow zone conditions exist.



SPACE BASKET—To make pruning more efficient, a "space basket" is attached to the front-end loader of a tractor-mounted hydraulic-powered pruning and picking machine. The unit can move up and down and each arm section can move through an arc of 330 degrees horizontally.

Other Patents of Interest

Other interesting patents include:

A method of treating wounds in trees and shrubs by means of a patch or layer of living tissues from another part of the tree grafted over the wound. Francis W. Holmes and Joseph S. Demaradzki of Amherst, Mass., were granted patent 3,039,230.

A safety signaling device to warn persons nearby that a tractor or fork-lift truck is in their area, for which Arthur M. Warn of Seattle, Wash., won patent 3,039,425.

A system for producing cloth designed to protect radar workers from radiation damage, patent 3,039,172 granted to Walter G. Egan of Richmond Hill, New York City.

Copies of patents can be obtained from U.S. Patent Office, Washington 25, D. C., for 25 cents each.

• Science News Letter, 82:14 July 7, 1962

ANTHROPOLOGY

Preserved Bamboo Strips Tell Chinese History

➤ PRESERVED for nearly 2,000 years under desert sands, a deposit of slender strips of wood has told the story of roving tribes attacking the borders of imperial China near the time of Christ.

The 10,000 wooden strips, mostly bamboo, served as account books for the soldiers of the Chinese imperial army during the Han dynasty some 2,000 years ago, according to Prof. Kan Lao, recently of Taiwan University, now with the University of California, Los Angeles, in the Oriental languages department.

He explains that the multitude of records involved in maintaining an army in the field were ink-brushed on these slips in old Chinese script and that the sands of the desert have preserved them as effectively as a Pentagon filing cabinet.

"Imperial China, like imperial Rome," Prof. Lao says, "was under constant attack along its frontiers by fierce, roving tribes."

Fortunately for posterity, the Chinese army guarding the northwest frontier against the Hun-nu tribesmen in what is now Inner Mongolia kept detailed records of supplies and equipment, names of soldiers, beacon fire stations, irrigation systems, and other agricultural and military data. When pieced together, these records tell a revealing story of life on the China frontier.

Using brushes with pointed tips, the soldiers made their bookkeeping entries on flat strips of bamboo and other wood measuring one foot in length and one-half inch in width. The records, covering a period from about 100 B.C. to 100 A.D. have been deciphered by Prof. Lao, a world-renowned authority on the Han Dynasty.

• Science News Letter, 82:14 July 7, 1962