



**AUTOMATIC SWITCHING**—Both track and speed can now be remote-controlled by one operator. One button governs the route, another the speed at the Milwaukee Road's Air Line Yard, the first classification yard in railroad history to employ both automatic switching and retarding speed.

## ENGINEERING

## Automatic Train Assembly

► A LONE man in a lookout tower with a lot of pushbuttons before him is switching about 2,000 freight cars a day to proper tracks for assembly into new trains. He also controls their moving speed by use of an installation just made in a 25-track classification yard in Milwaukee.

The yard, in which incoming freight trains are broken up and the cars reassembled into new trains for various destinations, is owned by the Chicago, Milwaukee, St. Paul and Pacific Railroad. Neither automatic switching nor the use of speed-retarding devices are entirely new. But the Milwaukee installation marks the first time in railroad history, the railroad officials claim, that both automatic switching and retarder speed control have been put into service.

In modern classification yards, trains to be broken up are backed by a switch engine to a slightly elevated section of a track. At the top of the grade, cars are released one by one to roll by gravity to the proper track where new trains are being made up. Automatic switches are used to route each car to its new position.

The car's speed is controlled by so-called master retarders, which operate electrically by remote control. Each is a short section of track with side rails that may be pressed against the wheels of the car and act as brakes. The grade of the tracks after leav-

ing the retarders is such that the cars gradually slow down to a stop.

The devices and system, designed to classify over 2,000 cars per day, are the products of Union Switch and Signal division of Westinghouse Air Brake Company. The yard, with its 25 assembly tracks, has a capacity of 1,095 cars. Some 40 to 50 trains enter or leave the yard daily.

Science News Letter, July 5, 1952

## ASTRONOMY

## Faint Comet Discovered in Ursa Minor Constellation

► A FAINT comet has been found in the constellation of Ursa Minor, the smaller bear.

The comet was discovered June 20 by Leslie C. Peltier of Delphos, Ohio, an amateur astronomer credited with the discovery of about a dozen comets. It has since been spotted by Henry L. Giclas of Lowell Observatory and Dr. George Van Biesbroeck of Yerkes Observatory.

The comet is of the tenth magnitude, thus a telescope will be needed to locate it in the north these summer evenings.

Word of the comet's discovery has reached Harvard College Observatory, clearing house for astronomical news in the western hemisphere.

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## PHYSICS

## Atomic Power Plants In Point Four Program

► FIRST USE of stationary atomic power plants might well be in the Point Four program.

This was suggested by Atomic Energy Commissioner T. Keith Glennan, speaking at a meeting of the American Society for Engineering Education at Dartmouth College, Hanover, N. H.

Predicting an increasing demand for stationary nuclear power plants, Mr. Glennan said: "This demand naturally will arise first where present costs for electrical energy are high and this suggests that such a program may have an important place in any future Point Four programs."

Mr. Glennan said there are only a few skeptics left in the field of mobile reactors for naval use and predicted a "firm demand" for conversion to naval propulsion under atomic power. Aircraft, however, is a job of almost unbelievable difficulty, but success there will also be achieved, he said.

Mr. Glennan pointed out that future developments in atomic energy will call for an increasing number of scientists and engineers in the coming years and he urged educators to turn out an increasing number of well-trained, well-balanced graduates in these fields.

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## VETERINARY MEDICINE

## Horses Go Lame on Too Little Sunlight

► HORSES STABLED indoors may go lame because they get so little sunlight that they get a mild form of the porous bone disease, osteoporosis, Dr. William F. Riley of Michigan State College, East Lansing, Mich., declared at the meeting of the American Veterinary Medical Association in Atlantic City, N. J.

As a help in preventing this lameness, Dr. Riley advises study of the horse's rations to make sure the animal is getting enough and the right proportions of calcium, phosphorus, vitamin D and essential trace elements.

For owners of valuable saddle and running horses, Dr. Riley advised the following four-point program of health protection for their animals: 1. proper wound treatment; 2. balanced rations; 3. regular dental care; and 4. adequate parasite control.

Horses should have their teeth examined regularly for sharp points, irregularities and sore areas, Dr. Riley explained. If dental care is neglected, the animals may have trouble in eating, leading to possible nutritional disease.

If worming is neglected, horses may become rough-coated and "poor doing," and suffer serious weight losses, he reported.

Science News Letter, July 5, 1952