

6-inch telescope in his backyard observatory. What was more important, a photometer happened to be attached to the instrument so that he was able to make an accurate measurement of the nova's brightness. It was then about as bright as Rigel, the brightest in the constellation of Orion, just north of the nova.

Science News Letter, November 21, 1942

Gases Ejected Violently

► NOVA PUPPIS is now in the midst of its most violent phase of ejection of gas, it is indicated by observations of its spectrum by Dr. A. D. Maxwell and Dr. Dean B. McLaughlin of the University of Michigan Observatory.

The Michigan spectra show strong interstellar calcium lines and allow estimates that the distance of the nova is such that it took light 1,600 years (traveling 186,000 miles per second) to reach earth and that the actual brilliance of the star is 150,000 times that of our sun.

Dr. Maxwell discovered the new star independently on Armistice Day morning before news of its discovery in Argentina had been received.

The star's spectrum shows strong hazy bright hydrogen bands, conspicuous bright ionized iron and a neutral oxygen band at 6155, with their centers undisturbed. These are bordered on the edges of shorter wavelength by diffuse absorption lines. Absorptions of ionized titanium, magnesium and silicon are also present. No traces are seen of helium or other "hot star" lines. Displacements of absorption lines are discordant. Hydrogen is shifted the equivalent of a motion of 1,100 kilometers (700 miles) per second toward the earth, iron and titanium about 900 kilometers (550 miles) per second, and magnesium somewhat less.

Science News Letter, November 21, 1942

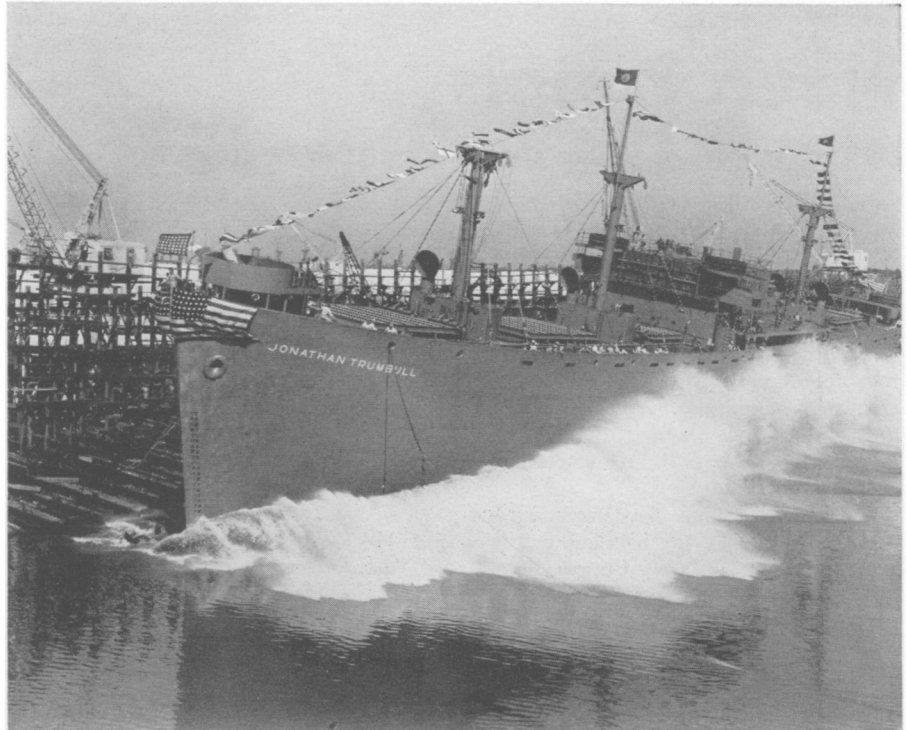
Past Peak Brilliance

► PEAK BRILLIANCE of Nova Puppis was apparently reached on November 12 although it is still one of the brightest objects in the night sky.

Cables from Lund, Sweden, report the discovery of the star by Prof. P. Finsler of Zurich Observatory, Switzerland. It was also discovered by George Baird, Oakland, Calif., amateur.

Spectrum photographs at Yerkes Observatory and Michigan indicate that a gaseous shell appears to be expanding around Nova Puppis at the rate of 400 to 700 miles per second.

Science News Letter, November 21, 1942



SIDE-LAUNCHING of a Liberty ship which occurred recently, is shown at an undisclosed shipyard. This method is being improved and widely used as it permits construction work in narrow waters. This picture is from the official collection of the U. S. Maritime Commission.

ENGINEERING

Side-Launching Improved

► SHIPS are tumbling off groundways, side-launched by an improved technique announced to the Society of Naval Architects and Marine Engineers by James H. Fahey of Manitowoc, Wis.

These were the first experiments ever conducted, as far as could be determined, using a model submarine for side-launching. The miniature undersea craft was about the size of a rowboat.

Studies included tests for the best angle of tilt for the ship, amount of roll as it strikes the water, velocity of the launching and other factors which affect the safe birth of Uncle Sam's "tin fish."

Instead of the usual wooden cradles, which are used only once, it was first planned to adopt steel cradles which could be used again and again. But experiments showed that there was danger of their edges striking the bottom, so the old method has been continued.

Side launching permits construction of ships in rivers and narrow waters where

it would be impossible to obtain the run that is necessary when ships are launched endwise. However, this creates the problem of requiring much water frontage.

Assembly-line methods have now solved this problem, Mr. Fahey reported. A whole row of ships are built parallel to each other, extending back from the water's edge. Starting farthest from the shore, each ship is moved a step closer with each operation, finally tumbling sidewise into the water at the end of the line as it nears completion.

Science News Letter, November 21, 1942

New Steel for Ships

► USE of high elastic steel will reduce weight and improve durability of Uncle Sam's seagoing vessels if tests confirm present indications, declared Edgar P. Trask of New York City, at the meeting.

The proposed steel would be easily flame cut and welded, and have high

corrosion resistance. At least one of the new steels tried so far has been apparently successful in withstanding corrosion under seafaring conditions. Definite acceptance must await further experimentation, Mr. Trask warns.

Some of the steels tried have a stretching strength of 70,000 pounds per square inch and resist atmospheric corrosion four or five times as well as ordinary mild carbon steel.

At a time when shipping tonnage was never more important, use of the new steel would permit extra tons of cargo because of the reduced weight. An oil tanker of 15,600 tons cargo capacity making 25 trips per year, from Texas to New York, for example, would deliver 78,200 more barrels of oil, it is estimated.

"A further saving should be effected,"

said Mr. Trask, "by the 100% added durability of the high elastic steel."

A 15% increase in earnings for such a tanker due to the increased carrying capacity, is predicted. For a cabin class ship, the increased earnings due to reduced fuel saving would be 6% or over.

"If as great resistance to marine corrosive elements and to liquid cargoes can be had as is said to exist in the new material for railroad equipment against its corrosive elements," declared Mr. Trask, "the predicted saving may be greatly exceeded."

With this important prospect of fuel savings and increased cargo tonnage, Mr. Trask called for further study and development of data related to attainment of these benefits.

Science News Letter, November 21, 1942

MEDICINE

Not Due To Alcohol

Idea is now exploded that cirrhosis of the liver is caused by drunkenness. Although it may play a role, post-mortems show other factors responsible.

➤ "ALCOHOL, contrary to prevailing opinion, cannot seriously be regarded as a specific cause" of cirrhosis of the liver, Dr. Russell S. Boles, associate in medicine at the University of Pennsylvania, declared at the meeting of the Southern Medical Association in Richmond.

"While it is recognized that alcohol may play a role, and perhaps a predominant role in a certain number of cases, it must be conceded that in general, factors other than alcohol are responsible for the cirrhosis," he stated.

In a thorough study of post mortem examinations and histories of thousands of patients dying at the Philadelphia General Hospital, he found that cirrhosis occurred decidedly more often in cases with no history of alcoholism. In one series the figures were 34% of the cirrhosis cases in alcoholics, 66% in non-alcoholics.

Habitual excessive use of alcohol, according to one authority quoted by Dr. Boles, may, however, lead to chronic hepatitis, or inflammation of the liver. This is capable of being completely cleared up when the alcohol is stopped. This alcoholic hepatitis may develop in young men and women who indulge in cocktails daily for three and four days a week and who show as a result a sallow complexion, loss of appetite, irritability

and also a tender, slightly enlarged liver.

Dr. Boles always suspects some impairment of function of the biliary tract in most persons who cannot "tolerate reasonable amounts of alcohol without suffering such ill effects as headaches and drowsiness or a so-called bilious condition."

Cirrhosis, even if not specifically caused by chronic alcoholism, is conspicuously associated with it, occurring six or seven times as often in the inebriate as in the temperate or abstinent individual. Life insurance figures covering the periods of prohibition suggest, Dr. Boles pointed out, that cirrhosis diminishes as the consumption of alcoholic beverages diminishes.

"Speaking of the consumption of alcoholic beverages," he commented, "it must be apparent to most of us that there have been conspicuous changes in the drinking habits of the people of this country. The number of individuals who drink has greatly increased, but their taste has definitely changed."

He cited figures showing that per capita consumption of beer, "the chosen beverage of the moderate drinker," has increased, while that of distilled spirits has decreased.

"May it be hoped," he said on this point, "that the day will soon arrive

when the fundamental aspects of drinking will be controlled in a sane educational manner and not through recourse to futile and vicious legislation of the prohibition standards."

He commended the efforts of the Research Council on Problems of Alcohol to solve the "many complicated problems that arise as a result of the consumption of alcoholic beverages" and urged an unprejudiced approach to the problem of cirrhosis of the liver, "a chronic, devastating disease causing death to a considerable number of individuals within a comparatively short time."

Science News Letter, November 21, 1942

"Business as Usual" Out

➤ "BUSINESS as usual" is out for the private physician and the health officer just as it is for the huge industrial concern, the small manufacturer, the butcher and the baker, Dr. Thomas Parran, Surgeon General of the U. S. Public Health Service, declared at the meeting of the Southern Medical Association.

Even if available medical services are rationed under National Service legislation, as has been proposed and discussed in recent weeks, great efforts must be made, he warned, to increase the supply of personnel. This means keeping enough physicians in medical schools to teach and train more doctors. Medical students and, if the draft age is lowered, premedical students could, he suggested, be enrolled as a special category of professional manpower and, upon completion of internship, allocated among the Army, Navy and civilian services.

"This," he said, "would eliminate the present uneconomical procedure under which the Army and the Navy compete for medical students by commissioning them in numbers which may later prove disproportionate to the needs of the respective services.

"Much depends now and more will depend after the war upon a continuing flow of young, able-bodied physicians of the highest caliber."

The Medical and Health Committee, he reported, has recently approved a plan for increasing the number of graduate nurses and meeting the growing deficiency in hospital nursing services. The plan calls for speeding up the basic training course for completion in 24 months, after which third year students would go on the payroll of the parent hospital or affiliated institutions. They