

STELLAFANE

BIRTHPLACE OF AMATEUR TELESCOPE MAKING

By GERALD E. McLAUGHLIN

Photographed by
MAURICE BLAIS



A. Hazleton Rice

Samuel M. Gardner of Boston, left, discusses with John E. Welch of Springfield the Newtonian telescope built by Welch.

AS THE UNITED STATES speeds its work to send satellites into the skies, amateur telescope makers throughout the world are preparing for check-up observations—and many of these checks will be made from a Vermont “temple of the stars” called Stellafane, home of this country’s hundreds of amateur telescope makers’ organizations.

Stellafane stands on Breezy Hill east of Springfield, a memorial to one of the great men of that industrial town—Russell Williams Porter, patron saint of amateur telescope makers everywhere. Porter died in 1949 shortly after completing his part in building the great 200-inch Palomar Mountain telescope in California.

Every August hundreds of amateur makers, lugging their telescopes, come back to Stellafane to pay tribute to

Porter’s memory, to study the new “scopes” made during the year and to spend happy hours in the evening and early morning gazing into the heavens.

The early members of the Springfield Amateur Telescope Makers’ built this star shrine, Stellafane in 1924 with their own hands. Carved over the doorway is the inscription: “The Heavens Declare the Glory of God.”

Porter was born in 1871 in Springfield. Later, finding studies at Norwich University and University of Vermont tedious and consumed with a fever for exploration, he joined the expeditions to the Arctic with Peary, Dr. Cook and Ziegler. Money secured this way enabled him to complete his study of architecture at Massachusetts Institute of Technology.

When Porter was 36, his Arctic fever finally cured, he



married the young postmistress at Port Clyde, Maine, Alice Marshall. It was while living there that, reading an article in *Popular Astronomy*, the telescope-making bug bit him hard. His first 10-inch reflecting telescope he later described as a "horrible figure."

After two years teaching architecture at M.I.T. he worked during World War I on optics at the National Bureau of Standards and in 1920 returned to his native Springfield to work with an old friend, James Hartness, head of Jones & Lamson Machine company.

Out of their relationship came the new comparator division of the company, which today manufactures delicate optical measuring devices used in every branch of industry. Hartness himself was an amateur astronomer

and constructed a remarkable turret type telescope of his own invention.

Shortly Porter gathered together in Springfield 16 mechanics and one woman whom he taught to make reflecting telescopes. He was aided by John M. Pierce, Springfield High School's cooperative course director, and by Oscar Marshall, a master mechanic who later traveled to Palomar with Porter.

Porter explained to his amateur "scopers" the principle of the reflecting telescope—how a silvered concave surface will catch light rays coming from a distant object and focus them to a point where the observer examines them with his eyepiece magnifier. He taught them to take two pieces of glass, rub them together with coarse abrasive

Above: Youngsters and oldsters alike enjoy the annual August outing on Breezy Hill. The Star Shrine is in background; Russell Porter's 16-in. telescope at right.



Group of veteran telescope makers assembled at Porter's telescope at Stellafane. In front of numeral "O" is John Pierce of Springfield who still teaches youngsters how to make telescopes.



“high degree of craftsmanship, patience and perseverance the actual creation of a powerful telescope requires.”

Albert G. Ingalls of the *Scientific American* magazine staff, gave the Springfield Telescope Makers their first national publicity. He joined with Porter later in a successful book on amateur telescope-making. The hobby grew across the nation and thousands of wonderful telescopes were made by members of clubs in Boston, New York, Philadelphia, St. Louis, Cleveland, Portland, Los Angeles and Pittsburgh, to name a few.

Soon club members began to gather each year for an annual convention at Stellafane, the mother club. They came trekking across the continent from the very shadows of California’s famous telescope peak, Mt. Wilson, to the top of Breezy Hill. And the dinners they were served were second in enjoyment only to star gazing.

Porter attended his last meeting of the Telescope Makers in 1946, the largest ever held at Stellafane, with 377 members present. In 1928 he had been recruited to help on the Palomar telescope. His duties came down to this: At each of the many stages in the long evolution of design, reached after interminable discussions, Porter would convert the blueprints into three-dimensional pencil

Philetus Allen of the Glens Falls, N. Y. Stargazers, with cane, who has long been coming to the Stellafane Conventions, discusses with other “scopers” meeting at Stellafane a big Newtonian telescope with an equatorial mount and clock drive.

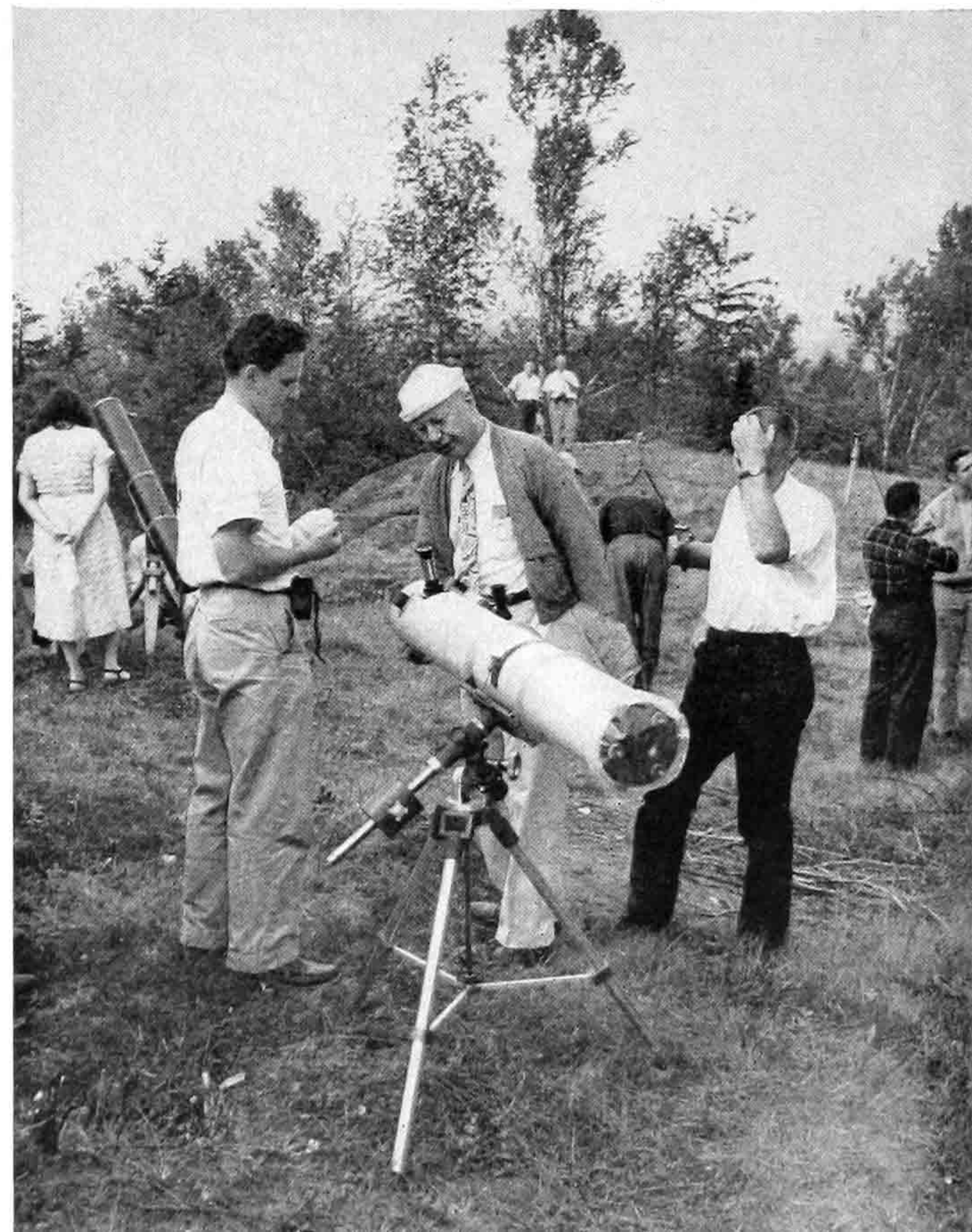
and by certain strokes to hollow out the surface of one of the discs, to be used as the mirror. Then finer and finer abrasives were used and the final polish given with jeweler’s rouge. The most difficult step came last—the tricky Foucault test to determine the requisite parabolic surface. With the organization of this class was launched the movement of the telescope makers of America.

The group first held casual meetings where papers on astronomical subjects were read and lantern slides shown. More exciting were expeditions to surrounding hills, the men packing their telescopes on their backs. After hours of observing, the astronomers rolled into their blankets and spent the rest of the night under the stars.

It was finally decided to build a permanent observation point on Breezy Hill. Porter called it “Stellarfane,” Temple of the Stars. Later the name was shortened to “Stellafane. In later years many improvements have been made to the original building.

In 1923 a legal corporation, The Telescope Makers of Springfield, was formed, Porter the first president, Pierce vice-president and Marshall secretary-treasurer. Soon to the original 15, other members were added, but all had to pass the rigid requirements for entrance: proof of the

This is an 8-inch Newtonian telescope with equatorial mount.





Dr. Charles H. Smiley, cap in hand, Brown University astronomy head and judge in the annual contest for telescope makers, joins others in examining an unusual scope which can be moved in any direction. At left is Wilfred Shattuck, also a judge.

drawings, to those who studied them like working models.

When the war put the Palomar project in mothballs Porter went back to national service. But the war had put heavy pressure on him and on February 22, 1949 he died.

Porter's death took something out of the Springfield Telescope Makers. They continued to meet but the spark was gone. Then in 1953 James Gagan of Lynn, Mass. conceived the idea of resuming the Stellafane conventions with the Springfield club and the Boston Amateur Telescope Makers as sponsors.

At the first convention in 1954 more than 300 amateur star gazers from 11 states and Canada came. A couple of runaway weather balloons, daytime Northern lights and a brilliant display of meteors in the evening were a few of the extra features.

Last year in spite of southern New England's floods, amateur telescope makers came over hundreds of miles of detours to be present and display their telescopes. Prizes were awarded as usual for mechanical excellence and optical efficiency.

In Springfield interest in telescope making is reviving. Newest member of the club is a young Charlestown, N. H. boy who has just completed his telescope and received admission. Now two other young men are working with John Pierce on their own instruments.

This summer when "the corn and the moon are right" (in August after the new moon and Vermont sweet corn arrive) the Telescope Makers from around the world will join once again in convention at Stellafane. END

A founder's granddaughter, Ann Pierce, has hereditary interest.

