Anniversaries of Science

August 7, 1807 — Robert Fulton's steamboat the Clermont made its first trip from New York to Albany.

When only thirteen, Fulton's dream of conquering the waters with a force stronger than that of poles or oars began to be realized, for at that age he constructed a boat which he moved with side paddle-wheels. . . He studied what English and French engineers had done on the subject, then returned to the United States, intent on bringing his experiments to a successful issue. As Fulton himself often said, he never claimed the idea of the steamboat as his own, but only the ability to make a steam-driven vessel which could be operated with practical success.

Before he left Europe he had shipped to New York a good steam-engine from the famous works of Boulton and Watt, at Soho. On his arrival in America he began the construction of the wooden hull of the steamboat, later named the *Clermont* in honor of the Livingstons' country-seat up the Hudson River. A memorable year was 1807, in which *Fulton's Folly,* as the scoffers had called the *Clermont,* ended her trip from New York city up the Hudson, to Albany. She had made the run of 150 miles in thirty-two hours, which gave her a speed of nearly five miles an hour and a good margin over the four miles required in order to maintain an exclusive grant for steam navigation in the waters of the Empire State. There was a stop overnight at Clermont, the chancellor's estate, where congratulations were showered upon the promoters. Thus, for the first time on any river, was steam navigation on a large scale made a commercial success.

—Harrington in *A Popular History of American Invention.*

Science News-Letter, July 30, 1927

August 7, 1869—The hypothetical element "coronium" was discovered during an important solar eclipse which was observed clear across the United States.

Fortunately, clear skies greeted the observing parties. Little of the important work accomplished will be noted in detail here. Spectroscopically, the most valuable discovery was that the spectrum of the corona was continuous but was traversed by a single green ray. This green line was detected independently by both Harkness and Young, the latter identifying its position as coinciding with the line numbered 1474 on Kirchoff's scale. But since this line 1474 is due to iron, it was surprising and perplexing in the highest degree to find it present in the corona and reaching such great heights above the sun's surface. In spite of the apparent coincidence, it was evident that the substance causing the green line was not iron. To it the name *coronium* was given—and today after more than half a century of active research we know little more of coronium than when it was first discovered.

—Mitchell: *Eclipses of the Sun.*

Science News-Letter, July 30, 1927

August 9, 1829—The first locomotive to run in commercial service in the United States, the "Stourbridge Lion," was placed on the tracks of the Delaware and Hudson Canal Co. at Honesdale, Pennsylvania, with Horatio Allen at the throttle.

The "Stourbridge Lion," built at Stourbridge, England, was the first locomotive that ran in commercial service in America. In August, 1829, with Horatio Allen at the throttle, the engine made its trial trip. It had two vertical cylinders operating two overhead walking beams, from which connecting rods ran to the driving wheels, and must have appeared like a marine engine on wheels. . . .

In 1884 Mr. Allen wrote the following humorous account of the first American trial of the "Stourbridge Lion":

"When the time came, and the steam was of the right pressure, and all was ready, I took my position on the platform of the locomotive alone, and with my hand on the throttle-valve handle, said: 'If there is any danger in this ride it is not necessary that the life and limbs of more than one be subjected to danger.'

"The locomotive, having no train behind it, answered at once to the movement of the hand; . . . soon the straight line was run over, the curve was reached and passed before there was time to think as to its not being passed safely, and soon I was out of sight in the three miles ride alone in the woods of Pennsylvania. I had never run a locomotive nor any other engine before; I have never run one since."

—Bannard and Kaempffert in *A Popular History of American Invention.*

Science News-Letter, July 30, 1927

BACTERIOLOGY

"Hard Boiled" Bacteria

Disease causing bacteria have many devices to perpetuate their kind in an adverse world. Bacteriologists of the Hooper Foundation for Medical Research, University of California, have shown that tetanus spores may resist the temperature of boiling water for ninety minutes, botulinus in vegetable juices for five and one-half hours and those of a closely related but harmless species for eight and one-half hours. Other workers have proved that typhoid and other organisms may remain alive for years at refrigerator or lower temperatures.

This happy provision of nature—happy, that is for the bacteria—constitutes a factor of great danger for man and animals which it is the function of scientific research to obviate, says Dr. George E. Coleman, of the Hooper Foundation. "The brilliant success," he states, "that has been attained already, in which the experimental use of mice and guinea pigs has played a large part, is constantly being proclaimed by statistical evidence of fewer food poisonings and typhoid fever outbreaks as well as by increased protection from many of our other microscopic foes."

Science News-Letter, July 30, 1927

ENTOMOLOGY

The Fly

In the progress down the ages, numbered in a million stages,
In the course of evolution from the primitive confusion
'neath the sky,
Hatching out in horse manure when there wasn't any sewer,
Rose a pesky little varmint called the fly.

On the numberless fine bristles of his tibiae and tarsi
Ride a milion streptococci, vibrios and diplococci
thousands strong.
As he buzzes 'round your table, finding food where he is able
He is scattering bacilli all along.

In the morning I'm awakened when the day is scarcely breaking
And I start the day by cussing at the tickling and the buzzing
'round my face.
I'd be very glad to slumber for at least an hour longer
But the pesky flies wont give me any peace.

I have met the Jersey "skeeter" and I do not like him either,
I have had my temples bleeding where the small black flies were feeding
And "no-see-ems" very nearly drove me mad.
But for sheer exasperation and the wrecking of my patience
I have never seen a pest that's half so bad.

So wherever you may find him with his trail of dirt behind him,
In your house or in your stable, feeding at your dinner table
on the sly.
With fly paper, trap or swatter or with formalin in water
SWAT THE FLY!

—*Philip H. Pope.*

Science News-Letter, July 30, 1927

GEOLOGY

Telescopes at Grand Canyon

Telescopes will soon be used to allow visitors to the Grand Canyon to inspect the latest geological discoveries in the depths of nature's great gully. Scientists are at work unearthing fossil foot-prints and other geological wonders in the Grand Canyon National Park. Visitors will be taken to the actual sites but an observatory situated on the Canyon's rim will allow a preliminary introduction to the various discoveries.

Science News-Letter, July 30, 1927