

Anniversaries of Science

June 8, 1275—Guglielmo Salicetti completed his "Cyrurgia" or treatise on surgery, in which, for the first time, surgical diagnosis is not separated from internal medicine. He was modern in many of his observations and descriptions.

William of Saliceto (1201-1277) was, however, the greatest surgeon of the thirteenth century, and the author of a systematic work on surgery ("Cirurgia"). Like Hugh of Lucca he had had experience on the field of battle. He described wounds of various kinds, the suturing of intestines and nerves, the treatment of fractures and dislocations. His influence tended to restore the use of the knife in surgery, though he devoted considerable space to the discussion of different methods of cauterization. Saliceto distinguished between hemorrhage from arteries and veins, but his knowledge of anatomy was, like that of all his contemporaries, very limited.

—Walter Libby: *The History of Medicine*.

June 11, 1292—Roger Bacon died. He was the earliest really modern scientist. He knew the earth was round, use of lenses (probably had a microscope), could make gunpowder, prophesied submarines, flying machines, and automobiles. He knew the literatures of Latin, Greek, Chaldaic, Hebrew and Arabic.

"But whatever is contained in the books of the Magi ought to be prohibited, for these books, though they may contain something of the truth, have so much falsity in them it is impossible to distinguish between the true and the false.

"Moreover, men who carry out their affairs according to the face of the heavens and the disposition of the constellations are at liberty to ascribe not only these figures themselves but all of their works as well, directly, to the virtue of Art and of Nature as, less directly, to the virtue of the heaven.

"I repent of having given myself so much trouble to destroy ignorance."

—Roger Bacon's Letter, *Concerning the Marvelous Power of Art and of Nature and Concerning the Nullity of Magic*.

June 14-15, 1919—Daily Mail prize of £10,000 was won by Captain Alcock and Lieut. Whitten Brown, who crossed Atlantic from Newfoundland to Clifden, Ireland, in 16 hours, 12 minutes.

Alcock and Brown's trip across the Atlantic was short but terrible. Half an hour after they left Newfoundland, a part of the wireless set gave way. They could not let a world, which was literally holding its breath, know how they fared. Nearly all the way over they were either in fog or flying between banks of fog, so that they could not see the water most of the time. A flying-machine always drifts from its course—how much, the pilot notes by watching the waves of the sea or the ground. But Alcock and Brown could not

see the water, so that, for all they knew, they were drifting away from the right course and might never reach land again. Luckily, they caught a glimpse of the sun, the moon, and a star or two, so that they could calculate their position. Most of the time they sped at a height of 4,000 feet. Flying in a fog makes it hard for a man to know whether his machine is on an even keel or not. When Alcock once swooped down to within fifty feet of the sea to get what he called his "horizon," which means his level, he found himself flying almost on his back. And he never knew it until he saw the water! To be sure, he did not fly very long in that position—only a few minutes probably. So thick was the fog that the two men never saw the sun rise. Once they climbed up to 11,000 feet and ran into hail and snow. Brown had to stand up and chop off the ice from the instruments. Think of that two miles in the air!

Alcock and Brown covered the distance of 1,960 miles between Newfoundland and Ireland in sixteen hours and twelve minutes—less than the time it takes the Twentieth Century Limited to run from New York to Chicago, which is only half the distance. The speed of the airplane was about 120 miles an hour, which is due to the fact that a following wind helped the machine along by about 25 miles an hour.

—Kaempfert: *A Popular History of American Invention*.

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EDUCATION

An Educational Test

By CASSIUS J. KEYSER

Many college graduates—perhaps a majority of them—are not educated.

What is the test?

There is no criterion that may be rightly called *the* test, for there are many tests.

Though the tests are many, I will here state but one of them. In a sense it is a negative test but it has the double merit of being at once infallible and convenient. It is convenient because any one can apply it readily either to himself or to others.

The test in question in this:

Do you read books that you cannot understand easily? Books that require to be read slowly and deliberately? Books that you know are beyond your capacity to understand fully? If you do not, you are not educated; you have not the temper and habit of an educated mind; you are not a student.

Do people who fail to meet that test *think* that they are educated? No. Such people do not think.

—Quotation from *Mole Philosophy and Other Essays*—Dutton.

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Wyoming is attempting to round up the thousands of wild horses in the state.

Glumtrap Rhyme

This poem was published in *Nature* for April 14, 1898, with the note that it is repeated by the children in the nurseries of Balnibarbi. The author explains that Balnibarbi is one of the countries visited by Gulliver; the "glumtrap" is their equivalent of the English nursery, and the babies of that fortunate land "are brought up on strictly scientific principles—as is evidenced by their knowledge in these verses."

Distant scintillating star,
Shall I tell you what you are?
Nay, for I can merely know
What you were some years ago.

For, the rays that reach me here
May have left your photosphere
Ere the fight of Waterloo—
Ere the pterodactyl flew!

Many stars have passed away
Since your ether-shaking ray
On its lengthy journey sped—
So that you, perhaps, are dead!

Smashed in some tremendous war
With another mighty star—
You and all your plants just
Scattered into cosmic dust!

Strange, if you have vanished quite,
That we still behold your light,
Playing for so long a time
Some celestial pantomime!

But, supposing all is well,
What you're made of, can I tell?
Yes, 'twill be an easy task
If my spectroscope I ask.

There—your spectrum now is spread
Down from ultra-blue to red,
Crossed by dark metallic lines,
Of your cooler layer the signs.

Hence among the starry spheres
You've arrived at middle years—
You are fairly old and ripe,
Of our solid solar type.

Ah, your sodium line is seen
Strongly shifted towards the green.
Hence you are approaching me
With a huge velocity!

But, if some celestial woe
Overtook you long ago,
And to swift destruction hurled
Life on every living world,

Did there in the fiery tide
Perish much of pomp and pride—
Many emperors and kings,
Going to do awful things?

Mighty schemes of mighty czars—
Mighty armies, glorious wars!
From the Nebula they may
Rise to curse a world some day!

—G. M. Minchin.

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