

ASPECTS OF THE PLANETS FOR MARCH.

URANUS

is morning star until the 16th, when his name is registered on the roll of evening stars. He wins the place of honor for the month, on account of his opposition with the sun, the greatest event in his course. This epoch occurs on the 16th at 2 o'clock in the morning. He then comes into line with the earth and the sun, the earth being in the middle, is at his nearest approach to the earth, and, like the other planets under the same conditions, is opposite the sun, and in his most interesting aspect for observation. The five outer planets after this event are evening stars. They are all traveling from opposition to conjunction, having reached the goal in the following order: Neptune, Saturn, Jupiter, Mars, and Uranus. We shall have no more oppositions to chronicle until December, when Neptune again takes the lead.

Uranus, near opposition, is visible to the naked eye, appearing as a star of the sixth magnitude, the smallest that the eye can perceive. The position of the planet must be carefully studied before any effort is made to find him. Uranus is in the constellation Virgo, between Beta and Eta, two third-magnitude stars of the constellation. In the first part of the month, he is in a good position for observation about 9 o'clock, being then half way between the horizon and the zenith, and must be looked for southeast of the Sickle in Leo, and northwest of Spica, the leading brilliant in Virgo. He is an interesting object in a telescope, where the tiny point visible to the unaided eye is transformed into a small sphere, of a delicate greenish hue, resembling that of sea foam.

Uranus has been a known member of the system since 1781, a little more than a century, though no one knows how many million years he has been describing his vast circuit round the sun. He was discovered by accident, Herschel, the discoverer, thinking he had picked up a comet instead of a world. Astronomers went diligently to work trying to compute the orbit of the supposed comet, but all in vain; the figures were of no avail. Finally, the theory was started that the astronomical prize picked up in the sky was another planet, revolving outside of the six planets that had been known from time immemorial. Computations now worked like a charm, and soon the new comer was mathematically imprisoned in an orbit whose deviations were to be the means of showing the presence of still another planet, traveling, as far as can be seen, on the system's remotest bounds.

There was great rejoicing in the scientific world over the advent of Uranus. Strangely enough, it was found that observers had detected his presence and marked his position on star catalogues no less than nineteen times, supposing him to be a fixed star and without a suspicion that he was a planet! Flamsteed had seen him five times, noting him on his catalogue as a star of the sixth magnitude, the first observation being in 1690, nearly a century before the discovery by Herschel. Lemonnier came nearer, for he had observed the planet twelve times, making several observations within the space of a few weeks. If he had taken the trouble to reduce and compare his observations, he might have won the prize twelve years previous to Herschel. But he had no system in his arrangements, and his papers are said to have been a very picture of chaos—an intricate observation of this very star being recorded on a paper bag that had contained perfumed hair powder!

The discovery of Uranus made Herschel famous. For six years, he looked in vain for Uranian moons. His largest telescopes, wonderful eyesight, and long practice failed to detect a single moon. Astronomy presents no more poetic picture than that of this great scholar and his sister and untiring helpmate, Miss Caroline Herschel, as through the silent hours of starlit nights they studied the mysteries of the heavens. For thousands of nights they sat side by side, watched, calculated, and recorded, the one sweeping the heavens with the telescope, the other noting the results. This they did for nearly forty years, growing old and illustrious together, forgetting to sleep, almost to eat, in their enthusiasm for their favorite science.

In 1787, Herschel's quest was rewarded. He discovered two moons, and afterward four more, as he supposed, but they proved to be myths. Mr. Lassell has since discovered two, and the Uranian planet rejoices in four satellites that travel backward or in an opposite direction from the moons of the other planets except Neptune.

Observers should try to find Uranus at opposition, for he is the most distant planet visible to the naked eye. He is a beautiful object in the telescope, and makes observers wish that he were nearer in order to be more intimately acquainted with him. It is easy to keep track of his oppositions, for they occur about four and a half days later each year. Thus the opposition this year takes place on the 16th of March, next year it will be the 21st of March, and so on. The right ascension of Uranus on the 1st is 11 h. 49 m.; his declination is 2° 2' north; and his diameter is 3.8".

Uranus rises on the 1st at 7 o'clock in the evening; on the 31st, he sets at a quarter after 5 o'clock in the morning.

VENUS

is evening star, and is during the month a radiant representative of the solar fraternity. Everything favors her conditions for observation. She is moving rapidly northward, approaching the earth, approaching her eastern elongation, remaining longer every night above the horizon after the sun has set, speeding away from the great luminary along

the invisible wire on which she seems to be strung like a golden bead.

On the 27th, at 9 o'clock in the evening, moving eastward, she encounters Neptune bound westward. The fairest of the stars and the most distant planet that circles around the sun have a conjunction, though not a near one, for Neptune passes 3° 34' south. Venus seen through the telescope now presents the phase of the gibbous moon when passing from the full to the last quarter.

There are three points to be noted in regard to Venus during the month—her rapid progress northward, her progress eastward, and her long stay above the horizon after sunset. These are easily discernible to the unscientific observer, and are due to her apparent progress in her orbit, as she travels from superior conjunction to eastern elongation. We can find no new words to describe the bewitching grace of the lovely evening star, as she sits enthroned almost companionless amid the sunset glow or beams more brightly later in the evening from the darker background of the sky amid the myriad starry hosts.

The right ascension of Venus on the 1st is 1 h. 12 m.; her declination is 7° 43' north; and her diameter is 14.6".

Venus sets on the 1st at 9 o'clock in the evening; on the 31st, she sets about 10 o'clock.

JUPITER

is evening star. He is now nearly half way to the zenith when it is dark enough for him to become visible. As he majestically treads his starry path, he rouses feelings of admiration and awe something like those evoked by the great sun himself. To be sure, he is not a sun, but he is nearer like one than any other planet, while the stars around him are such far away suns that the feeling of relationship is entirely lost. The giant planet seems hardly to have dwindled a second since opposition, though figures say that he has diminished in diameter 2.6", a quantity hard to estimate by unpracticed observers. The winter starlit nights are wondrously beautiful with Venus, Jupiter, Saturn, and Mars to grace the show.

The right ascension of Jupiter on the 1st is 7 h. 48 m.; his declination is 21° 44' north; and his diameter is 41.6".

Jupiter sets on the 1st at half past 4 o'clock in the morning; on the 31st, he sets at half past 2 o'clock.

SATURN

is evening star, ranking third in the order of brightness, being outshone by Venus and Jupiter. He holds the even tenor of his way, with seemingly small advance in his orbit, making his transit at sunset, and shining in the west on the first of the month till about midnight.

The right ascension of Saturn on the 1st is 4 h. 8 m.; his declination is 19° 17' north; and his diameter is 17.2".

Saturn sets on the 1st at half past 12 o'clock in the morning; on the 31st, he sets a few minutes before 11 o'clock in the evening.

MARS

is evening star. He is stationary in the middle of the month, and Jupiter presents the same aspect later in the month. Mars is still a bright object among the stars, but observers will note that his luster dims much more quickly than that of Jupiter and Saturn. Mars is of little account except for a month before and a month after opposition. As this epoch comes round but once in two years and fifty days, the favorable times for observing his ruddy face are few and far between.

The right ascension of Mars on the 1st is 8 h. 25 m.; his declination is 23° 18' north; and his diameter is 13.2".

Mars sets on the 1st about a quarter after 5 o'clock in the morning; on the 31st, he sets about a quarter after 3 o'clock.

NEPTUNE

is evening star. He has the honor of taking part in the conjunction with Venus on the 27th, as already described.

The right ascension of Neptune on the 1st is 3 h. 36 m.; his declination is 15° 42' north; and his diameter is 2.6".

Neptune sets on the 1st about half past 11 o'clock in the evening; on the 31st, he sets at half past 9 o'clock.

MERCURY

is morning star after the 16th, the sole planet enjoying this distinction. He retains the honor till the 30th, becoming then evening star, so that the month ends with every one of our brother planets congregated on the eastern side of the sun! On the 30th, at 3 o'clock in the afternoon, Mercury is in superior conjunction with the sun, which means that he apparently passes from his western to his eastern side in his fleet footed course. He is of no account during the month, for he is too near the sun to be seen.

The right ascension of Mercury on the 1st is 21 h. 36 m.; his declination is 16° 10' south; and his diameter is 5.6".

Mercury rises on the 1st about 6 o'clock in the morning; on the 31st, he sets about half past 6 o'clock in the evening.

THE MOON.

The March moon fulls on the 11th, at 40 minutes after 2 o'clock in the evening, standard time. On the 2d, two days before her first quarter, she makes a close conjunction with Neptune, being 27' south. On the 3d, she is near Saturn, on the 7th near Jupiter, on the 8th near Mars, on the 12th near Uranus, and on the 26th, the day before her change, near Mercury. The new moon of the 27th commences the same routine, paying her respects to Neptune on the 29th, to Venus on the 30th, and to Saturn on the 31st. She makes no close conjunction with any visible planet.

Opposition to Patent Nullification.

Perhaps the principal reason why there has not, thus far, been more general and forcible protest against the bills now before Congress nullifying our patent laws, is to be found in the fact that such proposed legislation has been frequently attempted before, and without success. Patentees and inventors should not, however, rest in any feeling of security on this account. The attack on our patent system was never before more bitter, and never apparently so well sustained, as it has been during this session of Congress. The most earnest appeals should be made, therefore, to both Senators and Representatives, though they can be supported by no stronger arguments than heretofore advanced, in order that no one of these most pernicious bills shall be allowed to slip through both houses, and become law, on any plea of inadvertence, or of failure to understand the full scope of the injury it is proposed to inflict upon the industry of the country.

Among other opponents of the proposed patent nullification by the last Congress, a committee of the Franklin Institute, Philadelphia, did good service in Washington. The bills then were of much the same character as those now urged, and of one of them the committee used the following language: "This bill legalizes theft, and is clearly unconstitutional. It is a short sighted and iniquitous piece of legislation, and should properly be entitled 'An act to discourage American invention,' since, if it become law, it would nullify the grant of all patents." The urgency for these bills was then attributed to a few grangers, whom the politicians wanted to please, and to the powerful moneyed influence of the Eastern and Western railroad associations, organized ostensibly for fostering invention, but in reality to "freeze out" all inventors who had any patents of value in the railroad business.

Mr. Reed, of Maine, a member of the present as he was also of the last House, forcibly put the objections to laws nullifying patents in the 37th Congress as follows: "The Constitution has a right motive in protecting patentees, because the public gets value received, and unless you pay inventors men will not invent. If you rob them of the proceeds of their invention after they have invented, you stop the business. And every man knows that, notwithstanding thousands of dollars are taken away from innocent men by fraudulent practices such as are complained of, there are millions of dollars conferred upon the public by this very inventive faculty. . . . What would this country be without the inventive faculty? Without the patent laws to-day it would be poor instead of rich. We owe the cheapness of everything that enters into the production of our daily bread, of everything that we wear, of everything that we use, to the inventive power. Do not strike it down; it is not wise to do so."

Apropos, however, of the foolish prejudices which sometimes influence law makers on important matters, a valued Philadelphia correspondent calls our attention to the occasion when Oliver Evans first ran a high pressure, self-propelling steam engine. It was only run from the shops in that city to the Schuylkill, but in its progress accidentally knocked down an old lamppost, whereupon a law was promptly enacted forbidding "any more such nonsense," the only law existing there to-day prohibiting self-propelling engines, although the engine thus sought to be annihilated was the precursor of the thousands of locomotives that now reach every corner of that State and of the United States.

Ruinous Legislation.

There seems to be some very strong influence at work, not only to deprive patentees and inventors of their rights, but to cripple and retard our national prosperity, which so largely depends upon new inventions and improvements. Our country would never have attained its present gigantic proportions and great prosperity had it not had the benefit derived from the great inventions of the last half century. Had the intelligence of our early statesmen been on a par with our present House of Representatives, it is more than likely that the 114 members who voted for bills 3,925 and 3,934 would now be ornamenting their own firesides, and the other 6 would have had to make their way to the capitol of the nation in a stage coach.

Even with our present laws the inventor has very little encouragement, as he proverbially lacks capital to protect his inventions, and with that little withdrawn he most assuredly is not going to work his brain for the benefit of capitalists, and like Charles Edouard Jacot, of Switzerland, referred to in the article of Feb. 3, will have to emigrate to a country where Government is wise enough to protect inventors and encourage improvements. It is to be hoped that the intelligence of our senators is of a higher order, and that they will not dishonor their record by passing bills so damaging to their constituents and the interests of their country.

W. L. B.

Poisoning by Chlorate of Potash.

At a recent meeting of the Medical Society of the State of New York, in this city, Dr. Geo. B. Fowler read a paper on Poisoning by Potassium Chlorate. He gave the history of a case in which the use of 4 to 6 drachms of the article had produced serious poisoning. Several prominent physicians also certified to the dangerous effects of the drug. Chlorate of potash is often used as a gargle for sore throat; but Dr. Sherwell, of Brooklyn, had observed that the medicine produced another form of sore throat.