

orbit round the sun. If the earth were not in motion, no such effect could take place. If the earth were at rest, the star would be seen in the place in which it really is, never seeming to alter its position ; but the earth being in motion with its present velocity, the telescope is necessarily inclined a little in order to see the star, and it is the real annual orbital motion of the earth that causes the apparent motion of the star, in describing such a figure in the course of our year.

Dr. Bradley, also, took an active part in the reform of the calendar, which had by this time varied a little from the true seasons ; and, in order to rectify the error, joined in recommending that eleven days should be struck out of the month of September, 1752, so that the day that would be the fourth of that month, was called the fourteenth. This measure was very unpopular at the time, and Bradley came in for a large share of popular dislike on this account ; and his death, which occurred a few days afterwards, was, by many of the ignorant, regarded as a mark of Divine displeasure at his presumption in thus daring to interfere with the regular order of the calendar. This alteration has since been effected in nearly all countries, except Russia, where dates are still reckoned according to the old style, and are now thirteen days behind those used in the rest of Europe.

We may now just glance at the services which have been rendered to astronomy by another of those men whose names will ever stand foremost in its annals, Sir William Herschell. He was a man of somewhat humble origin, and unable to procure a telescope sufficiently powerful by which to understand some of the mysteries of the heavens. He had, however, an intense desire to do so, and having acquired a knowledge of the principles of the telescope set himself to construct one. In this, he succeeded well ; and he is said to have ground altogether upwards of 500 specula for reflecting telescopes. In March, 1781, when he was examining the sky by the aid of one of these instruments, he came upon a small star, which as he examined it with higher powers seemed to exhibit a disc. He accordingly took an accurate note of its position so as to watch it again on another evening. When he again examined it, it was at once clear that it had changed its position. The idea, however, of a new planet does not appear at all to have entered into his mind, so accustomed had every one been to regard Saturn as the extreme planet of our system ; accordingly, he set it down as a new and strange comet which he had discovered, and announced it as such. Its motions, however, soon showed that, unlike the comets, it moved in an orbit of but small eccentricity, and it was then found to be a planet revolving in an orbit outside of Saturn. This planet he named *Georgium Sidus* in honor of King George III., who had been his patron, but the name was afterwards altered to Herschell, and finally to Uranus, by which name it is now known.

Soon afterwards he constructed a much larger telescope, the speculum of

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