

THE HARTWELL OBSERVATORY.

(Continued from page 233.)

Speculum Hartwellianum; the Cycle of Celestial Objects continued at Hartwell Observatory to 1859. By Vice-Admiral W. H. SMYTH. 4to. London: Privately printed.

In our October number we gave a short account of the origin of this Observatory, with a description of the transit-room and the instruments therein. We have now much pleasure in resuming the subject, and proceed to give a few particulars concerning the instrument more immediately interesting to amateurs—the equatorial.

Three years after the completion of the transit-room, Dr. Lee commenced the building of his equatorial tower. Having procured an object-glass of nearly six inches diameter, he was anxious that it should be mounted with the completeness and efficiency of detail so successfully carried out with regard to the transit instrument; his arrangements, under the able superintendence of Admiral Smyth, and assisted by Mr. Charles May the Engineer, were at length perfected, and in 1850 the equatorial room was finished.

The object-glass alluded to, however, was not mounted in this room, as it was found, after being thoroughly tested, to be by no means a fine production, and, ultimately, the celebrated telescope used by Admiral Smyth in his observations for the *Bedford Catalogue* was erected, the Observatory at Bedford, after fulfilling its purpose, having been dismantled. This instrument is fully described in *The Cycle of Celestial Objects*, vol. i. pp. 337 *et seq.* The object-glass, of 5·9 inches clear aperture, and 8 feet 8 inches focal length, was obtained by Admiral Smyth from Sir James South, and was “deemed, perhaps, the finest specimen of the late Mr. Tulley’s skill.” It is mounted on the English plan, known as “Sisson’s.” The polar axis, 14 feet in length, is supported by stone piers, resting on brick foundations of a solidity equal to those constructed for the instruments in the transit-room, as mentioned in our former notice. On the head of the north pier, 10 feet above the floor, a cast-iron frame receives the upper pivot of the polar axis, the lower end of which carries the hour circle, reading both time and space, of 3 feet diameter, and connected with a very efficient driving-clock, regulated by governor-balls

similar to those of a steam-engine. The clock is remarkably steady in action, retaining a star on the wire of the micrometer very satisfactorily. The declination circle attached to the telescope is also 3 feet in diameter, and reads to 10'' of arc.

The equatorial room is of circular form, the interior diameter being 15 feet, and the walls of the substantial thickness of 14 inches. It is surmounted by a hemispherical dome, constructed of wood upon a flattened ring of iron, a similar ring being firmly secured to the upper surface of the brickwork; and the dome rotates upon three iron spheres, each about 6 inches in diameter, interposed between the rings. The opening in the dome is equal to one-sixteenth of its circumference, having a shutter of copper somewhat less than an eighth of an inch thick, which turns upon a pin in the top of the dome, and is opened and closed by means of a handle and rackwork.

On the occasion of our agreeable visit to Dr. Lee in August last, we found the equatorial in full activity under Mr. Birt, who was employing the instrument to excellent purpose in obtaining measurements for his new and elaborate survey of the lunar surface.

The magnificent quarto, the title of which heads the présent notice, gives a complete description of the Hartwell Observatory, and the purposes for which it was established. It is, moreover, a voluminous, very able, and highly interesting commentary or dissertation on astronomical discoveries, and other important subjects connected with the science, which have arisen and been made since the publication of *The Cycle*—1844; and, in particular, it contains a valuable series of further observations and re-measurements of a considerable number of double stars and other objects included in the *Bedford Catalogue*, with discussions thereon, the whole being brought down to the year 1859. The *Speculum H.* is also illustrated and enriched with many beautiful cuts and engravings.

The commencement of the year 1864 witnessed the production of a third and handsome volume, also from the prolific pen of Admiral Smyth, entitled *Addenda to the Ædes Hartwellianæ*, wherein is collected a vast amount of information, both local and general—archæological, geological, numismatological, and (though last, to us not least) astronomical—forming, indeed, a most worthy companion to the two preceding works. The Admiral resides at

St. John's Lodge, a short distance only from Hartwell House; and on our brief visit to him during our sojourn at Hartwell, we found him still busily at work in the cause of Astronomy, he being at that time engaged in the preparation of his *Sidereal Chromatics*. This elegant *brochure* has been since completed and privately published; and we shall take occasion in an early number to offer to our readers a few remarks thereon.

ROYAL ASTRONOMICAL SOCIETY.

Third Meeting, January 13, 1865.

Warren De la Rue, Esq. F.R.S., *President*, in the Chair.
Secretary, R. Hodgson, Esq.

Thirty-two presents were announced, and among them the President called attention to M. Guillemin's treatise, *Le Ciel*.*

The Rev. E. L. Berthon,	J. D. Allcroft, Esq.,
The Rev. R. Holme,	G. W. Wigner, Esq.,
The Rev. T. J. Potter,	A. P. Wiss, Esq., and
W. T. Radford, Esq.,	R. N. Stevens, Esq.,

were balloted for, and duly elected Fellows of the Society.

The name of a gentleman was removed from the list of Fellows of the Society for non-payment of subscriptions.

The following were the papers of the evening:—

Observations of Comets IV. and VI. 1864, made by Mr. Hartnup, with the Liverpool equatorial.

An Approximate Ephemeris of Encke's Comet, prepared by Mr. Farley, presented by Mr. Hind.—The ephemeris comprised positions of the comet from January 22 to March 1; and it was announced that copies were in preparation for those Fellows of the Society who took an interest in and were observers of these faint objects.

* We understand that an English translation of this work will shortly be issued by Mr. Bentley. It is to be edited by Mr. Lockyer, and as additions will be made to the original work, which, both with regard to text and illustrations, is of a very interesting character, it will be an acceptable book to all English astronomers.