

Dawes's Observatory, Watringbury

THE OBSERVATORY OF THE REV. W. R. DAWES, F.R.A.S., AT WATERINGBURY, NEAR MAIDSTONE.

We have had occasion already to make mention of Mr. Dawes in connexion with Mr. Bishop's observatory, of which he had the direction for a considerable period. Previously to this Mr. Dawes had established an observatory at his residence at Ormskirk, in Lancashire, where, for a period of several years, he confined himself chiefly to observations of double stars, the results of which are published in the fifth and eighth volumes of the *Memoirs of the Royal Astronomical Society*. It is but recently that Mr. Dawes has re-established his observatory at his present residence at Watringbury, and our readers will remember, as an interesting fact connected with its re-establishment, the early announcement of the discovery, by himself and Mr. Lassell, of the third or interior ring of Saturn, contemporaneously with its discovery by Mr. Bond in America.

The observatory consists of a transit room and an equatorial room. In the transit room is a clock, and a 2-ft. transit circle having a 30-in. telescope with an aperture of $2\frac{3}{4}$ in. The circle is by Troughton and Simms: it is furnished with a rough reading-microscope, and four micrometer-microscopes, which are attached to a stout stone fork, forming part of the top of one of the piers; and they are so placed as to read off the divisions at the extremities of two diameters of the circle.

In the equatorial room is an achromatic refractor by Merz and Son, of Munich. The clear aperture of the object-glass is $6\frac{1}{2}$ in., and its focal length $102\frac{1}{2}$ in. English measure. It is mounted equatorially on Fraunhofer's plan, and is carried by clockwork. The hour-circle is $9\frac{1}{2}$ in. in diameter, and is divided on silver to single minutes of time, which are subdivided by two opposite verniers to 4". The declination circle is 12 in. in diameter, and is divided on silver to 10', and its two opposite verniers read to 10". The telescope is of great excellence: it shows the second satellite of Saturn (*Enceladus*) very plainly when near its greatest elongation, and separates stars of moderate brightness whose central distance does not exceed $0''\cdot7$.

The observatory and instruments, having been removed from Mr. Dawes' late residence at Camden Lodge, near Cranbrook, were erected at his present residence last October. Its geographical position is not yet accurately determined, but is approximately in north lat. $51^{\circ} 15' 12''$, and east long. 1m. 39s. 8.

Mr. Dawes has procured some micrometrical measurements of Saturn's ring, which prove that the portion which he has observed lately and described in his paper to the Royal Astronomical Society, *formed no part of the ring* as it was seen and measured by Struve at Dorpat. This is very strange; for, in addition to the splendid skies of Russia, the illuminating power of the Dorpat telescope was greater in the proportion of 92 to 40.