

nor in Norway, as in 1851, but on this occasion embracing for a longer or shorter duration almost the entire north of Spain. Under the auspices of the Astronomer Royal an expedition was in due time organized, comprising a considerable number both of amateur and professional observers. After the experience gained on the two former occasions it was reasonable to hope that the locality of the rose-coloured prominences would at length be finally established, and that some better information would be obtained relative to the origin of the beautiful radiations of the corona. With this view certain improvements were introduced into the form of the micrometer or measuring instrument, and in particular a happy suggestion of Sir John Herschell's was adopted, whereby the sun's disc could be observed without the necessity of contracting, as heretofore had been necessary, the aperture of the telescope. Beyond all, great advances had been made in the art of photography as applied to autographic pictures of celestial objects, and especially in this country by Mr. Warren de la Rue, who by a rare combination of chemical, mechanical, and astronomical skill, had obtained photographic picture of the sun and the moon, possessing not only unrivalled beauty, but what was of more consequence, an amount of accuracy which would bear comparison with results obtained by the most refined instrumental measurements. It was in fact proposed to attempt to photograph the corona and its appendages during the totality itself.

At the instance of Mr. Airy, the Admiralty of that day devoted their noble troop-ship the *Himalaya* to the purposes of the expedition. Nothing was omitted which was deemed likely to conduce to the successful prosecution of the observations required. A code of instructions was drawn up, maps of the path of the moon's shadow were engraved on a large scale, and all the anticipated circumstances of the eclipse were described with a copious and precise detail. Among other arrangements Mr. Hind, the superintendent of the Nautical Almanack, furnished a pictorial chart of the positions, in relation to the sun, of such planets and stars as it was presumed would become visible during the obscuration of the eclipse. The main object of the construction of this chart was to afford the means of detecting certain intra-Mercurial planets, the existence of which had been suggested by M. Leverrier, and especially a planet "*Vulcan*," which that eminent astronomer maintained had been observed in its transit over the sun's disc by M. Lescarbault.

Beyond all other circumstances which promised favourably for the successful observation of this eclipse was the existence of a railway, in process of construction from Bilbao to Tudela, across the shadow of the eclipse. It was rightly considered that such works in a country where roads were few, and accommodation and means of transit scarce, would prove a circumstance of the utmost importance; indeed but for the existence of this railway, and beyond all, but for the untiring zeal and unbounded liberality and intelligence of the engineer, E. Vignolles, Esq., F. R. S., the whole expedition must have been thrown into almost inextricable difficulties.

THE DAY FORTY-EIGHT HOURS LONG.

THE subject involved in the following explanation has often been a puzzle to school-masters:

"Last week showed that the first beginning of the day is somewhere between America and Asia. The precise locality of that somewhere has not been determined. If the Pacific ocean were thickly populated with men, the place of the beginning of the day would be a matter of great consequence, and would probably be settled by statute. The day would start from a meridian line extending from pole to pole, and the longitude of this day line would be so accurately fixed that a man might stand astride it and realize the paradox of having one foot in Monday and the other in Tuesday. Many of the readers of this will live long enough to hear this subject discussed in national councils.

"We propose now to show that Monday or any other week day is forty-eight hours long; we mean that during the whole of forty-eight hours, Monday is on the earth somewhere to be found. The Monday of this city is of course twenty-four hours long, but before and after our Monday there is Monday in some other quarter. When Monday begins in New York, there have been three hours of Monday in London, and for three hours after our Monday ends there will be Monday in San Francisco. Thus between these places Monday lasts thirty hours. Now if the day line were at our antipodes, Monday would begin there twelve hours before ours, and end twelve hours after ours. Thus, for the space of forty-eight hours the earth is not rid of Monday. The fact may be illustrated in another way. Suppose we are at the day line. Monday begins there, and in twenty four hours along comes Tuesday. But just west (half an inch if you please) Monday began only an instant before it ended east of the line. The Monday east of the line is twenty-four hours long, and west of the line is the same length, and in all Monday lasts forty-eight hours."—*Scientific American*.

EDUCATIONAL INTELLIGENCE.

AT HOME.

Colchester Co.—H. C. Upham, Esq., Inspector, writes as follows:—"During the month of August I visited the schools in the following sections: Cumberland Road South, Clarkville, Brookfield, Lower Stewiacke West, Fort Ellis, Gay's River, Upper Gay's River, St. Andrew's, Folly, DeBert River, No. 1, DeBert River, No. 2, DeBert, Chigonois, Upper Chigonois, North Mountain, Bass River, Central Economy, Upper Economy, Pleasant Hills and Highland Village. I abstained from visiting schools nearly two weeks, hoping that the vacations would have passed, yet missed seeing the schools in Shubenacadie East, Folly Mountain, Lower Economy and East River, when in the neighborhood, on this account. Some schools had their vacations in June, and there has not been a week since when some school has not been vacant, and this is likely to continue until the potatoes are harvested. A general feature of the month's inspection is smallness of attendance, arising from various causes, but most particularly from the abundant crops of this year, and from the prevalence of whooping cough and mumps in many places.

A new school-house is building at Lower Stewiacke (East section) in place of that which was burned last winter. The new houses in Chigonois are now occupied by respectable schools. It is to be hoped that this section may never again fall into the low state in which it has been for many years past. The new and good school-house in Highland Village is now completed.

I beg to call your attention to an error in defining the word "definitely" in the 5th reading book *N. S. Series*, p. 118.

Kings Co.—Wm. Eaton Esq., Inspector, reports as follows:—"I am glad to be able to report, that as the work of inspection proceeds, new tokens of advance present themselves. I find that in addition to those before reported, three new school houses are in progress, and will be open at the commencement of the coming term. Two more, the frames of which were erected last year, and covered in, will I hope be finished soon. The acknowledged scarcity of money has prevented more being done.

The great desideratum, in order that the present school law work out for the Province all those benefits which it is designed to effect, is an adequate staff of teachers, possessing ability, and proper training. These are not however the only requisites to successful teaching; unless there is brought to the discharge of the duties of the school room, a good degree of enthusiasm; unless real spirit and energy, and originality of thought, as well as tact characterize the individual who takes upon himself the business of instruction, failure in some measure will result. I have no doubt but the teachers of Kings, will in these respects compare favorably with those engaged in other counties, for we have some thorough good teachers; but occasionally as I visit the School-room, my heart is pained, and sick at the dullness that is apparent in all the exercises. The character and feelings of the teacher, an impressed invariably upon the children, so that we cannot help reiterating the saying, "As is the teacher, so is the school."

Let the teacher be of the right stamp, and value his services proportionately; not engaging with Trustees for a mere pittance, as I regret to say has been the case in several instances in the present term—so will he be respected, and the profession be raised to its proper position. The number registered in the schools is generally very satisfactory, although in some cases the average attendance falls considerably below what we might naturally expect. This however is owing chiefly to the demand made upon the child's services at home, from the scarcity of labor.

A greater difference between the number registered, and the average attendance should be expected under the present law, than under that which it superseded.

It is a significant fact, as indicative of public feeling, in reference to the present enactment, that neither of the candidates for the coming election presumes in his canvass, to touch the school law, unless in some of its minor details."

Lunenburg Co.—The Inspector reports that during his official visitations this term he has instituted careful enquiries respecting teachers' agreements, and the disposal of school books supplied through the Educational Department. In reference to these matters he says, "In no instance, so far as I have been able to learn, have the official regulations been disregarded or departed from in any particular." East Chester, which has been without any school-house for years past, has erected an excellent and commodious house. It will be ready for occupancy by November. At Bridgewater both departments of the school are working well; but the elementary department is too much crowded. An additional apartment is greatly needed, and until it is had the school cannot give complete satisfaction. Upper Northfield is engaged in completing a new school house, well proportioned, and of ample size for the requirements of the section. The people in this section are very poor, but they have put forth unusual efforts to bring the most approved means of education within the reach of their children.—Garden Lots (No. 4) has a new and very neat school house, entirely finished; but it is yet deficient in furniture and apparatus.