

Travels," stated that some corrections of values given in vol. i. are required in consequence of the identification, made too late for their correction, of the value of Tavernier's carat, but the present discussion as to the Koh-i-Nur is quite independent of that.

With regard to the mutilated condition of the Koh-i-Nur, I have nothing to add; the statement as to its condition, quoted by me, and the figures and models of the stone appear to be sufficient proof that portions had been removed by cleavage, which would account for the difference between its weight and the Mogul, as described by Tavernier, and I still retain that opinion.

It is not of the least importance as regards the main question, whether my suggestion should prove correct or not, that if Babar's stone has survived it may be identical with the Darya-i-Nur, to which Malcolm attributed a weight of 186 carats. Prof. Maskelyne, upon a system of calculation which I cannot admit as applicable to the case, as we do not know the thicknesses of the stones which he compares, gives to the Darya-i-Nur an estimated weight of 210 carats. For the present, therefore, I prefer Malcolm's definite statement to Prof. Maskelyne's theory about the attributed weight being the "echo associated with the Koh-i-Nur."

I shall have something to say about the Golconda table diamond, and about a great many other diamonds and other precious stones too, on a future occasion. In that work I shall be as careful to give, as I have hitherto been, chapter and verse for every statement of fact quoted, and I shall trust the histories so supported will find acceptance from those who care to investigate the evidence in favour of the conclusions connected therewith.

I am not quite sure that I appreciate the full force of the phrase "verisimilitude of a true history"—the last words of Prof. Maskelyne's article—but of this I am certain, that if ever I should see a history of the Koh-i-Nur following the lines of that article, I shall feel bound to make another and special "incursion" into the subject in defence of Tavernier if not of myself.

Dublin, October 12.

V. BALL.

THE NAUTICAL ALMANAC.

IT has been known for some little time that Dr. John Russell Hind, F.R.S., who for many years past has been responsible for the production of the national ephemeris, would soon seek that retirement to which his long services and his distinguished career entitle him. At the end of the year, he will relinquish the office of Superintendent of the "Nautical Almanac," and the good wishes and kindly sympathy of the astronomers of many nations will follow him in the retirement he is seeking.

His successor has been appointed, and in Mr. A. M. W. Downing we have not the slightest doubt that the Admiralty have made a happy selection, and that under his auspices the high character and reputation of the "Nautical Almanac" will be fully maintained. Mr. Downing has long been associated with meridian astronomy in its best traditions; and in his position of greater responsibility and greater freedom we entertain the hope that his astronomical reputation will be fully maintained and extended. He may be said to enter on his office at a time when the "Nautical Almanac" is on its trial. The arrangement of the book, and the information it conveys, were practically settled by a Committee some sixty years since. How efficiently that Committee performed its task is shown by the fact that so little alteration has been needed for so long a period. But the outcry for change has gone forth: new committees are deliberating and reporting, and it will be among Mr. Downing's first duties to give shape, alike to the suggestions of irresponsible authorities, as well as to incorporate the recommendations of recognized committees in a new and improved "Nautical Almanac."

One great difficulty which has to be encountered, and of which it is not easy to see the proper solution, is due

to the fact that the "Nautical Almanac" seeks to supply the wants of two very different classes of persons—namely, astronomers properly so called, and nautical men. The former demand very considerable detail in the exhibition of the several computations, the latter are satisfied with a very few final results. The former class is a small one, and a very moderate edition would satisfy their demands. The latter class is a very large one, and necessitates the printing, it may be, of thirty or forty thousand copies. The first question therefore, it seems, which must claim the attention of any Committee, or of any Superintendent, is, whether it be desirable to separate the "Nautical Almanac" into two, or it may be more, sections—one circulating among astronomers, the other among mariners. Private enterprise, anxious to minister to the wants of a rapidly increasing mercantile marine, has long supplemented the "Nautical Almanac" with a smaller and pirated edition, valuable to sailors, but detrimental to the circulation of what may be considered the legitimate ephemeris. Would it not be better if the Admiralty could see their way to publish an ephemeris with other nautical information, entirely for the use of the marine? Such a course is followed by the Governments of other countries. The German Government publish at Berlin a compact "Nautisches Jahrbuch," admirably adapted for naval purposes. This example is followed in Austria and in America, and we believe that the sale of our "Almanac" to the naval men of those countries has fallen off in the last years, or at least has not kept pace with the increase of foreign tonnage.

Such questions are of importance, as concerning not only the financial position of the work, but its influence in our own and foreign navies. There are, however, others touching the scientific and purely astronomical side of the compilation. Such, for instance, is the vexed question of the introduction of empirical terms in the final positions of the moon. Astronomical purists will maintain that the position of the moon should be that assigned by a purely gravitational theory, to facilitate the comparison of that theory with observation. Others demand that the place of the moon should coincide, as accurately as possible, with observation; and looking at the large portion of the "Nautical Almanac" devoted to "lunar distances," it would seem (if this section is ever used) that it is desirable that the distances given should represent observed facts. After a naval man has been at the trouble of observing and reducing a lunar distance, to ask him to apply a correction for the error of moon's place seems wanton and irritating. And if the amount of the empirical correction is clearly ascertainable, it can be easily removed before instituting a comparison between observation and that theory from which the moon's place has been computed. But to satisfy the demands of both classes of astronomers will try the tact and ability of the new Superintendent to the utmost.

The section devoted to the apparent places of the stars has also been submitted to considerable criticism. No doubt here enlargement is needed, and possibly improved places of the stars, particularly of circumpolar stars in the southern hemisphere, are much wanted. But on this point the new Superintendent is himself a weighty authority. He has worked much and successfully in the determination and removal of systematic differences from star catalogues, and their reduction to known and recognized standards. So that, under his influence, we may hope that this section will take and maintain a foremost position.

Mr. Downing has undertaken a very important duty, of great national importance, at a very critical period. We fully believe that he will grapple with this task successfully, and that, in his efforts to improve our ephemeris, he will have the assistance and support of all classes of astronomers.