

ought to be there, points to his spy-glass, and, lo! there it is. If, then, a trained observer with a larger telescope fails to verify his marvel, what better proof is needed that the great telescope is ineffective? It is an axiom in astronomy, that, when once a discovery is made with a large telescope, the object can always be seen with a smaller one. This presumes, of course, that the same observer uses the two instruments, and that he knows where to look and what to look for with the smaller one. And this in no wise constitutes an argument for equality of the small telescope with the larger; for with a good atmosphere, and the superior telescopes now made, it is never true that the nature of any celestial object can be made out with a small telescope which a larger one will fail to show more satisfactorily. Taken in connection with the attempts of late years, so far successful, to set up powerful telescopes on mountain elevations where a correspondingly perfect atmosphere is obtained, the future of the monster telescope is most hopeful.

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#### MAKING A NEW MERV OASIS.

THE Russians have fixed their minds, says *Engineering*, on a new enterprise, well calculated to set on edge the teeth of English and Indian statesmen. This is no other than the formation of a new oasis, as large as that of Merv, along the new frontier to the Oxus, which the Afghan delimitation commission will delineate as soon as the spring weather enables it to quit its winter quarters at Tchamshambe. Briefly, the scheme, which is said to be a sober engineering design, complete in all details, and drawn up on the spot by the surveyors of General Annenkoff, the constructor of the Transcaspian railway, provides for cutting the bank of the Oxus near Tchardjni, and allowing the water to flow afresh through some ancient channels running in the direction of Merv.

There is no particular novelty in the idea, the oasis of Khiva being formed entirely of country irrigated by an elaborate system of canals running out from the Oxus near its entrance into the Aral Sea, while the Merv oasis is of a similar character, and uses up all the water of the Murghab. The channels, we have said, already run into the desert near Tchardjni; and a careful series of levels, taken during the autumn, show, that if the bank of the river be cut, and the channels cleared of drift in one or two places, the water will run freely for sixty or seventy miles. The nomads can then be left to manage the rest of the business themselves; for the natives of Merv and Khiva are extremely clever in making irrigation canals,

and they would speedily establish a network, and convert the clayey expanse now devoid of vegetation into a green oasis, as fertile as any in central Asia.

Readers of O'Donovan's and Marvin's books on Merv will not have forgotten, that as far as the Turcomans convey water from the Murghab, there amazing productiveness prevails, although immediately beyond is a desert. All that is really needed, therefore, is to withdraw from the Oxus a sufficient quantity of water (and Annenkoff's calculations show that abundance can be spared), and a year would be sufficient to create an oasis capable of supporting a quarter of a million people. In that case Russia could march troops from Askabad and Merv to the farthest parts of Turkestan, and despatch the Tashkent and Samarcand forces through Bokhara to Merv and Sarakhs in return, without having any desert to traverse, and the communications along the new frontier would be perfect. As the cost would be only £160,000, no doubt whatever is entertained in Russia that Annenkoff's proposal will be accepted.

DR. ARISTIDES BREZINA of Vienna has published a catalogue of the fine collection of meteorites in the Hofkabinet. The richest collections of meteorites are those of the museums of London, Vienna, Paris, and Calcutta. On May 1, 1885, the Vienna collection contained representations of 358 genuine falls. Dr. Brezina accompanies his catalogue by a valuable essay on the origin and classification of meteorites, and by a map of the world showing the localities in which the Vienna specimens have been found.

—The *Revue sud-américaine* of Dec. 30 announces the organization of a new scientific society in Paris under the name, 'Académie de l'Amérique latine.' The academy will be divided into four sections, as follows: social and political; historical and literary; geographical and ethnographical; economical, commercial, and financial. It will be devoted solely to the Latin nations of America, and the membership will be unlimited. It will publish a bulletin in the French, Spanish, and Portuguese languages.

—Extended researches by F. Emich (*Centralblatt für agrik. chemie*) show that the purification of natural waters is effected almost wholly by organic agencies; the chemical action of ozone, peroxide of hydrogen, and the oxidation from the air, exerting but a feeble influence. This was proved by experiments made upon water in which the germs had been destroyed by boiling.