tion may be regarded as a filling in of the eddy-space in such a way as to provide easy lines for the flow of the wind.

In waves into which freely drifting powders fall, the steep side is on the leeward instead of upon the windward, and this signifies that the eddy-space is *never* filled up. The whole eddy-space is, in fact, free to move forward, and does so when the snow is drifting, and this progression is the wave motion.

The relation between the profile of the snow-drift and that of the waves of drifting snow and sand may be further illustrated by drawing the profile of the wave, not in the usual way, from trough to trough, but from crest to crest. It is then seen that the unfilled space between the two ridges has the blunt nose and fine tail profile; that it is the profile of the hollows in snow round trees and of the fuljes of sandy deserts, tbe form proper to an eddy space.

The powder, when drifting in waves, has the "fine nose and blunt tail form," which is that of greater eddy-making resistance (the nose being that part turned towards the wind), and the powder, when in its complete accumulation near fixed obstructions, assumes the "blunt nose and fine tail" form, which is that of less eddy-making resistance. Both forms are simultaneously produced on a snow-field, and both are compatible with the removal by the wind of the maximum quantity of snow in the course of the winter. Thus, on the one hand, the maintenance of strong eddies in the drifting waves evidently increases the power of the wind to drive the snow before it; and the hindrance offered by a fixed obstruction is best minimised by filling in its eddy-space with a structure which shall thereafter absorb as little energy from the wind as possible.

Sometimes the freely drifting snow is accumulated in isolated hillocks, which have been called barchans or medaños. Sometimes their development from patches of drift snow can be observed. These patches have in ground plan a fine nose towards the wind and a blunt tail or lee end—a sort of delta shape, but with curved sides. The same thing may be seen in sand. This is in accordance with the habit of the freely drifting snow to adopt a fine nose and blunt tail arrangement in vertical profile.

Freely moving barchans of less or greater elongation probably fill in less or more of the narrow end of the ichthyoid curve. The crest of the cliff will be lower than the summit of the barchan if the former be beyond the broadest part of the curve. The erosion forms produced by wind when acting upon consolidated snow were also studied. Fig. 3 shows how the minute stratification of the snow is revealed by the action of the wind.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

THE following list of candidates successful in this year's competition for the Whitworth scholarships and exhibitions has been issued by the Board of Education, South Kensington:—Scholarships, 125*l.* a year each (tenable for three years):—William M. Selvey, London; Leonard Bairstow, Halifax; Isaac V. Robinson, West Hartlepool; Arthur Baker, Gosport, Hants. Exhibitions, 50*l.* (tenable for one year):—Charles Cook, Landport, Portsmouth; John S. Mitchell, Uddingston, near Glasgow; Charles J. Stewart, Fratton, Portsmouth; Arnold H. Gibson, Sowerby Bridge, Manchester; William E. W. Millington, Hollinwood, Oldham; Neil J. Maclean, Kelvinside, Glasgow; Henry J. Jones, Southsea; Harold Rawstron, Oldham; George H. Childs, Portsmouth; Norman L. Ablett, London; William E. F. Curror, Ilford, Essex; Walter L. Port, Brighton; John Alexander, Glasgow; Louis D. Stansfeld, London; Robert J. A. Pearson, Sheffield; William L. Perry, Plymouth; Arthur S. Angwin, London; Francis G. Steed, Devonport; Henry A. Bagg, London; Frederick J. Crabbe, Southsea; Arthur Garrard, Forest Gate, E.; Benjamin J. Thomas, Devonport; Maurice B. Dalby, Gateshead; Thomas Wadhams, Wolverton; Oliver S. Spokes, Crewe; James Crone, Charlton, Kent; Alexander B. Sowter, Glasgow; Fred Sykes, Huddersfield; Frederick E. Rebbeck, Belfast; Frank W. Harris, Swindon.

THE metropolitan and most of the provincial medical schools will be opened at the beginning of October. Among the addresses to be delivered, the following are announced:—*Charing Cross Hospital.* The fourth biennial Huxley lecture on "Recent Advances in Science and their Bearing on Medicine and Surgery," by Prof. W. H. Welch, of the Johns Hopkins University, Baltimore. *St. George's Hospital.* Address by Dr. T. T. Whipham. *St. Mary's Hospital.* An address by Sir A. W. Rücker, F.R.S. *Middlesex Hospital.* Mr. Stephen Paget will give an address. *University College.* An address by Mr. Percy Flemming. *London (Royal Free Hospital) School of Medicine for Women.* Address by Mr. Charles Burt. *School of Pharmacy.* Address by Dr. W. Palmer Wynne, F.R.S. *Royal Veterinary College.* Address by Prof. Bottomley. *Yorkshire College, Leeds.* Address by Mr. A. W. Mayo Robson. *University College, Sheffield.* Address by Sir H. G. Howse. *Owens College, Manchester.* Address by Sir Dyce Duckworth. *University College of South Wales and Monmouthshire, Cardiff.* Address by Dr. Berry Hart.

A SUMMARY of the more important recommendations contained in the report of the Indian Universities Commission, which has now been published in India, is given in the *Pioneer Mail* of August 8. Among other points, it is recommended that in addition to holding examinations, all universities should be recognised as teaching universities, and that there should be no more than five faculties, viz. arts, science, law, medicine and engineering. One regulation is certainly a tribute to the power of memorising possessed by the oriental mind; it is prescribed that "text-books to be read should be so long as to exclude the possibility of all of them being committed to memory"; another lays it down that "students should not be required to pass in science before entering on the University course. Instruction should include practical experimental work, and in examinations for the B.Sc., the practical examinations should be passed independently of the written examinations, and should have a separate minimum of marks. . . . The degree of D.Sc. should require original research." The improvement of the equipment of medical colleges is urged, as well as the establishment of a diploma of sanitary science. The universities are not recommended to undertake instruction in engineering, but are advised to encourage agricultural and commercial studies. We agree with the concluding remark of the commissioners, that "it is better for India that a comparatively small number of young men should receive a sound and liberal education than that a large number should be passed through an inadequate course of instruction leading to a depreciated degree."

SCIENTIFIC SERIALS.

Bulletin of the American Mathematical Society, (2) vol. viii. No. 10 (July).—E. J. Wilczynski, account of the first meeting of the San Francisco section, with abstracts of the papers read.—Mary M. Newson, a translation of Hilbert's lecture on mathematical problems (delivered at the Paris Congress, 1900).

American Journal of Mathematics, vol. xxiv. No. 3 (July).—S. Kantor, types of linear complexes of elliptic curves in space of r dimensions.—R. E. Moritz, generalisation of the differentiation process.—H. D. Thompson, simple pairs of parallel W-surfaces.

SOCIETIES AND ACADEMIES.

LONDON.

Royal Society, April 24.—"On Skin Currents. Part iii. The Human Skin." By Augustus D. Waller, M.D., F.R.S. (from the Physiological Laboratory of the University of London).

In freshly removed healthy skin, the normal current is always ingoing and the response to electrical excitation by the induction coil is always outgoing. This response, called by Dr. Waller the "blaze," is a sign of its vitality, is independent of the normal current and amounts to from 0·0100 to 0·0400 volt, if tested, within forty-eight hours after removal, by tetanising currents of alternating direction in both pairs of direction.

Moribund skin and skin from post-mortem room give small reactions of variable direction amounting to not more than ten-thousandths of a volt.

In all cases, the electrodes were carefully tested and the skin subsequently killed by boiling, tested and found to give negative results.