matical thought and work to be found easily. Passages 907 and 1643, which are given in German from Schiller and Jacobi, as well as in English, appear to be repetitions of the same story in slightly different renderings.

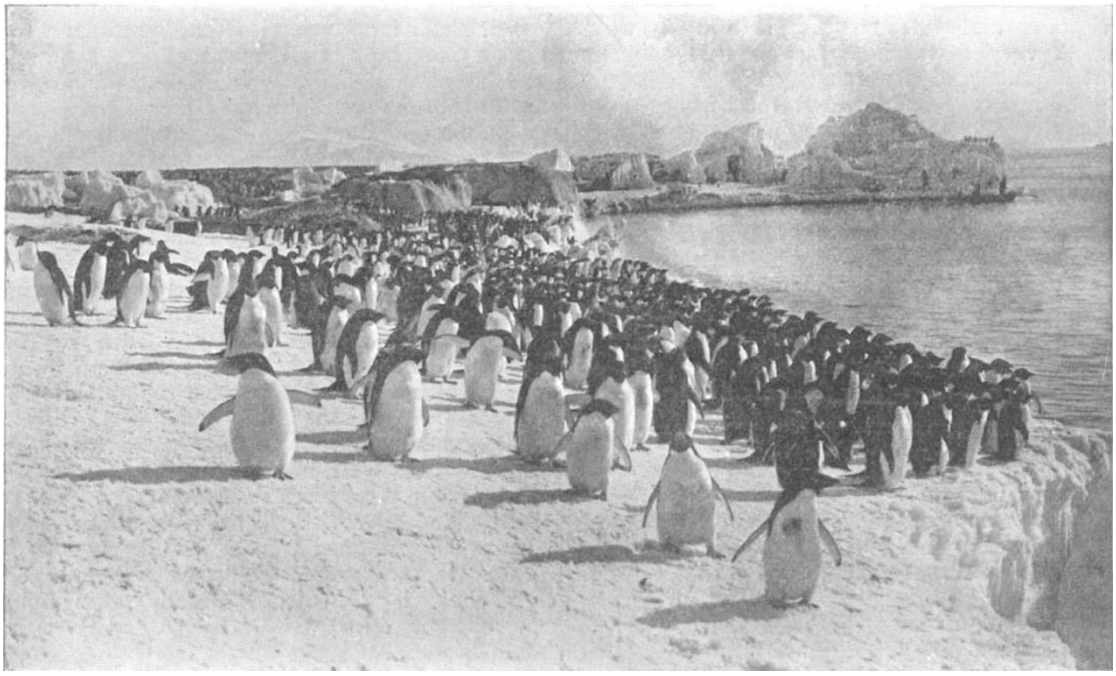
Zur Lehre von den Zuständen der Materie. By Prof. P. P. von Weimarn. Band I.: Text. Pp. x + 190. Band II.: Atlas. Tafeln lii. 2 Vols. (Dresden and Leipzig: T. Steinkopff, 1914.) Price 7 marks.

THESE two volumes are put forward in proof of the author's main thesis "that colloid-amorphous properties appear in bodies as their comminution increases, and that such comminution is possible in all bodies." The well-executed atlas of plates reproduces photographs of crystallisation processes in various concentrations, chiefly of barium sulphate and aluminium hydroxide. It is shown that the size of the crystals is strongly influenced either way by the concentration. Examined in the ultra-microscope, jellies and transparent colloid structures generally show minute particles which are essentially crystalline, differing from crystals only in their size. Any solid, sufficiently comminuted, might be made into a "solid mist" of particles showing Brownian motions, but the latter are just what leads as a rule to crystalline agglomeration. By comminuting aniline-blue into a neutral substance (urea), Pihlblad obtained colloid solutions of the former in water of any degree of fineness. The author, in view of these facts, proposes to substitute the term "dispersoid" for the less significant term "colloid," and would call the science of colloids "dispersoidology."

PROBLEMS OF THE PENGUINERY.[1]

DR. LEVICK has made a fascinating study of the Adélie penguins (*Pygoscelis adeliae*), and the charm of his book is enhanced by his beautiful and really interesting photographs. He has certainly a good subject, for penguins are among the quaintest of living creatures, among the most ancient of birds, triumphs of adaptation to aquatic life, remarkably congruent with Antarctic conditions, and very instructive from a psychological and even sociological point of view. Inquisitive, unafraid, altruistic and social, they make a strong claim on our interest and sympathy.

The Adélie penguins spend their summer and bring forth their young in the far South. They



"Occasionally an unaccountable 'broodiness' seemed to take possession of the Penguins." From "Antarctic Penguins.'

seek out wind-swept places, kept bare of snow, where they find solid ground and pebbles for making nests. After the chicks have been sufficiently educated to be able to fend for themselves, young and old leave the southern limits of the sea and make their way to the pack-ice out to the northward. The first year's birds remain on the pack for two winters, until they get their adult plumage. "The spring following this, and probably every spring for the rest of their lives, they return south to breed, performing their journey, very often, not only by water, but on foot across many miles of frozen sea." That they find the breeding ground is remarkable, for they cannot see far when they are swimming (and there is often nothing to be seen), or when they are "tobogganing," and their horizon when walking

[1] "Antarctic Penguins." By Dr. G. Murray Levick. Pp. x+140+ plates. (London: W. Heinemann, 1914.) Price 6s. net.