

raphy' and relates the ceremonials by which the males and females are admitted to the rights of puberty and social rank. They are severe in the extreme, but are carried out inflexibly. No explanation of their rites is satisfactory, and that of the author, that it is merely for convenience, is no better than the others.

In the midst of the debasement reflected in the general condition of these tribes, it is interesting to learn that law and order, as they understand the terms, are maintained, and that a culprit is well aware of the punishment following his misdeeds and submits to it. When that punishment is death he quietly digs his own grave and awaits the spear thrusts which consign him to it.

The volume contains nothing on the physical anthropology of the natives and is very meager on their religious views.

D. G. BRINTON.

*Iowa Geological Survey, Artesian Wells of Iowa.*

Vol. VI., pp. 115-428. By W. H. NORTON. Des Moines, State Print. 1897.

Although the subject of artesian wells and their utilization in the redeeming of the arid regions of the world commands general interest, still one would scarcely expect to find so much of interest to the unprofessional reader in the official report of a State Geological Survey.

The first section of Mr. Norton's report gives one an excellent idea of the artesian well in its historical development as well as in its present distribution, nomenclature and classification. These chapters will amply repay the untechnical reader and will also give the specialist a point of view which he is too apt to overlook in his application to details.

The remaining chapters are devoted to a very satisfactory and exhaustive setting forth of the records of the artesian wells of Iowa. Very many geological sections of individual wells and also of extended regions, together with full and conservative discussion, help to give one a very clear idea of the stratigraphic, hydrographic and hydrostatic conditions which exist in that State. In view of the interest attaching to the question of subterranean temperatures and the valuable information obtained from wells in the Dakotas northwest of Iowa by Mr. N. H. Darton, it is

perhaps to be regretted that the report did not include the temperature of the flowing water, at least where the volume is considerable. From the popular explanation as to why these wells are called artesian, from Artois, instead of Mutinian, from Mutina, to the technical discussion of the stratigraphic conditions in their relation to sea-level, the volume is interesting and instructive; and although it is to be received chiefly as a contribution to our knowledge of the subterranean waters of Iowa, nevertheless it will serve as a valuable key to similar conditions in other localities.

W. HALLOCK.

*The Mystery and Romance of Alchemy and Pharmacy.* By C. J. S. THOMPSON. London, The Scientific Press (Limited). Pp. xv + 335. 12mo. Ill.

As foreshadowed in the title, the author of this work has not attempted a systematic history of alchemy and of pharmacy, but has gathered much curious information as to the mystery surrounding them in bygone ages and the romance associated with them. The first five chapters deal with the art of healing, the earliest fathers of medicine and the necromantic practices of the Greeks and Romans. In the sixth chapter we are introduced to the alchemists, and here the author shows his unfamiliarity with the results of modern historical researches; he states, for example, that the word chemistry first occurs in the writings of Suidas, whereas everyone knows that it is found six centuries earlier in the astrological treatise of Julius Maternus Firmicus, entitled *Mathesis*. Mr. Thompson also credits the Arabian Geber with knowledge of nitric acid, nitrate of silver and hydrochloric acid, as described in the *Summa Perfectionis* and *Liber Philisophorum* [sic], whereas Berthelot showed in 1893 that these Latin treatises are fraudulently ascribed to Geber, who had no knowledge of the mineral acids. To enhance the romantic and mysterious phase of his subject, Mr. Thompson has introduced several chapters on 'The Black Art,' 'Black Magic' and the occult sciences. The work is stronger on the medical side than on the chemical, the chapters on 'Curious Remedies,' 'Surgery in the Middle Ages,' 'Amulets,