

I do not see how Mr. Young's theory of the origin of Cone-in-cone structure by the upward escape of gases bringing up from below successive layers of plastic mud can possibly apply to the bulk of such concretions.

E. J. GARWOOD.

FLEXIBLE SANDSTONE.

SIR,—I have read an interesting paper by Mr. G. W. Card, A.R.S.M., in the March number of the *GEOLOGICAL MAGAZINE* "on the flexibility of rocks," and as there have of late been several allusions to this subject in the press. I venture to bring the following facts under your notice.

About eleven years ago a friend presented me with a piece of flexible sandstone which he had brought from India. I, in turn, gave the specimen to my friend and chief, the late Mr. C. S. Wilkinson, F.G.S., Government Geologist of N.S.W.

Mr. Wilkinson was greatly interested in the peculiarities of the stone, and after devoting some time to their investigation he informed me that he felt convinced that the flexibility was due to the presence of interstices between the grains of sand, and to the interlocking of the latter. He believed the interstices to be due to the shrinking of the cementing clay by loss of moisture, and in order to test his theory he immersed the specimen in water, with the result that after some time it became rigid. After again thoroughly drying the stone he found that its flexibility was completely restored.

Mr. Wilkinson was in the habit of showing this specimen and explaining the cause of its flexibility to visitors for some years before Mr. Oldham's paper on the Delhi sandstone was written, and there is no doubt in my mind that to him (Mr. Wilkinson) is due the credit of first recognising the cause of the flexibility of the Indian sandstone.

EDWARD F. PITTMAN, A.R.S.M.

GEOLOGICAL SURVEY, N. S. WALES,

Government Geologist.

DEPARTMENT OF MINES, SYDNEY, 9th May, 1892.

OBITUARY.

STEPHEN AUSTIN.

BORN 1804. DIED 21ST MAY, 1892.

By the death of Mr. Stephen Austin, in his 88th year, the Editor of this Journal has been deprived of an old and much valued friend, whose name must also now be familiar to all his Contributors as the printer of the *GEOLOGICAL MAGAZINE*, since December 1865. The first two volumes (1864–65) were printed by Messrs. Spottiswoode & Co.; but the last twenty-seven volumes have been issued from the printing press of the well known firm of Messrs. S. Austin & Sons, Printers, Hertford, the excellence of whose work has largely contributed to maintain the reputation of this Journal during more than a quarter of a century that it has been in their hands.

This noted firm has been established in Hertford since 1768, having in that period passed through the hands of four generations of "Stephen Austins."

Mr. Austin's name will be best known to the world at large as one of the first and most celebrated printers of Oriental Literature.

Mr. Austin and his father were the appointed printers and booksellers to the East India Company's College, the work of which while Haileybury was being built, was carried on at Hertford Castle. Mr. Stephen Austin retained that position until the Company was dissolved in 1858; and it was under the auspices of the authorities of that institution that he commenced the printing and publishing at Hertford of works in various Oriental languages. Up to that time great difficulty had been experienced in procuring the different Oriental books required by the students in their studies; those that were obtainable were only to be had at great cost, while the type used was so bad and the paper of such indifferent quality that the books were oftentimes almost illegible. It was somewhat of a revolution, therefore, when "The Hitopadesa" was printed with new Sanskrit type at Hertford in 1847, as at that date there were not more than one or two Oriental printers in England, and thenceforward during successive years a great number of books printed in Sanskrit, Bengali, Arabic, Persian, Pushto, Hindustani, Hindi, Hebrew, and other Eastern languages, as well as in Greek, Latin, and French, were issued from the Hertford Press of Stephen Austin, which in due time acquired a world-wide reputation for Oriental printing, and many of the finest specimens of Oriental typography now extant bear his name. The skill and taste displayed in these productions were acknowledged by the presentation to Mr. Austin of gold medals by her Majesty the Queen and the Empress of the French, by the award of medals of the first class at the International Exhibitions held in London and Paris, and by testimonials from many of the most eminent Oriental scholars of Europe and India; and in the year 1883 the Congrès International des Orientalistes presented their diploma to Mr. Austin for services rendered to Oriental literature.

After the abolition of the East India Company's College at Haileybury, Mr. Austin was mainly instrumental in rescuing this historical place of learning from becoming an asylum or workhouse, and establishing the present successful Public School there; and in 1882 the Council of Haileybury College acknowledged Mr. Austin's valuable exertions by the presentation of a handsome service of plate.

In 1834 Mr. Austin established the "Reformer" Newspaper, now called the "Hertfordshire Mercury," which he has carried on successfully for more than fifty years.

It would be impossible to speak here of all the public offices Mr. Austin held during his long life in connection with his native town and county, or of the many marks of esteem and regard which he received. He leaves five sons and four daughters to cherish his memory, and who will share with many associates a tender regret for the loss to them of an honoured parent, and to us, of a dear and valued friend.

H. W.