MEETING OF JULY 7th, 1884.

Mr. van Diest read a report upon the building stones submitted to the State Capitol Commissioners, the report having been prepared by a special committee appointed by the Governor, of which Mr. van Diest was a member.

[ABSTRACT.]

A general idea is first given of the character and properties of building stones and of the influences which affect their durability, followed by a description of the different tests and experiments made upon specimens of forty building stones from different quarries in Colorado.

Of all these stones the complete chemical composition, the specific gravity, the ratio of absorption for water, the relative resistance to the action of frost, the loss by ignition, and the resistance to pressure, were determined. The chemical analyses and most of the above mentioned tests were made in the laboratory of the State School of Mines, at Golden, by Prof. Regis Chauvenet.

To facilitate comparison of the different specimens in regard to their relative degree of excellence, a comprehensive table is given wherein the stones are divided into granites, lavas, limestones and sandstones, and each in its class is ranked according to its properties. The stones which resist the greatest pressure, which are the least subject to the action of frost, which absorb the least amount of water, and contain the smallest amount of organic matter and free alkali salts, are indicated by the lowest figures in each column, thus giving to those stones which have the lowest aggregate of all these figures in the different colums a superiority over those having a greater aggregate.

Comparison of these figures with the results of tests made on building stones from other States shows that Colorado possesses very good building material. Several specimens were found to be in every respect equal to the best Joliet (Illinois) stone. Granites and lavas suitable for building purposes are plentiful in Colorado. Some fine marble occurs near Calumet, Chaffee county. Sandstones

of excellent quality are found in great abundance along the foothills at the eastern base of the Rocky Mountains, those from the neighborhood of Boulder being of superior quality.

The report ends with remarks in regard to the extent of the quarries, the study of the outcrops which have been exposed to the influence of rain, snow and frost for many years, and suggestions with reference to the quarrying and seasoning of stones.

Mr. van Deist then gave some extracts from a report upon the volcanic eruption of Krakatôa, Straits of Sunda, by the Dutch geologist R. D. M. ver Beek, in charge of the geological survey of Java.

MEETING OF OCTOBER 6th, 1884.

Mr. van Diest offered some remarks upon the ore deposof the "Old Man" mine near Silver City, Grant county, New Mexico, illustrating the same by specimens presented to the Society and by several sketches. The ore is found in cavities and on fissure planes in a siliceous zone of metamorphism in limestone. The latter is supposed from the fossils found to be of Silurian age. Above the limestone is a quartzite layer which is also metamorphic and contains Carboniferous fossils. A layer of coal, four feet thick, occurs in this formation.

The ore is chiefly greenish chlorobromide of silver with some argentite.

Mr. Pearce exhibited a specimen of meteoric iron recently forwarded to the Boston and Colorado Smelting Co., from Albuquerque, New Mexico, as a supposed lump of silver bullion. It shows the Widmanstätten figures when etched. The smaller piece exhibited was presented to the Society. Mr. Hillebrand expressed his readiness to make an analysis of the meteoric iron at some time during the winter.