with cosmogenetic problems, ought to be designated by a different term. The need of such a term has long ago prompted its adoption, as will be evident from the following quotations from various text-books and geological papers, selected somewhat at random.

"Manual of Geology," Dana, 4th ed., p. 366:

> The ridges of the Great Basin . . . have been assumed to be each limited by faults . . . and to have become, in effect, monoclinal orographic *blocks*.[1]

"Elements of Geology," LeConte, 5th ed., p. 239:

> The strata are broken into prismatic *blocks*. . . . The slipping of these *blocks* has given rise to cliffs.

"An Introduction to Geology," Scott, 2d ed., p. 5:

> Rocks are divided into still larger masses or *blocks* by . . . fissures and planes of dislocation, or faults.

(Pp. 464 and 465): The plateau of basalt has been fractured into a series of *blocks* which are tilted. . . .

"Exploration of the Colorado River of the West, and Its Tributaries," Powell, p. 184:

> The faults . . . divide the district under consideration into long belts or *blocks*. . . . In examining the downthrow of these *blocks*, it is observed. . . .

"Geology of the Henry Mountains," G. K. Gilbert, p. 23:

> The strata of the upper part of the arch (of Mt. Ellsworth) are divided (by faults) into a number of prismoid *blocks*.

"The Geology of the Eastern Portion of the Uinta Mountains," by J. W. Powell, pp. 16, 17:

> When the *blocks* into which a district of country has been broken by faults are greatly tilted . . . the uplifted edges of such *blocks* often form long mountain ridges. . . . In this region many zones are found to be divided into small *blocks* by faults. . . . Fig. 4 is a bird's-eye view of the *blocks* mentioned. . . . Fig. 5 is a diagram of the same region showing the *blocks* into which it is severed. . . . Many other areas far more complex than these have been discovered where a zone has been broken into *blocks* and these *blocks* tipped and contorted. . . .

"The Ore Deposits of New Mexico," Lindgren, Graton and Gordon, Professional Paper 68, U. S. Geological Survey, p. 25:

> The principal disturbances . . . are marked by a series of . . . ranges of apparently tilted *blocks*.

Bulletin of the University of Texas, No. 93; "A Sketch of the Geology of the Chisos Country," p. 80:

> It (the Chisos country) covers a part of a sunken *block*, which measures about 39 miles from east to west and which has settled from four to six thousand feet below the level of the terranes on either side.

SCIENCE, N. S., Vol. XXXVII., No. 945, p. 226:

> Keyes speaks of the "so-called fault-*block* mountains" and refers to a statement by Spur that no one has ever seen the fault-lines *blocking* out the desert ranges.

It will be seen from these quotations that *block* is a term which has long been in use, and which is being used at the present time with a definite meaning, similar to that proposed. It seems to be needed. If retained and used in the same sense as heretofore, it will aid in giving greater precision to the geological nomenclature. We need the term *segment* for a slightly different use, as already stated.

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[1] Italics here and below by the writer of this note.

CRITICAL CRITERIA ON BASIN RANGE STRUCTURE

CHARLES R. KEYES in a recent number of SCIENCE[1] presents a note entitled as above in which he expresses in general terms his lack of belief in "Basin Range Structure," so called, and suggests deflative agencies rather than local tectonic displacement as the important factor in the formation of such ranges.

The writer has no desire at this time to defend the hypothesis of basin range structure, though he is thoroughly convinced of the

[1] N. S., Vol. 37, No. 945, p. 226.

soundness of this tenet: but only to right any misconception which may arise from the slightly ambiguous statement made by Mr. Keyes in which the writer's name is mentioned. To be explicit: Mr. Keyes says: "The present sharp meeting of mountain and plain is now explained by causes other than dislocation, through ordinary stream corrosion according to Paige."

The writer wishes to say that in the paper from which the idea above is drawn[2] the process under discussion was the formation of certain sloping planated rock surfaces which though likely to originate on the borders of enclosed desert basins do not in the process of their formation vitiate in any way the hypothesis of basin range structure. In fact, such surfaces may be used to prove (by their elevated positions) the very existence of such faults as are needed to establish the basin range structure. They are but an incident in a long series of changes of which basin range structure itself is but a minor part. After all there is nothing inherently antagonistic in processes of deflation, stream erosion or block faulting. All have operated and are operating to-day and any explanation of physiographic forms or account of physiographic history which would ignore any one of them is open to obvious criticism.

SIDNEY PAIGE

AN INVESTIGATION OF A "HAUNTED" HOUSE

CALLED by telephone a few days ago to examine a large and handsome house in the Back Bay district of Boston for the reason that it was acquiring an unfortunate and annoying reputation as being "haunted," the writer found a really serious state of affairs.

The trouble centered in the third and fourth stories, which were occupied by the children and servants—the slumbers of whom were disturbed by strange sensations. It was said to be a common occurrence for servants to awake in the night with a sensation of oppression, "as if some one were tapping upon me," or with a "creeping feeling going all over me with a feeling of being paralyzed." Sounds were also said to be heard, as if some one were walking about the house or overhead. These sensations often continued after the sleeper was thoroughly awake and even after the lights had been turned on. The children of the family, who also slept on the upper floors, were similarly affected. A little boy, for example, awoke one night and inquired of his nurse why she had been lying on him, and persisted for some time in his delusion. Another child rushed screaming into the nurse's room crying that a man was waking him up, and asking why she let the man frighten him so. The children appeared sluggish in the morning and pale, even cold water losing its power to enliven them.

These and other symptoms were well defined and often repeated, and had extended over the period of about two months during which the family had occupied the house as tenants. Upon inquiry it appeared that previous tenants had been troubled in the same way, matters having reached the point where the servants actually talked of seeing walking apparitions. The present occupant, although not entertaining any vitalistic theory of the phenomena, was fully alive to the reality and gravity of the situation, and anxious to find the underlying cause.

A comparatively simple and mechanistic solution of the problem soon appeared. It had been suspected that the trouble might have its origin in undetected leaks of illuminating gas, and the writer was called in to verify this theory. It developed, however, that the large amount of "furnace" gas escaping from a viciously defective hot-air furnace was quite sufficient to cause the trouble. In this furnace the separation between the fire box and the hot air ducts (upon which the hygienic integrity of the apparatus depends) was badly broken and as a result the inhabitants of the house were bathed in an atmosphere of diluted flue gases. To make matters worse, a small boiler for a steam-heating system had been placed within the fire box directly over the fire, the effect being to cool the top of the fire and so promote incomplete combustion.

[2] "Rock-cut Surfaces in the Desert Ranges," *Journal of Geology*, Vol. 20, No. 5, 1912.