study of geology should be required of all civil engineering students. Certainly a course in the fundamental principles of geology, emphasizing the applications to engineering practice, should have an important place in the training of construction engineers. Many schools include such a course in their curricula. It cannot be expected, however, that the student will become proficient as an engineer and as a geologist at the same time. He should of course have some basis for appreciating the nature of geologic problems that may confront him in his work. Such an appreciation will serve to emphasize in his mind the need for cooperation with highly trained geologists.

Governor Young's commission stresses the desirability of having all such structures as the St. Francis Dam "erected and maintained under the supervision and control of state authorities." Surely the people of California ought to demand no less than this, because "while the benefits accrue to the builders of such projects, the failures bring disaster to others who have no control over the design, construction and maintenance of such works." Unquestionably state supervision decreases the danger; but in the writer's opinion a further step is desirable—the participation of geologists in the selection and final approval of dam sites should be specifically provided. Certain states require official inspection of such sites, but commonly the board is made up of engineers only. If the system of state supervision were universal, and if each board of engineers for inspection and approval of dam sites included at least one competent geologist, the danger of disastrous failures would be in large part removed.

High dams for water supply and for power projects are essential for present and future development; and doubtless the number of such structures will increase rapidly, especially in certain parts of the West. The recent experience in California furnishes a plain warning that geological conditions at dam sites cannot be ignored. There is reason to believe that California will profit from the lesson. It is the duty of other states also to take any measures that promise to prevent similar disasters within their borders.

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## ISONTIC?

ONE of the useful premises of science is that between two points equal in some respect there does not tend to be change in that respect. Thus lines or surfaces connecting points that are equal in some respect play a great rôle and we have a number of names applied to particular varieties such as contours for lines of equal elevation, levels, niveaux. Particularly common are words beginning with "iso"—such as:

*isotherm*, line connecting points of equal temperature;
*isobar*, line connecting points under equal atmospheric pressure;
*isogam*, surface or line of equal gravitative attraction;
*isochlor*, line connecting points where the water (?) has equal chlorin, etc., etc.

Now I think I need, and it might be useful to others, a word to apply to any line or surface drawn through points equal in some respect, and upon due application to my dictionary and my colleague, Professor Wyatt, I think *isontic* (being equal or equal in being) is about the word I want.

What do others think? One could then speak of a gravitation isontic, meaning thereby the curve connecting all the points where the force of gravitation had the same value, or a sodium isontic in the ocean, connecting point where the seawater had the same per cent. of sodium, of an evaporation isontic or a radium isontic, and if it came into general use be understood, and one would not have to use a long phrase or some queer hybrid or have to hunt up some Greek equivalent which might not be familiar. Is there some word already that will meet my need?

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## A NOTE ON ASTASIA CAPTIVA BEAUCH!

IN rich cultures of *Stentor coerulens* and of *Spirostomum ambiguum*, which were being used for micrurgical studies, I noticed recently a small euglenoid form living with these ciliates, either as a commensal or an endoparasite. They were actively crawling about in the cortical layer of the ectoplasm, just below the pellicle. Their course seemed, on careful focussing, to be restricted to this region.

The shape of the cells was fusiform, the anterior and posterior ends were rounded, and the paramylum granules were in the form of elongated rods. The animals exhibited a high degree of metaboly, during which both anterior and posterior ends retained their rounded form. Accurate cell measurements could not be made on account of the constant metabolic movement, but the length of the cell did not exceed 40 μ when fully extended. No flagellum was seen, nor was a stigma visible.

On the basis of these characters, the form has been identified as *Astasia captiva* Beauchamp, previously reported as an endoparasite in the *Rhabdocoele, Catenula lemnae*, in France.

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