do not extend south of North Carolina and do not represent true desert conditions. The more southerly of these areas indicate distinctly less arid climates than those farther north, and even contain appreciable quantities of coal, which Brooks interprets as a product of equatorial rain forests.

It is perhaps too much to expect a meteorologist to be fully qualified to deal with purely geological questions, but when he ventures into a field in which geology plays almost as important a part as meteorology, the active collaboration of a geologist of recognized standing would appear to be a highly desirable safeguard. It would at least prevent such violence to terminology as the indiscriminate use of the word "period" to describe any and all intervals of geologic time, from "Mesozoic period" to "Pliocene period."

Although marred by too frequent errors such as those mentioned, the book is nevertheless a remarkable and highly valuable work. A prodigious amount of labor has gone into its preparation. It is to be hoped that it will have a salutary effect on those who see in new and fantastic hypotheses the only solution to the problem of geologic climates.

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SCIENTIFIC APPARATUS AND LABORATORY METHODS

A METHOD FOR CUTTING GLASS TUBING

READING the note by Herman E. Seemann on a "Method for Cutting Glass Tubing," SCIENCE No. 1726, I have remembered a method used to the same effect at laboratories of the University of St. Petersburg, Russia.

By means of a fine triangular file a circular furrow used to be made around a tube and then a melted glass stick applied to the cut in such a way as to press melted glass into the furrow. Usually the tubing cracked immediately and very regularly following the direction of the cut. Rather seldom it was necessary to apply melted glass repeatedly. The method, so far I am able to remember now, never failed and gave everybody a complete satisfaction. Especially it was used to open heavy glass tubings containing some preparation for analysis, for example, minerals or rocks under great pressure heated for a number of hours with sulfuric acid in a closed tubing. Any other method of cutting, for example, the one offered by Hermann E. Seemann, might not be applied in this case.

A furrow might be rather shallow, about a half of a millimeter was found quite sufficient, but has to be made accurately without lateral incisions even short ones. The whole operation, including the making a furrow, used to take less than a half of an hour even in the case of heavy tubing of a large diameter.

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A PLATINUM SPOON FOR ISOLATING AND TRANSFERRING PROTOZOA

IT is often desirable in investigations on protozoa, especially in those concerning life-histories, to secure the animals free from other organisms and detritus. The use of the capillary pipette in isolating organisms is very satisfactory in most cases if the animals are sufficiently washed. The author has experienced considerable trouble in washing to eliminate all other organisms. In an attempt to obviate this difficulty he has found that if only a few specimens are required, the instrument described below (Fig. 1) has some advantages over the pipette.

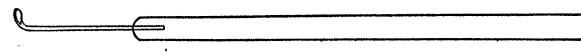

FIG. 1

The tip of an ordinary platinum bacteriological needle is flattened so as to form a circular disk about .2 mm. thick and .5 mm. to 1 mm. in diameter according to the needs. The surfaces and edges are then smoothed off so that the animal will not be injured. With a stylus or some other blunt instrument a depression is made in one of the flat surfaces of this disk forming a concavity, holding just enough water to cover the individual to be isolated.

The spoon is used as follows: A specimen desired for isolation is selected and if lying on the bottom of the dish, the instrument is lightly passed beneath it, then with a jerk it is brought to the surface by the currents produced; the spoon is now placed directly under the individual and gently raised through the surface film. In this way one can transfer active as well as sluggish animals, *e.g.*, didinia, paramecia, amoebae, etc. With a little practice specimens as small as 150 micra can be isolated under the low and high powers of the microscope.

The use of the instrument has the following advantages: It can be easily and thoroughly sterilized, a thing which is often desirable in protozoan studies; it is not fragile, an item of considerable importance as a labor saving device; and lastly, such minute quantities of fluid are transferred with the animals that the effect of it on the new solution becomes negligible after a few transfers and the possibility of contamination less.

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