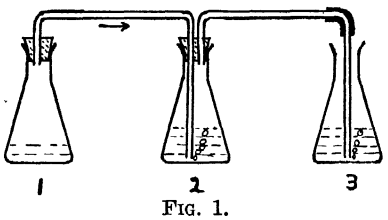

FIG. 1.

one half full of distilled water. Flask No. 3 contains an aqueous solution of barium hydroxide.

The following preparation keeps its activity very well and removes hair in 3 to 5 minutes from areas large enough for ordinary operative purposes. Forty grams of powdered barium hydroxide were added to flask No. 3, which contained 500 cc of distilled water. The contents of the flask were agitated occasionally during several hours in order to insure solution (an electric stirrer would cut down the time and eliminate the shaking). The hydrogen sulphide was generated by treating one ounce of granulated ferrous sulphide with 200 cc of 1–2 hydrochloric acid. The gas was washed by means of the water in flask No. 2 and passed directly into the aqueous solution of the barium hydroxide, which was agitated continuously for the first few minutes and then at intervals of a few minutes. The hydrogen sulphide was allowed to pass into the solution for thirty minutes or until the supply was practically exhausted. The apparatus was disconnected and twenty-five grams of powdered barium hydroxide were gradually added while stirring the solution. After testing the solution for its activity by means of laboratory animals (a small area on one's arm may be used), it was stored in a brown bottle.

The application of the depilatory must be attended with some precaution since the solution will dissolve the nails and cuticle as well as the hair. If one will take 25 to 50 cc of the solution in a beaker and apply it gently by means of a small piece of gauze and a pair of forceps, he will obtain good results. If the coat of hair is heavy, it will be necessary to keep adding fresh solution from the beaker for several minutes. A tongue depressor, spatula or some blunt-edged instrument may be used to gently remove the most of the dissolved hair. The animal is held under a stream of warm water in order to wash off the depilated area and free it from the barium solution. It is best to keep the animal in a warm place until dry and longer if the depilated area be very large.

DISCUSSION

Since the solution was found to be toxic if administered subcutaneously or intraperitoneally, one might expect that it would be injurious if it were used for removing hair. It, however, has been used on dogs, rabbits, guinea-pigs and white rabbits without any apparent deleterious effects.

The depilated areas seemed to grow hair at a slower rate than similar areas which were shaved.

The solution, made according to the method as described above, will retain its activity for several months. The quantity of barium hydroxide treated with hydrogen sulphide and the quantity of barium hydroxide added to the treated solution can be varied somewhat without markedly affecting the activity of the depilatory. One solution, containing approximately the same amount of barium hydroxide as used in the above method, was quite active after standing for one year.

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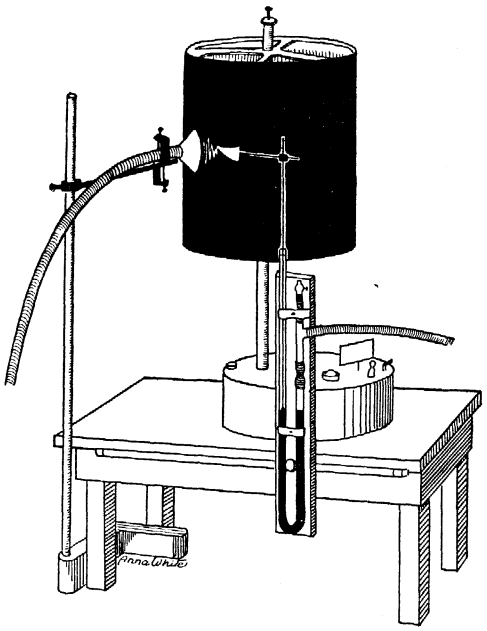
AIR CONTROL OF MANOMETER WRITING POINTS[1]

ARTERIAL and venous pressures are often recorded on a smoked drum by means of a writing point attached to a float. Various devices are used to keep the writing point in contact with the drum in such a manner that a clear tracing will be obtained without so much friction that the recording of pressure changes will be interfered with. This is a simple matter with mercury manometers but when water manometers are used it is often very difficult to obtain a good tracing. A simple method of keeping the writing point against the drum with a delicate but even pressure is shown in the accompanying illustration. A stream of air is blown against the writing point, pressing it against the drum. By regulating the air current the contact of the writing



[1] Demonstrated at the meetings of the Federated Biological Societies at Montreal, 1931.

point with the drum can be very delicately adjusted. The matter of obtaining a uniform pressure over a large range of movement of the pointer is a difficult one on account of air eddies, but a very satisfactory air stream for recording small changes of pressure can be obtained by blowing air through an ordinary fish tail burner tip, commonly used on Bunsen burners, as illustrated in the figure.

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SPECIAL ARTICLES

PRE-CARBONIFEROUS FORAMINIFERA

THE foraminifera, representatives of the most primitive invertebrate phylum, are, paradoxically enough, essentially missing from the roster of the geologically older faunas. The various reasons for their apparent absence can not be discussed here; but because our paleontologic knowledge of the group prior to the mid-Mississippian (when at least one species, *Endothyra baileyi*, definitely became abundant), is so scanty, even the vaguest pre-Carboniferous foraminiferal record is eagerly sought for by paleontologists.

The specimens recorded from the pre-Cambrian of Brittany by Cayeux, however, are regarded by many as unauthentic. Those described by G. F. Mathew from the Cambrian of New Brunswick, according to Howell,[1] turn out to be phosphatic concretions; and a large percentage of the few Cambro-Ordovician and Silurian species of Europe, described by Chapman, Ehrenberg, Brady, Terquem and Keeping, has been looked upon with considerable skepticism by some paleontologists. In 1930, however, Moreman[2] described a rich faunule of arenaceous foraminifera from the Silurian Chimney Hill formation of Oklahoma, and a few species from the Arbuckle and Viola formations. This was the first *bona fide* North American occurrence of pre-Carboniferous age to be reported. But since the appearance of Moreman's paper, Whitcomb[3] has reported (but not described) Ordovician foraminifera from Pennsylvania, and Thomas[4] has described posthumously a single Devonian species from Iowa. To these three American records it is now possible to add a number of others.

For several years a group of graduate students, under the direction of the senior author, has been carrying on detailed micropaleontologic examinations of the older Paleozoic sediments of Ste. Genevieve County, Missouri. As some of these investigations have resulted in the discovery of arenaceous foraminifera in considerable abundance, it is thought advisable to make announcement of this important fact prior to the publishing of the detailed descriptions of the faunas.

Late in 1930 Mr. Dunn found a number of arenaceous foraminifera in siliceous residues of the Bainbridge limestone (Niagaran of southeastern Missouri). Accordingly, on our return to the University of Chicago's Missouri Field camp in June, 1931, we were equipped to carry on microscopical studies of the sediments essentially at their outcrops. In this way it was found that almost all samples of the Bainbridge, regardless of lithologic appearance and stratigraphic or geographic position, contain foraminiferal remains. The Brassfield (Alexandrian) strata of southeastern Missouri also were found to carry an abundant fauna; and later it was discovered that a suit of Brassfield samples, collected by Professor D. J. Fisher near Joliet, Illinois, was likewise replete with the same general types of foraminifera. Furthermore, although the suspected remains thus far found are decidedly fragmental, we have a strong suspicion that the Niagaran beds of the Chicago area and the Waldron strata of Indiana also contain similar forms, though in considerably diminished numbers. So far as the Waldron is concerned we understand that this suspicion is shared by Professor Willard Berry, of Ohio State University. Mr. Dunn will soon have the results of the research on these Silurian sediments ready for publication. In the meantime, however, it may be pointed out that forms similar to if not identical with the following typical Chimney Hill species are common in the Bainbridge fauna:

Ammodiscus excertus, Cushman.
Ammodiscus incertus (d'Orbigny).
Bathysiphon curvus, Moreman.
Colonammina conea, Moreman.
Lagenammina stilla, Moreman.
Lituotuba exserta, Moreman.
Psammosphaera cava, Moreman.
Sorosphaera tricella, Moreman.
Thurammina triangularis, Moreman.

The similarity of these unusual faunas suggests the possibility of accurate correlation of a number of mid-Paleozoic formations on the basis of arenaceous foraminifera. The writers are fully aware of the fact that this is in part a presumption. The effectiveness

[1] B. F. Howell, Appendix E, Rept. Nat. Research Council Sub-committee on Micropaleontology, April, 1931.
[2] W. L. Moreman, *Jour. Paleont.*, iv, 1, 1930.
[3] L. Whitcomb, Appendix E, Exhibit A, Rept. Nat. Research Council Sub-committee on Micropaleontology, April, 1931.
[4] A. O. Thomas, *Jour. Paleont.*, v, 1, 1931.