struction are apparent from the sketch. The device may be supported conveniently by a ring clamp, which grasps the cylindrical section of the vacuum stirring head immediately above *A*.

The joint marked *A* in Fig. 1 was made vacuum-tight by applying a thin layer of de Khotinsky cement to the shoulder at *A* while the male part of the joint was disengaged from the female part and heated gently to 140° C. The former was then screwed into place, and the parts around *A* were warmed until the cement also wet the female part. The parts were screwed together tightly while hot and allowed to cool slowly to room temperature.

The vacuum chamber and the standard taper adapter were snugly fitted together by lapping them with silicon carbide, grit No. 600, after which all traces of abrasive were removed by scrupulous cleaning. This joint was lubricated with Apiezon M grease in the usual manner and held together by a steel leash under tension. No trouble has been encountered in obtaining a vacuum, but the first degassing of the device occasionally requires more than a day before a vacuum of 10^{-4} mm Hg can be held overnight.

Reference

1. HEIDT, L. J. *J. Chem. Phys.*, **10**, 300 (1942).

Comments and Communications

Geology *Is* in the Elementary Schools

DORSEY HAGER'S plea for the teaching of geology in the grade schools (SCIENCE, **114**, 19 [1951]) reflects the concern of one who has undoubtedly experienced, enjoyed, and profited from both the formal and informal study of the earth sciences. There is no question that children of grade school age would also profit from more firsthand experiences with rocks, minerals, and physiographic forms. However, the approach suggested by Hager, involving new courses, simple geological texts, and the teaching of "geology as the Mother of Sciences, not as one of the natural sciences," is open to question.

It is becoming axiomatic that children, not subjects, are the concern of the grade schools. The past generation has seen a marked trend away from isolated subject courses of all types. Newer curricula based on findings in the fields of psychology and child development have taken their place. Grade school teachers would be loath to see geology introduced as a separate subject, despite the intrinsic value of the earth sciences, which they have long recognized.

The actual situation is not nearly as "outrageous" as Hager claims. In the opinion of the writer, it is hopeful and promising, although there is ample room for improvement. The scope and standards of elementary education do vary widely in different parts of the country. Localities may be found where science education is meager or absent. For the country as a whole, however, science education in the grade schools is constantly increasing, and materials from the fields of geology are included at nearly every grade level in the schools where science is taught. Even a casual survey of the textbooks used in elementary science will show much material from the field of geology. Land forms, soil, erosion, rocks and minerals, ore deposits, glaciation, mountain building, stratigraphy, fossils, weather, and climate are some of the topics included in ways that are appropriate to the age level and interests of the child.

The textbook series used in the elementary grades includes material on all the topics Hager uses as illustrations: erosion, building materials, rock identification, mineral fuels, metals, fossils, and the solar and stellar systems. When astronomy is included with geology, as Hager recommends, the space allotted in the textbooks reaches major proportions. As expected, the material is more advanced in the intermediate and upper grades than in the primary grades. Analyses of textbook content (Michals, B. E. *Science Education*, 34, 248 [1950]) indicate the detailed distribution from grade to grade. In addition to textbooks, the elementary schools make considerable use of popularly written scientific books. A number of writers, especially Carroll Fenton and Lilian Strack, have produced excellent books packed full of geologic data which children use and enjoy. There is ample evidence from books and from state and local courses of study that the earth sciences are not neglected in the elementary schools.

A problem which Hager does not mention, and which is of greater concern to those working in science education, comes from the fact that science teaching in the elementary grades is relatively new. Because of this, classroom teachers who have had very little, or no training whatever, are trying to do the best they can with this subject. Teacher training institutions have only begun to prepare teachers for this work. Their efforts so far are limited. For this reason, teachers all over the country need and are anxious to have the kind of help that people like Hager and others, trained in the earth sciences, can offer. Why don't these geologists let local school boards, principals, and teachers know of their interest in science education? Let them indicate some specific ways they can help teachers—e.g., with field trips, specimens, demonstrations, or lectures. This could be a practical first step toward the goals set forth in Hager's communication.

There is no doubt, as Hager indicates, that the earth sciences are much more vital than some college texts

indicate. They should, and do, have a place in grade school science teaching. Educators are anxious to have all the help that geologists can give in improving the caliber of this teaching in the schools.

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Mail for Indonesia

ON page 367 of SCIENCE for March 30, 1951, I read a communication of A. B. Gurney about the new Indonesian names of some towns in this country and about the attitude of Indonesian postal officials toward the former Dutch names. On the authority of Mr. Hooyer, of Leiden, Mr. Gurney writes: "as that bearing Dutch place names is likely not to be delivered because of the present attitude of postal authorities in the Republik Indonesia Serikat (R.I.S.)" [the correct name is R.I.: Republik Indonesia].

Now from my own experience I can assure you that this statement is *entirely wrong.* After the change of the government the Indonesian postal authorities published a communication in the papers that mail from the interior would be returned to the sender if it did not bear the new Indonesian address. But at the same time it was stated that foreign mail would be delivered in any case.

As professor at the Department of Veterinary Science, University of Indonesia at Bogor (Buitenzorg), I am charged with the care of the library of our department. Our mail amounts to about 400 letters and printed matter monthly. Most of them bear the new addresses, but some of our correspondents still use the old Dutch names of the departments, streets, or places. And I can assure you that there was never any delay in the receipt of our mail, nor any loss of mail due to these Dutch addresses. I discussed this matter with some other people here and they have had the same experience.

As a proof I enclose 18 covers of letters (4 from Holland, 3 from England, 1 from Norway, 1 from Denmark, 1 from Eire, and 8 from the USA) from the mail of last week, all bearing the old Dutch names of the departments, institutes, streets, and place, and all promptly delivered here.

Our address in Dutch is:

Bibliotheek van de Faculteit der Diergeneeskunde
Van Imhoffplein 1
Buitenzorg

The new Indonesian address is:

Perpustakaan Fakultet Kedokteran Hewan
Taman Kentjana 1
Bogor

The most important changes of names are: Batavia = Djakarta, Buitenzorg = Bogor, Cheribon = Tjeribon, Fort de Cock = Bukit Tinggi, Borneo = Kalimanten, Celebes = Sulawesi. A list of the new Indonesian names of departments, institutes, services, libraries, etc., can be obtained from the secretary of the Organization for Scientific Research, Merdeka Selatan 11 pav., Djakarta.

It is possible that one of the subordinate postal officers caused some trouble in delivering foreign mail with Dutch addresses, but this certainly may be regarded as an exception, and it is not the attitude of the postal *authorities.* Although it is much better to use the new Indonesian names, you may be sure that mail from abroad with the old names or with addresses written in English will be promptly delivered.

You will favor me very much indeed by publishing a rectification of Mr. Hooyer's communication, because wrong ideas about postal matters in Indonesia are not a favorable basis for our scientific relations with colleagues and institutes in other countries.

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WE HAVE been reading the letter by Ashley B. Gurney in your March 30 issue (SCIENCE, 113, 367 [1951]).

By surface mail the second edition of *Guide of Scientists in Indonesia,* O. S. R. Bulletin 10, has been dispatched to you, in order that contacts between scientists in your country and Indonesia may be less hampered due to faulty addressing. This bulletin, like all other editions of the Organization for Scientific Research in Indonesia, is already being mailed to about a hundred scientific institutions of the USA.

You will note that a large number of scientists and scientific institutions may be reached through the secretaries of:

Organization for Scientific Research, Medan Merdeka Selatan 11, Djakarta
Science Council of Indonesia, c/o Medan Merdeka Selatan 11, Djakarta
Akademi Nasional, Taman Matraman 15, Djakarta
Gadjah Mada University (Prof. Dr. Poesponegoro), Setinggil, Jogjakarta
Balai Perguruan Tinggi Republik Indonesia (University of Indonesia), Salemba 6, Djakarta

G. BROERSMA

Organization for Scientific Research
Djakarta, Indonesia

An Error Has Crept In

WITH respect to my letter to SCIENCE (114, 332 [1951]), entitled "How Does the Ivy Grow?" I regret that either in the composition of this note for publication or in a typographical error in the original, an error has crept in. For the rate computed in mm/min, the value should read 0.05 mm/min, not 0.5 mm/min as printed. Even with this decrease in rate, the growth of this shoot was still considerable.

SUMNER ZACKS

Harvard Medical School