

LETTERS TO THE EDITOR.

**** Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.**

On request in advance, one hundred copies of the number containing his communication will be furnished free to any correspondent.

The editor will be glad to publish any queries consonant with the character of the journal.

The Color Question.

A FEW weeks ago (*Science*, March 25) Mr. Milton Bradley wrote to you on this subject, which unfortunately is still in an unsatisfactory state, notwithstanding the researches of Helmholtz and Maxwell. Mr. Bradley is, do doubt, quite right in treating, for the purposes of his system, all the colors of the spectrum as of equal value, but it is by no means as clear as he supposes that the three colors, red, green, and violet, are entitled to be considered primaries in preference to red, yellow, and blue, if any colors are to be thus treated. The fact that Maxwell found the cross-section of a cone of color to be approximately triangular with red, green, and violet at the three corners, proves little as to the real relation between the various colors. It is very easy by means of a prism so to condense a spectrum as that only red, green, and violet shall be visible, and my impression is that some such explanation will be found of Maxwell's supposed elementary green at least. I read with suspicion such statements as that most natural yellows and blues when analyzed by a prism show a large quantity of green

in their composition, and that yellow can be produced by mingling green and violet. In the former case the green is due probably to an overlapping of the yellow and the blue, notwithstanding the belief, which is erroneous, that the yellow and blue of the prism will not produce green. Anyone on looking through a prism at different objects, can easily devise a mode of causing two spectra to overlap, and thus convince himself that the blue and yellow do actually thereby give rise to green. He can, moreover, make the red and violet rays overlap, and thus form shades of purple. Such being the case, green, although sometimes in overlapping spectra observed by looking through the prism it appears to obliterate the blue, is no more entitled to be called a primary color than purple itself. For all practical purposes all the colors should be regarded as primary, the question of their actual relation being left to be settled by further investigation.

C. STANLAND WAKE.

349 North Clark Street, Chicago, Ill.

Family Types.

CAN I ask one or two questions about Mr. Williams's note in the issue of April 15? Does the mother in placental mammals tend to assimilate in respect to blood to the father? Does the result of a study for twenty-five years of one family offer more than the slightest evidence on the point in question? Does the mother frequently acquire diseases belonging to the father indirectly through the child she is carrying? Does each child in a family

CALENDAR OF SOCIETIES.]

Women's Anthropological Society of America, Washington.

April 30.—Miss Annie T. Smith, Report of the Committee on the Investigation of Directive Forces in Society; Mrs. York, Medical Inspection of Schools; Miss Sickles, The Ghost Dance.

Biological Society, Washington.

April 30.—The principal paper of the evening was: The Distribution of Land, Water, and Ice on this Continent in Later Geological Periods, by Professor W. J. McGee; Communications: Erwin F. Smith, The Relation of Plants to the Soil; Charles Hallock, Where Salt-Water Fishes Hide: Results of Deep-Water Seining.

Society of Natural History, Boston.

May 4.—J. S. Kingsley, Notes on the Anatomy of Amphiuma.

Publications Received at Editor's Office.

- BAUSCH, EDWARD. Manipulation of the Microscope. Rochester, Bausch and Lomb Optical Co. 16°. 128 p. Ill.
- CATHCART GEORGE R. Literary Reader; A Manual of English Literature. New York, American Book Co. 12°. 560 p. \$1.15.
- CHAPMAN, C. H. An Elementary Course in Theory of Equations. New York, John Wiley & Sons. 12°. 98 p. \$1.50.
- CHURCH, IRVING P. Notes and Examples in Mechanics. New York, John Wiley & Sons. 8°. 144 p., plates. \$2.
- GORMAN, S. The Discoboli. Cambridge, Museum Comp. Zool. 4°, paper. 96 p., plates.
- GREELY, A. W. Irrigation and Water Storage in the Arid Regions. Report to the Sec. of War. Washington, Government. 4°, paper. 356 p. Maps.
- HURST, G. H. Silk Dyeing, Printing and Finishing. With numerous colored patterns. New York, Macmillan & Co. 16°. 184 p. \$2.
- LANDAUER, J. Blowpipe Analysis. Trans. by James Taylor. 2d ed. New York, Macmillan & Co. 16°. 190 p. \$1.10.
- MORRIS, R. ANNA. Physical Education in the Public Schools. New York, American Book Co. 8°. 192 p. \$1.

Business Department.

The Providence and Stonington Steamship Company's new steel steamer New Hampshire made a record for phenomenal speed on her trial trip at Wilmington, Del., on April 21, 1892. Loaded with 600 tons dead weight, she made time over the measured mile, two minutes fifty-nine seconds, an average of over twenty miles per hour. The New Hampshire is a sister ship to the Maine, recently built at Wilmington, for the Providence and Stonington Steamship Company, which has also proven a great success, both as a fast sailer and a most comfortable and luxurious boat for passengers.

Exchanges.

[Free of charge to all, if of satisfactory character. Address N. D. C. Hodges, 874 Broadway, New York.]

For sale or exchange, Das Ausland, 10 vols., 1832 to 1891, including 6 vols. bound, 4 in numbers. Wheeler Survey, vol. 1. Geog. Report; also vol. 6. Botany; Production of gold and silver in the United States, 1880, '1, '2, '3, '5; Selfridge Isthmus of Darien. Will sell at very low prices. J. F. James, 1443 Corcoran St., Washington, D. C.

For exchange.—A fine thirteen-keyed flute in leather covered case, for a photograph camera suitable for making lantern slides. Flute cost \$27, and is nearly new. U. O. COX, Mankato, Minn.

To exchange; Experiment Station bulletins and reports for bulletins and reports not in my file. I will send list of what I have for exchange. P. H. ROLFS, Lake City, Florida.

Finished specimens of all colors of Vermont marble for fine finishing or display. Will be given only for valuable specimens because of the cost of polishing. GEO. W. PERRY, State Geologist, Rutland, Vt.

For exchange.—Three copies of "American State Papers Bearing on Sunday Legislation," 1891, \$2.50, new and unused, for "The Sabbath," by Harmon Kingsbury, 1840; "The Sabbath," by A. A. Phelps, 1842; "History of the Institution of the Sabbath Day, Its Uses and Abuses," by W. L. Fisher, 1859; "Humorous Phases of the Law," by Irving Browne; or other works amounting to value of books exchanged, on the question of governmental legislation in reference to religion, personal liberty, etc. If preferred, I will sell "American State Papers," and buy other books on the subject. WILLIAM ADDISON BLAKELY, Chicago, Ill.

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Wants.

Any person seeking a position for which he is qualified by his scientific attainments, or any person seeking some one to fill a position of this character, be it that of a teacher of science, chemist, draughtsman, or what not, may have the "Want" inserted under this head FREE OF COST, if he satisfies the publisher of the suitable character of his application. Any person seeking information on any scientific question, the address of any scientific man, or who can in any way use this column for a purpose consonant with the nature of the paper, is cordially invited to do so.

TRANSLATOR wanted to read German architectural works at sight (no writing). One familiar with technical terms desired. Address "A.," Box 149, New York Post Office.

WANTED.—A position in a manufacturing establishment by a manufacturing Chemist of inventive ability. Address M. W. B., care of *Science*, 874 Broadway, N. Y.

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ADDRESS WANTED.—Will some one please send the address of the Secretary of the American Philological Society. Also that of Herbert Spencer. "ADDISON," Room 84, 164 Madison St., Chicago, Ill.

ADDRESSES of Old Book Dealers wanted.—Wishing to obtain a number of old books out of print, I very much desire the addresses or catalogues of rare second-hand book dealers. If there is a directory or list of such dealers I should like to obtain possession of one. W. A. BLAKELY, Chicago, Ill.

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J. C. DANA.

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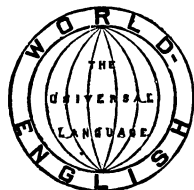
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—A. C. McClurg & Co. announce a volume entitled "Direct Legislation by the People," by Nathan Cree. The author gives a brief review of direct government from the earliest times, and of the rise and development of popular representation. He then considers the advantages of combining direct popular legislation with representative institutions, in which direction, he believes, lies emancipation from political corruption. In this connection he examines two remarkable features of the Swiss Government, viz., the *Referendum* and the *Popular Initiative*. The author's standpoint is said to be conservative.

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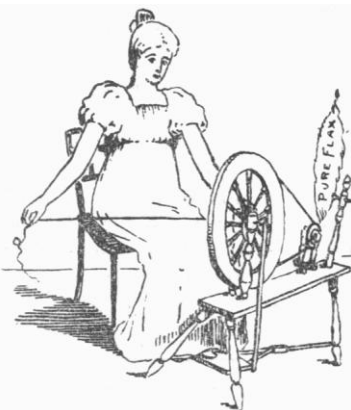


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First inserted June 19. No response to date.

N. D. C. HODGES,
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TO THE READERS OF SCIENCE. PUBLISHER'S ANNOUNCEMENT.

OUR PLANS.

WITHIN the past six months the use of *Science* by scientific men and women as a medium for prompt publication and weekly discussion, has increased very materially, so that the pages are now well filled each week with original matter. As the number of those promising contributions is increasing at the rate of three or four each day, it cannot be long before *Science* at its present size will be too small for the amount of matter offered. We have under consideration therefore an enlargement of the paper by one-half, but must first learn the temper of our constituency as to an advance in price to \$5.00, which was the subscription price from the start for four years, up to June 30, 1887. Further, to carry out the proposed enlargement, we shall need five hundred additional subscribers. If you are not already a subscriber, are you willing to aid in making *Science* more worthy of American scientific work by becoming one?

It goes without saying, that the demand for scientific literature is limited, when compared with that for literature which is more to the public taste, so that the receipts of most of the Scientific Journals, in this country, do not pay quite for their printing and paper, to say nothing of the other items of expense. We say this merely to emphasize the fact, that generous and prompt support must be accorded this move if it is to succeed.

Titles of Some Articles Published in *Science* since Jan. 1, 1892.

Aboriginal North American Tea.
Actinism.
Amenhotep, King, the tomb of.
Anthropology, Current Notes on.
Arsenical Poisoning from Domestic Fabrics.
Anatomy, The Teaching of, to Advanced Medical Students.
Astronomical Notes.
Botanical Laboratory, A.
Brain, A Few Characteristics of the Avian.
Celts, The Question of the.
Collection of Objects Used in Worship.
Deaf, Higher Education of the.
Diphtheria, Tox-Albumin.
Etymology of two Iroquoian Compound Stems.
Eye-Habits.
Family Traits, Persistency of.
Fishes, The Distribution of.
Fossils, Notice of New Gigantic.
Grasses, Homoptera Injurious to.
"Healing, Divine."
Hemipterous Mouth, Structure of the.
Hypnotism among the Lower Animals.
Hypnotism, Traumatic.
Indian occupation of New York.
Influenza, Latest Details Concerning the Germs of.
Infant's Movements.
Inventors and Manufacturers, the American Association of.
Iowa Academy of Sciences.
Jargon, The Chinook.
Klamath Nation, Linguistics.
Lightning, The New Method of Protecting Buildings from.
Lissajou's Curves, Simple Apparatus for the Production of.
Maize Plant, Observations on the Growth and Chemical Composition of.
Mineral Discoveries, Some Recent, in the State of Washington.
Museums, The Support of.
Patent Office Building, The.
Pocket Gopher, Attempted Extermination of.
Psychological Laboratory in the University of Toronto.
Psychological Training, The Need of.
Rain-Making.
Rivers, Evolution of the Loup, in Nebraska.
Scientific Alliance, The.
Star, The New, in Auriga.
Storage of Storm-Waters on the Great Plains.
Teaching of Science.
Tiger, A New Sabre-Toothed, from Kansas.
Timber Trees of West Virginia.
Tracheæ of Insects, Structure of.
Vein-Formation, Valuable Experiments in.
Will, a Recent Analysis of.
Wind-Storms and Trees.
Wines, The Sophisticated French.
Zoology in the Public Schools of Washington, D. C.

Some of the Contributors to *Science* Since Jan. 1, 1892.

Aaron, Eugene M., Philadelphia, Pa.
Allen, Harrison, Philadelphia, Pa.
Baldwin, J. Mark, University of Toronto, Canada.
Barnes, Charles Reid, Madison, Wis.
Baur, G., Clark University, Worcester, Mass.
Beal, W. J., Agricultural College, Mich.
Beals, A. H., Milledgeville, Ga.
Beauchamp, W. M., Baldwinsville, N.Y.
Boas, Franz, Clark University, Worcester, Mass.
Bostwick, Arthur E., Montclair, N.J.
Bradley, Milton, Springfield, Mass.
Brinton, D. G., Philadelphia, Pa.
Chandler, H., Buffalo, N.Y.
Comstock, Theo. B., Tucson, Arizona.
Cragin, F. W., Colorado Springs, Col.
Davis, W. M., Harvard College, Cambridge, Mass.
Dimmock, George, Canobie Lake, N.H.
Farrington, E. H., Agricultural Station, Champaign, Ill.
Ferree, Barr, New York City.
Flexner, Simon, Johns Hopkins University, Baltimore, Md.
Foshay, P. Max, Rochester, N.Y.
Gallaudet, E. M., Kendall Green, Washington, D.C.
Garman, S., Museum of Comp. Zool., Cambridge, Mass.
Golden, Katherine E., Agricultural College, Lafayette, Ind.
Hale, Edwin M., Chicago, Ill.
Hale, George S., Boston, Mass.
Hale, Horatio, Clinton, Ontario, Canada.
Hall, T. Proctor, Clark University, Worcester, Mass.
Halsted, Byron D., Rutgers College, New Brunswick, N.J.
Haworth, Erasmus, Oskaloosa, Iowa.
Hay, O. P., Irvington, Ind.
Haynes, Henry W., Boston Mass.
Hazen, H. A., Weather Bureau, Washington, D.C.
Hewitt, J. N. B., Bureau of Ethnology, Washington, D.C.
Hicks, L. E., Lincoln, Neb.
Hill, E. J., Chicago, Ill.
Hill, Geo. A., Naval Observatory, Washington, D.C.
Hitchcock, Romy, Washington, D.C.
Hotchkiss, Jed., Staunton, Va.
Howe, Jas. Lewis, Louisville, Ky.
Hubbard, Gardiner G., Washington, D.C.
James, Joseph F., Agricultural Dept., Washington, D.C.
Johnson, Roger B., Miami University, Oxford, O.
Kellerman, Mrs. W. A., Columbus, O.
Kellicott, D. S., State University, Columbus, O.
Macloskie, G., Princeton, N.J.
McCarthy, Gerald, Agricultural Station, Raleigh, N.C.
MacDonald, Arthur, Washington, D.C.
Marshall, D. T., Metuchen, N.J.
Mason, O. T., Smithsonian Institution, Washington, D.C.
Nichols, C. F., Boston, Mass.
Nuttall, George H. F., Johns Hopkins University, Baltimore, Md.
Oliver, J. E., Cornell University, Ithaca, N.Y.
Osborn, Henry F., Columbia College, New York City.
Osborn, Herbert, Agricultural College, Ames, Iowa.
Pammel, L. H., Agricultural Station, Ames, Iowa.
Pillsbury, J. H., Smith College, Northampton, Mass.
Ruffner, W. H., Lexington, Va.
Schufeldt, R. W., Washington, D.C.
Scripture, E. W., Clark University, Worcester, Mass.
Slade, D. D., Museum Comp. Zool., Cambridge, Mass.
Smith, John B., Rutgers College, New Brunswick, N.J.
Stevenson, S. Y., Philadelphia, Pa.
Stone, G. H., Colorado Springs, Col.
Thurston, R. H., Cornell University, Ithaca, N.Y.
Todd, J. E., Tabor, Iowa.
True, Frederick W., National Museum, Washington, D.C.
Turner, C. H., University of Cincinnati, Cincinnati, O.
Ward, R. DeC., Harvard University, Cambridge, Mass.
Ward, Stanley M., Scranton, Pa.
Warder, Robert B., Howard University, Washington, D.C.
Welch, Wm. H., Johns Hopkins University, Baltimore, Md.
West, Gerald M., Clark University, Worcester, Mass.
Williams, Edward H., Lehigh University, Bethlehem, Pa.