

SCIENCE

NEW SERIES. VOLUME XLII

JULY-DECEMBER, 1915

NEW YORK
THE SCIENCE PRESS
1915

THE NEW ERA PRINTING COMPANY,
41 NORTH QUEEN STREET,
LANCASTER, PA.

CONTENTS AND INDEX.

NEW SERIES. VOL. XLII.—JULY TO DECEMBER, 1915.

THE NAMES OF CONTRIBUTORS ARE PRINTED IN SMALL CAPITALS

- Abderhalden, E., Abwehrfermente, J. AUER, 532
 ABEL, J. J., Studies of the Blood, 135, 165
 Absorption of Air by Charcoal, C. T. KNIPP, 429
 Academy and the State, T. C. MENDENHALL, 881
 Acoustics at Adelbert College, F. P. WHITMAN, 191
 Adams, C. C., Io and its Environment, F. E. LUTZ, 611
 ADAMS, J., Geographical Distribution, 366
 Aerial Transmission Problems, M. I. PUPIN, 809
 Aeronautic Engineers, Amer. Soc. of, 239
 Albino Birds, W. CRAIG, 934
 Alfalfa, Regeneration of, O. T. WILSON, 126; Leaf-spot, L. E. MELCHERS, 537
 ALLEN, J. A., Saving the Genus, 492
 American, Association for the Advancement of Science, Section B, 36; Pacific Coast Meeting, 48; Address of President, 227, 919; Committee of One Hundred, 368; Pacific Coast Meeting, H. F. OSBORN, 471; A. L. BARROWS, Section H., 473; G. G. MACCURDY, 541; Section B, W. J. HUMPHREYS, 36, 584; Columbus Meeting, L. O. HOWARD, 606; Section F, H. V. NEAL, 617, 657; Meetings of Societies, 719; Convocation Week, 863, 916; Committee on Policy, L. O. HOWARD, 760; Section L, E. K. STRONG, JR., 771; Longest Continuous Membership, L. O. HOWARD, 791, 870; Section G, W. J. V. OSTERHOUT, 874
 Americanists, International Congress, 116
 AMI, H. M., Royal Soc. of Canada, 465
 ANGELL, J. R., Emotional Excitement, W. B. Cannon, 696; Emotions, G. W. CRILE, 698
 Anthropological Soc. of Wash., D. FOLKMAR, 134, 808
 Anthropology at the San Francisco Meeting of Amer. Assoc. for Adv. of Sci., G. G. MACCURDY, 541
 Aphid, Pond-lily, E. M. PATCH, 164
 AREY, L. B., Movements in Visual Cells, 915
 Atmospheric Refractions, W. BOWIE, 712
 AUER, J., Abwehrfermente, E. Abderhalden, 532
 AVERY, C., Bessey Hall, 718
 Azotobacter, M. MULVANIA, 463
 B-Rays, Density and Absorption, F. SANFORD, 130
 Bacteria, A. I. KENDALL, 209; in Milk, W. D. FROST, 255; Iron, E. C. HARDER, 310; Hemoglobinophilic, D. J. DAVIS, 532
 Bacteriologists, Soc. of Amer., A. P. HITCHENS, 316, 351
 BAEKELAND, L. H., Applied Chemistry, 547
 BAILEY, F. D., Powdery Scab of Potatoes, 424
 BARKER, F. D., Parasites of the Muskrat, 570
 BARNETT, S. J., Magnetization, 163, 459
 BARROWS, A. L., Pacific Coast Meeting of Amer. Assoc. for Adv. of Sci., 473
 BARUS, C., Trains of Beating Light Waves, 350; Interferences with Two Gratings, 841
 BATHER, F. A., References in Journal Articles, 690
 BAYLISS, W. M., Phase Boundaries, 509
 BERRY, E. W., Pliocene Floras of Holland, 613
 BENEDICT, F. G., Nutrition Laboratory, 75
 Bessey Hall at Univ. of Nebraska, C. AVERY, 718
 Bigelow, F. H., Atmospheric Thermodynamics, F. W. VERY, 800
 Biological, Soc. of Wash., M. W. LYON, JR., 843, 880; Science, C. W. ELIOT, 919
 Bird Protection, 212
 Black, Greene Vardiman, A. W. HARRIS, 496
 Blake Sea, D. T. MACDOUGAL and G. SYKES, 133
 BLAKESLEE, A. F., Zygosporos and Rhizopus, 768
 Blood, Studies of, J. J. ABEL, 135, 165
 Boas, F., Frederic Ward Putnam, 330
 BOBERT, M. T., Pure Chemistry, 737
 BOLTWOOD, B. B., Radium, 851
 Bornite, A. F. ROGERS, 386; E. T. WHERRY, 570
 Botanical Soc. of Wash., P. SPAULDING, 286
 Boulenger, G. A., Fishes, T. D. A. COCKERELL, 31
 BOUYOUCOS, G., and M. M. MCCOOL, Soils, 507
 BOWIE, W., Atmospheric Refractions, 712
 BRASCH, F. E., History of Science, 746
 BRIGHAM, A. P., Geography, J. McFarlane, 611
 British, Scientific Men, 214, 282; Assoc., Address of President, 397; Manchester Meeting, 486
 BROOKS, C. F., Notes on Meteorology, 63, 251
 Brown, J. C., Essays and Addresses, J. L. H., 456
 Brues, C. T., and A. L. MELANDER, N. A. Insects, T. D. A. COCKERELL, 190
 BRUMFIELD, D. M., Protozoa, 430
 Caddis Flies, W. L. MCATEE, 694
 California and Stanford, A. W. MEYER, 374
 Calorimeter and the Life Processes, G. LUSK, 816
 CAMPBELL, W. W., Science and Civilization, 227
 Cancer, and Heredity, C. C. LITTLE, 218, 494; Mice and X-Ray, J. B. MURPHY and J. J. MORTON, 842; in Mice, L. LOEB, 912
 Cannon, W. B., Emotional Excitement, J. R. ANGELL, 696
 CARLETON, M. A., New Wheat Rust, 58
 CARPENTER, W. T., American Sanitation, 189
 CASE, E. C., Cricotus Cope, 797
 CASTLE, W. E., Heredity and Environment, E. G. Conklin, 162; and S. WRIGHT, Color Mutation in Rats, 193
 Castle and Wright, Color Mutation in Rats, A. H. STURTEVANT, 342
 CASWELL, A. E., Electrical Units, 695
 Celloidin Sections, A. STEWART, 872
 Cell Penetration by Acids, W. J. CROZIER, 735
 Cells, Mesenchymal, C. R. STOCKARD, 537
 Cetacea, N. J., W. J. FOX, 798

- Chamberlain, C. J., Plant Histology, E. C. JEFFREY, 767
- CHAMBLISS, C. F., Cereal Conference, 154
- CHARLTON, O. C., Reverchon Park, 213
- Chemical Soc. Amer., C. L. PARSONS, 37, 67, 94, 215, 943
- Chemistry, Analytical, W. H. FRY, 89; Applied, L. H. BAEKELAND, 547; Pure, M. T. BOGERT, 737
- Chicken with Four Legs, C. D. PERRINE, 90
- Citrus Pollen, M. KELLERMAN, 375
- Clark, A. H., The Comatulids, F. SPRINGER, 432
- CLARK, G. A., Fur Seal Report, 799
- CLARKE, J. M., Nature and Science on the Pacific Coast, 27
- CLELAND, H. F., Geological Excursion, 634
- COCKERELL, T. D. A., Fishes, G. A. Boulenger, 31; N. A. Insects, C. T. Brues and A. L. Melander, 190; Gnothera, 908; Flora of N. M., E. O. Wootton and P. C. Standley, 870
- COCKS, R. S., New Orleans Acad. of Sci., 256, 808, 880
- COGHILL, G. E., Amphibian Embryos, 347
- COLE, A. D., Amer. Physical Soc., 390
- COLE, F. N., Amer. Math. Soc., 470; 844
- COLE, R., Injections of the Bundle of His, 765
- COLEMAN, D. A., N. KOPELOFF and H. C. LINT, Soil Protozoology, 284
- Color Effects of Positive and of Cathode Rays, C. T. KNIPP, 942
- COLTON, H. S., Saving the Genus, 307
- Conductivity, Electrical, W. A. TAYLOR, 388
- Conklin, E. G., Heredity and Environment, W. E. CASTLE, 162
- COPELAND, E. B., What is Hellenism? 646
- Correlation and Relationship, C. N. MOORE, 575
- Cory's Shearwater, G. H. THAYER, 308; W. STONE, 530
- COULTER, J. M., "Orthogenesis" in Plants, 859
- COWLES, H. C., Ecological Society, 496
- CRAIG, W., Albino Bird, 934
- Cricotus Cope, E. C. CASE, 797
- CRILE, G. W., Selected Papers, R. Park, 497
- Crile, G. W., Emotions, J. R. ANGELL, 698
- CROZIER, W. J., Cell Penetration by Acids, 735
- Cuterebra and Dermatobia, C. H. T. TOWNSEND, 253
- Cyanide, and Trees, W. MOORE and A. G. RUGGLES, 33; and Locust Borer, W. P. FLINT, 726
- DAGGETT, FRANK S., A Gallapagos Tortoise, 933
- Dairy Score Cards, J. A. HARRIS, 503
- DALL, W. H., Scottish Antarctic Expedition, 731; Nomenclature, T. O. Smallwood, 805
- Dall, W. H., Index to Museum Boltenianum, G. D. HARRIS, 61; Spencer Fullerton Baird, H. M. SMITH, 425
- DAVENPORT, C. B., Heredity of Stature, 495; Feeble-mindedness, H. H. Goddard, 837; Erblichkeit mit Grundzügen der biologischen Variationsstatistik, W. Johannsen, 911
- DAVIS, B. M., Gnothera, R. R. GATES, 648
- DAVIS, D. J., Hemoglobinophilic Bacteria, 532
- Daylight, Artificial, S. H. GAGE, 534; M. LUCKEISH, 764
- DEAN, B., Bibliography of Fishes, 32
- Delphinus and Phocaena, H. W. FOWLER, 220
- Discussion and Correspondence, 24, 56, 89, 122, 158, 187, 218, 243, 281, 307, 340, 374, 422, 450, 492, 527, 570, 609, 643, 690, 725, 764, 796, 830, 869, 900, 933
- Diseases, of Wheat, P. J. O'GARA, 313, of Sudan Grass, 314; of Wheat-grass, 616
- Doctorates conferred by American Universities, 555
- DODSON, J. M., Pedagogics of Pathology, 773
- Dohein, F., and R. Hesse, Tierbau und Tierleben, G. H. PARKER, 870
- Doncaster, L., Determination of Sex, T. H. MORGAN, 312
- Dynamics, Teaching of, W. KENT, 900
- DYSON, F. W., Distances of the Stars, 13; Construction of the Heavens, 435
- Eclipse, J. N. STOCKWELL, 830
- Ecological Society, H. C. COWLES, 496
- EDGERTON, C. W., Tomato Wilt, 914
- Ehrlich, Paul, 332
- Electromotive Phenomena and Membrane Permeability, J. LOEB, 643
- Eliot, C. W., Biological Science, 919
- Elliott, G. F. S., Prehistoric Man, G. G. MAC-CURDY, 249
- ELLIS, F. W., Pendulum Key and Metronome, 315
- ELLWOOD, C. A., Social Problem, A. A. TENNEY, 283
- Embryos, Amphibian, G. E. COGHILL, 347
- EVERITT, P. F., Gamma Function, 453
- Falling Body, W. H. ROEVER, 122
- Farming and Food-supplies in War, R. H. REW, 475
- FARRINGTON, O. C., Natural History Museums, 197
- Fauna of Soils, C. A. KOFOID, 937
- FETTKE, C. R., Pittsburgh Acad. of Sci., 226
- First get the Facts, W. C. REDFIELD, 39
- FISCHER, M. H., Hydration and "Solution," 223
- FISH, P. A., Conservation and the Veterinarian, 323
- Fisheries, Bureau of, 930; Station at Woods Hole, 605
- Fishes, Bibliography of, B. DEAN, 32
- FLINT, W. P., Cyanide and Locust Borer, 726
- FOLKMAR, D., Anthropol. Soc. of Wash., 134, 808
- FORD, W. W., Public Health in America, 1
- Forests, National, 278
- FOWLER, H. W., Delphinus and Phocaena, 220
- FOX, W. J., New Jersey Cetacea, 798
- FRANKLIN, W. S., and B. MACNUTT, Mechanics, 56; Laws of Motion, 422
- Fraternitas Medicorum, 179
- FROST, W. D., Bacteria in Milk, 255
- FRY, W. H., Analytical Chemistry, 89
- Fur Seal Report, G. A. CLARK, 799
- GAGE, S. H., Artificial Daylight, 534
- Galloway, T. W., Zoology, C. W. H., 651
- Gamma Function, P. F. EVERITT, 453; and Curve Fitting, R. PEARL, 833
- Gases, C. T. KNIPP, 93
- Gates, R. R., Gnothera, B. M. DAVIS, 648
- Genetic Assoc., Amer., P. POENOE, 391
- Genus, Saving the, F. B. SUMNER, 90; H. S. COLTON, 307; J. A. ALLEN, 492; and Subgenus, M. M. METCALF, 796
- Geographical, Distribution, J. ADAMS, 366; W. G. REED, 798; Research, H. G. LYONS, 585
- Geologic, Surfaces, R. H. JOHNSON, 450; Periods, J. E. TODD, 908
- Geological Soc. of Amer., E. O. HOVEY, 86
- GILL, A. H., Chemistry, J. Lewkowitsch, 428
- Glacial Drift, R. P. WENTWORTH, 58
- Goddard, H. H., Feeble-mindedness, C. B. DAVENPORT, 837

- GOLDSCHMIDT, R., New Mitotic Structure, 727
GOLDTHWAIT, J. W., Lost River and its Potholes, 834
GORTNER, R. A., Der Nachweis organischer Verbindungen, L. Rosenthaler, 573
GRAY, H. F., Public Health, 243
GREGORY, W. K., *Sivapithecus* Pilgrim, 341
Grimsehl, Ernst, 303
GUDGER, E. W., North Carolina Acad., 431; Basking Shark, 653
Guidebook to Western U. S., J. E. HYDE, 220
Gurswitsch, A., Histology, F. T. LEWIS, 91
Guthe, Karl Eugen, 685
- H., A., "Pan-American Scientific Congress," 531
H., C. W., Zoology, T. W. Galloway, 651
H., J. L., Essays and Addresses, J. C. Brown, 456
H., W. T., Butterfly Guide, W. J. Holland, 313
Hagar, G., Oil Geology, C. T. KIRK, 937
Haldane, J. S., Mechanism, Life and Personality, L. J. HENDERSON, 378
HALL, I. C., Sterile Siphon Tip Protector, 700
HAMOR, W. A., Willard Gibbs Professorship, 636
HANCE, R. T., Contractile Vacuoles, 461
Handwörterbuch der Naturwissenschaften, R. L. MOODIE, 838
HARDER, E. C., Iron Bacteria, 310
HARPER, R. M., Vegetation and Soils, 500
HARRIS, A. W., Greene Vardiman Black, 496
HARRIS, G. D., Index to Museum Boltenianum, W. H. DALL, 61
HARRIS, J. A., Dairy Score Cards, 503
Heavens, Construction of, F. W. DYSON, 435
HEILBRUNN, L. V., Oxidation in Sea-urchin Egg, 615
Hellenism, What is it? E. B. COPELAND, 646
HENDERSON, J., New Species, 725
HENDERSON, L. J., Mechanism, Life and Personality, J. S. Haldane, 378
Heredity of Stature, C. B. DAVENPORT, 495
Hertwig, O., Entwicklungslehre, F. T. LEWIS, 129
Hesse, R., and F. Doflein, Tierbau und Tierleben, G. H. PARKER, 870
HILGARD, E. W., Potassium from the Soil, 527
HILLIARD, C. M., C. TOROSSIAN and R. P. STONE, Germicidal Effect of Freezing, 770
Hindle, E., Flies and Disease, W. D. HUNTER, 92
Hindle, Dr. E., G. H. F. NUTTALL, 696
His, Injections of the Bundle of, A. W. MEYER, 693; W. G. MACCALLUM, 765; R. COLE, 765
HITCHENS, A. P., Soc. of Amer. Bacter., 316, 351
Holder, Dr. Charles Frederick, G. F. KUNZ, 823
Holland, W. J., Butterfly Guide, W. T. H., 313
HOLMES, S. J., Recessive Characters, 300
Horsburgh, E. M., Methods of Calculation, D. E. SMITH, 128
HOSKINS, L. M., Mechanics, 281; Mass as Quantity of Matter, 340
HOVEY, E. O., Geol. Soc. of Amer., 86
HOWARD, L. O., Amer. Assoc. Adv. of Sci., 606; Committee on Policy, 760; Longest Continuous Membership, 791, 870
HUMPHREYS, W. J., Section B, Amer. Assoc. Adv. of Sci., 36, 584
HUNTER, W. D., Flies and Disease, E. Hindle, 92; Entomology, W. A. RILEY and O. A. JOHANNSEN, 531
HUNTINGTON, E. V., Mechanics, 158
HYDE, J. E., Guidebook to Western U. S., 220
- Indians, Pima and Papago, M. L. KISSELL, 66
Industrial Accident Statistics, 238
Inheritance of Contractile Vacuoles, R. T. HANCE, 461
Interferences with Two Gratings, C. BARUS, 841
Invention Committees in England and U. S., 154
ISHAM, R. M., and W. G. SACKETT, "Niter Spots," 452
- JACKSON, C. M., Obstacles to Research, 819
JACOBSON, C. A., Scientific Research, 598
JEFFREY, E. C., Plant Histology, C. J. Chamberlain, 767; Pflanzenanatomie, S. Tschulok, 767
Johannsen, O. A., and W. A. RILEY, Entomology, W. D. HUNTER, 531
Johannsen, W., Erblichkeit mit Grundzügen der biologischen Variationsstatistik, C. B. DAVENPORT, 911
JOHNSON, R. H., Geologic Surfaces, 450
JORDAN, D. S., The Long Cost of War, 190
- K., E., Pharmacognosy, H. Kraemer, 935
Kafka, G., Zoology, G. H. PARKER, 912
KAHLENBURG, L., Chemistry, W. E. S. TURNER, 574
KARPINSKI, L. C., Paradoxes, A. De Morgan, 729
Keller, A. G., Societal Evolution, A. A. TENNEY, 498
KELLERMAN, M., Citrus Pollen, 375
KENDALL, A. I., Bacteria, 209
KENT, W., Teaching of Dynamics, 900
KEYES, C., Valley-fill of Arid Intermont Plains, 377
KEYSER, C. J., Human Significance of Mathematics, 663
Kilauea and Mauna Loa, Hawaii, S. POWERS, 147
KING, W. V., Transmission of Malaria, 873, 934
KIRK, C. T., Oil Geology, D. Hagar, 937
KISSELL, M. L., Pima and Papago Indians, 66
KLOTZ, O., Pan-American, 870
KNIPP, C. T., Gases, 93; Absorption of Air by Charcoal, 429; Color Effects of Positive and of Cathode Rays, 942
KOFOID, C. A., Fauna of Soils, 937
KOPELOFF, N., H. C. LINT and D. A. COLEMAN, Soil Protozoology, 284
Kraemer, H., Pharmacognosy, E. K., 935
KRAUS, E. J., Germinating Pollen, 610
KUNZ, G. F., Dr. Charles Frederick Holder, 823
- Labelling, Chemical Specimens, C. E. VAIL, 656; Museums, H. I. SMITH, 695
LAMB, D. S., Animal Malformations, 189
LANE, A. C., Pre-Cambrian Nomenclature, 869
LANG, W. H., Plant Morphology, 780
LAZENBY, W. R., Ohio Acad. of Sci., 890
LEWIS, E. P., and F. SANFORD, Amer. Physical Soc., 90
LEWIS, F. T., Histology, A. Gurswitsch, 91; Entwicklungslehre des Menschen und der Wirbeltiere, O. Hertwig, 129
Lewkowitsch, J., Oils, Fats and Waxes, A. H. GILL, 428
Light, Waves, Trains of Beating, C. BARUS, 350; Sensibility of Copper-Oxide, A. H. PFUND, 805
LINT, H. C., N. KOPELOFF and D. A. COLEMAN, Soil Protozoology, 284
LITTLE, C. C., Cancer and Heredity, 218, 494
Little, Dr., Reply to, M. SLYE, 246

- LOEB, J., Electromotive Phenomena and Membrane Permeability, 643
 LOEB, L., Cancer in Mice, 912
 Lost River, J. W. GOLDTHWAIT, 834
 LUCKEISH, M., Artificial Daylight, 764
 LUSK, G., Calorimeter and Life Processes, 816
 LUTZ, F. E., Io and its Environment, C. C. ADAMS, 611
 LYMAN, G. R., and J. T. ROGERS, Spongospores, 940
 LYON, M. W., JR., Biol. Soc. of Wash., 843, 880
 LYONS, H. G., Geographical Research, 585
- McAtee, W. L., Caddis Flies and Chironomids, 694
 MACCALLUM, W. G., Injections of the Bundle of His, 765
 MCCOOL, M. M., and G. BOUYOUCOS, Soils, 507
 MACCURDY, G. G., Neanderthal Man, 84; Prehistoric Man, G. F. S. ELLIOTT, 249; Anthropology at the San Francisco Meeting, 541
 MACDOUGAL, D. T., and G. SYKES, Blake Sea, 133
 McFarlane, J., Geography, A. P. BRIGHAM, 611
 MACNUTT, B., and W. S. FRANKLIN, Mechanics, 56, 422
 Magnetization, S. J. BARNETT, 163, 459
 Malaria, Transmission of, W. V. KING, 873, 934
 Malformations, Animal, D. S. LAMB, 189
 Marine, Waters, R. H. TRUE, 732; Biological Laboratory, 792
 MARSHALL, C. E., Microorganisms and Agriculture, 257
 Mass as Quantity of Matter, L. M. HOSKINS, 340
 Mathematical, Research, H. S. WHITE, 105; Soc. Amer., F. N. COLE, 470, 844
 Mathematics, C. J. KEYSER, 663
 Mating, Recording Types of, R. PEARL, 383
 MAXWELL, S. S., Biological Research, 701
 Mechanics, W. S. FRANKLIN and B. MACNUTT, 56, 422; E. V. HUNTINGTON, 158; L. M. HOSKINS, 281, 340; E. B. WILSON, 528; W. KENT, 900
 Medical Men of Science, R. M. PEARCE, 264
 MEINECKE, E. P., Spore Measurements, 430
 Melander, A. L., and C. T. BRUES, N. A. Insects, T. D. A. COCKERELL, 190
 MELCHERS, L. E., Alfalfa Leaf-spot, 536
 MENDENHALL, T. C., Academy and the State, 881
 METCALF, M. M., Genus and Subgenus, 796
 Meteorology, Notes on, C. F. BROOKS, 63, 251
 MEYER, A. W., California and Stanford, 374; Injections of Bundle of His, 693
 Microorganisms and Agriculture, C. E. MARSHALL, 257
 Migrations of Distinguished Americans, S. NEARING, 413
 MILLER, A. M., Wind Gaps, 571
 MILLER, G. A., Quantity and Quality, 327
 MILLIKAN, R. A., Electron Theory, O. W. RICHARDSON, 383
 Mineral Production in 1915, 46
 Mitotic Structure, R. GOLDSCHMIDT, 727
 MOODIE, R. L., Handwörterbuch der Naturwissenschaften, 838
 MOORE, C. N., Correlation and Relationship, 575
 MOORE, W., and A. G. RUGGLES, Trees and Cyanide, 33
 Morgan, A. De, Paradoxes, L. C. KARPINSKI, 729
 MORGAN, T. H., Determination of Sex, L. DONCASTER, 312
 Motion, Laws of, W. S. FRANKLIN and B. MACNUTT, 422
- MULVANIA, M., Azotobacter, 463
 MURPHY, J. B., and J. J. MORTON, X-Ray and Cancer in Mice, 842
 Museums, Natural History, O. C. FARRINGTON, 197
 Muskrat, Parasites of, F. D. BARKER, 570
 Mutations in Rats, W. E. CASTLE, and S. WRIGHT, 193
- National Acad. of Sci., Proceedings, E. B. WILSON, 61, 222, 345, 499, 652, 840; J. W. RICHARDS, 161; F. E. NIPHER, 495; New York Meeting, 680
 Naval, Advisory Board of Inventions, 371, 522, 893
 NEAL, H. V., Section F, Amer. Assoc., 617, 657
 Neanderthal Man, G. G. MACCURDY, 84
 NEARING, S., Migrations of Distinguished Americans, 413
 Nearing, Professor, Dismissal of, 26, 565, 930
 New Orleans Acad. of Sci., R. S. COCKS, 256, 808, 880
 New York Botanical Garden, 333
 NIPHER, F. E., Nat. Acad. of Sci., 495
 "Niter Spots," W. G. SACKETT and R. M. ISHAM, 452
 Nomenclature, W. G. VAN NAME, 187; C. W. STILES, 609; A. E. CASWELL, 695; W. H. DALL, 805; A. C. LANE, 869
 North Carolina Acad. of Sci., E. W. GUDGER, 431
 Nutrition Laboratory, F. G. BENEDICT, 75
 NUTTALL, G. H. F., Dr. Edward Hindle, 696
- O'GARA, P. J., Disease of Wheat, 313; of Watermelons, 314; of Sudan Grass, 314; of Wheatgrass, 616
 Ohio Acad. of Sci., W. R. LAZENBY, 890
 Olcott, W. T., Sun Lore, C. L. POOR, 532
 "Orthogenesis" in Plants, J. M. COULTER, 859
 OSBORN, H. F., Pacific Coast Meeting of Amer. Assoc., 471
 OSTERHOUT, W. J. V., Amer. Assoc. for Adv. of Sci., Section G, 874
 Oumov, Nikolai Alexeyevich, L. PASVOLSKY, 113
- Pacific Coast Guidebook, J. M. CLARKE, 27
 Pan-American, Scientific Congress, 931; G. L. SWIGGETT, 445; H. A., 531; Pan-American, O. KLOTZ, 870
 Park, R., Selected Papers, G. W. CRILE, 497
 PARKER, G. H., Tierbau und Tierleben, R. Hesse and F. Doflein, 870; Tierpsychologie, G. KAFKA, 912
 PARKER, J. B., Protozoa, 727
 PARSONS, C. L., Amer. Chem. Soc., 37, 67, 94, 215, 943
 Pasvolksy, L., Nikolai Alexeyevich Oumov, 113
 PATCH, E. M., Pond-lily Aphid, 164
 Pathology, Pedagogics of, J. M. DODSON, 773
 PATON, S., Universities and Unpreparedness, 647
 PEARCE, R. M., Medical Men of Science, 264
 PEARL, R., Types of Mating, 383; Experiment Station Publications, 518; Gamma Function and Curve Fitting, 833
 Pendulum Key and Metronome, F. W. ELLIS, 315
 Pennsylvania, University of, Dismissal of Professor Nearing, 26, 565, 930
 PERKINS, P. B., Radioactivity, 806
 PERBINE, C. D., Chicken with Four Legs, 90
 PFUND, A. H., Light-Sensibility of Copper-Oxide, 805

- Phase Boundaries, W. M. BAYLISS, 509
Physical Soc., Amer., F. SANFORD, and E. P. LEWIS, 90; A. D. COLE, 390
Phytopathological Soc., Amer., C. L. SHEAR, 580
Pittsburgh Acad. of Sci., C. R. FETTKKE, 226
Plain Writing, G. O. SMITH, 630
Plant Morphology, W. H. LANG, 780
Pliocene Floras of Holland, E. W. BERRY, 613
Pollen, Germinating, E. J. KRAUS, 610
POOR, C. L., Sun Lore, W. T. Olcott, 532
POPENOE, P., Amer. Genetic Assoc., 391
Potato Mosaic, E. J. WORTLEY, 460
Potatoes, Powdery Scab of, F. D. BAILEY, 424
POWERS, S., Kilauea and Mauna Loa, 147
Prentiss, Charles William, S. W. RANSON, 178
Profession, New, J. E. RUSH, 444
Protozoa, J. B. PARKER, 727; D. M. BRUMFIELD, 430
Public Health, W. W. FORD, 1; H. F. GRAY, 243; W. T. SEDGWICK, 361
Publications, Experiment Station, F. A. WOLF, 24; R. PEARL, 518
PUPIN, M. I., Aerial Transmission Problems, 809
Putnam, Frederic Ward, 638; F. BOAS, 330
- Quantity and Quality, G. A. MILLER, 327
Quotations, 26, 127, 282, 727, 909
- Radioactivity, A. RICHARDS, 287; P. B. PERKINS, 806
Radium Production, 184; Life of, B. B. BOLTWOOD, 851
RAMSEY, R. R., Radium Fertilizer, 219
RANSON, S. W., Charles William Prentiss, 178
Recessive Characters, S. J. HOLMES, 300
REDFIELD, W. C., First get the Facts, 39
REED, W. G., Geographical Distribution, 798
References, Position of, H. SCUDDER, 454; F. A. BATHER, 690; C. J. WEST, 691
Research, Biological, S. S. MAXWELL, 701; Obstacles to, C. M. JACKSON, 819
Reverchon Park, O. C. CHARLTON, 213
REW, R. W., Farming and Food Supplies in War, 475
RICH, S. G., *Unio complanatus* Dillwyn, 579
RICHARDS, A., Radioactivity, 287
RICHARDS, J. W., Nat. Acad. of Sci., 161
RICHARDS, T. W., Wolcott Gibbs Laboratory, 845
Richardson, O. W., Electron Theory, R. A. MILLIKAN, 383
Riley, W. A., and O. A. Johannsen, Medical Entomology, W. D. HUNTER, 531
RITTER, W. E., Scientific Research, 245
River Beds, C. H. STERNBERG, 131
Rockefeller Institute. Appointments, 49
ROEVER, W. H., Falling Body, 122
Roger Bacon and Gunpowder, L. THORNDIKE, 799
ROGERS, A. F., Bornite, 386
Rosenthaler, L., *Der Nachweiss organischer Verbindungen*, R. A. GORTNER, 573
Royal Society of Canada, H. M. AMI, 465
RUGGLES, A. G., and W. MOORE, Trees and Cyanide, 33
RUSH, J. E., Bacteriological Examination of Shell Eggs, 25; A New Profession, 444; Soil Fertility, 632
- SACKETT, W. G., and R. M. ISHAM, "Niter Spots," 452
- SANFORD, F., Density and Absorption of B-Rays, 130; and E. P. LEWIS, Amer. Physical Soc., 90
Sanitation, American, W. T. CARPENTER, 189
SCHUSTER, A., Science and Humanity, 397
Science, Organization in Great Britain, 127; and Civilization, W. W. CAMPBELL, 227; and Liberal Education, E. B. WILSON, 625; in National Affairs, 727; History of, F. E. BRASCH, 746
Scientific Notes and News, 22, 49, 87, 116, 155, 185, 216, 241, 280, 304, 334, 371, 415, 448, 488, 523, 566, 606, 639, 686, 706, 721, 793, 825, 865, 897, 931; Books, 27, 59, 91, 128, 162, 190, 220, 248, 283, 312, 342, 378, 425, 456, 497, 531, 573, 611, 648, 696, 729, 767, 800, 837, 870, 911, 935; Journals and Articles, 871; Research, C. A. JACOBSON, 598; in Great Britain, 240; in California, W. E. RITTER, 245
Scottish Antarctic Expedition, W. H. DALL, 731
SCUDDER, H., Position of References, 454
Sea-urchin Egg, Oxidation, L. V. HEILBRUNN, 615
SEDGWICK, W. T., Public Health Work, 361
Shapley, H., Orbits of Binaries, J. STEBBINS, 59
Shark, Basking or Bone, E. W. GUDGER, 653
SHEAR, C. L., Amer. Phytopath. Soc., 580
Shell Eggs, J. E. RUSH, 25
Shufeldt, R. W., the Negro, B. G. WILDER, 768
Sivapithecus Pilgrim, W. K. GREGORY, 341
Skinner, E. B., Investment, E. B. WILSON, 248
SLYE, M., Reply to Dr. Little, 246
Smallwood, T. O., Nomenclature, W. H. DALL, 805
SMITH, D. E., Methods of Calculation, E. M. Horsburgh, 128
SMITH, G. O., Plain Writing, 630
SMITH, H. I., Labelling Museums, 695
SMITH, H. M., Spencer Fullerton Baird, W. H. DALL, 425
Societies and Academies, 134, 226, 256, 286, 470, 808, 843, 880
Soil, Protozoology, N. KOPELOFF, H. C. LINT and D. A. COLEMAN, 284; Acidity, E. TRUOG, 505; Potassium from, E. W. HILGARD, 527; Fertility, J. E. RUSH, 632
Soils, and Vegetation, R. M. HARPER, 500; G. BOUYOUCOS, and M. M. McCool, 507
"Solution" and Hydration in Gelatin, M. H. FISCHER, 223
SPAULDING, P., Bot. Soc. of Wash., 286
Special Articles, 33, 66, 93, 130, 163, 193, 223, 253, 284, 313, 347, 383, 429, 459, 503, 534, 575, 615, 653, 700, 732, 768, 805, 841, 872, 912, 937
Species, New, Publication of, J. HENDERSON, 725
SPENCE, J. B., A Typical Case, 311
Spongopora Subterranea, G. R. LYMAN, and J. T. ROGERS, 940
Spore Measurements, E. P. MEINECKE, 430
SPRINGER, F., The Comatulids, A. H. Clark, 342
Standley, P. C., and E. O. Wootton, Flora of N. M., T. D. A. COCKERELL, 870
Stars, Distances of, F. W. DYSON, 13
STEBBINS, J., Orbits of Binaries, H. Shapley, 59
Sterile Siphon Tip Protector, I. C. HALL, 700
STERNBERG, C. H., River Beds, 131
STEWART, A., Zea Mays, 694; Celloidin Sections, 872
STILES, C. W., Zoological Nomenclature, 509
STOCKARD, C. R., Mesenchymal Cells, 537
STOCKWELL, J. N., A Remarkable Eclipse, 830
STONE, R. P., C. M. HILLIARD, and C. TOROSSIAN, Germicidal Effects of Freezing, 770

- STONE, W., Cory's Shearwater, 530
 STRONG, E. K., JR., Section L, Amer. Assoc., 771
 STURTEVANT, A. H., Castle and Wright on Crossing over in Rats, 342
 Sugar-beet Mosaic, C. O. TOWNSEND, 219
 SUMNER, F. B., a Correction, 89
 SWIGGETT, G. L., Pan-American Congress, 445
 SYKES, G., and D. T. MACDOUGAL, Blake Sea, 133
- TAYLOR, W. A., Electrical Conductivity, 388
 Technical Literature, 115
 TENNEY, A. A., The Social Problem, C. A. Ellwood, 283; Societal Evolution, A. G. Keller, 498
 THAYER, G. H., Cory's Shearwater, 308
 THORNDIKE, L., Roger Bacon and Gunpowder, 799
 TODD, J. E., Geologic Periods, 908
 Tomato Wilt, C. W. EDGERTON, 914
 TOROSSIAN, C., C. M. HILLIARD, and R. P. STONE, Germicidal Effect of Freezing, 770
 TOWNSEND, C. H. T., Cuterebra and Dermatobia, 253
 TOWNSEND, C. O., Sugar-beet Mosaic, 219
 TRUE, R. H., Toxicity and Malnutrition, 195; Marine Waters, 732
 TRUOG, E., Soil Acidity, 505
 Tschulok, S., Pflanzenanatomie, E. C. JEFFREY, 767
 Turner, W. E. S., Chemistry, L. KAHLENBURG, 574
 Typical Case, J. B. SPENCE, 311
- Unio complanatus Dillwyn, S. G. RICH, 579
 Universities and Unpreparedness, S. PATON, 647
 University and Educational News, 24, 55, 88, 121, 158, 186, 218, 243, 281, 307, 339, 373, 421, 449, 490, 526, 569, 608, 642, 690, 724, 763, 795, 829, 868, 900, 933
- VAIL, C. E., Labelling Specimens, 656
- Valley-fill, C. KEYES, 377
 VAN NAME, W. G., Zoological Nomenclature, 187
 Variation in Ctenothera, T. D. A. COCKERELL, 908
 VERY, F. W., Atmospheric Thermodynamics, F. H. Bigelow, 800
 Veterinarian, and Conservation, P. A. FISH, 323
 Visual Cells, Movements in, L. B. AREY, 915
- War, The Long Cost of, D. S. JORDAN, 189
 Watermelons, Root Parasite, P. J. O'GARA, 314
 WENTWORTH, R. P., Glacial Drift, 58
 WEST, C. J., References, Position of, 691
 Wheat Rust, New, M. A. CARLETON, 58
 WHERRY, E. T., Bornite, 570
 WHITE, H. S., Mathematical Research, 105
 WHITMAN, F. P., Acoustics at Adelbert College, 191
 WILDER, B. G., The Negro, R. W. Shufeldt, 768
 Willard Gibbs Professorship, W. A. HAMOR, 636
 WILSON, EDMUND B., Science and Liberal Education, 625
 WILSON, EDWIN B., Proceedings, National Acad. of Sci., 61, 222, 345, 499, 652, 840; Mathematical Theory of Investment, E. B. Skinner, 248; Mechanics, 528
 WILSON, O. T., Regeneration of Alfalfa, 126
 Wind Gaps, A. M. MILLER, 571
 Wolcott Gibbs Laboratory, T. W. RICHARDS, 845
 WOLF, F. A., Experiment Station Publications, 24
 Wootton, E. O., and P. C. Standley, Flora of New Mex., T. D. A. COCKERELL, 870
 WORTLEY, E. J., Potato Mosaic, 460
 WRIGHT, S., and W. E. CASTLE, Color Mutations of Rats, 193
- Zea Mays, A. STEWART, 694
 Zygosporos and Rhizopus, A. F. BLAKESLEE, 768