

SCIENCE NEWS LETTER for December 30, 1933

Dye bath—albino frogs	117	Fernandez, Miguel Angel	300	Glands—adrenal	14	Hoskins, R. G.	340	Karns, George M.	46
Dysentery	328, 342	Ferns	156	Glands—pituitary	14, 24	Hot weather hints	106	Keith, Arthur	36, 37, 38, 87
Eagle, blue	171	Fertilizer 46, 100, 154, 169,	202	Glands—thyroid	24, 46, 101	Hotchkiss, W. O.	4	Kellogg, L. A.	133
Ears	188	Field, Henry	85	Glass	137, 155	Houston, Sam H., Jr.	201	Kellogg, P. P.	326
Earth—model	376	Field Museum—exhibits	85	Glass, bro-silicate	56	Howell, W. H.	63	Kellogg, W. N.	133
Earth—internal structure		Fieseler, Franz	291	Glass bricks	5	Howells, Thomas H.	188	Kelly, E. F.	88
Earthquakes	12, 190, 285	Fig—new variety	203	Glidden, Joseph F.	74	Hoyt, W. G.	107	Kelly, Edward J.	63
Earthquakes—Aleutian Is-		Films, water	203	Gliders	137	Hrdlicka, Ales		Kelps	205
lands	47, 72, 84	Filters, porcelain	24	Goetz, F. W. P.	148	Hubbard, Donald	229, 294, 344, 393	Kelsner, R. A.	173, 174
Earthquakes—Calif.	104, 233	Fingernails	185	Goiter	24, 41, 46	Huber, Bruno	37, 38	Kendall, Arthur I.	24
Earthquakes—China	152, 168	Fingertips—sensitivity	188	Gold	131	Hug, E.	55, 275	Kettering, Charles F.	124, 147
Earthquakes—Fiji Island	181	Fiorni, Guido	73	Golovin, N. N.	419	Hulburt, E. O.	422	Killip, Ellsworth P.	135
Earthquakes—Japan	56	Fire-fighting tank	111	Gomez, Eduardo Salazar	169	Hull, Callie	217	Kincer, J. B.	8, 390
Earthquakes—Mexico	56	Fischer, E. K.	203	Goodall, W. M.	19	Human factor	100	King, Arthur S.	116
Earthquakes—Pacific	56	Fish	56, 88, 100, 175, 232, 297, 318, 350, 361	Goodman, Herman	296	Human resources	212	Kirby, Daniel B.	281
Earthquakes—Peru	233	Fish—diseases	126	Goodpasture, E. W.	83, 356	Human society	276	Kittredge, F. A.	44
Earthquakes—Siberia	393	Fisher, W. J.	259	Gooseberry	169	Hunger disease	57	Klein, Anita	124
Earthquakes—S. Amer.	296	Fiske, Cyrus H.	348	Gordon, Alfred	13	Hunziker, H.	46	Knower, Franklin H.	216
Earthworks—Ohio	92	"Flatiron" building	311	Gorilla baby	323	Hurd-Karrer, Annie	120	Koch, Karl	235
Easterwood, Henry W.	99	Flexner, James	122	Govt. appropriations, 31, 35, 36, 37, 38, 51, 61, 78, 83, 94, 110		Hurricanes—1933	165, 248	Koehring, Vera	105
Ebaugh, Franklin G.	57	Flexner, Simon	340	Govil, Hari G.	165	Hydrocarbon gases	137	Kolhorster, W.	179
Eclipse, solar	126	Flights—Antarctic	182	Graham, Everts A.	5	Hydrocyanic acid	152	Korff, S. A.	135
Economy, governmental		Floods—China	141	Grapefruit	383	Hydrogen 8, 116, 120, 149, 171		Kornhauser, Arthur A.	254
Eddington, Sir Arthur	31, 35, 36, 37, 38	Flowers, State	239	Grasshoppers	41, 132, 141, 244	Hydrogen atoms	30	Kowarsyk, H.	89
Education	9, 355	Fluorescein	72	Gray, Asa	235	Hydrogen—heavy weight	8, 10, 31, 149, 181, 425	Krauss, C. E.	184
Edwards, H. R.	9	Fluorescent paints	156	Greece—archaeology	94, 124	Hydrogen isotope	149, 156, 181, 228	Kreezer, George	195
Edwards, O. F.	24	Flying	137	Greenek vase	262	Hyperinsulinism	57	Krogh, August	394
Eel grass disease	73	Flys	111, 233, 249	Greeks	190, 371	Kurie, F. N. D.	131	Laboratory, Calif. Tech.	251
Efficiency, industrial	200	Fog	330	Green bottles	151	Ice Ages	4, 84	Laidlaw, P. P.	312
Eggs	83	Folsom stone points	190	Green plants	216	Ice tongues	182	Lamb, Arthur B.	108
Eggs, fossil	53	Food	4, 90, 91, 92, 394	Greene, Edward B.	313	Ickes, Harold L.	36, 37, 38, 110, 230	Lamb, Geo. F.	280
Egypt—archaeology	56	Food—prehistoric man	87	Greenwood, Major	198	Illness during depression	282	Lamps, electric	97, 109
Einstein, Albert	10, 250	Foods, Chinese	72	Gregory, P. H.	222	Indetermination theory	72	Land charges	139
Electric roof of world	19	Foot and mouth disease	61	Griffith, C. H.	165	Indian culture	189	Land classification	111
Electrical meas.—brain	8	Footprints—fossil 29, 201, 280		Grimming, George	197	Indian engineers	44	Landis, Carney	206
Electricity	148	Forbes, A.	339	Growth	9, 184, 195	Indians—Mayas	154, 206, 213	Lands, floating	84, 248
Electricity—high voltage	99, 149, 220, 364	Forendy, Chester L.	359	Gruess, Johannes	87	Indians—North America	44, 47, 68, 88, 92, 138, 165, 189, 190, 193, 283, 286	Lands, marginal	116
Electrified layer	104	Forest—petrified	173	Guayule rubber	187	Lands, northern	139	Lands, unprofitable	111
Electromagnetic radiation	68	Forests—ice age	121	Gurwitch rays	40	Lane, Alfred C.	424	Langston, William C.	375
Electron wave	105	Forgeries detected—Vitamin D	155	Gurzburg, B.	139	Langston, William C.	375	Language map—Mexico	111
Electrons	24, 40, 68, 120, 148, 174, 180, 186, 205	Fossils—13, 22, 136, 164, 376		Guthrie, C. G.	137	Lanza, A. J.	68	Larimer, W. H.	244
Elements	8	Fossils—eggs	53	Gutmacher, Alan Frank	230	Larkum, N. W.	243	Lauritsen, C. C.	220, 228
Elijah's melons	163	Fossils—Mexico	217	Hackberry	159	Larviculture	110	Lawrence, Ernest O.	3, 8, 10, 99, 181, 291, 311
Ellis, Carleton	196	Foundations—philanthropic	89	Haines, William C.	197	Layers, electrical	19, 170	Lead	11, 381
Ellsworth, Lincoln	182, 183	Frankfort, Henry	117, 173	Haldane, J. B. S.	174, 318	Leake, James P.	141, 163, 172, 185, 207, 244	Leakey, L. S. B.	83, 294
Elm—disease	104, 179, 297	Franklin, Benjamin	202	Hale, George E.	276	Leith, C. K.	124, 147	Lemaître, Abbé G.	205, 252, 341, 382
Emergency brakes	152	Frasch process	277	Hall, Asaph, Sr.	115	Levine, S. A.	101	Lewis, F. H.	186
Emotions	164, 206	Fray, Walter W.	233	Hamilton, J. B.	44	Lewis, Gilbert N.	10, 116, 149	Lewis, Margaret Reed	117
Emotions—children	118	Frazier, W. C.	421	Handy, J. O.	25	Libbey, D. S.	261	Lieber, Hugo	153
Employment Stab. Res. Inst.	41	Freeman, Frank N.	9	Hanson, Adolph M.	396	Life	22, 163, 164	Life expectancy	109, 124, 220
Employment information	148	Freeman, G. L.	201	Hanson, Earl	75	Light	151, 156, 188, 419, 422	Light absorption	393
Empress of Australia	65, 69	Friedman, Herbert	326	Ha-Reubeni, Ephraim	163, 184	Light, brightness	121, 136	Light energy	108
Encephalitis. 141, 163, 172, 185, 207, 312, 344, 348, 380		"Fright disease"	227	Harkins, Wm. D.	203	Light, red	121, 136	Lighting	156
Enders, H. E.	10	Frisch, R.	120	Harris, M. R.	420	Lighting, electrical	11, 381	Lightning	120, 323, 381
Energy	3, 10, 40, 90, 108, 135, 163, 164, 201	Fritz, Martin F.	215, 292	Harris, Leslie J.	296	Lindner, Paul	253	Lindstrom, E. W.	20
Engineering	420, 426	Frogs	7, 117	Harrison, Seal	57	Lingood, Frank V.	20	Lips	72
Enzyme, protein-digesting	420	Frost, Arthur A.	245	Hart, E. B.	73	Liquids	151	Liquor	342
Epilepsy	13, 427	Fruits	184, 235	Hartmann, George W.	188	Lithium	8, 10, 116	Living things, smallest	123
Epstein, Paul S.	250	Fruits, dried—vitamin D	155	Hathaway, J. C.	46	Livingston, M. S.	10, 291	Lloyd, F. E.	102
Equivalence—mass, energy	3	Fuchs, Hans J.	89	Havens, Leon C.	75	Logic	397	Lomboc Strait	42, 58
Eruptions, volcanic	140	Fulton, J. F.	360	Hay, Will	115	Long-range forecasting	25	Loo, Y. T.	4
Escalona, Alberto	300	Fungi	8, 61, 145, 157, 169, 179, 191, 216, 217	Hay fever	200, 205	Lorentz, Marjorie G.	38	Lost City of Nevada	387, 420
Espinosa, Vasques de	179, 180	Fungus injections—Treatment	8	Hazen, H. L.	69	Lucas, Francis F.	252	Luckhardt, Arno B.	317
Esselen, Gustavus J.	301	Gafafer, William M.	297	Headhunter	291	Luckiesh, M. R.	280	Ludwig, Leon R.	172
Esterman, I.	120	Gages, electrical	45	Heald, R. H.	308	Lutpold, George F.	172	Lumsden, Thomas	51
Ethnology—Amer. negro.	29	Galaxies	83, 211, 383	Hearing	153, 188	Lungfish, male	202	Lungs	14
Ethyl iodide	8	Galileo	26	Heart, artificial	105	Lungs—disease	8, 67, 233	Lyman, Carl M.	195
Ethylene	317	Galvanograph	206	Heart—diseases	101, 124, 324	Lystrup, Herbert T.	185	Lytton, Lord Bulwer	54
Eugenics Res. Assn. Prizes	40	Galvanometer	45, 184	Heart test	296	MacArthur, W. P.	427	MacBride, E. W.	41
Evans, Herbert M.	14	Gamio, Manuel	139	Heavy-weight water	31, 116, 149, 157, 228, 245, 387, 425	MacClendon, J. F.	46	McCormack, William S.	232
Evans, Robley D.	384	Gamma rays	40, 227	Heidel, W. A.	247	McCormack, Roland L.	281	McDonald Observatory	113, 122, 123
Eve, A. S.	174	Gamow, George	250	Heidelberg man	85	McDonald, William J.	122, 123		
Evolution 13, 22, 157, 286, 345		Gandara, Guillermo	132	Heisenberg, A.	105, 201				
Examinations—oral	200	Gann, Thomas	5	Heisenberg, W.	148, 250, 323				
Exhaust gas analysis	170	Gans, D. M.	3, 131	Helium atoms	8, 121, 131				
Expanding universe	83, 211, 341	Gas. 25, 168, 153, 170, 171, 190		Hemenway, Ansel F.	325				
Expeditions, archaeologi-		Gases—effect on unborn	138	Hemoglobin	73, 122, 164				
cal	47	Gasolines—bromine	153	Henderson, Malcolm C.	291				
Expeditions, biological	10, 41	Gates, Frederick L.	188	Herbs	168				
Expeditions, scientific	108	Gault, Robert H.	188	Heredity	24, 40, 427				
Expeditions, zoological	25	Gazin, C. Lewis	164	Heredity—mental diseases	40				
Exploration, Antarctic	182	Gempert, Frank	388	Herrick, C. Judson	8				
Eyeball	360	Generators	202	Herskovits, Melville	29, 422				
Eyes	174, 318, 375	Genes	24, 52	Hess, Alfred F.	281				
Eyes—hearing	188	Genna, Giuseppe	248	Hess, W. C.	185				
Eyesight	186	Geologic hard times	22	Heublein, Arthur C.	232				
Eyring, Henry	245	Geologic time	4, 30	Hibernation	238				
Eyston, G. E. T.	313	Geological measurements.	4	Hieroglyphics	154				
Facial expression	346	Geological Survey—Cuts	36, 37, 38, 78	High temp. mutations	239				
Faeroe Islands	92	Geology	22, 183, 206	Highway	387				
Failure, psychology of	54	Germanium	427	Hinton, M. A. C.	180				
Falling bodies	26	German scholars aided	57	History	174				
Falling stars	104	Germann, A. F. O.	196	Hitler, Adolph	46				
Family life	21, 164	Germany—archaeology	28, 87	Hoh, Pik Van	72				
Famine—China	141	Germany—science	46, 57, 137, 312	Holden, J. H.	25				
Faris, Ellsworth	28	Germys	292	Holt, W. L.	45				
Farrand, Livingston	57	Geysers	185	Homesickness	164				
Fay, Paul J.	184	Giddings, Glenville	294	Homicide rates	325				
Fear—psychology	118	Gilligan, Albert	329	Hopkins, Sir F. G.	163, 164, 184				
Fels Planetarium	68, 291	Gini, Conrado	248	Hopkins, Harry	260				
Fels, Samuel S.	68, 291	Glacier	373	Hormones	14, 24, 188, 345, 360, 421				
Fence, barbed wire	74	Gland extract	284	Horses, clay	213				
Fermentation, tomato	14	Gland secretions	188	Horses—sleeping sickness	173, 174				

McEwen, George F.....25, 308	Middleton, Austin R..... 10	O'Donnell, Lawrence 277	Positrons 262	Roberts, Frank H. H., Jr. 243
McGraw, Myrtle B.....262, 378	Migrations 189	Oil 108	3, 24, 30, 180, 205, 262	Roberts, George B..... 295
Machine Age 198, 284	Miles, Catharine C..... 295	Oil wells 281	Potapenko, G. W..... 372	Robertson, J. D..... 396
Machines—design 200	Miles, G. H..... 200	Okey, Ruth 4	Potash 154	Robinson, W. O..... 120
Machines, electrostatic 202	Miles, Walter R. 295, 315, 360	Old Age 109, 220	Potassium—cancer treat- ment 121	Robot of robots 104
Macht, David I..... 329	Milk 73, 253, 421	Old man's world 314, 315	Potassium iodide 8, 46	Rock writings 104
McKenzie, R. Tait..... 346	Miller, Ellen 9	Olitsky, Peter K..... 61	Potato beetle 79	Rocks, poetry of 206
McKinley, Earl B..... 380	Miller, Gerritt S., Jr. 7	Olivier, Charles P..... 71, 155	Pote, Winston H..... 282	Rocks, radioactive 120
McLaughlin, Dean B. 132, 377	Millikan, Robert A..... 251	Operations 125, 296	Pottery—prehistoric 68	Rocky Mt. spotted fever..... 254
McMillan, Edwin 116	3, 63, 124, 135, 147, 251	Ophiuchi 132, 262	Potts, S. F..... 105	Roddy, H. Justin 13
MacMillan, Hamilton 52	Mills, Clarence A..... 324	Oppenauer, R..... 168	Power plants, electric 202	Roemmert, George..... 214, 215
McMurry, K. C..... 111	Millwee, Robert H..... 227	Oppenheimer, J. Robert..... 250	Prairies 168	Roman house model..... 294
MacNider, William deB..... 350	Minerals 36, 37, 38, 72, 73, 137	Oreston 24	Prehistoric Americans...1, 15	Romer, Alfred S..... 318
Magnesium—cancer treat- ment 121	Mines 78, 278	Ornithologists' Union..... 326	Prehistoric man 15, 28, 31, 44, 68, 81, 85, 86, 90, 92, 93, 104, 117	Roosevelt, Franklin D..... 123, 124, 147
Magnetic storms 170	Minnesota Employment Off. 77	Orstand, C. E. Van..... 37, 38	Prehistoric man—diseases 56	Roosevelt, Mrs. Franklin D..... 260
Magneto-optics 45	Minturno, Italy 246	Ostrich, extinct 53	Pressure—measurement 12	Roper, Sec. of Commerce 35, 36, 37, 38, 51, 78, 110, 216
Mahicans 357	Mirande, M..... 152	Ostriches 329	Prindle, Louis M..... 37, 38	Rose, Charles L..... 55, 275
Maleic acid 196	Mirror, telescopic 56, 120	Ott, Emil 89	Prizes—Eugenics 40	Rosenthal, S. M..... 328
Mallory, Walter H..... 141	Mitchell, C. L..... 165, 248	Oxford accent 248	Prohibition 166	Ross, Frank E..... 123
Malnutrition—children 260	Mockingbird 45	Oxygen 14, 28, 116, 122, 149, 164, 189, 202, 219, 293	Prohormon triplets 53	Ross, Sir James C..... 183
Malzev, V..... 104	Moffitt, G. W..... 123	Oxygen tube 282	Protons 8, 30, 120, 131, 174	"Rosetta Stone" 307, 321
Mammals—cancer 168	Mold spores 270	Oysters 105	Protium 181	Rossier, R. A..... 200
Mammals, extinct 164, 217	Molecules 24, 120, 149, 203, 222	Ozone 148	Protozoa 13, 249, 361	Rovenstine, E. A..... 282
Man, prehistoric, 15, 31, 44, 85, 86, 90, 92, 93, 229, 294, 393	Monkeys 40, 120	Paine, Sydney G..... 20	Prytherch, Herbert F..... 105	Rowe, Allan Winter 345
Man, prehistoric—art 68, 81, 86	Monte Alban—archaeology 51, 84, 175, 176	Paints 136, 155, 156	Psychiatry 57, 313	Rubber 45, 104, 109, 153, 187, 200, 219, 232
Man, prehistoric—diseases 56	Moon, harvest 204	Paleontology 13, 19, 23, 29, 53, 201, 216, 217	Psychodietetics 292	Ruckmick, Christian A..... 206
Man, prehistoric—food 87	Moore, Marjorie B..... 200	Palestine—archaeology 93, 163	Psychology—character 100	Ruedemann, Rudolph..... 13
Man, prehistoric—tools, 28 117	Moore, Thomas Verner..... 140	Pallas, M..... 113	Psychology—children 118	Ruhräh, John 56
Man, prehistoric—writings 104	Morgan, Agnes Fay 4	Palmer, Carroll E..... 31	Psychology—college stu- dents 231	Ruins—Mayan 5
Manganese 73	Morgan, Thomas Hunt..... 275	Pancreas 5, 57	Psychology, comparative 129, 133	Ruml, Bardsley 164
Mangum, Claud 201	Mosaic floor—Corinth 94	Pankratz, David S..... 122	Psychology—tests 4, 41, 185, 188, 198, 204, 206, 215, 216	Rumsey, H. St. John..... 248
Mantis, praying 137	Mosquitoes—sleeping sick- ness 173, 174, 207	Paprika acid 249	Public health 36, 37, 38, 221	Russell, Frederick F..... 234
Manville, Ira A..... 20	Moss, F. A..... 158	Parachutes 259	Public Works 35, 36, 37, 38, 110	Russell, G. Oscar 423
Map, Antarctic 182	Moss, Frank K..... 280	Paraffin 388	Pueblo Bonito 44	Russell, Henry N..... 360, 380
Map, drinking 166	Moths 105, 159	Parents 28, 204	Puffball 145, 157, 326	Russell, W. F..... 219
Map, language—Mexico..... 117	"Motor Age" 185	Parker, J. R..... 41, 141	Punishment 28	Rust 149
Map, work-weather 230	Motors 69, 170	Parker, R. R..... 254	Pure Food Act 358, 374	Rutherford, Lord 8, 131, 205, 425
Mapping U. S..... 110, 420	Motram, J. C..... 228	Parker, E. J..... 109	Pyramids—Cholula, Mex. 165	
Maps, ancient..... 225, 234, 253	Mt. Wash. Observ. 97, 109, 273	Particles 30, 68, 123, 180, 181	Quantitative analysis 45	
Marconi, Guglielmo 19, 63, 147	Movies—psych. effect..... 206	Patterson, R. U..... 234	Quantum mechanics..... 250, 325	
"Marine fire" 190	"M" rays 40	Paul, Dutches Friedrich 309	Quantum theory 148	
Maris, H. B..... 375	Mud-dauber 285	Pauli, W..... 148, 250	"Quasi-optical" waves 147	
Markey, Frances V..... 118	Mueller, H. K..... 174	Paulson, J. D..... 372	Quicklime 190	
Marmosets 33, 40	Muelleried, Frederick 136, 217	Pearce, J. E..... 333	Rabbit tick 254	
Marquina, Ignacio 139	Mulder, Arthur G..... 122	Pearl, Raymond 276	Rabies 281	
Marriage 215, 367	Mummies, Texan 1, 15	Pearson, Fred 419	Rabies—Croatan 52	
Mars 27, 391	Murphy, G. M..... 149	Peary, R. E..... 182	Racial mixture 248	
Marsh, Edward B..... 108	Murphy, James B..... 361	Pease, Francis G..... 419	Racial types 99	
Martin, Lillian J..... 315	Muscle power—flying 137	Pease, Francis K..... 108	Radiant energy 15	
Mason, John Alden 149	Muscles 152, 185, 346	Peat, ammoniated 169	Radiation, cosmic rays 68, 72, 179	
Mass and energy 3, 10	Muscular development 152	Pedestrians 361	Radiation, invisible 5	
Maternal deaths 360	Mus. of Sci. and Indus. 278	Peking Man 85, 90, 229	Radiations..... 5, 40, 68, 99, 153	
Maternal reaction 284	Mushrooms 61, 152	Pelicans, white 136	Radiation..... 147, 170, 373, 389	
Mathematics 397	Mutation—seeds 239	Peltier, Leslie C..... 132, 262	Radio beacon 330, 341	
Mather, Stephen T..... 41	Mutis, José Celestino 135	Perkins Observatory..... 49, 56	Radio transmission—dis- tance 19	
Matter 8, 148	Muzey, Dorothy M..... 398	Perrott, G. St. I..... 282	Radio tubes 137	
Matz, Philip B..... 153	Naismith, R..... 170	Personality by weight..... 289	Radio waves 19, 147, 345, 372	
Mauna Loa 377	Names, mineral—standard 137	Personality type 295	Radiology 221	
Mawson, Sir Douglas..... 41, 183	National Acad. of Sciences 147	Peru—archaeology 149	Radium 40, 228, 259, 384	
Max, Louis W..... 184	National monuments 93, 173	Petrie, Sir Flinders 56	Rainbow 67	
Maxwell, Clark 148	National Park Service..... 41	Petterson, Otto 319	Rajewsky, Boris 40	
Mayas—archaeology 5, 15, 88, 138, 139, 154, 179, 180, 206, 213, 223, 300	National parks 41, 169, 173, 191, 277	Pettit, Edison 5	Raleigh, Sir Walter 52	
Mayne, Bruce 244	Nature—poetry 206	Pfund, A. H..... 261	Ram 373	
Means, J. H..... 101	Navashin, M..... 239	Phalen, H. R..... 233, 260	Ramazzini, Bernardino 296	
Measurement, electrical 40	Nebanderthal man 85	Phenix, J. D..... 307	Ranson, S. W..... 392	
Measurements, psychologi- cal 100	Nebulae 211, 382	Phonograph voices—ani- mals 247	Ratcliffe, Herbert L..... 168	
Measurements, scientific..... 123, 124	"Negatron" 180	Phosgene 153	Ratcliffe, J. A..... 19	
Medicine 88, 188, 234	Negroes—Amer. 29, 398, 422	Phosphorus 99	Rats 180, 399	
Meetham, A. R..... 148	Neher, H. V..... 135	Photoelectric cell 69, 75, 109, 188	Raw materials—uses 280	
Meinardus, W..... 186	Neill, T. T..... 38	Photographic lab.—cuts 37, 38	Rayon 301	
Melons 163	Nelson, E. M..... 120	Photographs 131	Reactions, chemical 205, 217	
Men—ages of 85	Nerve, auditory 339	Photons 68, 174	Reagents, chemical 217	
Mendizabal, Miguel 117	Nervous diseases 57	Physics 250, 419, 425	"Reductin" 296	
Mental diseases 5, 40, 57, 140, 292	Nervous system 9, 198	Physics—nomenclature 180	Reed, Walter 234	
Mental hygiene 55	Neutron, double weight..... 131	Physique, American 4	Reflector 120	
Mental training 9	Neutrons 10, 30, 121, 131, 205, 220, 228, 311	Picard, Auguste 245	Refrigerators, electric 197, 285	
Menzel, Donald H..... 293, 360	Newcomet, William S..... 246	Picture writing—Mayas..... 206	Reich, John 281	
Mercury arc photograph..... 161, 172	Newson, H. W..... 131	Pierce, Eunice 222	Reichstein, T..... 168	
Merriam, John C..... 124, 147	Niagara Falls—noise 199	Pierce, Willis C..... 222	Reid, E. D..... 56	
Mesopotamia—archaeology 117	Nicholson, Seth B. 5, 276, 307	Piltown man 85	Reindeer 247	
Metal films 261	1933 HH 307	Pipe line 426	Reinmuth, Otto 217	
Metal—smoothness 75	Nisley, H. A..... 152	Pisa, Leaning tower..... 26, 27	Re'is, Piri 253	
Metallurgy, ancient 117	Nitrogen 102, 169, 202	Pitcher-plants 102	Relativity 10, 121, 136, 153, 325	
Metals—corrosion 171	Nobel Prizes 275, 323	Pithecanthropus..... 85, 90, 229	Research—aeronautics 280	
Metals—testing 75	Noble, Ralph A..... 57	Plague, bubonic 180	Research—biological 123	
Metals—unbreakable 137	Noguero, Eduardo..... 56, 68, 138, 139	Plague, China 254	Research—scientific 31, 35, 36, 37, 38, 51, 61, 94, 95, 110, 187, 229	
Metcalf, Woodbridge 111	Noise—tests 198	Planck, Max 250	Resources, natural 108, 121, 154, 212	
Meteor shower 70, 155, 156, 259, 298	Northrop, John H..... 420	Planetariums 29, 68, 291	Rheumatic diseases 324	
Meteorology 108, 186, 197	Northwest Res. Found. 280	Planets..... 27, 73, 136, 168, 216	Rhoads, Jesse F..... 172	
Meteoroids 155, 348	Nova Ophiuchi Nov. 3 132	Plants 132, 189, 202, 205, 219, 302	Rhythm 186, 398	
Methylene blue 55, 221	Nutrition 4, 220, 223	Plants—carnivorous 102	Richardson, George B. 37, 38	
Metzner, Jerome 361	Oak, bur 168	Plants—collection 135	Richelieu, Cardinal 54	
Mexico—archaeology 5, 15, 51, 52, 56, 84, 88, 138, 139, 165, 175, 176, 179, 180, 300	Oats—crayons 104	Plants—diseases 169, 238	Richey, George W..... 120	
Mexico—race 248	Observatories, Astronom. 49, 56, 73, 123	Plants, insectivorous 170	Riddle, Oscar 421	
Meyer, K. F..... 173, 174	Observatories—McDonald 112, 113, 123	Poincaré, H. M..... 147	Ringworm 196, 222	
Michelson, Truman 357	Observatories—Mt. Wash. 97, 109	Poisons 88	Ritter, William Emerson..... 62	
Microclimatology 244	Observatories—U. S. Naval 115, 120	Pokeberry 95	Rivets 105	
Micron 123	Occupational testing 76, 77, 148	Polhamus, Loren G..... 200		
Microscope, new 252	Ocean heat 108	Policemen 40		
Microvivarium..... 209, 214, 215	O'Donnell, Ed..... 238	Pollen 200, 205		
		Pollock, Harry E. D..... 213		
		Pomeroy, C. M..... 367		
		Pomeroy, L. H..... 175		
		Population-classes 277		
		Population—U. S. 213, 314, 315		
		Portevin, Albert 75		

"Servo-mechanism"	69	Steggerda, Frederic R.	122	Trees—diseases	104, 169, 179	Vitamin C—synthetic	168	White spot—Saturn	115, 136, 163
Settle, T. G. W.	359	Steinach Eugen	345	Trees, petrified	173	Vitamin D	155, 184	Whitehead, J. B.	381
Setzler, Frank M.	15, 307	Sterilization	295	Troxell, H. C.	107	Vitamin G	375	Whitehead, H. Beckwith	259
Sex and family	164	Stern, O.	120	Truck drivers	281	Vitamins	253	Whitney, M. O.	25
Sex control—test	204	Sterol ring	184	Tuberculosis	9, 67, 124, 233, 345, 392	Vocubulary	191	Whitney, R. W.	171
Shackleton, Sir E. H.	183	Stetson, Harlan T.	56, 373	Tubes, glass	137	Vocational guidance	77	Whooping cough—vacci-	92
Shambaugh, George E., Jr.	376	Stevens, H. P.	109	Tugwell, Rexford	116	Volcanoes 140, 156, 169, 377	202	Whorf, Benjamin Lee.	154
Shapley, Harlow 132, 262, 310	121	Stevenson, D. H.	83	Tule tree	21	von Liebig, Justus	202	Wilhelm, Glenn P.	125
Shear, M. J.	93	Stewart, John Q.	72	Tumors	5, 361	Von Schrenk, Herman	21	Wilkes, Charles	183
Shetrone, H. C.	220, 253	Stieglitz, Julius	188	Tumors, plant	238	Voss, John	121	Wilkins, Sir Hubert 182, 183	183
Sherman, H. C.	54	Stirling, Matthew W.	291	Tung, K. Z.	312	Voss, W. C.	25	Williams, Jessamine C.	72
Sherman, Mandel	54, 76	Stock, Chester	343	Turkeys	344	Vysotsky, A. N. 47, 121, 136	131	Williams, L. L.	244
Shkvarnikov, P.	239	Stomach	20, 109, 211	Turrentine, J. W.	154	Walke, Harold	42, 58, 59	Williams, Roger J.	195
Shoes	333	Stone age man	85	Turtle	180	Wallace, Alfred R.	36, 37, 38, 127	Willis, John E.	115
Shopping	255	Stone blades	190	Twins, identical	10, 230	Wallace, Henry A.	24	Wilson, D. A.	89
Shoreline—protection	101	Stone decay	20	Typewriter script	313	Wallace's line	42, 43, 44, 58, 59	Wilson, Woodrow	124
Shrine, China	312	Storks—Germany	217	Tyzer, Ernest Edward.	344	Walston, H. D.	227	Winchmann, H. J.	381
Siam—fauna	25	Storms	170, 355	Uhlenbeck, Geo. E.	250	Walton, E. T. S.	10	Winds	108, 185
Silicosis	67	Storms—synthetic	101	Ulcers—stomach	20	Walton, W. R.	260	Windsor, A. L.	296
Simmons, James S.	172	Stout, William B.	158	Ultraviolet filters	261	Wantz, J. B.	227	Wisconsin, Univ. of	311
Simpson, George G.	328	Stratosphere 148, 241, 245, 359	308	Ultraviolet light	155, 156, 222, 398	War	35, 153, 190, 419	Wood—protection	136
Simanthropus	85, 90	Streamlining	281, 308	Ultraviolet radiation 153, 375	375	Ware, R.	384	Wood, H. E.	73
Sirius	47, 67	Struve, Otto	122, 123, 136	Uncertainty principle	72	Washburn, E. B.	149	Wood, R. W. 261, 388, 425	389
Sirius—companion	121, 136	Students, college 191, 216, 231	231	Underground distillation	281	Wasmund, Erich	373	Woodruff, A. M.	83
Skeel, Madga Skalet	185	Students—examination	200	Unemployment	57, 187, 355, 420	Wasp	285	Woodward, Sir Arthur S.	90, 93
Skeletons—dinosaur	216	Students—grades	184	Unger, Leon	200	Water	28, 107, 131, 424	Woolley, C. L.	173
Skellert, A. M.	72	Sturgeon	175	U. S. Bureau of Standards 31	31	Water-lily	16, 17, 30	Wooster, L. D.	361
Skin—texture	57	Submarines	111	U. S. Employment Service 148	148	Water supply	107, 108, 168	Work—efficiency	201
Skin—diseases	196, 228	Succulents, leafy	193, 201	U. S. Intern'l Counc. of	92	Waters, C. E.	423	"Working" weather	244
Skull, turquoise-covered	84	Sulfur	27	Scient. Unions	92	Waters, Ralph M.	282	Work-weather map	230
Sky-writing	101	Sulfur dioxide	25	U. S. Public Health Serv-	36, 37, 38	Watersheds	107	Wren, Christopher	20
Slater, John C.	250	Sulfuric acid	169	ice—cuts	36, 37, 38	Watkins, W. G.	422	Wright, George M.	173
Sleep	249, 294, 392	Summer	8, 106	Universe	83, 135, 201, 211, 341	Watson, Goodwin	100	Wright, Irving S.	88
Sleep—children	119	Summer school—jungles	10	Unterberger, F.	204	Watts, Oliver P.	171	Wright, W. H.	115
Sleeping sickness—St. Louis	141, 163, 172, 173, 174, 185, 207, 244	Summer, Francis B.	88	Urey, Harold C. 149, 181, 388	149, 181, 388	Waves	101	X-ray photographs	9
Sleepy drivers	281	Sun	293, 377	Utterback, C. L.	393	Waves, radio	147	X-ray, pressure exper.	12
Slepian, Joseph	172	Sun—temperature	116	Vaccine—smallpox	83	Waves, submarine	319	X-ray tube	227, 228
Slime-molds	270	Sun worshippers—Carnac	86	Vaccine—whooping cough 92	92	Weapons	125	X-rayed water	249
Slipher, E. C.	115	Sunspots 25, 276, 307, 343, 373	373	Vaccines, disks in	202	Weather	8, 9, 67, 165, 197, 343, 371, 376, 390	X-rays 12, 40, 99, 222, 228, 227	423
Slipher, V. M.	27	Surgery	5, 125	Vacuum tube amplifiers	69	Weather—Antarctic infl.	186	X-rays—cancer	227
Sloth, ground—fossil	217	Surveying	110	Valerian	234	Weather—forecasting	25, 308	X-rays—low-voltage	232
Slye, Maud	52	Swann, W. F. G.	68	Van Biesbroeck, George	123, 136, 259, 284	Weather hints, hot	106	X-rays—lung diseases	233
Small, John K.	249	Swanton, John R.	52	Van de Graaff, Robert J. 364	364	Weather stations	197	X-rays—negative	99
Smallpox	83, 356	Swingle, J. W.	245	Van Vleck, John H.	250	Weaver, J. E.	168	X-rays—positive	99
Smith, C. W.	153	Swiss Lake Dwellers	86	Vansell, G. H.	422	Weeds	95, 110, 131, 132, 422	X-rays—public health	221
Smith, David T.	8	Sykes, W. Stanley	296	Vega, Luis Rosado	300	Wegener hypothesis	84	Yarmanhook, Engineer	281
Smith, Hugh M.	25	Syverson, Jerome T.	61	Venus	70, 391	Weight, children's	313	"Yarovization"	309
Smith, Margaret G.	185	Talkie films	329	Venus' flytrap	103, 170	Weight-reducing	396	Yellow fever	234
Smith, Sidney Kinnear.	231	Tanks	111, 152	Verder, Elizabeth	380	Welding	111, 426	Yellowstone National Park	53
Smith, Theobald	312	Tapeworm	427	Vibrations	153, 188	Wells, Lloyd L.	25	Yust, Arthur A.	247
Smoke, frozen	101	Tarpon	232	Virus—smallpox	83	Wendel, W. B.	55	Zeiss, Carl	68
Smoking	296	Taylor, C. V.	249	Viruses, filterable	141, 185	West, Clarence J.	217	Zero	181
Smoothness determinations	75	Taylor, Hugh S.	245	Vision	186	Whelpton, P. K.	314	Zinc carbonate	109
Snail	391	Taylor, Lauriston S.	221	Vitamins	20, 196, 227	Whipple, Fred L.	284	Zinc plating	107
Snakes	361	Teeth	75	Vitamin C	174	Whistling jugs	149	Zoological differences 42, 25	58
Snapdragons	217	Tektites	329	White, E. L. C.	19	White, E. L. C.	19	Zoology—expedition	26
Snobgrass, R. E.	326	Telephones	232	White, L. T.	170	White pine disease	169, 300	Zwick, Karl G.	41, 46
Snodobol, W. A.	137	Telescopes	49, 56, 113, 120, 122, 123	White, Ralph K.	200				
Sodium bicarbonate—sex	204	Tell Asmar—archaeology	173						
Sodium—cancer treatment	121	Temperature	4						
Sodium vapor light	280	Temperature differences	233						
Sodom	184	Temperature—sun	116						
Soil erosion	83	Temperatures, low	181						
Soil—Switzerland	46	Tennessee Valle	283						
Solar eclipse	126	Tension structure	73						
Solar heat	116	Test chamber	245						
Solar radiation	25	Tests, mental	9						
Solids	181	Tests, occupational	76						
Soltan, A.	220, 228	Tests, psychological	204, 206						
Solvent	342	Texas—archaeology	1						
Somerville, A. A.	219	Theater—Minturno	246						
Sommerfeld, Arnold	250	Thermite reaction	39						
Sorokin, Pitirim A.	419	Thibaud, Jean	262						
Sound	153	Thinking, oral	200						
S. America—archaeology	31	Thom, W. T., Jr.	285						
South Pole—expeditions	182	Thomas, J. O.	249						
Soviet ascension 241, 245, 259	259	Thompson, Ben H. 136, 173	173						
Soviet social system	21	Thompson, J. Eric 206, 36	223						
Spain—archaeology	232	Thompson, L. R.	36						
Spectra	181	Thompson, Warren S.	314						
Spectroscope	10, 67	Thomson, Sir J. J.	99						
Spectrum	132, 149, 181	Thon, M. N.	30						
Spedding, Frank H.	181	Thor, Esther K.	255						
Speed	387	Thrupp, Thomas C.	20						
Spence, Kenneth W.	186	Throxine	335						
Spencer, Arthur Coe	37, 38	Tide	108, 109						
Sperry, Charles C.	222	Tietz, Esther Bogen	284						
Spiders	41, 195	Tin plating	107						
Spleen	9	Ting, V. K.	90						
Sprays	118	Tires	104, 187						
Spreading factor	292	Tobacco	122						
Stafford, O. F.	342	Todd, Charles	126						
Stagner, Ross	204	Todd, T. Wingate	4						
Stammering	201	Toll, Roger W.	284						
Standards—U. S. commer-	78	Tomatoes	14, 24, 297						
Stansel, R. H.	203	Tongue—vaccination	281						
Star story	6, 70, 150, 218, 298, 362	Tools	28, 184						
Star temperatures	380	Town planning, ancient	173						
Stars	5, 47, 68, 136, 200	Toxoid—diphtheria	75						
Stars—brightness measured	47	Tozzer, Alfred M.	154						
Stars, variable	5, 132, 232	Tractors	153						
Statuary	371	Train—ball bearing	281						
Stead, William H.	148	Transmission, radio	19						
Steam vent	169	Transmutation	8						
Steamship	65	Travis, Lee Edward	201						
Steavenson, W. H.	115	"Treasures of Carniola"	309						
Stebbins, Joel	383	Tree ring	376						
Steel	73	Trees	152, 159, 169, 261, 381, 384						

ERRATA. Vol. XXIV, Nos. 638-664, July-Dec., 1933

PAGE	TITLE BEGINS	CORRECTIONS
29	New York	Head—Fourth for Third. Line 7—Same. Line 11—After Philadelphia insert and contracts have been awarded for a third in Los Angeles.
40	Lively Young	Line next to last—After usual insert South American.
41	Twelve-Legged	Par. 3, line 6—arthropoda for anthropdae. Par 5, line 2—same.
54	Teach Children	Second bank of head—Precept for Percept.
70	Venus Enters	Col. 3, line 18—western for eastern; third line from bottom, star for planet.
72	Uncertainty	Par. 3, line 8—velocity for position.
82	Do You Know?	Line 1—About 5,000 for two hundred.
105	Physicists Seek	Col. 2, line 10—Dr. W. for Dr. A.
115	Spot Larger	Par. 3, line 7-3 for 5. Col. 3, last par.—delete being and rest of sentence.
117	Iron Blade	Head—Millennium for Millennium.
149	Dead Seas	Line 6—E. W. for E. B.; line 17—Palestine for Asia Minor.
153	New Relativity	Delete last sentence.
186	Waltz Time	First part last sentence—Although the three-four time was preferred, the fox trot time was better. . .
192	First Glances	Classification—Podiatry for Podiatry.
207	First Glances	Last line—Wave for Ware.
208	First Glances	Col. 1, Par. 2, line 2—Indexing for index; Par. 4, line 2, Ballou for Ballon.
218	Saturn Rules	Col. 2, last par.—Delete words within parentheses.
234	Yellow Fever	Col. 3, line 11—thirty-three for thirty; 4th line from end, same.
242	Do You Know?	Par. 3—After cells insert per cubic millimeter of blood.
245	1933 Bad	Line 1—Begin sentence Principal damage from grasshoppers was completed in August, Dr.
253	Milk Seen	Head—After as insert Fairly. Par. 2, line 4—pointed out for declared.
297	Male of	Line 1—New York Zoological Society for American Museum.
335	Thyroxine	Line 6—C. R. for C. H.
335	Aluminum-Coated	See SNL, Dec. 30, p. 423.
358	Bill Would	Par. 2, line 4—Harvey W. for Harvey B.
360	Eyeball Does	Line 2—used to be