THE SCIENTIFIC MONTHLY

EDITED BY J. McKEEN CATTELL

CONTENTS

The Evolution of the Stars and the Formation of the Earth.			
Dr. William Wallage Campbell	•	•	. 1
The History of Fiji. Dr. ALFRED GOLDSBOROUGH MAYER		•	. 18
War Selection and the Ancient World. Chancellor DAVID STA	ler J	ORDA	N 86
Anti-suffragists and War. Dr. Elsie Clews Parsons .	•	•	. 44
An Interpretation of Slavophilism. ARTHUR D. REES .	•	•	. 47
Physical Training as Mental Training. Dr. J. H. MoBerde	•	•	. 56
Edward Jenner and Vaccination. Professor D. Fraser Har	RIS	•	. 6 0
The Value of Industrial Research. W. A. HAMOR .		•	. 86
A Few Classic Unknowns in Mathematics. Professor G. A.	Mill	ER.	. 98
The Aboriginal Rock-stencillings of New South Wales.			
Dr. Chas, B. Davenport			. 98
The Progress of Science:			
Paul Ehrlich: Substitutes for War: National Wealth and Taxation; Sci	sientif	le Item	ıs 100

THE SCIENCE PRESS

A LANCASTER, PA.

GARRISON, N. Y.

NEW YORK: SUB-STATION 84

SERGLE NUMBER, 80 CERTS

YEARLY SUBSCRIPTION, \$3.00

THE SCIENTIFIC MONTHLY

EDITED BY J. McKEEN CATTELL

CONTENTS

Papus where the Stone-age lingers. Dr. ALFRED GOLDSBOROUGH MAY	ER 100
Contact Electrification and the Electric Current. Professor FERNAN	DO
Sampord	. 124
On Certain Resemblances between the Earth and a Butternut.	
Professor A. C. LANE	. 132
The Cash Value of Scientific Research. Professor T. Brailsford Ro)B-
ERTSON	. 140
The Physical Michelangelo. Dr. James Frederick Rogers	. 148
The Conservation of Talent through Utilization. Professor JOHN	M.
GILETTE	. 151
War, Business and Insurance. Chancellor DAVID STARR JORDAN .	. 165
The Evolution of the Stars and the Formation of the Earth.	
Dr. William Wallage Campbell	. 177
Progress and Peace. Professor R. M. YERKES	. 195
The Progress of Science:	
The Missouri and the New York Botanical Gardens; The Second Pan-Ameri	can
Scientific Congress: Scientific Items	

THE SCIENCE PRESS

LANCASTER, PA.

GARRISON, R. Y.

NEW YORK: SUB-STATION 84

SESSEE NUMBER, 80 CENTS

YEARLY SUBSCRIPTION, \$3.00

44,100

THE SCIENTIFIC MONTHLY

EDITED BY J. McKEEN CATTELL

CONTENTS

The Inside His	tory of	a G	lreat	Med	lical	Disco	very.	. I	dr. A	RIST	IDE	
AGRAMONTE	•					•	-					209
The Evolution	of the	Star	and	l the	Fo	rmatic	on of	the	Ear	th.	Dr.	
WILLIAM W	ALLACE	CAM	PBEL	L.	•	•	•	•		•	•	238
A Metrical Trag	edy. 1	Or. Jo	s. V.	Cor	LINS	•		•	•	•		256
Adaptation as a	Process	. Pr	ofesso	or H	ARRY	BRA	L To	REY	•			264
Why Certain Pla	nts are	Acri	d. P	rofee	sor `	WILLI	ам R	. Laz	enby			272
How Our Ances	tors we	ere C	ared.	Pre	ofess	or Ca	rl H	OLLI	DAY.	•		278
Eminent Americ	an Nan	106.	LAUE	en l	Hew:	ITT A	HE					283
A Visit to Oenin	gen.]	Profes	sor T	. D.	A.	Cooke	RELL	•		•		287
The Theory and	d Prac	tise (of Fr	rost	Figh	ting.	Prof	66801	ALI	XAX	DER	
McAdie .	•	•	•	•		•		•	•		•	292
The Progress of	Science:	:										
The New York	Meeting	of the l	Nation	al Aca	demy	of Scien	ace; Fr	ederic	k War	d Put	nam;	
Scientific Items	•	•	•	•	•	•		•	•	•		308
Index												308

THE SCIENCE PRESS

A .wo.emp b.

GARRISON, N. Y.

NEW YORK: SUB-STATION 84

SCHOOL NUMBER, 80 CENTS

YEARLY SUBSCRIPTION, \$3.00

INDEX311

INDEX

THE SCIENTIFIC MONTHLY, OCTOBER, NOVEMBER, DECEMBER

NAMES OF CONTRIBUTORS ARE PRINTED IN SMALL CAPITALS

Aboriginal Rock-stencillings of New South Wales, Chas. B. DAVENPORT,

Acrid, Why Certain Plants are, WIL-LIAM R. LAZENBY, 272

Adaptation as a Process, HARRY BEAL TORREY, 264

AGRAMONTE, ARISTIDES, \mathbf{The} Inside History of a Great Medical Discovery, 209

American Names, Eminent, LAUREN HEWITT ASHE, 283

Ancestors, How they were Cured, CARL HOLLIDAY, 278

Ancient World, War Selection DAVID STARR JORDAN, 36

Anti-suffragists and War, ELSIE CLEWS Parsons, 44

ASHE, LAUREN HEWITT, Eminent American Names, 283

Business, War and Insurance, DAVID STARR JORDAN, 165

Butternut, Resemblances to the Earth, A. C. LANE, 132

CAMPBELL, WILLIAM WALLACE, The Evolution of the Stars and the Formation of the Earth, 1, 177, 238 Cash Value of Scientific Research, T.

Brailsford Robertson, 140

Classic Unknowns in Mathematics, A Few, G. A. MILLER, 93 COCKERELL, T. D. A., A Visit to Oeningen, 287

COLLINS, Jos. V., A Metrical Tragedy,

Conservation of Talent through Utilization, John M. Gillette, 151 Contact Electrification and the Electric Current, FERNANDO SANFORD, 124

DAVENPORT, CHAS. B., The Aboriginal Rock-stencillings of New South Wales, 98

Earth, Formation of the, and the Evolution of the Stars, WILLIAM WALLACE CAMPBELL, 1, 177, 238; Resemblances between it and a Butternut, A. C. LANE, 132

Edward Jenner and Vaccination, D. FRASER HARRIS, 66

Ehrlich, Paul, 100

Electric Current and Contact Electrification, FERNANDO SANFORD, 124

Eminent American Names, LAUREN HEWITT ASHE, 283

Evolution of the Stars and the Formation of the Earth, WILLIAM WAL-LACE CAMPBELL, 1, 177, 238

Few Classic Unknowns in Mathematics, G. A. MILLER, 93

Fiji, A History of, ALFRED GOLDSBOB-OUGH MAYER, 18

Frost Fighting, Theory and Practise of, ALEXANDER MCADIE, 292

GILLETTE, JOHN M., The Conservation of Talent through Utilization, 151

HAMOR, W. A., The Value of Industrial Research, 86

HARRIS, D. FRASER, Edward Jenner and Vaccination, 66

History of Fiji, Alfred Goldsborough MAYER, 18

HOLLIDAY, CARL, How our Ancestors were Cured, 278

Indebtedness, Public, and National Wealth, 102 Industrial Research, Value of, W. A.

Намов, 86

Inside History of a Great Medical Discovery, Aristides Agramonte, 209 Insurance, Business and War, DAVID STARR JORDAN, 165

Interpretation of Slavophilism, ARTHUR D. REES, 47

Jenner, Edward, and Vaccination, D. FRASER HARRIS, 66

JORDAN, DAVID STARR, War Selection in the Ancient World, 36; War, Insurance and Business, 165

LANE, A. C., On Certain Resemblances between the Earth and a Butternut, 132

LAZENBY, WILLIAM R., Why Certain Plants are Acrid, 272

McAdie, Alexander. The Theory and Practise of Frost Fighting, 292 McBride, J. H., Physical Training as

Mental Training, 56

Mathematics, A Few Classic Unknowns | Rock-stencillings, Aboriginal, of New in, G. A. MILLER, 93

MAYER, ALFRED GOLDSBOROUGH, A History of Fiji, 18; Papua where the Stone-age lingers, 105

Medical Discovery, A Great, The Inside History of, ABISTIDES AGRAMONTE,

Mental Training, as Physical Training, J. H. McBride, 56

Metrical Tragedy, Jos. V. Collins,

Michelangelo, The Physical, JAMES FREDERICK ROGERS, 148 MILLER, G. A., A Few Classic Un-knowns in Mathematics, 93

Missouri and New York Botanical Gardens, 202

National. Wealth and Public Indebtedness, 102; Academy of Sciences, New

York Meeting, 303 ew, South Wales, The Aboriginal Rock-stencillings of, Chas. B. Dav-New, South ENPORT, 98; York, and Missouri, Botanical Gardens, 202

Oeningen, Visit to, T. D. A. COCKERELL, 287

Pan-American Scientific Congress, 205 Papua where the Stone-age lingers, ALFRED GOLDSBOROUGH MAYER, 105 Parsons, Elsie Clews, Anti-suffragists and War, 44

Progress, Peace, and ROBERT M. YERKES, 195

Physical, Michelangelo, JAMES FRED-ERICK ROGERS, 148; Training as Mental Training, J. H. McBride, 56 Plants, Certain, Why they are Acrid, WILLIAM R. LAZENBY, 272

Putnam, Frederick Ward, 305

REES, ARTHUR D., An Interpretation of Slavophilism, 47

Research, Industrial, Value of, W. A. HAMOR, 86; Scientific, Cash Value of, T. BRAILSFORD ROBERTSON, 140 Resemblances between the Earth and a

Butternut, A. C. LANE, 132 ROBERTSON, T. BRAILSFORD, The Cash Value of Scientific Research, 140

South Wales, CHAS. B. DAVENPORT,

ROGERS, JAMES FREDERICK, The Physical Michelangelo, 148

SANFORD, FERNANDO, Contact Electrification and the Electric Current, 124 Science, The Progress of, 101, 202, 303
Scientific, Items, 104, 208, 306; Research, Cash Value of, T. BrailsFORD ROBERTSON, 140; Congress, Second Pan-American, 205

Slavophilism, An In ARTHUR D. REES, 47 An Interpretation of,

Stars, The Evolution of the, and the Formation of the Earth, WILLIAM WALLACE CAMPBELL, 1, 177, 238 Stone-age, Papua, where it lingers, AL-FRED GOLDSBOROUGH MAYER, 105

Talent, Its Conservation through Utilization, JOHN M. GILLETTE, 151 Theory and Practise of Frost Fighting, Alexander McAdie, 292 TORREY, HARRY BEAL, Adaptation as a Process, 264

Unknowns, Classic, in Mathematics, G. A. MILLER, 93

Utilization, Conservation of Talent through, JOHN M. GILLETTE, 151

Vaccination, Edward Jenner and, D. FRASER HARRIS, 66

Value of Industrial Research, W. A. HAMOR, 86

Visit to Oeningen, T. D. A. COCKERELL, 287

Progress and Peace, ROBERT M. YERKES, War, Selection in the Ancient World, DAVID STARR JORDAN, 36; and Antisuffragists. ELSIE CLEWS PARSONS, 44; Substitutes for, 101; Business and Insurance, David Stark Jordan, 165

Wealth, National, and Public Indebtedness, 102

Why Certain Plants are Acrid. WIL-LIAM R. LAZENBY, 272

YERKES, ROBERT M., Progress and Peace, 195

The Scientific Monthly

Entered as second-class matter October 1, 1915, at the post office at Lancaster, Pennsylvania. under the Act of March 3, 1879

THE SCIENTIFIC MONTHLY is conducted on the editorial lines followed by THE POP-ULAR SCIENCE MONTHLY since 1900. It publishes as the THE POPULAR SCIENCE MONTHLY published, articles appealing especially to educated readers as opposed to purely popular matter intended for the public generally, and for such a journal THE SCIENTIFIC MONTHLY appears to be the more fitting name. The editorial management, publication department and typographical form are the same as have characterized THE POPULAR SCIENCE MONTHLY during the past fifteen years, and have made it an important agency for the advancement and diffusion of science.

CONTENTS OF THE OCTOBER NUMBER OF THE SCIENTIFIC MONTHLY

The Evolution of the Stars and the Formation of the Earth. Dr. William Wallace Campbell.

The History of Fiji. Dr. Alfred Goldsborough Mayer. War Selection and the Angient World, Chancellor David Starr Jordan.

Anti-suffragists and War. Dr. Elsie Clews Parsons. An Interpretation of Slavophilism, Arthur D. Rees. Physical Training as Mental Training. Dr. J. H. McBride.

Edward Jenner and Vaccination, Professor D. Fraser Harris.

The Value of Industrial Research. W. A. Hamor.

A Few Classic Unknowns in Mathematics. Professor G-A. Miller.

The Aboriginal Book-steneillings of New South Wales. Dr. Chas. B. Davenport.

The Progress of Science:

Paul Ehrlich; Substitutes for War; National Wealth and Taxation; Scientific Items.

CONTENTS OF THE NOVEMBER NUMBER THE SCIENTIFIC MONTHLY

Papus where the Stone-age lingers. Dr. Alfred Goldsborough Mayer.

Contact Electrification and the Electric Current. Professor Fernando Sanford.

On Certain Resemblances between the Earth and a Butter-nut. Professor A. C. Lane.

The Cash Value of Scientific Research. Professor T. Brailsford Robertson.

The Physical Michelangelo. Dr. James Frederick Rogers. The Conservation of Talent through Utilization. Professor John M. Gilette.

War, Business and Insurance. Chancellor David Starr Jordan.

The Evolution of the Stars and the Formation of the Earth.
Dr. William Wallace Campbell.

Progress and Peace. Professor R. M. Yerkes.

The Progress of Science:
The Missouri and the New York Botanical Gardens The
Second Pan-American Scientific Congress; Scientific Items.

The MONTHLY will be sent to new subscribers for six months for One Deliar.

SUBSCRIPTION ORDER

To THE SCIENCE PRESS.

Publishers of THE SCIENTIFIC MONTHLY.

Sub-Station 84. New York City.

Please find enclosed check or money order for three dollars, subscription to THE SCIENTIFIC MONTHLY for one year, beginning December. 1915.

N ame		
	Address	

Single Number 30 Cents

Yearly Subscription, \$3.00

THE SCIENCE PRESS

Lancaster, Pa.

Garrison, N. Y.

Sub-Station 84; New York