



THE



SUCCESS LIBRARY



DR. ORISON SWETT MARDEN

EDITOR-IN-CHIEF

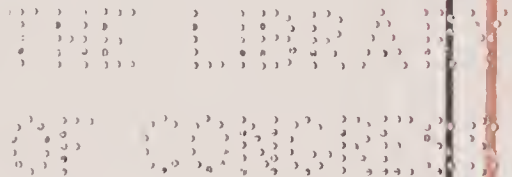
GEORGE RAYWOOD DEVITT, M. A.

MANAGING EDITOR

THIRTY VOLUMES

VOLUME TWENTY-EIGHT

ENCYCLOPÆDIA OF BUSINESS; BIOGRAPHICAL DICTIONARY; WORLD'S
HISTORY AND GAZETEER; COMPENDIUM OF GENERAL INFOR-
MATION—SCIENTIFIC, FINANCIAL, AND STATISTICAL;
WITH READY-REFERENCE INDEX OF SUBJECTS
IN THE PRECEDING VOLUMES



"Knowledge is of two kinds: we know a subject ourselves, or we know where we can find information about it."—DR. JOHNSON.

"All that mankind has done, thought, gained, or been, it is all lying in magic preparation in the pages of books."—CARLYLE.

"Mira quaedam in cognoscendo suavitas et delectatio.—There is a wonderful sweetness and delight in gaining knowledge."—CICERO.

NEW YORK

THE SUCCESS COMPANY

PUBLISHERS

AEG
174

THE LIBRARY OF
CONGRESS,
TWO COPIES RECEIVED
JUN. 2 1902
COPYRIGHT ENTRY
May 13, 1902
CLASS AXXc. No.
32870
COPY B.

COPYRIGHT, 1902,
BY
THE SUCCESS COMPANY

All Rights Reserved

MADE IN
CHINA

ENCYCLOPÆDIC INDEX

A

- A 1.**—A symbol used to class first-class vessels in Lloyd's Register of British and Foreign Shipping. Also frequently used to express general excellence.
- Aachen.**—See AIX-LA-CHAPELLE.
- Ab.**—The fifth month of the Jewish ecclesiastical year, and the eleventh of the civil year. It begins with the new moon of Aug. The 9th of Ab commemorates the destruction of the temple by Nebuchadnezzar.
- Abaco** (*ä'bä-kō*), **Great.**—One of the principal islands of the Bahamas.
- Abatement.**—A reduction or rebate.
- Abbas** (*ab'bas*) **I.**—(1557-1628.) A famous Persian Shah, known as "The Great."
- Abbey, Edwin A.**—(1852-96.) American painter and designer, 3525.
- Abbot, Ezra.**—(1819-84.) An American biblical scholar; was professor of New Testament criticism and interpretation at Harvard University (1872-84), one of the editors of the American edition of Smith's "Bible Dictionary" and a member of the American Committee for New Testament revision; published "Literature of the Doctrine of a Future Life" (1864), "The Authorship of the Fourth Gospel" (1890), etc.
- Abbot, Francis Ellingwood.**—Born at Boston, Mass., 1836. An American philosophical writer, editor of "The Index," a journal of free thought, (1870-80), and author of "Scientific Theism" (1886), "The Way Out of Agnosticism" (1890), etc.
- Abbott, Austin.**—(1831-96.) An American lawyer and legal writer, son of Jacob Abbott; was appointed dean of the faculty of law of the University of the City of New York in 1891, and was the author of "New Cases, Mainly New York Decisions (1877-86)," "Legal Remembrancer" (1887), a series of digests of New York statutes and reports of United States courts, etc.
- Abbott, Benjamin Vaughan.**—(1830-90.) An American lawyer and legal writer, eldest son of Jacob Abbott. He was the author of "A Treatise on the Courts of the United States and their Practice" (1877). "A Dictionary of Terms in American and English Jurisprudence" (1870), etc.
- Abbott, Jacob.**—Clergyman and author; sketch of, 1.
- Abbott, John Stevens Cabot.**—(1805-77.) An American Congregational clergyman and historical writer. He was the author of a "History of Napoleon Bonaparte," a "History of Frederick the Second," "The Mother at Home," "The Child at Home."
- Abbott, Lyman.**—Born at Roxbury, Mass., Dec. 18, 1835. A Congregational clergyman, author and journalist. He has been the editor-in-chief of the "Christian Union," which was changed to the "Outlook" in 1881, and was pastor of Plymouth Church, Brooklyn, from 1888 to 1899, succeeding Henry Ward Beecher. He originally studied law, but abandoned that profession for the ministry in 1860.
- Abbot, Samuel.**—(1732-1812.) A Boston merchant and philanthropist; one of the founders of the Andover Theological Seminary.
- Abbotsford.**—The home of Sir Walter Scott, near Melrose, on the Tweed.
- Abd-el-kader.**—(1807-83.) Algerian general. Captured by the French in 1847. Released by Napoleon III. in 1852.
- Abecedarians.**—A German Anabaptist sect of the 16th century, led by Nicholas Stork, a weaver of Zwickau, which rejected all learning (even the learning of "A-B-C") as a hindrance to religion; professed a special inspiration and predicted the overthrow of existing governments.
- A Becket, Thomas.**—(1118-70.) Archbishop of Canterbury and Chancellor of England. Murdered in the Cathedral in Canterbury, as a consequence of his opposition to the opinions of King Henry II. He was canonized by the Pope, and many pilgrims visit his shrine.
- Abélard, Peter.**—(1079-1142.) A Breton scholar and teacher, celebrated for his romantic love for Héloïse.
- Abencerrages.**—A powerful Moorish tribe of Granada. Exterminated by Boabdil, the last King, who was dethroned by Ferdinand and Isabella, in 1492.
- Abercromby Sir Ralph.**—(1734-1801.) A distinguished British general and commander-in-chief in the West Indies, 1795-97, where he took Grenada, Demerara and Trinidad, and relieved St. Vincent. He was mortally wounded at the battle of Alexandria, between the English and the French.
- Aberdeen.**—Chief seaport of the north of Scotland, near the mouth of the Dee. Pop. 143,722.
- Abib, or Nisan.**—The first month of the Jewish year, corresponding to the month of April.
- Abingdon.**—City in Knox County, Ill. Pop. (1900), 2,022.

- Ableman vs. Booth.**—A celebrated case in which the Supreme Court maintained the constitutionality of the fugitive-slave law of 1850. Booth was tried for violation of the fugitive-slave law before a commissioner appointed by the U. S. district court of Wisconsin, and was ordered to appear before the district court. Upon his failure to do so, he was imprisoned by Ableman, the U. S. marshal for the district, but was released on a writ of habeas corpus, issued by the supreme court of the State. Later, however, he was indicted before the U. S. district court, but was again released by the State supreme court. In 1858 the case came before the U. S. Supreme Court. Booth's plea had been the unconstitutionality of the law, but the court upheld the law, and reversed the decision of the State supreme court.
- Abnaki.**—A confederacy of North American Indians, formerly occupying Maine and the valley of the St. John River, and ranging northwest to the St. Lawrence. After the fall of the French in North America, many of the Abnaki retired to Canada. They number now about 1,600.
- Abner.**—Cousin of Saul, first king of Israel. Slain by Joab.
- Abo.**—A seaport of Finland. The capital of Finland until 1819. Pop. (1898), 35,820.
- Abolitionists.**—Jan. 1, 1831. William Lloyd Garrison began the publication in Boston of a paper called "The Liberator," which advocated the immediate emancipation of slaves in the U. S., regardless of all laws or constitutional provisions to the contrary. At the beginning of the next year he organized the New England Anti-slavery Society, with the right of every slave to "immediate unconditional emancipation" as its chief doctrine. To the members of this society the term "Abolitionists" was applied. In 1833 a similar society was formed in Philadelphia, and from this time the question assumed national importance. Garrison was indicted by grand juries in several Southern states for the promulgation of incendiary literature, and rewards were offered for his conviction. The "New York Weekly Emancipator" was another organ of the Abolitionists. The term "Abolitionists" came to be generally applied to all persons who were opposed to slavery and who advocated its abolishment. Slavery ended during the Civil War, by the proclamation of Abraham Lincoln.
- Abominations, Tariff of.**—In U. S. history, a name given by its opponents to the high tariff act of 1828.
- Aborigines.**—The earliest inhabitants of a country. In America the term is generally applied to the Indians.
- Aboukir** (*a-boo'keer*).—A bay and city in the north of Egypt. Nelson defeated the French fleet in the bay, in what is known as the battle of the Nile, in 1798. In 1799, Bonaparte with 5,000 men defeated a Turkish army of 15,000. In 1801 Gen. Sir Ralph Abercromby, in charge of a British expedition against the French, captured the town.
- Above Par.**—Above equal, nominal, or face value.
- A. B. Plot.**—The name given to an attempt, in 1824, to injure the candidacy of William H. Crawford of Ga., for the presidency. In the early part of that year a series of letters signed "A. B." appeared in a Washington newspaper, charging him with malfeasance in office, as secretary of the treasury. The charges were not sustained and Crawford was exonerated.
- Abraham (Arabic Legend).**—1437.
- Abraham, Plains or Heights of.**—A high plateau near Quebec, Canada, the scene of the battle of Quebec, Sept. 13, 1759, between the English under Gen. Wolfe, and the French under Gen. Montcalm. Both commanders were mortally wounded in the action. By this battle Canada was lost to the French.
- Absinthe, or Wormwood.**—The leaves and tops of *Artemisia absinthium*, a plant of the order Compositæ. An aromatic, bitter tonic, and anthelmintic. It is the basis of a French liqueur called absinthe. The continued use of this liqueur produces epileptiform diseases, which are incurable.
- Absolute, Sir Anthony.**—A character in Sheridan's comedy "The Rivals."
- Abstract.**—A summary of the substance or important parts of a treatise or writing.
- Abt, Franz.**—A German composer, noted chiefly for his songs. Born at Eilenburg, Prussian Saxony, 1819; died at Wiesbaden, 1885.
- Abydos.**—An ancient city of Upper Egypt. Important on account of the discovery there of valuable tablets and other remains of antiquity.
- Abyssinia** is in Eastern Africa. It is mountainous and elevated. The hills enclose fertile valleys, which produce rich crops of coffee, cotton, sugar-cane, grapes, fruits, and timber. Iron ore and salt are the mineral products. Chief exports are ivory and gums. Capital, Adis Abbeba.
- Acacia.**—2839.
- Academy of Arts and Sciences, American.**—A society for the encouragement of art and science, founded in Boston in 1780.
- Academy, French.**—A society having for its object the literary interests of France; the outgrowth of an association which originated early in the seventeenth century, and which was formally established by Cardinal Richelieu in 1635. The Academy includes forty members, who are generally known as the "forty immortals."
- Acadia.**—The former name of the Canadian Province of Nova Scotia, on the Bay of Fundy. It was colonized by the French in 1604, and ceded (with the exception of Cape Breton) to England in 1713. Forty-two years later, the French settlers in the colony were defeated by Britain. Do not confuse this word with Arcadia, which was a Greek grazing or pasture country, lauded by poets—the home of rustic simplicity and plenty, of piping shepherds and coy shepherdesses.
- Acapulco** (*ā-kā-pōl'kō*).—A Mexican seaport. It possesses a very fine harbor. Pop., about 5,000.
- Acarnania.**—A country in Ancient Greece, south of Epirus, separated by the Ambracian Gulf, west

of Ætolia. It forms with Ætolia one of the nomes or divisions of modern Greece.

Accent, in reading or speaking, 3060. The chief accents used are:

The acute accent (´) marks a rising inflection of the voice.

The grave (`) marks a falling inflection.

The circumflex (ˆ) is a combination of both.

The macron (ā) marks a long vowel.

The breve (ă) marks a short vowel.

The diæreses (ä) when placed over the latter of two vowels indicates that the sound of both vowels must be separate, and that the combination is not a diphthong.

Accept.—To agree or to promise to pay.

Acceptance.—The act of receiving a bill of exchange in such manner that the acceptor is bound to pay it.

Accessory.—One who takes part in a felonious act, but is not a principal in the crime. The law in dealing with the offence distinguishes between an accessory before the fact, and an accessory after the fact.

Accipters.—A class of birds distinguished by a hooked bill, strong, short feet, and sharp, hooked claws. It includes the Vulture, Falcon, Owl, and Shrikes.

Accommodation.—A term applied to designate a note or endorsement intended for discount, but which has not been given in payment for goods.

Accrue.—To accumulate, as interest, profits, or losses.

Accrued Interest.—Interest earned to date.

Account.—An entry in a book or on paper, of buying and selling or of payments, services, etc.,

set forth with names of parties concerned, dates, prices, and payments.

Accountant and Bookkeeper.—To become a good and competent bookkeeper and approved (or chartered) accountant, it is essential that one should have a general professional knowledge of accounting business, have a good elementary education, and some acquaintance with commercial law. In most offices employing accountants and bookkeepers, the applicant for a position is expected to know, and is sometimes tested in his knowledge of the following subjects: First, Dictation; second, English Grammar; third, Arithmetic; fourth, Euclid; fifth, Bookkeeping; sixth, Type-writing; seventh, Latin; eighth, French, German, and Spanish. For the higher posts in the profession a knowledge is necessary, in addition to the foregoing, of the Higher Mathematics, Commercial Law, and the duties of an Actuary. In this country, where a young man, as a rule, enters business life at an early age, he is often poorly equipped for even the lower positions in a counting house and office; such seeking these positions and advancement in them, should endeavor strenuously to fit themselves for what may be required of them, especially in the elements and groundwork of education. For mercantile positions, applicants have often been found lacking in this, to their great disadvantage, and ignorant of even the familiar signs and abbreviations made use of in bookkeeping and other commercial occupations and pursuits. For the benefit of such, are appended the more common abbreviations in use by accountants and bookkeepers, to save time and space in their daily work:—

A

@.—At (so much per lb.).
 @/c. or Acc't.—Account.
 A. D. (*Anno Domini*).—In the year of our Lord.
 Agt.—Agent.
 Am't.—Amount.
 Ans.—Answer.
 Apr. or Ap'l.—April.
 Ark.—Arkansas.
 Ass't'd.—Assorted.
 Asst.—Assistant.
 Aug.—August.

B

Bk.—Bank.
 Bal.—Balance.
 B. Rec.—Bills Receivable.
 B. Pay.—Bills Payable.
 Bl.—Bill of Lading.
 Bbl.—Barrel.
 Bds.—Boards (binding).
 Bo't.—Bought.
 Bro't.—Brought.
 Bdls.—Bundles.
 Bgs.—Bags.
 Bu.—Bushel.
 Bls.—Bales.
 B. O.—Buyer's option.
 Bxs.—Boxes.

C

%.—Care of.
 ¢.—Cents.

Cs.—Cases.
 Cap.—Capital.
 Cks.—Checks, casks.
 Chts.—Chests.
 Chg'd.—Charged.
 Clo.—Cloth (binding).
 Co.—Company.
 Cin.—Cincinnati.
 C. O. D.—Collect on Delivery.
 Com.—Commission.
 Const.—Consignment.
 Cr.—Creditor.
 Cts.—Cents.
 Cwt.—Hundredweight.
 Cyc.—Cyclopædia.

D

D.—Pence.
 D. or d.—Dollar.
 D or *Dele.*—Delete, erase, cancel.
 D. G.—(*Dei Gratia*) by God's grace.
 D's.—Days.
 Dan.—Daniel.
 Dec.—December.
 Dep.—Deposit, deputy.
 Dft.—Draft.
 Dis.—Discount.
 Div.—Dividend.
 Doz.—Dozen.
 Dols.—Dollars.
 Do. or Ditto.—The same, the said.
 Dr.—Debtor, doctor.
 Dwt.—Pennyweight.

E

ea.—Each.
 Ed.—Editor.
 e. g.—(*exempli gratia*) For example.
 Etc.—(*Et cætera*) And the rest, and so on.
 E. E.—Errors excepted.
 E. & O. E.—Errors and omissions excepted.
 Edit.—Edition.
 Exch.—Exchange.
 Emb'd.—Embroidered.
 Eng.—English.
 Esq.—Esquire.
 Ex.—Example.
 Exch.—Exchange.
 Exec.—Executor.
 Exp.—Expense or expenses.

F

Fav.—Favor.
 Feb.—February.
 Fig'd.—Figured.
 For'd.—Forward.
 Fcp.—Foolscap (size of paper).
 Fla.—Florida.
 Fol.—Folio.
 F. O. B.—Free on board.
 Fir.—Firkin.
 Fr.—Franc.
 Fr't.—Freight.
 Ft.—Feet.
 Fi. fa.—(*Fieri facias*) Cause it to be done.
 Fur.—Furlong.

G

Ga.—Georgia.
Gal.—Gallon.
Gr.—Grain or gross.
G. P. O.—General post office.
G. B.—Great Britain.

H

Hf.—Half.
Hf.-bd.—Half-bound.
Hhd.—Hogshead.
Hon.—Honorable.
H. P.—Horse-power.
Hdkfs.—Handkerchiefs.

I

Ia.—Iowa.
I. O. U.—I owe you.
I. B.—Invoice book.
Ib. or *Ibid.*—(*Ibidem*) In the same place.
Id. or *Idem.*—The same.
Inf.—(*Infra*) below.
inst.—Instant, present month.
Int.—Interest.
Intro.—Introduction.
Inv.—Invoice, Inventory.
I. e.—(*Id est*) That is.
Ill.—Illinois.
Ind.—Indiana.
Ia.—Iowa.
I. T.—Indian Territory.
ij.—Two (medical).
IV.—Four or fourth.

J

Jan.—January.
J. or Jour.—Journal.
Jno.—John.
Jr.—Junior.

K

Kan.—Kansas.
Ky.—Kentucky.
Kilo.—Kilogramme.

L

L.—Book, Lake, Pound.
Lbs.—Pounds.
Led.—Ledger.
L. F.—Ledger folio.
Lib.—(*Libra*) Pound.
L. S. (*Loco Sigilli*).—The place of the Seal.
Lt.—Lieutenant.
La.—Louisiana.
L. S. D.—Pounds, Shillings, and Pence.

M

M.—One thousand.
Mfa.—Months after date.
Mar.—March.
Mass.—Massachusetts.
Md.—Maryland.
Me.—Maine.
Mem.—Memorandum.
Mich.—Michigan.
Minn.—Minnesota.
Miss.—Mississippi.
Md'lle.—Mademoiselle.
Mme.—Madame.
MM.—Messieurs, gentlemen.
Mdse.—Merchandise.
Mrs.—Mistress.
Mo.—Month.

MS.—Manuscript.
MSS.—Manuscripts.
Mo.—Missouri.

N

N.—North.
N. B.—(Nota bene) Observe.
Mark well, Note book.
N. O.—New Orleans.
No.—Number.
Nov.—November.
N. P.—Notary Public.
N. C.—North Carolina.
N. D.—No date.
N. E.—New England.
Neb.—Nebraska.
Nem. Cou.—(*Nemine Contradictente*) No one contradicting.
Nev.—Nevada.
N. J.—New Jersey.
N. H.—New Hampshire.
N. Y.—New York.

O

Oz.—Ounce.
O. I. B.—Outward Invoice Book.
Oct.—October.
O.—Ohio.
O. P.—Out of print.
Or.—Oregon.
Obdt.—Obedient.

P

pp.—Pages.
P. B.—Pass Book.
Par.—Paragraph.
Pd.—Paid.
Pay't.—Payment.
Per.—By.
Pr.—Pair.
Pcs.—Pieces.
P. S.—(*Post Scriptum*) Post Script.
Pro tem.—(*Pro tempore*) For the time.
Prox.—(*Proximo*) In the next month.
P. T. O.—Please turn over.
P. O. O.—Post office order.
Pa.—Pennsylvania.
Per An.—(*Per Annum*) By the year.
P. C.—(*Per centum*) By the hundred, or Post Card.
Penn.—Pennsylvania.
Pm.—Pmcheon.
Pt.—Pints.
Prem.—Premium.
P. M.—(*Post Meridien*) Afternoon.
Phila.—Philadelphia.

Q

Qr.—Quarter.
Qts.—Quarts.
Q. v.—(*Quod vide*) Which see.
Qy.—Query.

R

R.—(*Recipe*) In prescriptions—Take.
Ry.—Railroad or Railway.
R. I.—Rhode Island.
R. S. V. P.—(*Fr. Repondez s'il vous plait*) Please reply.
R. R.—Railroad.
Rec'd.—Received.
Rec't.—Receipt.
Rt. Hon.—Right Honorable.

S

S. O.—Seller's option.
Sat.—Saturday.
Schr.—Schooier.
S. Caps.—Small capitals (Print).
Shp't.—Shipment.
Str.—Steamer.
Stg.—Sterling.
Sh'p.—Ship.
Sing.—Singular.
Sunds.—Sundries.
S. C.—South Carolina.
S. D.—South Dakota.
Sup.—(*Supra*) Above.
Sp. gr.—Specific gravity.

T

T. O.—Turn over, Telegraph office.
Tenn.—Tennessee.
Tex.—Texas.
Trcs.—Tierces.
Treas.—Treasurer.
Treas'y.—Treasury.

U

Ult.—(*Ultimo*) Last month.
U. S.—United States.
U. T.—Utah Territory.
Ut. Sup.—(*Ut Supra*) As above.

V

V.—Versus.
Va.—Virginia.
Viz.—(*Videlicet*) Namely, to wit.
V. P.—Vice President.
Vt.—Vermont.
Vol.—Volume.

W

Wt.—Weight.
Wis.—Wisconsin.
W. Va.—West Virginia.
Wy. T.—Wyoming Territory.
Whf.—Wharf, wharfage.

X

Xmas.—Christmas.

Y

Yds.—Yards.
Yr.—Year.
Yr.—Younger.
Yrs.—Years.

&. &c.—(*Et*) and (*Et cetera*) and the rest.

4to —Quarto.
8vo.—Octavo.
12mo.—Twelvemo.

℥.—Pound.
\$.—Dollar.
Pr.—Per, by.
".—Ditto (the same).
%.—Per Cent.

#.—Number.
+.—Sign of Addition.
−.—Sign of Subtraction.
×.—Sign of Multiplication.
÷.—Sign of Division.
=.—Sign of Equality.
¼th.—One-fourth.
½.—One-half.
⅓.—One and three-fourths.

Accountant, The.— 5323.

Account Current.— A detailed statement of all debits and credits of an open account between two persons.

Accounting.— The science or profession of the orderly recording of business transactions.

Account Sales.— A statement of merchandise sold on commission.

Acetic Acid.— An acid obtained from the oxidation of spoiled wines and from the destructive distillation of wood. The strongest vinegar contains 5 per cent. of acetic acid. When it assumes a solid state it is called Glacial Acetic Acid.

Acetylene.— A transparent, colorless gas with a pungent odor, formed when coal gas is imperfectly burned in air. Acetylene is readily obtained by treating dry calcium carbide with water, when the gas is copiously evolved. It is inflammable and burns with an intensely brilliant light, which makes it serviceable for lighting purposes.

Achaia (*A-ka'yā*).— North of the Peloponnesus, in Greece, supposed to have been settled about 1330 B. C. It was conquered by the Turks in 1540.

Achelous.— The largest river in Greece, 130 miles long.

Achilles.— See STORY OF THE ILIAD, 1715.

Achilles' Tendon (*Tendo Achilles*).— The ligament which attaches the coelus and gastrocnemius muscles of the calf of the leg to the heel-bone.

Achillæa, or **Milfoil.**— A plant belonging to the Compositæ. It is sometimes called the Yarrow.

Acids, in chemistry are substances which generally have a sour taste, turn blue litmus red and are composed of Hydrogen chemically united with some negative element or radical. They are used extensively in arts and manufactures. Sulphuric acid is probably one of the most useful substances in the world.

Acis and Galatea.— Opera by Händel; composed about 1720.

Acknowledge.— To assent to an act in a legal sense.

Aconcagua.— One of the loftiest peaks of the Andes, 23,000 ft. high.

Acotyledonous plants include the Cryptogams, such as ferns, mosses, lichens, liverworts, fungi, and algæ.

Acoustics.— That branch of physical science which explains the phenomena and laws of sound. (See SOUND.)

Acre.— A seaport in Syria, in the Levant at the head of the Mediterranean Sea. It played an important part in the Crusades and its siege by Richard Cœur de Lion in 1191 is one of the most remarkable events in the Wars of the Cross. It was again besieged in 1799 by Bonaparte's army, which was compelled to raise the siege in 60 days and to retreat.

Acre.— A standard land measure. A square, 12,649 rods, or 69.57 yds., or 208.71 feet on a side, contains one acre. It is composed of 10 square chains, a surveyor's chain being 66 feet. An acre is contained by a rectangle of the following dimensions in rods:—

1 x 160	9 x 17 7-9
3 x 53 1-3	11 x 14 6-7
5 x 32	12 x 13 1-3
7 x 22 6-7	12 1-2 x 12 4-5
	12 13-20 x 12 13-20

There are in an acre 4,840 Sq. Yds.; 43,560 Sq. Ft.

The acre in the United States and that in England are the same. Taking this as 1:— The Scotch is 1.27; the Irish, 1.62; the French Hectare, 2.47; the German Morgen, 0.65; the ancient Roman Jugerum, 0.66 and the Greek Plethron 0.23.

Acrogenous plants, or **Acrogens** (growing at the summit) are those in which the stem grows by a simultaneous development throughout the stem, increasing by elongation at the summit. The class comprises many varieties of palms.

Acropolis.— The high-city, was a name given by the Greeks to the citadel, which usually occupied the highest point within the city. The most noted was the Acropolis at Athens which contained the Parthenon and other famous buildings.

Acrostic.— The name of a number of poetical lines so arranged that the initial letters of the lines form a word or a name. The final letters spell words sometimes also; and sometimes the middle letters of the lines are so arranged. One of the most remarkable acrostics is the formation of the Greek word *ichthys* meaning "a fish," from the initial letters of the Greek word "Jesus Christ, the son of God, the Savior." This is the explanation of the quite common use of the fish as a weathervane on churches.

Action.— A suit or legal process before a court to redress a wrong or enforce a right.

Actium.— A promontory and village at the entrance of the Ambracian Gulf in Acarnania in ancient Greece. Octavius, who succeeded Julius Cæsar as Emperor of Rome, here defeated Mark Antony, his rival, Sept. 2, 31 B. C. After the battle, Antony fled with Cleopatra to Egypt, and his army and fleet surrendered after waiting in vain seven days for his return.

Actuary.— One who is skilled in the management of joint stock associations, or insurance companies.

Adagio.— Slow movement or measure of time in music. 3403.

Adair, James.— An English trader, resident among the North American Indians from 1735 to 1775; author of a "History of the American Indians."

Adam (Arabic Legend).— 1415.

Adam (Koran).— 1740.

Adams, Charles Baker.— (1814-1853.) An American naturalist and geologist.

Adams, Charles Francis.— (1807-1886.) Son of John Quincy Adams, American statesman and diplomatist.

Adams, Charles Kendall.— Born at Derby, Vt., 1835. An American educator and historical writer.

Adams, Fort.— One of the three principal forts in the United States. It mounts 500 guns; situated at the entrance of the harbor of Newport, R. I.

- Adams, John.**—Second President; sketch of, 3.
- Adams, John.**—(1825-1864.) Officer of the U. S. army, serving with distinction in the Mexican War. He was a major-general in the Confederate service in the Civil War; commanded a division of Hood's army in the Tenn. campaign after the fall of Atlanta, and was killed in the battle of Franklin.
- Adams, John Quincy.**—Sixth President; sketch of, 9.
- Adams, Mount.**—1. The second highest summit of the White Mountains (5,819 ft.). 2. A peak of the Cascade Mountains (9,570 ft.).
- Adams, Point.**—A headland of Ore., at the mouth of the Columbia River.
- Adams, Samuel.**—(1722-1803.) An American patriot and statesman; prominent in the Revolution; a delegate to the first Continental Congress, a signer of the Declaration of Independence, and governor of Mass. (1794-97).
- Adams, William Taylor.**—(Pseudonym "OLIVER OPTIC," 1822-1897.) An American writer of fiction, chiefly juvenile.
- Adder's Tongue, The Yellow.**—2920.
- Addison, Joseph.**—(1672-1719); English poet and essayist, and famous contributor to the "Spectator."
- Adler, Felix D.**—A well-known lecturer and author, b. 1851. In 1876 he founded in New York City the Society of Ethical Culture.
- Address, Forms of,** the titles or ceremonious terms, to be used in addressing written communications to people of high or official position. Usage in this country has sanctioned the employment of the following modes of address: *His Excellency, The President of the United States.* Custom has also made proper the use of the prefix *His Excellency* when addressing governors of states, and ambassadors or ministers of the United States abroad. In conversation, or in formal oral address, the term *Mr. President* is used by all to the head of the nation, save by the President's personal or intimate friends. The Vice-president is addressed by letter as *The Honorable, The Vice-president of the United States,* or *The Hon.* ———, *Vice president of the United States.* When the latter is acting as *ex-officio* presiding officer of the Senate, he is addressed by the senators as *Mr. President.* Cabinet officers, senators, and representatives of the United States, judges of state and federal courts, and consuls, are all entitled to the prefix *Honorable,* as *The Hon. Senator S. M. Cullom, The Hon. Mr. Justice,* or *The Hon. Judge Day.* Custom also permits the use of *Honorable* to mayors of cities, as *The Hon. Mayor Low,* or *The Hon. Seth Low, Mayor* of the City of New York.

For church dignitaries the terms of address vary somewhat with the denomination. In the Protestant Episcopal Church, the bishop is addressed *The Right Rev.* ———; in the Methodist Church as *The Rev. Bishop* ———. Clergymen take the title *The Rev.,* or simply *Rev.,* adding any collegiate degrees to which they may be entitled, such as M.A., D.D., LL.D., etc., or in the case of a clergyman who has a doctorate degree, he may be addressed simply: *The Rev.*

Dr. ———. It is bad form, it may be added, to speak or write of a clergyman as *Rev. Blake, Rev. Morgan,* etc. If his Christian name is not known, use invariably the prefix *Mr.* (Mister), as the *Rev. Mr. Blake,* etc. Archbishops are addressed: *The Most Rev.* ———, D.D. (or whatever degree possessed of); while cardinals are addressed *His Eminence* ———. Physicians and surgeons are addressed: *Dr.* ———, or *John Abernethy, Esq., M. D.* Lawyers or private gentlemen may be addressed either ———, *Esq.,* or plain *Mr.* ———.

Where husband and wife are both addressed, it is proper to give the title of the former, followed by the word *Mrs.,* using the given name or initials of the husband; thus: *His Excellency, the President, and Mrs. Roosevelt; Governor and Mrs. Chas. H. Brown;* or *The Hon. and Mrs. John Bigelow.* In the case of scholastic titles or those conferred by universities, they usually precede the name, thus: *Prof. William Jones; Dr. Thomas Brown,* or may follow the name, thus: *Chauncey Depew, Esq., D. C. L.* (Doctor of Civil Law), or ———, *Esq., LL. D.* (Doctor of Laws).

- Adelaide.**—Capital of S. Australia; pop. 140,000.
- Aden.**—A fortified British seaport and coaling and watering station in Arabia, near the Straits of Bab-el-Mandeb, the southern entrance to the Red Sea. A valuable and important station on the way from India to Europe.
- Adirondacks.**—A range of mountains in the north of New York State, between Lakes Champlain and Ontario. Mount Marcy, 5,344 ft., is the highest peak.
- Adjustment.**—A settlement of an account as of a loss by fire or storm.
- Admiral.**—The word was introduced into Europe by the Crusaders in the Middle Ages. The rank of admiral in the U. S. navy, as distinguished from that of vice-admiral and rear-admiral, was established by act of Congress, July 25, 1866. There have been only three admirals in the U. S. navy. David G. Farragut was commissioned in 1866, and David D. Porter in 1870, after Farragut's death. The rank became extinct at Porter's death in 1891, but was revived in 1899 and bestowed upon George Dewey.
- Admiralty Inlet.**—An arm of the sea, on the western coast of the state of Wash., connecting Puget Sound with the Strait of Juan de Fuca.
- Administrator.**—One authorized by a court to have charge of the goods and estate of another who dies without a will.
- Admiralty Island.**—An island west of Alaska, belonging to the United States.
- Admission of States.**—By the adoption of the Declaration of Independence, July 4, 1776, the original thirteen Colonies which formed the Union were created "free and independent states." Several of the Colonies had already changed their original charters and established independent local governments. A resolution was passed Oct. 10, 1780, by the Continental Congress, which provided that western territory to be ceded to the U. S. "shall be settled and formed into distinct

republican states, which shall become members of the Federal Union." The following steps are necessary for the admission of a territory to statehood: (1) A petition to Congress expressing the desire of the people for admission; (2) an enabling act passed by Congress, stating the conditions of admission; (3) the adoption of a constitution and form of state government by a convention of delegates chosen by the people; (4) the ratification of the constitution and the election of state officers by the people; (5) a proclamation by the President that the territory has become a state. The admission of a State to the Union dates from the day on which the act takes effect.

Adonis.—A beautiful youth who in Greek myth was beloved by Aphrodite; he was killed by a boar in the chase.

Adopted Robins, The.—See ANIMAL STORIES, 2731.

Adrianople (the city of Hadrian).—A city in European Turkey, named for its restorer, Emperor Hadrian, who died 138. Population 81,000.

Adriatic Sea.—That part of the Mediterranean Sea which lies between Italy on the west and Austria and Turkey on the east. It is 500 m. long from the Gulf of Otranto on the south to the Gulf of Trieste on the north; its average width is 130 m. The most interesting part of it is that region around Venice. Its depth varies very greatly. In some places it is not more than 12 fathoms deep. Its waters are much more salt than the Atlantic and the rise of tide is very slight.

"**Advance Agent of Prosperity.**"—A political sobriquet applied to William McKinley by his supporters in the presidential campaign of 1896. The people were suffering from great commercial and industrial depression and it was urged by Republicans that the election of Mr. McKinley would bring prosperity to the country.

Advance, The.—The vessel in which Elisha Kane explored the Arctic regions in search of Sir John Franklin.

Ad Valorem.—According to value. Duties imposed upon the value of imported articles and not estimated by weight or number.

Advances.—Goods, supplies, money, or endorsement, furnished on a contract before any equivalent is received.

Advent.—The space of four weeks immediately preceding Christmas. It commences on the Sunday nearest St. Andrew's Day (Nov. 30).

Adventure, The.—(1) The ship of the pirate Captain Kidd. (2) The ship in which Captain King explored the coast of South America (1826-30).

Advertising.—3126.

Advertisement.—The first regular newspaper, "The Certain Newes of this Present Week," published in England in 1622, did not contain advertisements. They first appeared in 1652 in very crude form in the "Mercurius Politicus." The first printing press was brought to America in 1639. In 1704 the first regular newspaper "The Boston News Letter" was published.

Advice.—Notice sent to a person concerning drafts upon him, that he may be ready to pay them.

Advice to the Faithful (Koran).—1748.

Ægean Sea.—Between Greece and Asia Minor and south of Turkey. It is sometimes called the Grecian Archipelago, as it is studded with islands belonging to Greece.

Ægospotami, or Ægospotamos, in the Thracian Chersonese, is famous for the defeat of the Athenian fleet by the Lacedæmonians under Lysander 405 B.C.

Æneid.—The great Latin epic poem which records the wanderings of Æneas from the time of the burning and sack of Troy. It was written about 24 B.C. by Publius Vergilius Maro, who died in 19 B.C. at the age of 51.

Æolia.—In Asia Minor, comprised territory on the mainland and several islands. Mytelene, on Lesbos, was regarded as the Capital.

Æra or Epoch.—Of which the most noted in history, are The Alexandrine, which began in B.C. 5492, The Jewish in B.C. 3760, The Olympiads B.C. 776, Year of Rome (A.U.C.) B.C. 753, Julian Era B.C. 45, Christian Era A.D. 4, Diocletian Era A.D. 284, The Æra of the Hegira (the starting point of the Mohammedan Calendar, commemorative of the flight of Mohammed from Mecca to Medina. A.D. 622.

Æschines.—Grecian orator, at Athens.

Æschylus.—(525-456 B.C.) Father of Greek tragic drama.

Æsculapius.—The Roman tutelary deity of medicine. His worship dates back to 291 B.C.—1609.

Æsop.—1365.

Æthelred (*ath'el rād*), or **Æthelred, II.**, "The Unready" —(968-1016.) King of England.

Ætolia.—A district in northwestern Greece. After the downfall of Athens and Sparta, the Ætolians became the rivals of the Achæans, and were alternately enemies and allies of the Romans.

Affidavit.—A written declaration under oath.

Afghanistan is in the southwestern part of Asia, and on the northwestern border of British India. The north and east are very high, and on the southwest is the elevated plateau of Iran and sandy plains. Climate is healthful. All the products of the temperate zone abound, also asafetida and madder. Fruits are largely exported. Carpets form the chief article of manufacture. Area 279,000 sq. miles, population 4,000,000. Capital, Cabool (Kábul). Each state of Afghanistan is governed by a petty ruler called a "sirdar."

Africa.—The second in size of the three grand divisions of the Eastern Hemisphere, extending from latitude 37° 20' north to 34° 50' south, and from longitude 17° 31' west to 51° 22' east. Its boundaries are the Mediterranean Sea on the north; the Isthmus of Suez, the Red Sea, and the Indian Ocean on the east; the Southern Ocean on the south, and the Atlantic Ocean on the west. The countries bordering the Mediterranean have long been inhabited by nomadic tribes of Moors and Arabs. Egypt contains remains of the most ancient civilization. The Great Desert of Sahara stretches 2,000 miles from east to west and 1,000 miles from north to

south, between the cultivated tract bordering on the Mediterranean and the Soudan. Over a great part of this region rain never falls, and in other parts but rarely. The inhabitants of Africa are chiefly of the Negro race, with Kafirs, Hottentots, Copts, Arabs, Moors, Berbers, and some Europeans. The prevailing religions are Mohammedanism and various forms of paganism, but the missionaries of the Roman Catholic and of the various Protestant churches have in recent years made many converts. Of all that has been written by explorers concerning the interior of the "Dark Continent," its people, vegetation, and animals, the works of David Livingstone and Henry M. Stanley probably convey the best and fullest general information. Most of Africa has been subjugated by European nations and divided among themselves, France and England claiming the largest portions. The area of the continent is about 11,508,793 sq. miles, with an estimated population of 165,000,000. The western coast was for many years ravaged by European slave traders, who captured the natives and sold them in foreign lands.

African Slave Trade.—When the aborigines of America proved too weak for the work in the mines and on the plantations, to which they were subjected by the whites, the Portuguese, who possessed a large part of the African coast, began the exportation of negroes to the New World, in which they were soon imitated by other Old World nations. The first Englishman who engaged in slave traffic was Sir John Hawkins. The first importation of negro slaves was authorized in 1517, and was characterized by extreme cruelty and inhuman treatment. The negroes were placed in the mines of Haiti and Santo Domingo. In 1619 a Dutch vessel brought a cargo of slaves into the James River and twenty negroes were sold to Virginia settlers. In 1713, by the treaty of Utrecht, Great Britain obtained the contract for supplying slaves to the Spanish West Indies. This greatly stimulated the slave trade. Several of the Colonies attempted to prohibit the importation of slaves, but Great Britain forced the trade upon them. Va., Pa., and Mass. passed several acts forbidding the traffic, but they were abrogated by the British Government. It was prohibited by R. I. and Conn. in 1774, and by all the Colonies under the non-importation covenant of Oct. 24, 1774, and was forbidden by nearly all the states during the Revolution. The slave trade was an important question in the framing of the Constitution. The Southern States, except Md. and Va., were strongly opposed to any restriction upon the traffic, and a compromise was finally effected which allowed Congress to prohibit it after 1808. The act of Mar. 22, 1794, prohibited the carrying of slaves from one foreign country to another by American citizens; that of May 10, 1800, allowed U. S. warships to seize vessels engaged in such traffic; that of Feb. 28, 1803, prohibited the importation of slaves into the states that had forbidden

slavery. In 1808 the importation of slaves into the U. S. was forbidden. The acts of Apr. 20, 1818, and Mar. 3, 1819, authorized the President to send cruisers to the coast of Africa to stop the slave trade. As no restrictions were placed upon domestic slave trading before the abolition in 1865, the importation of slaves was continued surreptitiously up to that time.

Agamemnon.—Grecian king, 1715.

Agassiz, Alexander.—Born at Neuchâtel, Switzerland, Dec. 17, 1835. An American zoölogist and geologist. He was director and curator of the Museum of Comparative Zoölogy of Harvard University, Cambridge, Mass., 1874-98.

Agassiz, Jean Louis Rodolphe.—Born at Motier, Switzerland, 1807; died at Cambridge, Mass., 1873. A justly celebrated Swiss-American naturalist, noted especially as a geologist and ichthyologist. He became professor of zoölogy and geology at Cambridge in 1848; and in 1859, curator of the Museum of Comparative Zoölogy. He wrote "Recherches sur les poissons fossiles" (1833-43), "Natural History of the Freshwater Fishes of Europe" (1839-40), "Etudes sur les Glaciers" (1840), "Système Glaciaire" (1847), "Contributions to the Natural History of the United States" (1857).

Agate.—A stone of the quartz family. The chief varieties are: 1, Caledony, 2, Carnelian, 3, Moss agates, 4, Bloodstones, 5, Chrysoprase.

Age, To tell any one's.—Tell a person to put down the number of the month in which he was born, to multiply it by two; then to add five; then to multiply it by 50; then to add his age; then to subtract 365; then to add 115; then to tell you the amount he has left. The two figures on the right will denote the age and the remainder the number of the month in which he was born.

Age of Animals.—According to an old Celtic rhyme, and thus put into modern English:—

"Thrice the age of a dog is that of a horse;
Thrice the age of a horse is that of a man;
Thrice the age of a man is that of a deer;
Thrice the age of a deer is that of an eagle."

Agent.—One employed to act for another; a deputy.

Ages (3 in number).—The age of stone, when implements of stone were employed; the age of bronze, when those of copper or bronze were used; and the age of iron, when implements of iron came in use as now.

Agessilaus.—King of Sparta, 399-360 B.C.

Agincourt.—A village in the department of Pas de Calais in France. On Oct. 25, 1415, Henry V. of England, with 15,000 men defeated the French army of over 50,000 men. The English archers won the battle which lasted three or four hours.

Agio.—The difference in value between metallic and paper money.

Agnes, The Eve of Saint.—A poem by Keats; written 1818.

Agnew, Cornelius Rea, M.D., LL.D.—(1830-1888.) Celebrated surgeon and oculist of New York.

Agnew, D. Hayes, M.D.—(1818-1892.) One of the greatest surgeons of America.

Agora.—The public market of the Greeks, corresponding to the Roman forum.

Agra (*ā'grā*).—In British India, a division of the northwestern province; also a district of the division of Agra. Military center and engaged in commercial interests.

Agrarian law provided for an equal distribution among the Roman people of all land acquired by conquest. It was proposed by Spurius Cassius the consul, in 486 B. C. He lost his life on account of it in 485 B. C. Others who suffered through it or its influences were Tiberius and Caius Gracchus in 133 and 121 respectively, and Livius Drusus, in 91.

Agricola (*agrīk-ō-lā*) **Cnæus Julius.**—Roman soldier and statesman. Born 37 A. D., died 93 A. D.

Agricultural Society Markets Fruits and Vegetables, How an, 5215.

Agriculture, Department of.—Established as a bureau by act of Congress, May 15, 1862; made a department of the government by act of Congress, Feb. 11, 1889, when its executive head was given a seat in the Cabinet. The first agricultural experiment station was established at Middletown, Conn., in 1875. There are now more than 50 fully equipped experiment stations distributed over the country, and over 400 specialists are engaged in conducting scientific investigations in the methods for obtaining the best yield of the fruits of the soil. Washington, in his annual message in 1796, said, "with reference either to individual or national welfare, agriculture is of primary importance," and urged the establishment of such a bureau. His sentiments were repeated and enlarged upon by nearly all of his successors. Congress, by the Morrill act of July 2, 1862, provided for an apportionment of public land to each state to found colleges of agriculture and the mechanical arts. More than 40 of these institutions have resulted, and in 1890 Federal aid was further increased. In 1891 the Weather Bureau was transferred from the War Department to the Department of Agriculture.

Aguinaldo, Emilio.—A Filipino insurgent leader against the United States, but now recognizing and accepting its authority in the Philippines, was born in 1870 near Cavité, in the Island of Luzon, one of the Philippine group. He is of mixed European and Mestizo or native half-breed descent, was educated by a Jesuit priest, and has studied medicine at Manila and at Hong Kong, where he is understood to have become a member of a revolutionary society. This society, known as the Catapunans, had for its object the freeing of the Philippines from the rule of Spain. In the furtherance of this design, he took part in the native insurrection of 1896, but is believed to have been bribed by Spain to take himself off to Hong Kong, where in 1898, on the outbreak of war between Spain and this country, he became a professed ally of the United States, and in April of that year was given passage to Manila on the dispatch boat "McCulloch." On landing in Luzon, he with his native following took part with General Mer-

ritt in the siege and capture of Manila and the Spanish soldiery; but a month later his ambition incited him to turn against American as well as against Spanish rule and to set up a provisional government with himself as President. Carrying his project into effect, he subsequently dispatched several envoys to Washington urging the administration to recognize the native insurgent government, and when this was refused he assumed active hostilities against the United States, even though Spain had made peace with that power and had entirely withdrawn from the country. In Feb. 1899, he declared war by formal proclamation against this country, and for a period of two years he defied its authority and in various parts of the Tagal provinces maintained harassing but desultory fighting. It was during this period that Major-General H. W. Lawton, in command of a U. S. corps, was killed in an action at San Mateo, Dec. 17, 1899. Throughout the following year Aguinaldo and his associates were actively pursued by bodies of United States troops, but though hard pressed at times he and his following eluded capture; until by subterfuge they were entrapped in the mountains, near Palanan, Mar. 23, 1901, by Brig.-General Fred. Funston, made prisoners, and brought to Manila. Here Aguinaldo, accepting his defeat, took the oath of allegiance to the United States, and issued a manifesto to his countrymen urging them also to surrender and to recognize the sovereignty of this country.

Agulhas, Cape.—The most southerly point of Africa.

Aida.—An opera by Verdi; first performed in 1871.

Ainsworth, William Harrison.—(1805-1882.) English writer of fiction

AIR.—

Before learning about the individual gases of which air is composed, something should be known of the quantity of air that surrounds the earth, and of its properties or qualities. It is, perhaps, generally known that enveloping the earth is a layer of air fifty or more miles in thickness. Just how thick this layer is we do not know, but we do know that it extends many miles from the earth. You may assure yourselves of this in a very simple manner by watching the shooting stars that may be seen on any clear night. These are nothing but masses of rocks that give off light only when they have been made red-hot by friction with the air in their rapid flight. The fact that we often see these stars while they are still many miles from the earth proves to us that the air through which they are passing extends to that height.

Air is very light, so light that it seems to have no weight at all; but, if you will think a minute you will see that it must have some weight, because birds fly in it and balloons can be made to float through it. It has been found that one hundred cubic inches of air at the sea level weighs, under ordinary conditions, about thirty-one grains. This seems a very small

Air.—Continued

weight, but when we remember the thickness of the atmospheric envelope over the earth we see that it must press quite heavily upon the earth's surface. There is a very simple instrument called a barometer, which is used for measuring the amount of this pressure. The name means pressure-measurer.

Another striking feature of air is its elasticity, and this explains something that is noticed by all mountain climbers. On a high mountain, it is difficult to get enough air to the lungs, though one breathes rapidly and deeply. The reason is, that the air at the foot of the mountain is compressed by the weight of that above it, and consequently the lungs can hold more of it than of the air on the mountain top, which has less weight resting upon it and is, therefore, not so much compressed. On account of the ease with which it is compressed, we find that more than half of all the envelope of air that surrounds the earth is within three miles of the surface.

When air is chemically analyzed it is found to consist of a number of substances mingled together but not chemically united. These include *nitrogen, oxygen, argon, carbonic acid gas, water vapor, ozone, nitric acid, ammonia,* and *dust.*

Oxygen is the most important of these constituents, for it is the part that is necessary to support life. Yet, notwithstanding its importance, it forms only about one-fifth of the entire bulk of the atmosphere.

Oxygen is a very interesting substance and many striking experiments may be performed with it. If a lighted candle is thrust into a vessel filled with oxygen, it burns very much more rapidly and brilliantly than in air. A piece of wood with a mere spark on it bursts into flame and burns brightly when thrust into oxygen, and some things that will not burn at all in air, can be made to burn very rapidly in oxygen. For example, if a piece of clock spring be dipped in melted sulphur and then put into a jar of oxygen, after the sulphur has been set on fire, the steel spring will take fire and burn fiercely. The heat produced is so great that drops of molten steel form at the end of the spring, and falling on the bottom of the jar, melt the surface of the glass where they strike.

The other two substances found in pure air, nitrogen and argon, are very much alike. They make up the remaining four-fifths of the air, and are very different from oxygen in nearly every respect.

Nitrogen and argon resemble oxygen in being colorless, odorless, and tasteless gases; and they are of nearly the same weight as oxygen, argon being a little heavier and nitrogen a little lighter; but here the similarity ends. Oxygen is what we call a very active substance. As we have seen, it causes things to burn very much more rapidly in it than in air. Nitrogen and argon, on the contrary, put out fire. If a lighted

candle is put into a jar of nitrogen or argon its flame will be extinguished as quickly as if put into water.

We must now consider the impurities found in air. Of these the most important is carbonic acid gas, or, as it is frequently called, carbon dioxide. It is always produced when wood or coal is burned, and is, of course, constantly being poured out of chimneys. It is also produced in our lungs and we give off some of it when we breathe. It is colorless, like the gases found in pure air, has no odor or taste, and is considerably heavier than oxygen or nitrogen. In its other properties it is much more like nitrogen than oxygen, for when a candle is put into it the flame is extinguished at once. To find out whether air contains carbonic acid gas, it is only necessary to force it through a little lime water, in a glass vessel, and watch what change takes place in the water. Fresh lime water is as clear as pure water; but after forcing air containing carbonic acid through it, it becomes turbid and milky. If the turbid water is allowed to stand for a time, a white powder will settle to the bottom, and if we examine this powder, we find it to be very much the same thing as chalk. While it is true that air generally contains only a very small portion of carbonic acid gas, there are some places in which it is present in such large quantities as to render the air unfit for breathing. The air at the bottom of deep mines and old wells often has an unusually large proportion of this gas, which, because of its great weight, accumulates at the bottom, and remains confined there. The presence of a dangerous quantity of the gas in such places may be detected by lowering a candle into it.

In some parts of the world large quantities of carbonic acid gas are constantly issuing from openings of the earth's surface. Two such places are the famous Poison Valley of Java and the Grotto del Cane near Naples, in Italy. The former is a small valley about half a mile around and about thirty-five feet deep, in which the air is so loaded with carbonic acid gas, that animals entering it are killed in a few minutes. Even birds that fly over the valley are overcome if they do not rise high above it. The Grotto del Cane, or Grotto of the Dog, is a small cavern in the crater of a volcano. A stream of carbonic acid gas flows constantly into the grotto, but the level of the gas does not reach the height of a man's mouth. When the same air is breathed over and over again, the quantity of carbonic acid in it is increased so much, that it may become as deadly as the air in the Poison Valley.

Two other gases that may generally be found in air are *ozone* and *ammonia*. The first is merely a form of oxygen that is produced by the passage of lightning through the air. After severe thunderstorms, it is said to be present, sometimes, in sufficient proportion to give to the air a slightly pungent odor. It is more active chemically than is the ordinary form of oxygen,

Air.—*Continued*

and, consequently, has a stimulating effect upon animals.

Ammonia, or hartshorn, as it is sometimes called, from the fact that it was formerly obtained by distilling the horns of harts, or deer, is almost always present in the air in small quantities. It is produced chiefly by the decay of animal and vegetable matter, especially the former. Though present in the air in very small quantities, it is of much value to the plant world because it contains nitrogen in a form in which it can be readily absorbed by plants. All plants contain some nitrogen, which is essential to their growth, but the greater part of the nitrogen in the air is not in such form that it can be absorbed by them. They must obtain their supply from the soil, which usually contains some nitrogen in a form that may be taken up by plants, and from the ammonia in the air. The latter is not taken directly out of the air by the plants, but the rains falling through the air absorb the ammonia and carry it to the soil, from which it is taken up into the plants by their roots.

Besides the gases that have been mentioned, there is present in the air, at all times, a small quantity of water-vapor, which is, in many ways, as important to mankind as is the oxygen itself. The quantity of water in the air is not always the same. As a rule, the quantity is greater in warm air than in cold, and is less over land than over water. Frequently the air feels damp in cold weather, and dry in hot weather, and it is natural to suppose that there is more vapor in the air on the damp day than on the dry one. This, however, is not always true. There is usually more moisture in the air on a warm summer day than on a cold day in winter, though the winter day may seem much more moist. You will be able to understand why this is so by comparing the air to a sponge. If we fill a sponge with water, and squeeze it gently, a little water will be forced out of it. If we then remove the pressure, the sponge will swell again, and will appear dry on the surface, but there will still be water in it, and on being squeezed harder than before it will again become moist on the surface and more water will be forced out of it. Now cold has an effect upon moisture-laden air very much like that of pressure on the sponge. When the air cools, some of the moisture is forced out of it, and the air seems damp. When it warms again, the air seems dry, though there is still water-vapor in it. It seems dry because it can absorb more water-vapor, just as the sponge seems dry after you cease to squeeze it, though it still contains water. From this we see that the air does not always seem moist, when there is much water-vapor in it, nor dry when there is only a little. It feels moist when there is as much water-vapor present as it can hold, and dry when it can hold more than it already has. And we also see, that, in hot weather, the air can hold

much more moisture than it can in cold weather, so that whether the air feels dry or moist, there is generally much more water-vapor in it, in hot weather, than in cold.

It is easy to see that, over water, the air naturally takes up more moisture, than over land, because there is so much more water there to be transformed into vapor. Over the surface of seas, lakes, and rivers, water is continually being converted into vapor by the process of *evaporation*, and this vapor is absorbed by the air.

Let us now consider the solid particles floating in the air, the dust that is seen dancing in the path of a sunbeam. Whenever we examine the air, these small particles are found, even on the tops of mountains, and at points so high above the earth that they have been reached only by balloons. Of course, there is very much less dust high above the earth than near the surface, where the winds are constantly stirring up the loose soil, and throwing into the air small particles of every kind. In cities, where factory chimneys are continually pouring out clouds of smoke, and the people and vehicles are constantly disturbing the dust of the streets, the air always contains more dust than does the air of the country.

In order that we may breathe air, the oxygen in it has been mixed with four times as much nitrogen and argon, which must be inhaled with the oxygen, though they have no more effect on the body than the water you take with a strong medicine to weaken it. The oxygen, however, has a very important effect upon the body, and if we compare the air we exhale with that we inhale we find considerably less oxygen in the former than in the latter. In place of the oxygen, the air has received carbonic acid gas. It may seem very strange to say that there is burning going on in the body, but that is very nearly what takes place. The chief difference from coal-burning is that in the body the process goes on so slowly that it does not make the body very hot; but when we set fire to coal, the process is much more rapid and a large amount of heat is produced, in a short time, so that the coal becomes very hot. The products of breathing and of coal-burning are the same, carbonic acid gas being the chief one. When coal is burned it disappears, together with some of the oxygen of the air, and in their stead we have carbonic acid gas. When a breath is taken some of the material of the body disappears, as does some of the oxygen of the air, and in place of them carbonic acid gas is found. If we could weigh the coal burned and the oxygen that disappears in the burning of it, and could then weigh the carbonic acid gas that is produced in the burning, we should find that the latter weighs just as much as the coal and the oxygen together. So, too, if we could weigh the oxygen that disappears from the air we breathe and also find the weight of the material taken from our bodies, by breathing, we should find that the two together weigh just as much as the carbonic acid gas given off

Air.—*Continued*

in our breath. In neither case is anything absolutely destroyed; the substances resulting from the change, weigh just as much as those that took part in it.

Having learned that a quantity of oxygen disappears every time we take a breath, and every time we build a fire, it would seem that in the thousands of years during which men and animals have been living on the earth, all the oxygen would have been exhausted and nothing left in its place but carbonic acid gas. That, however, is impossible, as the carbonic acid gas is used up almost as fast as it is produced and the oxygen is returned to the air in its stead.

All trees and plants, from the great redwood trees of California to the smallest flowers that dot the fields, need carbonic acid gas to keep them alive and to make them grow. Their leaves have the power when the sun shines on them to take up carbonic acid from the air and to return oxygen in exchange. In this way you see that the balance is kept just as it should be. The oxygen needed by animals of all kinds is furnished by the plants, and the carbonic acid required by plants is thrown off in the breath of animals.

Aix-la-Chapelle (*ās-lā-shā-pe'l'*).—A city of Prussia; the birthplace of Charlemagne; 55 emperors have been crowned here. The French took the city in 1792, the Austrians took it again in 1793; the French regained it in 1794; and it was finally ceded to Germany in 1814.

Ajaccio.—Capital of the island of Corsica, on the w. coast. It was the birthplace of Napoleon Bonaparte. The house in which he was born is still in good preservation. Pop. 17,000.

Ajax.—See STORY OF THE ILIAD, 1715.

Akers, Benjamin Paul.—(1825-1861.) An American sculptor. His best works are "Una and the Lion" and "The Dead Pearl-diver."

Akkad.—In Babylonia. One of the four cities of Nimrod's Empire.

Akron.—City and capital of Summit Co., O., 36 m. s. of Cleveland. Pop., 43,000.

Alabama.—One of the southern Gulf states of the U. S. of America. Bounded on the north by Tenn., east by Ga. and Fla., south by Fla. and the Gulf of Mexico, west by Miss. The northern part is mountainous and rich in coal and iron; the southern part is low and level and chiefly devoted to the raising of cotton. First settled by the French in 1702; the territory was acquired part by Great Britain and part by Spain, and was ceded to the U. S. by the former in 1783 and by the latter in 1819; admitted to the Union in 1819; seceded Jan. 11, 1861, and during the Civil War was one of the states of the Southern Confederacy; readmitted to the Union in July, 1868. Capital, Montgomery; chief cities, Mobile, a gulf port, and Birmingham, in the heart of the iron producing district; other important towns are Anniston, Eufaula, Florence, Huntsville, New Decatur and Selma; has 66 counties; area, 52,250 sq. miles; pop. (1900), 1,828,697.

Alabama, The.—A Confederate cruiser built in England and fitted out and sent to sea under the command of Raphael Semmes, in 1862. She cruised the ocean for nearly two years, during which time she inflicted upon the U. S. merchant marine damage estimated at above \$15,000,000. She was sunk in a battle with the U. S. S. "Kearsarge," off the harbor of Cherbourg, France, in June, 1864. (See SEMMES, RAPHAEL, 508; WINSLOW, JOHN ANCRUM, 623; also ALABAMA CLAIMS, in this volume.)

Alabama Claims.—These grew out of depredations committed on the U. S. merchant vessels during the Civil War by the Confederate cruisers "Alabama," "Florida," "Georgia," and "Shenandoah," which had been equipped in British ports. By the treaty of Washington, concluded in 1871, between Great Britain and the U. S., provision was made for the submission of the claims to a court of arbitration, since known as the Geneva Tribunal, from the Swiss city in which it met. The court convened for the first time Dec. 15, 1871, and was composed of Charles Francis Adams, appointed by the President of the U. S.; Sir Alexander Cockburn, by the Queen of England; Count Federigo Sclopis, by the King of Italy; M. Jacques Staempfli, by the President of Switzerland, and Viscount d'Itajuba, by the Emperor of Brazil. The contention of the U. S. that it should be compensated for the cost of pursuing privateers, for increased rates of insurance incidental to the extraordinary dangers to shipping, and for the prolongation of the war as a consequence of the depredations, was denied. The court, in a judgment rendered Sept. 14, 1872, unanimously declared Great Britain to have been responsible for the direct damages inflicted by the "Alabama"; Sir Alexander Cockburn alone dissented in a similar finding in the case of the "Florida," and three members of the court decided in favor of the U. S. in the matter of the "Shenandoah." The Tribunal awarded to the U. S. \$15,500,000 in satisfaction of all claims, Sir Alexander Cockburn opposing the decision in a long opinion. The award was promptly paid in gold by the British Government. The claims of those who had suffered by the ravages of the cruisers were adjudicated by a special court created for that purpose and they were paid out of the money received from England.

Alameda (*ā-lā-me'dā*).—1. A town in Spain, near Malaga. 2. A city in Alameda County, Cal. Pop. (1900), 16,464.

Alamo (*ā'lā-mō*).—A mission building in San Antonio, Texas, founded in 1744. The scene of a siege and assault (1836) during which the entire garrison of 150 men and the commander, Col. W. B. Traven, were destroyed.

Alarcon or Alarcos.—A small town and port of Central Spain.

Alaric I.—A visigothic king, invaded Italy and plundered Rome 402 and 410.

Alaric.—(376-410.) King of the Visigoths. The great event in his life was his attack on the city of Rome in 410, which was plundered by the Goths

for three days. Alaric retired to make the conquest of Sicily, but died soon after at Cosenza. It is said that his body was secretly buried with all his treasure in the bed of the stream of the Bnsento.

Alaska.—A territory of the United States, having an Arctic climate, situated in the extreme north-western part of the continent. The region, formerly known as Russian America, discovered by Russians in 1741 and partially settled by them in 1801, was acquired by treaty from Russia in 1867 at a cost of \$7,200,000. It is bounded on the north by the Arctic Ocean; on the east by British Columbia and the Northwest or Yukon territories of the Canadian Dominion; on the south by the Gulf of Alaska and North Pacific Ocean; and on the west by Bering Sea and Strait, which separates it from Russian Siberia. The international boundary between Canada and the United States is chiefly that of the 141st meridian of west longitude; but southeast of that, in the region about Dyea, Skaguay, and the head of the Lynn canal, the boundary line is only provisionally determined. The entire area of the territory is estimated at 590,884 square miles, equal (roughly speaking) to one-sixth of the United States. The capital is Sitka (pop., 1,396), on Baranoff Island, in Sitka Sound, and the chief towns are Nome City (pop., 12,486), on Norton Sound; Skaguay (pop., 3,117), at the head of the Lynn canal, the mart where miners purchase their supplies on the way north, by the Chilkoot Pass, to the gold mines of the Klondike and the Yukon; and Juneau (pop., 1,864), at the foot of the Lynn canal. The population of the entire territory (census of 1900) is given as 63,592. The chief river is the Yukon, which is over 2,000 miles in length; the principal ports are Dyea, Nome, St. Michaels, and Dutch Harbor, on one of the Aleutian islands, west of the Alaskan Peninsula. The Pribyloff Islands, in Bering Sea, are the main seat of the seal fisheries. Gold mining is at present the chief industry of Alaska, and has been encouragingly prosecuted, the yield of the precious metal for the year 1898-99 being about \$20,000,000. The forest wealth of the territory is also large and valuable, being chiefly spruce, cedar, and hemlock. The drawback to the country, which affects all industry, is, besides its inaccessibility, its Arctic climate, the mercury in winter frequently falling to 60° below zero. Mining under these extreme conditions is, with a short summer and a long winter, environed with difficulties. The Yukon, it is said, sometimes freezes to a depth of 5½ feet; in midwinter, near the Klondike boundary, the sun rises about 10 A. M. and sets from 2 to 3 P. M., the total length of daylight being only about four hours. By contrast, the summers afford a long day's work, there being about 20 hours of daylight. On the coasts there is much fog and an excessive rainfall, though inland the climate is drier and less disagreeable. In the territory, the privations of labor, it will be seen, are great; but despite its rigors

it is being eagerly resorted to, especially by those in search of its mineral wealth.

Albania.—A region in European Turkey, having Montenegro and Novi-Bazar on the north, Greece and the Gulf of Arta on the south, Macedonia and Thessaly on the east, and the Ionian Sea and the Adriatic on the west.

Albani.—Professional name of Marie Emma La-jeunesse, a famous soprano; born in 1851 near Montreal; a French-Canadian.

Alba Longa.—An ancient city of Italy, adjacent to and incorporated with the city of Rome. Its history is mythical. It is said to have been founded by Ascanius, the son of Æneas.

Albano (*âl-bâ'nô*).—A town of Italy, situated a few miles from Rome, on the site of Pompey's Villa.

Albans, St.—A city in Hertfordshire, England, named for Alban, the first British Christian Martyr, who was beheaded there in 296.

Albany.—The capital of the State of N. Y. It is situated on the left bank of the Hudson River; is an important commercial city, being the terminus of lines of steamers to New York and other river ports, and of the Erie and Champlain canals, and a center of extensive systems of railroads. It contains the law and medical departments and the Dudley observatory of Union University. It was settled by the Dutch in 1614, was fortified in 1624, obtained a city charter in 1686, was the seat of a convention, under the lead of Franklin, to form a colonial union, in 1754, and became the permanent capital of the State in 1797. Pop. (1900), 94,151.

Albany Convention.—An important forerunner of the Continental Congress, and one of the first definite steps toward national union. Upon a call issued by the Lords of Trade, commissioners from the Colonies of N. H., Mass., R. I., Conn., N. Y., Pa., and Md. met at Albany, N. Y., June 19, 1754, to arrange a treaty with the Six Nations of Indians. The convention adopted a plan for colonial union proposed by Benjamin Franklin. It provided for a president-general of all the Colonies, with veto power, and a grand council composed of delegates from each Colony, chosen by the assembly, for a term of three years each. This council was to be authorized to equip forces for the common defense of the Colonies, to levy taxes for their maintenance and to have control of all Indian affairs. The plan was rejected by the British Government because it gave the Colonies too much power.

Albany Regency.—A name given to a clique of New York politicians who controlled the machinery of the Democratic party in the State of N. Y. from about 1820 to 1854. Van Buren, Marcy, Wright, and Dix, were some of its members.

Albatross or Frigate Bird, 2602. Mr. J. Lancaster, an American naturalist, who spent five years on the west coast of Florida, in studying the habits of aquatic and other birds, states that the frigate bird can live in the air for a week at a time, night and day, without once perching or touching a roost. He timed these birds, and found them able to go at a rate of 100 miles an hour

- withease, and that on fixed wings. In Mr. Lancaster's opinion, these birds, up to that speed, could fly just as fast as they pleased. The wings of the frigate bird stretch to an expanse of about 10 or 12 ft., and it passes so much of its time in the air that it has been credited with sleeping on the wing. The albatross has followed the course of a ship for many days without being known to rest. This bird may be termed the monarch of the high seas. It exceeds the swan in size, attains a weight of from 12 to 28 lbs., and extends its wings from 10 to 13 ft. One remarkably large bird shot off the Cape of Good Hope measured 17½ ft. from wing to wing.
- Albemarle Point.**—The early name of Charleston, S. C.
- Albemarle Sound.**—A body of water in northeastern part of North Carolina. The Roanoke River flows into it; it is separated from the Atlantic Ocean by a series of sand beaches.
- Albert, Francis Augustus Charles Emmanuel.**—Prince Consort of England. Born near Coburg, Germany, 1819; married Queen Victoria Feb. 10, 1840; died at Windsor Castle, England, 1861.
- Albertinelli.**—3419.
- Albertus Magnus.**—(1193-1280.) Famous scholar, philosopher, and cleric, who lived principally at Cologne.
- Albert Nyanza.**—A large lake in Central East Africa. The White Nile flows through it. It is crossed by the equator.
- Albuquerque.**—One of the principal cities of New Mexico; it is an important railroad center. Pop., about 6,000.
- Alcæus.**—(about 611-580 B.C.) One of the greatest Grecian lyric poets.
- Alcantara** (*äl-kän'tä-rä*).—Knights of a religious and military order of Spain. Established about 1156, still active in its civil capacity.
- Alcazar** (*äl-kä'thär*).—1. In Spain; the palace of the Moorish kings, and afterward the royal establishment at Seville. 2. A palace of Segovia, Spain. Burned in 1862, since restored. Occupied by the Castilian sovereigns from the 14th century.
- Alceste.**—An opera by Gluck; first presented in Vienna, 1767.
- Alcestis** (*äl-ses'tis*), or **Alceste** (*äl-ses-te*).—A heroine of Greek legend. She is the subject of the play "Alcestis" by Euripides.
- Alchemy.**—The ancient name of those arts which preceded, and laid the foundation of, the modern science of chemistry. It received its greatest impetus from the search of the philosopher's stone, which it was supposed would turn all substances it touched into gold. It is of Arabic origin, as, indeed, is indicated by the initial letters *al*—the Arabic word for "the" which occurs also in al-manac, al-gebra, al-embic, Alcantara, al-cohol, etc. Some of the greatest names connected with this ancient science are, Geber, Albertus Magnus, Roger Bacon, Raymond Lully, Böttger, Tycho Brahe, and Dr. Faustus.
- Alcibiades.**—(450-404 B.C.) Famous Athenian general; friend of Pericles and Socrates.
- Alcohol.**—The active, intoxicating principle of fermented liquors. It is a hydrate of a hydrocarbon radical, and comprises many bodies of different chemical composition. Ordinary wine alcohol is formed by the breaking up by fermentation of glucose (grape sugar). Absolute or anhydrous alcohol contains no water. It has a sp. gr. at 60° of 0.794. It boils at 173° F., the sp. gr. of its vapor is 1.6133. It has never been frozen. Faraday caused it to thicken at 166° F. below zero. This quality makes it useful for thermometers to measure low temperatures. Spirit of wine or rectified spirit has a sp. gr. of 0.838, is 54 to 58 overproof, and requires 54 to 58 per cent. of water to bring it down to proof. Proof spirit, the standard of all mixtures of alcohol and water contains 57.27 per cent. by volume and 49.50 per cent. by weight of alcohol. A mixture which contains less than this is said to be underproof. When mixed with water, say in the proportion of 2 gallons of alcohol to one gallon of water, the volume of the resultant mixture is less than the combined volume of the two ingredients—that is, it does not measure 3 gallons of mixture. Methylated spirits is a mixture of alcohol of sp. gr. 0.830 with 10 per cent. of common wood spirit.
- Alcott, Louisa May.**—(1832-1888.) Famous American authoress.
- Alcuin.**—(735-804.) The most celebrated scholar of the 8th Cent. Confidant and advisor of Charlemagne.
- Alcyone.**—One of the Pleiades.
- Aldebaran.**—The brightest star in the constellation of the Bull, 3000.
- Alden, John.**—(1599-1686.) A Mayflower pilgrim, magistrate of Plymouth for 50 years. His romantic association with Miles Standish furnished Longfellow with a theme for his poem.
- Alder, The.**—2858.
- Alderney.**—One of the Channel Islands, belonging to England, in the English Channel. It is about 8 miles in circumference and is noted for its breed of cattle.
- Aldgate.**—Eastern gate of the old London Wall. Probably opened during the first years of the reign of Henry I.
- Aldine Press.**—That of Aldus Manutius or Aldo Manuzio, in Venice, which began in 1494 to produce famous first editions of classical works.
- Aldrich, Thomas Bailey.**—American author and journalist. Born at Portsmouth, N. H., 1836.
- Aldridge, Ira.**—(1810-1866.) A negro tragedian known as the "African Roscius"; in early life the valet of Edmund Kean; Othello was one of his chief parts.
- Aleppo.**—A large town in N. Syria.
- Aleutian Islands.**—A chain of about 150 islands, extending from the western extremity of Alaska nearly to Asia; discovered by the Russians about the middle of the 18th century, and came into the possession of the U. S. with the acquisition of Alaska; apparently of volcanic origin. Fish and fur interests. Pop., about 2,000.
- Alexander the Great.**—(356-324 B.C.) Alexander the Great is the hero of one of the most wonderful

and brilliant careers in history. He is known as the conqueror of the whole world and as one who wept because there were no more worlds to conquer.

Alexander was Greek in the truest sense of the word, and a born ruler. The history of Greece without him would be like a body without one of its strongest members. He was the son of Philip, King of Macedon. At the age of fourteen he became the pupil of the great and wise Aristotle, who taught him the arts of government and war, and gave him a knowledge of the heroes of whom Homer had written.

Alexander showed the spirit of a warrior at a very early age. He cared neither for pleasure nor riches, but thirsted for glory. When his father won great victories he said to his friends: "My father will go on conquering until nothing extraordinary be left for you and me to do."

Just before he became the pupil of Aristotle, he had occasion to show the spirit and courage which he possessed. A young horse was offered to Philip, who went to the field to try him before paying the price. He proved to be so vicious and unmanageable that none of the grooms dared venture to mount him. Philip angrily ordered that the wild animal should be taken away. But Alexander, who had observed fine points in the animal, said: "What a horse are they losing for want of skill and spirit to manage him!" Philip at first took no notice of the boy's remark, but finally said: "Young man, you find fault with your elders, as if you knew more than they, or could manage the horse better." "And I certainly could," answered the prince. After getting his father's consent, Alexander ran to the horse, took hold of his bridle, and drew his head toward the sun, spoke softly to him, and stroked him until he grew calm. Then he leaped lightly upon his back and, by a gentle pull of the rein, started him forward. As the horse became less uneasy, he urged him on in a gallop. Philip and his courtiers looked on in anxious silence. When the prince returned he was received with loud shouts. Philip, with tears in his eyes, embraced his boy and said: "Seek another kingdom, my son, that may be worthy of thy abilities, for Macedonia is too small for thee."

Alexander, when at the age of twenty he was called to rule in the place of his father, found foes and grave perils and difficulties on every hand. Having intelligence that the Thebans and Athenians had revolted, he resolved to show them that he was no longer a boy. He immediately advanced through the Pass of Thermopylæ. "Demosthenes called me a boy while I was in Illyrium," said he, "and a stripling when in Thessaly, but I will show him before the walls of Athens that I am a man." He soon took Thebes and leveled it to the ground. Having checked the plans that had been formed against him, he united Greece in the war against Persia, who had been threatening with her great power and large armies.

At a general assembly of the Greeks, held at the Isthmus of Corinth, he was chosen captain-general of a force which it was proposed to send against Darius in Asia.

With a large army he crossed over to Asia to conquer Persia and prepare the way for the union of Europe and Asia under the control of Greece. In a series of wonderful victories he "flashed across the world" and left the marks of his short life deeply traced in history. No story in history is more romantic than the tale of those ten years of victory. With his thirty thousand Greeks he crushed army after army, took city after city, and received the homage of prince after prince.

He moved so rapidly into Asia that he took the army of Darius by surprise. He reached the river Granicus in Asia, without meeting any opposition. He then went forward under showers of darts thrown from the steep opposite banks, which were covered with the enemy's troops. After climbing the muddy, slippery paths, he engaged in a hand-to-hand fight. He was attacked several times, and had a horse killed under him, but escaped unhurt. The Persians were defeated with heavy losses.

By his first victory he freed the Greek cities of Asia Minor, and scattered terror among the armies of Darius. By his second, he secured the treasure and royal family. He gave an example of generosity, by offering to restore all if Darius would meet him in person. Inflated with victory he passed on, taking town after town. He overcame Tyre, marched through Palestine, took Gaza, and passed into Egypt which received him as a deliverer. He again defeated Darius who had a more numerous army; but he wept over the body of the unhappy Darius who was found dying from a wound treacherously made by one of his own satraps.

Persia and all of its provinces now lay at his feet. Soon he discovered the Caspian Sea, and brought new regions of the world to the knowledge of Greece. He formed a plan to conquer India. Overcoming all opposing force, he advanced to the Indus, and sent a fleet to enter the Indian Ocean.

He had reached the top of his glory. While returning through the deserts to Babylon, three-fourths of his army perished in the sands, from illness caused by bad food and excessive heat. His victories had also made him vain. "He that ruleth his own spirit is greater than he that taketh a city."

Though Alexander conquered the world, he failed to subdue or control himself. While drunk, he killed his warm friend, Clitus, who had ventured to give him advice and to remind him that he was mortal. At Babylon he gave himself up to vice, while engaged in mighty plans for his great empire. Falling sick at a banquet, he suddenly died.

The oriental war waged by Alexander had its origin in the necessity of self-defense. It was the result of a contest begun long before.

Greece had twice been invaded by hordes of Asiatics and its fairest cities made a spoil. The Grecian patriot, who was nourished from his boyhood on the songs of Homer, the heroic deeds of Miltiades and Themistocles, and the oppression of the Ionian cities, looked upon Persia as a hostile power which should be conquered.

The war became one of conquest and suffering. Many human lives were lost. There was much pain and hardship. But the severe trials of war were followed by the spread of the higher Greek civilization into the East, where there was decay, oppression, and undeveloped powers. Alexander was neither a madman nor a ruffian. He used the sword to break the despotism of the sword. His greatest purpose was not to plunder and to destroy; and he aimed also to build, guard, renew, and cultivate. Wherever he conquered men he was ready to respect their human nature, their laws, and their gods. He did not seek to crush the feelings and thoughts of the people. He was generous and kind to those whom he conquered. He made them sharers in his plans.

He developed commerce by opening new routes and protecting old ones. He took gold from the royal coffers of the East and put it into circulation. He revealed a new world to Greece, and prepared the way for breaking down barriers between nations. He awakened the dormant powers of thought in other lands and led the way for developing ideas of laws, states, and citizenship.

Though he conquered much he founded nothing. With sword in hand, he seized Asia, in his rapid course; but when it lay as an immense booty, awaiting new ideas his body lay cold in death. He left the world with no one to take his place to give light to darkness, and to sow the seeds of progress in the bloody furrows of war.

As a man, Alexander was sincere and a lover of truth. He was a good son and a loyal friend. He also had a moral purity of character which was not common in that age. He hated meanness, and had a firm resolve to do his duty. Though he was liable to outbreaks of passion, he was able to control them, and candid enough to express regret in cases where he saw he had been too hasty. He had a childlike trust of men. He relied on the noble element of mankind and had no reason to regret it. In all things he aimed at the highest.

He had a great love for work, and often put aside personal comfort to devote himself to the great tasks that fell to him to do. Though he lived in an age of talk, he preferred to act. He thought wisely, and acted rapidly. His ability of swift discovery and vigorous execution made him one of the greatest of military leaders. Though he risked his life too often, and was daring when it led him to the goal, he often showed prudence when it was necessary.

He had the qualities of a great hero and a man of action. He was upright and truthful,

simple in manner, cheerful in spirit, ready in speech, calm in deliberation, and prompt in execution. Besides his natural qualities, he had learned much from experience. Before a battle he ordered all according to a fixed plan. He coolly considered everything relating to the nature of the ground and the weak and strong points of the enemy. Then he threw himself upon the foe with the spring of a lion. His genius found means to cross the deepest or widest rivers, climb the highest walls, and take the strongest forts. He had a strong power of endurance, both on the march and in the battle. In spite of hunger and thirst, he cheered his tired and discouraged men across deserts, and set them examples of courage and fortitude. He seemed to be favored by miracle, while his foes perished in the sands or were defeated in the conflict.

Alessandria.—The capital of the province of Alessandria, Piedmont, Italy. It is a strong fortress, and a railway center. Pop. (1899), 79,015.

Alexandria.—A port of entry, and the capital of Alexandria Co., Va. It was occupied by Federal troops in the Civil War May 24, 1861. Pop. (1900), 14,528.

Alexandria.—A city of Egypt, on the Mediterranean, founded by Alexander the Great in 332 B.C. It was a center of universal learning and contained the celebrated library of over 700,000 books which were collected by Ptolemy I and Ptolemy II. This was the largest collection of books prior to the invention of printing. It is said, though on very doubtful authority, that these were destroyed by Caliph Omar, who conquered the city in 640. Pop. (1897), 319,766.

Alexandrines.—A measure of poetry, consisting of 12 syllables to a line, or 12 and 13 alternated. Pope's criticism of this meter, in his "Essay on Criticism" reads:—

*"A needless Alexandrine ends the song,
That like a wounded snake drags its slow length
along."*

Alfieri, Count Vittorio.—(1749-1803.) Celebrated Italian dramatist.

Alfred the Great.—(849-901.) Alfred the Great was born at Wantage, in Berkshire, England, 849, and was the youngest member in a family of four children. His father was Ethelwolf, son of Egbert, King of the West Saxons. His good mother, Judith, was a religious woman, noble both by birth and nature. She strove to awaken in her children a love for books. She is said to have excited emulation among them by offering a volume of English poems to the one who should be the first to learn them. Alfred who had a bright and active mind won the prize. He early acquired a passionate love of learning and persevered in it through great troubles and difficulties. He was always fond of songs and poems about war and heroes, kings and queens, the sea and the sea-kings, and beautiful ladies and their lovers. He was interested in people and what they did.

While still a child he went with his father to Rome, and was anointed future king of Eng-

land by the Pope, with whom he was a great favorite. While traveling through France and Italy, he saw much of the beauty of the world. On a second visit he was at Rome for a year, and doubtless received useful impressions from what he saw there.

While he was still in his youth he had a chance to learn something of war, for the Danes were sweeping down on the country, and ravaging it. A few months before he came to the throne, he aided his brother, King Ethelred, in a desperate struggle with them, and defeated them while his brother was in his tent praying and hearing mass. Though he was a very religious man, he knew when he could serve his people and God better by working than by praying.

In 871, at the death of his brother, Alfred was elected king by the people, who admired and trusted him and knew that he was the best leader for those troublous times. He was not chosen to live a life of ease, with his home friends and his true, modest, prudent, affectionate wife, whom he had married when he was nineteen. He was called to spend his days and nights in the camp watching and fighting the invaders of his land. For seven years he fought heroically at the head of his thanes; but each year his possessions grew smaller and smaller, and finally, with his wife and his few remaining followers, he was driven to take refuge in the woods and morasses. He was compelled to seek his safety for many months in an obscure part of the country, disguised as a peasant. He even lived in a herdsman's cottage as a servant.

He endured all of his troubles in patience, and was ready to act again at a favorable time. Finally, according to the beautiful story of the vision of St. Cuthbert, he received a message in a dream, which announced that all of his sufferings were about to end. He arose with fresh hopes, inspired his friends with his courage, gathered more warriors, built a fort in the marshes, used strategy to learn the strength and plans of the Danes, and in the spring of 878 marched forth to victory. At Chippenham, he surrounded Guthrum and his followers who soon submitted. He was merciful to the vanquished. He gave to them the eastern portion of Mercia, on the condition that they should recognize him as their over-lord, and cease their ravages.

Alfred also did great service to his country by the final success of his efforts to resist the invasion of Hastings, the famous sea-king, who appeared on the coasts of Britain with a fleet of two hundred vessels.

During the years of peace which followed the wars against the Danes, Alfred worked earnestly to repair the losses which his country had suffered from pillage, fire, and disorder. He collected around him many true, wise friends to assist him in his measures of reform. He invited to Britain men of learning and skill from other countries in order that he might learn from their wisdom and counsel. He laid

the foundations of England's greatness. The fleet which he taught his people to build, was the beginning of the vast navy by which England has so long held the supremacy of the seas. He won the admiration and gratitude of his people, in other ways as well as by his measures for defense. He collected and studied the laws of his nation. Selecting those which were wise and just, and adding others to them, he published them by consent of his council, the Witan. He provided that justice should be done to all, poor and weak as well as rich and strong. He rebuked the judges who made mistakes through ignorance. He himself judged cases where there was reason to suspect that judges were unjust or corrupt. To assist in reviving and spreading religion, he founded monasteries, and selected good bishops and clergymen. He practised the religion that he sought to teach. He did all of his work with a deep religious spirit. He sincerely loved the people for whom he labored so hard, and he was merciful, just, and kind, to strangers and foreigners.

In that age of ignorance and semi-barbarism, he also zealously fostered learning, and gave the first impulse to English literature. When he began to reign, he found that all schools had been broken up, and that there were few clergymen south of the Humber who could even understand the Prayer-book, which was still in Latin. After selecting clergymen who were better educated, he established schools and libraries for the laity. Like Charles the Great, he had a school in his court for his own children and the children of his nobles. The school which he started at Oxford grew into the university which bears that name to-day. He desired that every youth in the land should be taught to read and write. To supply the need for books, he and his friends translated Bede's history and other good and useful works into Anglo-Saxon. He put new life into the "Anglo-Saxon Chronicle" which had been very dry before his reign. He showed a zeal for the instruction of his people that has seldom, if ever, been equaled by any monarch.

Besides his work as a king, a lawgiver, a judge, and an educator, and in spite of his infirmities and other hindrances, Alfred was kept very busy with many other things. According to Asser, who lived with him for months at a time, "he continued . . . to exercise hunting in all its branches; to teach his workers in gold and artificers of all kinds, his falconers, hawkers, and dog-keepers; to build houses, majestic and good, beyond all the precedents of his ancestors, by his new mechanical inventions; to recite the Saxon books, and especially to learn by heart the Saxon poems, and to make others learn them; he never desisted from studying most diligently to the extent of his ability; he attended the mass and other daily services of religion; . . . he bestowed arms and largesses on both natives and foreigners of all countries; he was affable and pleasant

to all, and curiously eager to investigate things unknown." He sent presents to the Christians in Rome, Jerusalem, and even to distant India.

Alfred obtained much pleasure from his almost constant labor. Time did not hang heavily upon his hands. He did not watch the clock, or grow impatient. In fact, he had no clock. He kept time by wax candles. When the violence of the wind blowing through the doors and windows, and cracks and fissures, caused them to burn too rapidly, he invented a lantern of horn for a protection. He always found a way to get over difficulties or to remove them.

Worn out before his time, by ceaseless toil, Alfred died in 901. He left behind him, not "a name at which the world grows pale," but a name at which every English heart grows warm with pride, gratitude, and love.

His character shines with a bright luster in a dark age. He was one of the greatest and best sovereigns—equally eminent in his private and public character. Whether the stories of his life are facts or fictions, he embodies for his countrymen a high ideal of self-sacrifice and service for the good of his fellow-men. Englishmen of all classes have been greatly benefited by having such an example held up for their admiration. Such characters are a rebuke to self-seeking; a constant stimulus to self-sacrifice for the common good. Alfred wrote, "So long as I have lived I have strived to live worthily and to leave to all men that come after a remembrance of me in good deeds." It is no wonder that the memory of a sovereign whose life was shaped by such a sentiment should be cherished with an undying gratitude and affection by his people.

Thomas Hughes says, he was the impersonation of the sentiment, "He that is chief among you shall be servant of all." Green declares that never before King Alfred had the world "seen a king, who lived solely for the good of his people. Never had it seen a ruler who set aside every personal aim to devote himself solely to the welfare of those whom he ruled. . . . Alfred was the noblest as he was the most complete embodiment of all that is great, all that is lovable, in the English temper." Myers says, "Aptly has he been called the Morning Star of Civilization."

Algæ, The.—2936.

Algonquin Indians.—A North American tribe at the time of the first settlements by Europeans on this continent occupied a much larger area than any other Indian nation; it extended from Labrador to the Rocky Mountains, and from Hudson's Bay to Pamlico Sound.

Alhambra.—A suburb of Granada, in Spain, in which stand the exquisite remains of the palace of the ancient Moorish kings. The wall which surrounds it is more than a mile in circuit and is studded with towers. The chief points of interest are: The Hall of the Ambassadors, the Court of the Fish Pond, the Court of the Lions,

and the Hall of the Abencerrages. It was begun about 1248 and completed about 1314.

Allen and Sedition Laws.—Acts of Congress passed by the Federalists in 1798, and largely instrumental in causing the downfall of the Federal party. During the French Revolution, public sentiment in the U. S. ran high, especially as only a few years before France had greatly aided this country in its war with England. Public men openly urged intervention in the affairs of France and characterized the neutral position of the government as cowardly and ungrateful. Many of the newspapers that violently attacked the administration were in the hands of foreigners, and this circumstance had not a little to do with the passage of the act. The law empowered the President to expel from the country such aliens as he might deem dangerous to the peace and safety of the nation, or as were engaged in plots against it. The sedition act imposed heavy fine and imprisonment upon such persons as should conspire to oppose the national government or its laws, or print or publish any false, scandalous, or malicious writings against the government, Congress, or the President, to bring them into disrepute, to excite hatred against them or to promote sedition. The followers of Jefferson, who formed what was then known as the Republican party, denounced the laws, and Kentucky and Virginia passed resolutions declaring them subversive of liberty of speech and a free press.

Alkali.—A substance with basic properties, which is soluble in alcohol or water. The alkalies include such substances as: soda, potash, ammonia, lithia, etc. They turn red litmus blue, have a caustic taste.

Aladdin.—A hero of the story "Aladdin or the Wonderful Lamp" in the "Arabian Nights Entertainment."

Allah (*al'ā*).—God.

Allahabad (City of God).—The "Holy City" of the Indian Mahometans, at the junction of the Jumna and Ganges rivers in N. W. Hindostan.

Allatoona (Ga.), Battle of.—A month after the capture of Atlanta by Gen. Sherman, the Confederate army under Gen. Hood, was launched northward, its purpose being to enter upon an aggressive campaign in Tennessee. Marching swiftly, Hood endeavored by quick, hard blows to break Sherman's communications between Chattanooga and Atlanta. On Oct. 5, '64, a Confederate division under Gen. French appeared before Allatoona Pass, 35 miles north of Atlanta. This is a strong natural position and here were stored 1,500,000 rations. These the Confederates desired to capture or destroy. The Federal force consisted of less than 800 men, commanded by Col. John E. Tourtelotte, of the 4th Minn. French was sluggish, delaying his attack till the next day. Meanwhile Gen. John M. Corse, with 1,200 men had reinforced the garrison, raising its strength to 2,000. French with a largely superior force, attacked with energy, but so gallant was the defense that after an engagement that lasted the entire

day, the Confederates drew off and abandoned the enterprise. The Confederate loss was above 1,000; that of Corse — who was one of the wounded — was 700, more than a third of his men. The defense of Allatoona ranks among the notably gallant operations of the Civil War.

Alleghany Mountains.—A chain of mountains crossing the western extremity of Md.; traverses W. Va. and forms part of the boundary between Va. and W. Va.

Allegheny.—A river in the United States rising in north of Pennsylvania; flows south 300 miles, and unites with the Monongahela at Pittsburg to form the Ohio.

Alliance.—Blackstone says "allegiance is the tie which binds the subject to the sovereign, in return for that protection which the sovereign affords the subjects." Natural or implied allegiance does not arise from any express promise, but is the obligation that one owes to the nation of which he is a citizen or subject, by either birth or adoption, as long as he remains such. Express allegiance is that which results from an expressed oath or promise. Local allegiance which is temporary and expires with residence, is the obedience and temporary aid due by an alien to the state or community in which he lives. (See NATURALIZATION.)

Allegri, Gregoria.—(1580-1652.) An Italian composer; he produced some magnificent religious music, notably the "Miserere," for nine voices and two choirs.

Allen, Elisha Hunt.—(1804-1883.) A politician and diplomatist. He was a Whig member of Congress from Maine (1841-43), and for many years chief-justice of Hawaii; he also served as minister to the U. S. from the Hawaiian Kingdom.

Allen, Ethan.—(1737-1789.) A distinguished commander in the Revolutionary War. Colonel of the "Green Mountain Boys." Born at Litchfield, Conn.

Allen, Ira.—(1751-1814.) An American Revolutionary soldier and politician, brother of Gen. Ethan Allen.

Allen, Joel Asaph.—(1838.) An American naturalist, noted as a mammalogist; was curator of the department of mammalia and birds in the American Museum of Natural History, N. Y., in 1885. He accompanied Agassiz on his expedition to Brazil in 1865.

Allen, William.—(1806-1879.) A lawyer and politician. He was a Democratic member of Congress from Ohio (1833-35); U. S. senator (1837-49) and governor of Ohio (1874-76). He was the leading expounder of the "Ohio Idea" — the payment of government obligations in "greenbacks."

Allen, William Henry.—(1784-1813.) An American naval commander who served with distinction in the War of 1812, and was mortally wounded while in command of the "Argus."

Allentown.—The capital of Lehigh Co., Pa. Noted for its extensive iron manufactures and a large trade in coal and iron. Pop. (1900), 35,416.

Allerton, Isaac.—(1583-1659.) One of the "Pilgrim Fathers," a founder of Plymouth, Mass., and agent in Europe of the Plymouth Colony.

Alligator Swamp.—A large swamp in N. C., between Paullico and Albemarle sounds.

Alligator.—2641.

Allison, William B.—Born at Perry, Wayne County, O., 1829. An American statesman and politician.

Alliteration.—3067.

Allonge.—A small piece of paper attached to a note or draft, upon which to write endorsements when the original document will hold no more.

All Saints' Day or All Hallows (Halloween).—A festival to commemorate Saints and Martyrs not honored by the assignment of an especial day. Began by Pope Boniface IV, about 607, established by Pope Gregory IV (about 830).

All Souls' Day.—(2 Nov.) A festival of the Roman Catholic Church, to commemorate the souls of the faithful.

Allston, Washington.—(1779-1843.) A noted American painter.

All's Well That Ends Well.—A comedy by Shakespeare; played first in 1601.

Almack's (âl'maks).—A famous London gaming club, founded in 1763 by William Almack. It became afterward a Whig club and was known as Brook's. 2. Very fashionable assembly rooms, built by Almack and opened to the public in 1764.

Almighty Dollar.—A phrase first used by Washington Irving in his sketch of a Creole Village, in 1837.

Almirante Oquendo.—A Spanish warship destroyed at Santiago. (See SCHLEY, WINFIELD SCOTT, 507.)

Almond (amygdalus communis).—A tree native to Asia, Barbary, and Morocco; of moderate height; bears a nut-fruit. There are two varieties, bitter (*amara*), sweet (*dulcis*).

Alpaca, The.—See LLAMA, 2481.

Alpha and Omega.—The first and the last letters of the Greek alphabet, used frequently to express ideas of completion.

Alphabet.—3041.

Alphabet Used Most Frequently, The Letter of the.—The letter e, which is the only letter in the English language which is used oftener than 100 times out of every thousand letters employed. The e stands first also as regards frequency of use in the French, German, Italian, and Spanish languages. The following letters are the ten English ones most frequently used, namely:—

Out of every 1,000 letters used.		Out of every 1,000 letters used.	
E	137	R	70
T	88	N	66
O	76	H	65
S	75	A	64
I	71	L	40

As initial letters the order is very different; the order of the ten most frequently so used being: R, S, C, P, A, T, D, M, F, and I. The four letters most seldom used are z, j, q, and x; while the four least frequently used as initial letters are K, Y, Z, and X. Other languages would require the various letters in different proportions. In Latin and French q and u would be deficient, h would be in excess, and w would be needless. The Welsh language requires a larger supply of d, y, w, and l, and does not require j, k, q, or x.

Alpheus.—The chief river of the Peloponnesus.

Alpheus.—In Greek mythology, a river-god.

Alps.—Mountains of Europe. See MATTERHORN and MONT BLANC.

Alsace or Elsass.—Formerly part of the Kingdom of Austria. Incorporated with the German Empire in 10th century. Restored to France in entirety, 1697. Reconquered by Germany, 1870.

Altai Mountains.—In Central Asia. The highest summit is about 11,000 feet.

Alter Ego (Latin, "a second I").—One's double or counterpart. In the play of the Corsican Brothers, the same actor performs the two brothers, the one being the alter ego of the other.

Alto Relievo.—Figures in marble or castings, raised or projecting from the tablet.

Alum.—A whitish, saline substance with astringent, sweetish taste. It is a double salt, composed of the sulphates of alumina and potash. It occurs in regular 8-sided crystals. The chief sorts of alum are: potash, soda, ammonia, chrome potash, iron, and manganese alum. It is much used as a mordant in dyeing, also in tanning, and in medicine to stop bleeding. It also serves to impart whiteness to bread.

Aluminum.—2949.

Aluminum or Aluminium.—A metal found in clay, feldspar, slate, and other rocks and minerals. It is white, very malleable, ductile, tough as iron, and takes a high polish. It melts at 1292° F. and may be cast. It does not rust, oxidize or tarnish in air or water. It is lighter than glass, and only one-fourth the weight of silver. It is a good conductor of heat and electricity. It alloys with other metals, and as the processes of extraction become more easy it is rapidly becoming cheap enough for much more extended use.

Alva, Duke of (Ferdinand Alvarez von Toledo).—Prime Minister and General of Spanish armies. Noted for his rigorous suppression of the revolt of the Netherlands, 1567.

Amadis of Gaul (*am' a-dis ov gâl*).—The hero of a famous medieval romance, the origin of which is not known, but which is thought to have been translated from a Portuguese work, afterward lost.

Amazon, The.—The principal river of South America, and the largest on the globe, has its source in the Andes of Peru and Ecuador, and flows almost due eastward to its mouth in the Atlantic Ocean near to the equator. Its length is estimated at 3,300 miles, and it drains, with its tributaries, about a third of the South American continent. Its mouth was discovered in 1500 by one of the brothers Pinzon, the Spanish navigators; it is navigable for large vessels for 2,200 miles, the tide ascending it for 400 miles. It is connected on the north with the Orinoco, in Venezuela, by the Rio Negro and the Cassiquiare. The main mouth of the mighty stream is 50 miles in width, and it is a mile wide, 2,500 miles from its Atlantic exit, near the Peruvian frontier. Its banks abound in forests, and in low elevations the river frequently overflows

and submerges large areas of fertile land. This occurs during the rainy season, or when the great wave bore, or eagre, comes in with a mighty and often destructive sweep from the sea. The valley of the upper Amazon is covered with dense stretches of valuable timber and a variety of tropical plant and animal life most interesting to the botanist and naturalist. This sea of verdure covers an area of many thousand miles.

Amazons.—Fabled warlike tribes of women in Asia, Africa, and Scythia.

Ambassador.—An envoy, plenipotentiary, or minister-diplomat of eminence or of high rank sent to a foreign government or court to represent his own country or sovereign. Until lately the United States, adhering to its democratic traditional policy, has withheld the term or title in sending its accredited representatives abroad to foreign courts or legations. This coyness it has, however, got over, the change occurring on the passing, in 1893, of the Diplomatic and Consular Appropriation bill. The measure empowered the President to raise American diplomats and ministers to the rank of ambassadors extraordinary and plenipotentiary, in the case of those accredited to the court of St. James (London), Paris, Rome, and Berlin. See UNITED STATES, DEPARTMENT OF (The Department of State). The first American who held this diplomatic rank was Thomas F. Bayard, who, by virtue of the act of Mar. 3, 1893, became ambassador to Great Britain. The term had for many years before been used, but always erroneously, to describe our envoys to foreign countries. Ambassadors are now accredited to France, Italy, Germany, Russia, and Mexico. Before that time the representatives of the U. S. to those countries were called, simply, ministers.

Amber.—A sort of resin of vegetable origin, but now appearing like coal, as a product of the mineral formation. Pale-yellow in color, transparent, brittle, and capable of electrical excitation on being rubbed. This quality combined with its Greek name, elektron, has given us the word "electricity." Its sp. gr. is 1.065 to 1.070. It is mentioned in Homer and was well known to the Ancients. It is found on the shores of the Baltic Sea, especially after storms. The largest piece ever found is said to be in the royal cabinet in Berlin, it weighs 15 pounds and is valued at £1,500 (\$7,500). Amber is used for mouthpieces for pipes; though an artificial amber composed of copal, camphor, and turpentine is much used. It is supposed that the fine tone of the Cremona violins is largely due to the use of an amber varnish.

Ambergris.—A fatty substance found floating in the sea in lumps varying from half an ounce to 100 lbs and upward. It is also taken from the bowels of the spermaceti whale. It is found in the Bahama Islands, East Indies, the coasts of Africa, Brazil, Japan, and China. It is much used in perfumery, and is worth about \$30 an ounce.

Amboyna.—Chief of the Molucca Isles. See *Moluccas*.

Amende Honorable.—A form of punishment prevailing in France in the 9th century. The offender, usually a traitor, was partly stripped, and with a rope around his neck, and a taper in his hand, was taken to court and compelled to beg pardon of God and his country. In modern usage, the term signifies an apology to one who has been injured.

"America."—A wooden keel schooner-yacht, owned by Commodore J. C. Stevens of the New York Yacht Club, in 1851, who entered her in the race of Aug. 22, open to yachts of all nations for a £105 cup. The course was around the Isle of Wight, and the "America" beat the entire fleet of 18 yachts by about seven miles. The cup was eventually given to the N. Y. Yacht Club and made a prize open to challenge by yachts of all nations.

America.—The entire Western continent, embracing North, Central, and South America and neighboring islands. It derives its name from Amerigo Vespucci, an early explorer whose descriptions of the country were widely published. Norsemen visited it as early as A.D. 1000, and there are traditions of Chinese and Irish discoveries; but it was only after the voyage of Columbus in 1492 that its existence became generally known in Europe. In 1507 the geographer Waldseemüller, in a treatise, "Cosmographical Introductio," first suggested that the continent be called America. On the north it includes the Arctic regions, and extending southward, all the land between the Atlantic and Pacific oceans to Cape Horn, the lowest point of South America. The upper portion of the habitable territory embraces a central basin divided by a watershed (within which are Hudson's Bay and its feeders on the north), drained by the Mississippi, Missouri, Ohio, and other rivers and their tributaries, which find an outlet into the Gulf of Mexico. This enormous basin is inclosed on either side and separated from the oceans by the Rocky and Appalachian Mountains, which ranges assume the general form of the letter V. The St. Lawrence runs transversely to the general course of the other rivers in the basin. In South America, the Andes, an extension of the Rocky Mountains, follows the line of the Pacific coast, and the general trend of the rivers is toward the southeast, except those north of the Amazon, which empty into the Caribbean Sea. The entire continent has great natural wealth in flesh, furs, minerals, and vegetables. Few of its original inhabitants, usually called Indians, survive.

"America for Americans."—The "Monroe Doctrine" in a nutshell. (See *MONROE, JAMES*, 429.)

American Bison, The.—2425.

American Colonization Society, The.—A society organized at Washington, D. C., in 1817, for the purpose of colonizing free American negroes. A tract of land was purchased near Cape Mesurado, Africa, and the colony of Liberia was

founded, which became an independent republic in 1847.

American Flag.—In 1777, the U. S. Congress resolved that the United Colonies of America should have a flag of their own. It was to be symbolical of the thirteen original states of the Union that had thrown off allegiance to England, and was constructed to represent these states—with 13 stripes, alternately red and white, together with 13 white stars on a blue ground. A new star has since been added for each new state entering the Union, but the stripes remain the same.

American Fox, The.—2420.

American Hare, The.—2431.

American Home, The.—2173.

American Indian Mythology.—1646.

Cosmogony of Primitive Man, 1647.

Primitive Religion and Magic, 1648.

Magic Power Interpreted as Breath or Spirit, 1649.

Magic Power Interpreted as Fire, 1650.

Origin of the Idea of a Sky-God, 1650.

Relation of Ritual and Myth, 1652.

Race Origin Myths, 1652.

Deluge Myth, 1653.

The Mortal Who Visited the Underworld, 1654.

How the Twins Visited the Sun, 1659.

The Cultus-Hero Kills Monsters, 1660.

How the Youth Punished Man-Eagle, 1660.

The Possession of Fire, 1663.

The Origin of a Tutelary God, 1663.

Americanisms.—3020.

American Protective Association.—Its principles, proclaimed in its platform of 1894, are (1) protection of our non-sectarian free public school system; (2) no public funds or property to be used for sectarian purposes; (3) the preservation and maintenance of the Constitution and Government of the U. S.; (4) restriction of immigration; (5) extension of time required for naturalization. Organized in 1887, the A. P. A., as it is commonly called, has councils in nearly every state and while disclaiming to be a political party, has influenced results in many elections.

American Philosophical Society.—A scientific society founded at Philadelphia by Benjamin Franklin, in 1744. It was reorganized in 1768 and united with the Jesuits, or Society for the Promotion of Useful Knowledge, in 1769. Franklin was its first president.

American Rabbit, The.—2428.

American Republics, Bureau of.—Established in 1889, at the instance of the Pan-American Congress, to collect and disseminate information concerning the North American and South American republics. Its work has been of much commercial value. It reports to Congress.

American System.—See *CLAY, HENRY*, 118.

American System.—This phrase was probably first used by Henry Clay in the debates on the enactment of the tariff law of 1824, and it is now generally understood to denote the policy of protection to home industries by high duties on imports. In 1848 it had a wider meaning, and

- President Polk in his message opposed the system on the ground that it marked a departure from the earliest policy of the government and that it was not warranted by a just interpretation of the Constitution. It was claimed that one of its aims was the establishment of a great national bank; that it favored a tariff for protection rather than to raise needed revenues; that it involved a comprehensive scheme of internal improvements and the distribution among the states of the money received from the sale of public lands.
- American Volunteers, The.**—A religious organization founded in March, 1896, by Mr. and Mrs. Ballington Booth, who had separated from the Salvation Army. In its plan and methods it was designed to be essentially American.
- Ames, Fisher.**—(1758-1808.) A noted American orator, statesman, and political writer.
- Ames, Joseph.**—(1816-1872.) An American painter.
- Ames, Mary Clemmer.**—(1839-1884.) An American writer; the author of several novels, volumes of poems, sketches, etc.
- Ames, Oakes.**—(1804-1873.) An American manufacturer, capitalist, and politician. He was interested in the construction of the Union Pacific Railroad, and was Republican member of Congress from Mass. (1863-1873). He was censured by the House for his connection with the Credit Mobilier—a financial scheme, alleged to be corrupt, incidental to the construction of the above named railroad.
- Amethyst.**—A variety of quartz, of a beautiful violet-blue or purplish-violet color due to impregnation of peroxide of iron or manganese. It is much used in jewelry and is found in India, Ceylon, and Brazil; though poor specimens occur abundantly everywhere. The Ancients believed that if worn around the neck it could prevent drunkenness, and, indeed, the name means, in Greek, *unintoxicated*.
- Amiens.**—City of Picardy, France. Its noted cathedral was built in 1220.
- Amistad Case.**—The case of the U. S. against the Spanish vessel "Amistad," which was seized by negroes near Cuba when coming from Africa with a cargo of kidnapped slaves. They sailed to the coast of Conn., where the vessel was captured by a U. S. vessel. On a libel for salvage, the U. S. Supreme Court held on appeal that the negroes were free and were not pirates.
- Ammen, Daniel.**—(1820-1898.) An American naval officer; retired as rear-admiral in 1878.
- Ammen, Jacob.**—(1808-1894.) A general in the U. S. army.
- Ammonia.**—A very volatile gas with pungent odor. It is obtained from gas-manufacture as a by-product. It was formerly made from the horns of deer, etc., hence its common name of hartshorn. It is extremely soluble in water, forming the ordinary ammonia of commerce. It contains 32 per cent. by weight of the gas and has a sp. gr. of .891. It is present in rain-water, which washes it out of the air in its fall. Ammonia is an important fertilizer as it contains nitrogen—its formula being NH_3 —which is so essential to plant growth. Ammonia salts are often called the nitrogen-carriers.
- Amnesty.**—A pardon for political crimes and offenses which are specified in the act of amnesty and are so obliterated that they can never again be charged against the parties named or described. Absolute amnesty is that which is proclaimed without reference to persons or places. President Lincoln's first amnesty proclamation, during the Civil War, excepted all officers or agents of the Confederate government, all of its army officers above the rank of colonel, all naval officers above the rank of lieutenant, all who had resigned from the military or naval service of the United States to participate in the Rebellion, and all who had treated negro soldiers or their custodians otherwise than as prisoners of war. President Johnson proclaimed universal amnesty, in 1868. Amnesty was practised in ancient times, especially among the Greeks.
- Amphictyonic Council.**—A council composed of 12 of the most virtuous men of various cities of ancient Greece to control the general interests of the nation. It is said to have been founded by Amphictyon in 1498 B.C., at Thermopylæ. It was still in existence in 31 B.C.
- Amsterdam, New** (*am' ster-dam*).—An early name for New York City.
- Amsterdam.**—North Holland, the chief commercial city of the Netherlands. Pop. (1899), about 525,000.
- Amsterdam.**—A city in Montgomery Co., N. Y. It has important manufactures of knit goods. Pop. (1900), 20,929.
- Anaconda, The.**—See SERPENTS, 2638.
- Anacreon** (*a-nak' rē-on*).—(563-478 B.C.) A famous Greek lyric poet.
- Anæsthetics.**—Substances which produce insensibility to pain, either total or local. They include such as: Chloroform, ether, nitrous oxide or laughing gas, cocaine, thymol, aconite, belladonna, chloral, phenol, and Indian hemp. It is only within the nineteenth century that their use has been known. Since their introduction the science of surgery has made wonderful advances. Their discovery is probably one of the greatest boons to humanity.
- Anagram.**—The transposition of the letters of a word, phrase, or sentence to form other words. Some of the most remarkable are:—
- (1) "*Quid est veritas?*" (Pilate's question "What is truth?")
"*Est vir qui adest.*" "It is the man who is here."
 - (2) Horatio Nelson—*Honor est a Nilo.* (Honor is from the Nile.)
 - (3) Florence Nightingale. Flit on, cheering angel.
- Ananias.**—A Christian Jew of Jerusalem; struck dead, for lying and fraudulent practices.
- Anatomy of Melancholy, The.**—A famous work by Robert Burton, published in 1621.
- Anaxagoras** (about 500-428 B.C.).—A Greek philosopher and student of astronomy and mathematics.

Ancestor Worship.—See CHINESE MYTHOLOGY, 1553.

Andalusia.—A large and fertile region in south of Spain. Its name was originally Vandalusia, from the Vandals who settled in it in the 5th century. It is called the garden and granary of Spain. The purest Spanish is spoken within its area. It covers 33,340 sq. m. and has a population of 3,500,000.

Andaman Islands.—On the east side of the Bay of Bengal. They are divided into the Greater and Lesser Groups, and number in all from 3,000 to 3,500 islands. The total area is 2,508 sq. miles. The inhabitants occupy the lowest stages of civilization, and are very dark with crisp woolly hair. They seldom exceed five feet in height. They are under British control.

Andersen, Hans Christian.—(1805-1875.) A Danish author; especially famous for his fairy tales.

Anderson, Joseph.—(1757-1837.) An American lawyer and politician, and an officer in the Revolutionary War. He was the first Comptroller of the Treasury (1815-36).

Anderson, Mary Antoinette (MRS. NAVARRO).—A noted American actress. Her first appearance on the stage was at Louisville, Ky., in 1875, when she scored a great success as Juliet. After a remarkably successful career in England as well as in America, she retired from the stage in 1889.

Anderson, Richard Henry.—(1821-1879.) A general of the Confederate army.

Anderson, Robert.—(1805-1871.) An American general, noted for the defense of Fort Sumter in the first engagement of the Civil War.

Anderson Case.—Before the war, Anderson, a strange negro, was found wandering on the plantation of Seneca Diggs in Missouri. He had no pass and Mr. Diggs arrested him as a fugitive slave. Anderson killed his captor and fled to Canada whence, under the extradition treaty, he was surrendered to the U. S. He was tried, but was discharged on a technicality.

Andes (Spanish, *Cordillera de los Andes*).—A South American range of mountains, which with the Alps in Europe, form the two chief mountain systems of the world. The Andes extend for 4,500 miles along the west coast of the continent, parallel to the Pacific Ocean, from near the Isthmus of Panama to Cape Horn. The range has a high average elevation (about 13,000 feet), though a number of the peaks, many of them containing volcanoes, rise abruptly from the coast to a height of 22,900 feet. The chief summits are Chimborazo, Cotopaxi, Aconcagua, Sorata, Illimani, and Tolima. The range covers an area of over a million square miles, and has a breadth varying from 50 to 350 miles. This vast system is classed by geographers under different names, derived from the state or country through which it passes, *viz.*, the Patagonian, Chilean, Bolivian, Peruvian, Ecuadorian, Colombian, and Venezuelan Andes. The volcanoes occur chiefly in Ecuador among the Andes of Quito. The range incloses many fertile plains and tablelands, including lakes, and the sources of the chief rivers. One of the

principal sheets of water in the Andes is Lake Titicaca, which lies at an elevation of 12,800; while the river Amazon has its source in the range, and drains a basin of about two and a half million square miles, with an entire length of 3,300 miles. The river is navigable for large vessels (steamers, etc.), for 2,200 miles, and is a free highway to all nations. There are a number of passes which cross the Andes at different points, but all are at a high elevation, ranging from twelve to fifteen thousand feet, and at Aconcagua a railway now traverses the great barrier, a wonderful engineering feat. The range has a variety of climate, and a characteristic animal and plant life. The animal life includes alpacas, llamas, condors, pumas, and jaguars, and the tropical parts are the home of a number of beautiful humming birds. Varied and valuable are the economic resources of the Andes, which embrace rich lodes of the chief metals, including gold, silver, copper, and lead. Emeralds are also found in the Tunca mines near Bogota. The rock and strata features of the Andes are interesting to geologists and mineralogists. The fruit of both tropical and temperate zones is to be found in many of the sheltered plains of the Andes, as well as many magnificent trees, palms, and other vegetation. On the loftier peaks there is almost perpetual snow, though the warm Pacific winds make salubrious the climate of the lower elevations.

Andorra.—A remarkable republic in the Spanish territory of Catalonia, comprising an area of 175 sq. m. Population estimated at 6,000. It is said to have been declared a free state by Charlemagne for the services rendered by its people against the Moors.

Andover.—A town in Essex Co., Mass., the seat of Andover Theological Seminary, Phillips Academy, and the Abbot Female Academy. Pop. (1900), 6,813.

André, John.—Born at London, 1751; executed at Tappan, N. Y., Oct. 2, 1780. A British officer in the Revolutionary War. As the representative of Sir Henry Clinton, he made the arrangements, near Stony Point, with Benedict Arnold, for the surrender of West Point (Sept. 21, 1780), but on his return was arrested at Tarrytown Sept. 23, and condemned and hanged as a spy.

Andrew, James Osgood.—(1794-1871.) An American bishop of the Methodist Episcopal Church. The fact that he was a slave-owner led to a dispute in the church, resulting in the formation of the Methodist Episcopal Church South, 1846.

Andrew, St.—The first disciple. He is the principal patron of Scotland. Tradition says he was crucified at Patrae, now Patras, in Greece, upon a cross of this form, X (crux decussata), called St. Andrew's Cross. It is a white saltire on a blue ground. Combined with the crosses of St. George of England and St. Patrick of Ireland it forms the Union Jack. St. Andrew is also much venerated in Russia, and the order of St. Andrew, founded by Peter the Great in 1708, is the highest in the state. St. Andrew's Day falls on Nov. 30.

Androcles and the Lion.—See ANIMAL STORIES, 2736.

Andromache.—Wife of Hector, the Trojan hero.

Andromeda, 1629.

Andronicus (*an-drō-ni'kus*) **I. Comnenus.**—(1110-1185.) Byzantine Emperor.

Andronicus II. Palæologus.—(1259-1332.) Byzantine Emperor.

Andronicus III. Palæologus.—(1296-1341.) Byzantine Emperor.

Andros, Sir Edmund.—(1637-1714.) An English colonial governor of N. Y. (1674-81) and of New England, including N. Y. (1686-89).

Androscoggin (*an-dros-kog'in*) **River.**—Rises in the northern part of New Hampshire and northern Maine, flows into the Kennebec.

Anemometer.—An instrument for measuring the force, direction, and velocity. The invention was first made by a Dr. Robinson, in 1846, and consists of four hollow cups, on horizontal arms of equal length, turning on a vertical axis. This axle is connected with a set of wheels, in an inclosed frame, which give it support, and which record the number of revolutions made by the cupped arms as they are whirled round by the wind. The rotation of the cups on this wind-vane thus enables one to calculate the rate or velocity of the wind. Other forms of the instrument, such as that known as Osler's pressure anemometer, have been constructed and deemed more accurate. In Osler's instrument a brass plate is fastened by springs on a vane in such a way that the varying pressure of the wind on the plate causes the springs to yield in corresponding degrees, and this is recorded on a moving sheet of paper by a pencil fastened to the vane; and the pencil records the changes in the direction of the wind, and still another, guided by a rain gauge, indicates the amount of rain that has fallen.

Anemone, The.—2899.

Angel.—A gold coin stamped with the figure of an angel, weight four pennyweights, value 6 s. 8 d. in the time of Henry VI, and at 10 s. in Elizabeth's time, 1562.

Angel, Benjamin Franklin.—(1815-1894.) An American lawyer and diplomatist.

Angelic Tree, The.—See GINSENG, 2881.

Angelico, Fra.—3411.

Angell, James Burrill.—(1829.) An American educator.

Angell, Joseph Kinnicut.—(1794-1857.) An American legal writer.

Angle.—3962, 3979, 3988.

Angler, The.—2682.

Anglo-Saxons.—The people who have resulted from the union of the German tribes, the Angles, Saxons, and Jutes who crossed over from the peninsula of Jutland—the modern province of Schleswig-Holstein—with Hengist and Horsa to Britain in 449. They wrested the country from the ancient Britons whom they drove west into Wales and north into Scotland. The Anglo-Saxons lived for a time under seven separate kings, but combined for defense when necessary. The seven kingdoms formed the Saxon Heptarchy. Egbert (827) was the first king of

all England or Angle-land as it was then called. The people were much harassed by the Danes, and were afterward conquered by the Norman-French under William the Conqueror (1066), who became king of England under the title of William I. Then followed a union or blending of the two races, in which, however, the strong racial characteristics of the Anglo-Saxons are in no wise obliterated.

Anglo-Saxon, Element in English, The.—3013.

Aniline.—A substance originally obtained from indigo, but now derived from coal-tar, the refuse of gas-making. It is an oily colorless fluid, yet it is the base of the numerous aniline dyes numbering some hundreds. To produce them, the aniline is treated with an acid, which forms a base. These bases are in many cases colorless and only develop tints when converted into salts.

Animals, Relative Ages of.—The average age of cats is 15 years; of squirrels and hares, 7 or 8 years; rabbits, 7; a bear rarely exceeds 20 years; a dog lives 20 years, a wolf 20, a fox 14 to 16; lions are long-lived, the one known by the name of Pompey living to the age of 70. Elephants have been known to live to the age of 400 years. When Alexander the Great had conquered Persia, king of India, he took a great elephant which had fought valiantly for the king, and named him Ajax, dedicated him to the sun, and let him go with this inscription, "Alexander, the son of Jupiter, dedicated Ajax to the sun." The elephant was found with this inscription 350 years after. Pigs have been known to live to the age of 20, and the rhinoceros to 29; a horse has been known to live to the age of 62, but they average 25 or 30; camels sometimes live to the age of 100; stags are very long-lived; sheep seldom exceed the age of 10; cows live about 15 years. Cuvier considers it probable that whales sometimes live 1,000 years. The dolphin and porpoise attain the age of 30; an eagle died at Vienna at the age of 104; ravens have frequently reached the age of 100; swans have been known to live to the age of 300. Mr. Malerton has the skeleton of a swan that attained the age of 200 years. Pelicans are long-lived. A tortoise has been known to live to the age of 107 years.

Animal Stories.—2725.

A Outlaw of the Hedges, 2725.
 The Song That Brought Sunshine, 2725.
 Damon and Pythias in Dog Life, 2726.
 Two Crows Better Than One, 2727.
 A Wily Fox, 2728.
 The Mischievous Tailor and the Elephant, 2728.
 The Dog and the Dishonest Baker, 2729.
 Owed His life to a Pet Bear, 2730.
 The Adopted Robins, 2731.
 The Elephant's Revenge, 2732.
 The Penitent Monkey, 2732.
 The Dog and the Hidden Coin, 2733.
 A Life-Saving Dog, 2734.
 A Captive Lion Tells a Monkey How He Killed His Keeper, 2734.

Argus, the Dog of Ulysses, 2735.
 Androcles and the Lion, 2730.
 An Honest Collie, 2737.
 Worth His Taxes, 2737.
 The Cat's Christmas Gift, 2738.
 The Pet of the Regiment, 2739.
 A Fox Hunt Described by a Fox, 2740.
 The Death of a Hero, 2741.
 The Dogs Who Changed Places, 2742.
 The Death of Gêlert, 2743.
 The Hen and the Pig, 2744.
 The Dog, the Man and the Snake, 2744.

Animalcules, means literally small animals, but the word is limited to those which are microscopic in size. They are found in stagnant water in large numbers.

Animals That Can Leap the Greatest Distance, The.—The galago, or flying lemur. This singular animal is a native of the Indian Archipelago. It is from 2 ft. to 3 ft. in length, and is furnished with a sort of membrane on each side of its body connecting its limbs with each other; this is extended and acts as a parachute while taking its long leaps, which measure about 300 ft. in an inclined plane. The kangaroo can leap with ease a distance of between 60 ft. and 70 ft., and can spring clean over a horse and take fences from 12 ft. to 14 ft. in height. The animals that can leap the greatest distance in proportion to their size are the flea and the grasshopper, the former being able to leap over an obstacle 500 times its own height, while the grasshopper can leap for a distance measuring 200 times its own length. The springbok will clear from 30 ft. to 40 ft. at a single bound. The flying squirrel, in leaping from tree to tree, often clears 50 ft. in a leap. This animal also has a broad fold of skin or membrane connecting its fore and hind legs. A steeplechase horse, called The Chandler, is reported to have covered 39 ft. in a single leap at Warwick some years ago. Some species of antelopes can make a leap 36 ft. in length and 10 ft. in height. A lion and a tiger each clear from 18 ft. to over 20 ft. at a bound while springing on their prey. A salmon often leaps 15 ft. out of the water in ascending the falls of rivers.

Anjou (*an'jō*).—An ancient government of France.

Anjou, Battle of (22d Mar. 1421).—Between English and French, commanded by the dauphin. The English were defeated with a loss of 1,500.

Anna Karenina.—Tolstoi's most important novel. Published in 1878.

Annals of a Quiet Neighborhood.—A novel by George McDonald.

Annam or **Anam** (*a-nam* or *an-nam*).—In the eastern part of Indo-Chinese peninsula. A French protectorate. Population about 5,000,000.

Annapolis.—A seaport, the capital of Md., situated on the Severn, two miles from Chesapeake Bay; the seat of the U. S. Naval Academy, and of the non-sectarian St. John's College. It was founded in honor of Queen Anne, and became a city in 1649. It was at first named Providence, then Anne Arundel Town, and finally Annapolis. It was one of the seats of the Continental

* Congress (1783-84); Washington here resigned his commission as commander-in-chief (1783). Pop. (1900), 8,402.

Annapolis Convention.—A convention of twelve delegates from the states of N. Y., N. J., Pa., Del., and Va., which met at Annapolis, Md., Sept. 11, 1786, for the promotion of mutual commercial interests.

Ann Arbor.—The capital of Washtenaw Co., Mich.; situated on the Huron River; the seat of the University of Michigan. Pop. (1900), 14,509.

Annatto, or Annatta.—The reddish pulp surrounding the seeds of the *Bisca Orellana*, a tree growing in Guiana and other parts of South America. It yields a bright orange dye, which is much employed in coloring butter and cheese.

Anne.—(1665-1714.) Queen of Great Britain and Ireland; daughter of James II. of England; wife of Prince George of Denmark.

Anne Boleyn.—Second wife of Henry VIII.

Anne of Austria.—Daughter of Philip III. of Spain; wife of Louis XIII. of France. Queen of France, 1643-61.

Anne of Brittany.—(1476-1514.) Daughter of Francis II., duke of Brittany; wife of Charles VIII. of France; afterward wife of Louis XII.

Anne of Cleves.—(1515-1557.) Fourth wife of Henry VIII.

Anne of Denmark.—(1574-1619.) Queen of England and Scotland; daughter of Frederick II. of Denmark; wife of James VI. of Scotland, afterward James I. of England.

Anne of Geierstein.—Title of a romance by Sir Walter Scott, published 1829.

Annexation.—The individual states, after the adoption of the Federal Constitution, ceded to the U. S. all territory west of the lines they established as their western boundaries. This territory, in the original charters, extended nominally to the Pacific Ocean, but actually only to the Mississippi, as Louisiana and Florida were held by Spain. In 1880 France acquired La., which in 1803 was bought by the U. S. for \$15,000,000. La. then included all the territory which now constitutes the state of that name lying west of the Mississippi, with New Orleans and the adjoining district east; Ark., Iowa, Mo., the Dakotas, Mont., Neb., Ind. Ter.; parts of Id., Minn., Colo., Wyo., and Kan., with a total area of 1,171,931 sq. miles. In 1819 Spain sold Florida to the U. S. for \$5,000,000, and Texas was admitted as a state in 1845. Through the Mexican War and the payment to Mexico of \$18,250,000 and \$10,000,000 to Tex., territory embracing Cal. and parts of N. Mex., Nev., Ariz., Wyo., and Colo. was acquired, and later, by the Gadsden treaty, the southern parts of Ariz. and N. Mex. were purchased. In 1867 the U. S. paid Russia \$7,200,000 for Alaska, and Hawaii was acquired by treaty in 1898. As a result of the war with Spain, Porto Rico, the Philippine Islands, Guam (of the Ladrone group) and other small islands, also belong to the U. S.

Anno Domini—**A. D. the year of our Lord.**—The Christian era begins with the first day of January in the fourth year of the 194th Olympiad (Greek mode of estimating time); or in the 753d year

of the building of Rome (according to the Roman method). Dionysius Exiguus, or Denys Le Petit, first introduced the era about the year 532. Charles III., of Germany, was the first to use the phrase "in the year of our Lord" in connection with his reign, in 879.

Annuity.—A sum of money payable yearly, for a given number of years or for life.

Annunzio (*än-nön'tzi-ö*), **Gabriele d'.**—An Italian poet, novelist, and playwright. Born 1864.

Annus Mirabilis (The year of wonders).—A year (1666) noted for the plague, and the great fire in London, and the English victory over the Dutch—the subject of a poem by John Dryden.

Antæus.—A fabled giant, 1625.

Ante-Date.—To date earlier than the real time.

Antelope, The.—2418.

Anthology, The.—A collection of several thousand Greek poems, covering a period of about 1,000 years from the time of the Persian war. The first anthology was prepared in the first century B.C. by Meleager of Gadara.

Anthou, Charles.—(1797-1867.) An American classical teacher and writer.

Anthony (*an'tō-ny*), **Saint.**—(251-356 A.D.) An Egyptian Abbot; founder of asceticism.

Anthony, Susan Brownell.—Advocate of the rights of woman; sketch of, 17.

Anthony of Padua.—(1195-1231.) Franciscan Monk, preacher, and theologian.

Anthony's Nose.—A promontory near the southern entrance of the Highlands, N. Y., projecting into the Hudson between West Point and Peekskill.

Antietam.—See JACKSON, THOMAS JONATHAN, 327.

Antietam (Md.) Battle of.—This, also called the Battle of Sharpsburg, one of the great battles of the Civil War, was the culmination of the Confederate invasion of Md., in Sept., 1862. After the severe engagement Sept. 14, at South Mountain (which see) Gen. Lee drew together his army at Antietam Creek, a small stream that flows into the Potomac, 8 miles above Harper's Ferry. "Stonewall" Jackson's corps was at Harper's Ferry (which see), so that at this time Lee had scarcely more than 30,000 men. Two of Jackson's divisions were hurried forward, together with other detachments, raising the Confederate strength to near 50,000. The Union army under Gen. McClellan was augmented from every available source and had an aggregate, including 5,000 cavalry, of about 80,000. The action began Sept. 16, on which day, toward evening, a large Union force under Gen. Hooker assailed the Confederate position, but night put an end to the attempt for that day. The fighting was renewed on the 17th, and continued throughout the day with the greatest fury. There was no decisive result for either side. Both combatants suffered very heavy losses and neither took the offensive on the 18th. McClellan issued an order to resume the fighting on the 19th, but it was found at dawn on that day, that the Confederates had retreated during the previous night. Lee succeeded in recrossing the Potomac without seri-

ous molestation, and returned to the line of the Rappahannock, in Virginia. It was believed at Washington that McClellan had not shown sufficient enterprise in pursuing the Confederate army, and a few weeks later he was relieved of the command of the Army of the Potomac. He was succeeded by Gen. Ambrose E. Burnside. The Federal loss at Antietam was above 12,000, of whom more than 2,000 were killed; the loss of the Confederates was somewhat larger.

Anti-Federalists.—A political party that had for its basic principle opposition to the strengthening of the National Government at the expense of the states. It antagonized the adoption and ratification of the Constitution, and under George Clinton, George Mason, and Patrick Henry, developed much strength in the First and Second Congresses. This party was finally absorbed by what was known as the Republican party, under the leadership of Jefferson. It opposed Hamilton and his plan of centralization, and advocated a strict construction of the Constitution as against supreme Federal power. Other political organizations have borne the prefix "anti"; but they have not, strictly speaking, been political parties, as they have lacked affirmative policies and, formed with specific purposes, they have disappeared with the issue that called them into being. Examples of such quasi parties have been the Anti-Lecompton, Anti-Masonic, Anti-Monopoly, Anti-Nebraska, and Anti-Renters.

Anti-Masonic Party.—Its origin may be attributed to the mysterious disappearance of William Morgan who, in 1826, announced that, assisted by David C. Miller, he intended to publish an exposure of Free Masonry. Before the issue of the work, Morgan was imprisoned for debt at Canandaigua, N. Y., whence he escaped or was taken Sept. 12, 1826. He was never heard of afterward. His fate was never revealed nor was it ever proved that he had been foully dealt with by the Masons, of which order he was a member. The bitter opposition to the Society that resulted from the singular occurrence was crystallized by Thurlow Weed, who published the "Anti-Masonic Enquirer." The Anti-Masonic party cast 33,000 votes in N. Y. State in 1828; 70,000 in 1829, and 128,000 in 1830. The latter number, however, included many who were Anti-Jackson men, without reference to Masonry. In 1831 the party's candidate for President, William Wirt, carried only Vermont. In 1835 the Anti-Masons elected Joseph Ritner governor of Pa. and the party then vanished almost as suddenly as it had appeared. During the first campaign of this party it was vehemently asserted that Morgan had been kidnapped and murdered by the Masons, and public feeling was aroused to a high pitch. The body of a drowned man was found and it was claimed to be that of Morgan. Although its identity was never established, the Anti-Masonic crusaders made much of it. They said among themselves that the unknown body was "a good enough Morgan till after election."

This phrase was adopted into the political literature of the time and has continued in use down to the present day.

Antilles.—Under this term, all the West India Islands except the Bahamas are usually included. Cuba, Jamaica, Haiti, and Porto Rico constitute the Greater Antilles. The Lesser Antilles are composed of two chains, one extending in a curve from Porto Rico to the Gulf of Paria, northeast of Venezuela, and the other westward, north of that country to the Gulf of Maracaibo. The Spaniards called the latter chain the Leeward Islands and the former the Windward Islands, but, to be exact, the Leeward Islands are those above the 15th parallel, north latitude, and the Windward Islands those below that line.

Anti-Monopolists.—A political party that was formed in 1884 and demanded the passage of the interstate act, which later became a law. Its platform favored economical government, the enactment of equitable laws, establishment of labor bureaus, legislation to insure industrial arbitration, a graduated income tax, a direct vote of the people for U. S. senators, payment of the national debt as it matures, and "fostering care" for agriculture. It opposed a protective tariff and grants of land to corporations. At its convention in 1884 it nominated Gen. B. F. Butler for President. He was indorsed by the Greenback-Labor party and the combination, which became known as the People's party, polled 130,000 votes. Later, the Anti-Monopolists were merged into the Populist party.

Antimony (Symbol *Sb*—Latin *Stibum*).—Atomic weight 122. A brittle metal of a bluish-white color. It is very easily powdered, and melts at 842° F. It is a bad conductor of heat and electricity. It does not tarnish or rust; it forms several alloys with other metals, forming Britannia metal, type-metal, pewter, and white or anti-friction or Babbit-metal. It is much used in medicine in such forms as Tartar emetic, butter of antimony, etc. It forms many compounds and two classes of salts and bases.

Antioch.—The ancient capital of the Greek kings of Syria, situated on the left bank of the Orontes, 14 miles from the sea, in Asia Minor. It was called "Antioch the beautiful" and "The Crown of the East." At one time it had 500,000 inhabitants and rivaled even Rome itself. It rose to the dignity of the first Christian city—it was here that the name *Christians* was first used. It was besieged and taken by the Crusaders in 1098. It shows few traces of its former grandeur.

Anti-Rent Party.—In U. S. politics, a party in the State of N. Y. composed of men who, dissatisfied with the patroon system in the eastern part of the state, refused to pay rent in 1839, and a few years later carried their opposition into politics. The matter was settled by compromise in 1850.

Antiseptics.—Substances which prevent putrefaction and similar changes. The chief antiseptic agents—those which destroy or prevent germ life upon which the changes depend—are: low

temperature, dry air, heat, common salt, saltpeter, alcohol, sulphurous acid, boracic acid, Burnett's solution, Condy's fluid, Platt's chlorides, nitrate of silver, creasote, chlorine, carbolic acid, charcoal, dry-mold, etc. In anti-septic surgery, iodoform, corrosive sublimate, thymol, eucalyptus, and carbolic acid find an extensive use as sprays, washes, and cleansing agents.

Ant, The.—2783.

Ant-Eater, The.—2471.

Antium.—A town in Latium in Italy. It was a favorite resort of wealthy Romans; but it is chiefly notable as being the birthplace of Caligula and Nero. Perhaps more especially noted as being the place where some of the most famous works of art have been discovered, as the Apollo Belvidere and the Borghese gladiator.

Ants.—See HOUSEHOLD PESTS, 2299.

Antwerp.—The chief commercial city of Belgium, on the Schelde, 27 miles N. of Brussels. It is the Liverpool of the continent although it is 52 miles from the sea. Pop. (1899) 282,018. It is remarkable for its trade and commerce and the enterprise of its merchants. It is closely associated with the great names of Flemish art. Its cathedral is the finest specimen of Gothic architecture in Belgium. It is 500 ft. long, 250 ft. wide, supported by 125 pillars and topped by a spire of exquisite design, 403 feet high. It contains the two finest paintings of Rubens, the Elevation of, and the Descent from, the Cross.

Apache Indians.—Now numbering about 6,200, confined on reservations in Arizona, New Mexico, and Oklahoma. They were anciently a confederation of the Athabascan stock of North American Indians and included at least a dozen tribes. In 1598 they occupied northwestern New Mexico and subsequently extended over the valley of the Gila River. In 1800 they had spread from the Colorado River to central Texas and as far south in Mexico as Durango. Ablaed by such chiefs as Cochise, Mangus, Colorado, and Geronimo, they have given the government much trouble. Settlers opposed the government's plan to remove them to a reservation in New Mexico and in April, 1871, more than 100 Apaches were massacred at Fort Grant, Ariz.

Apatite.—A mineral chiefly composed of phosphate of lime. It occurs in a variety of forms and colors and is easily mistaken for other minerals. It is much used in the preparation of fertilizers chiefly by acting upon it by sulphuric acid and forming a soluble phosphoric acid so essential to plant life. When crystals occur, they may be readily recognized by their six-sided form.

Ape.—2453.

Apennines.—A range of mountains running the entire length of the Italian peninsula.

Aphrodite.—A Greek name for Venus, 1612.

Apis.—A sacred bull worshiped at Memphis, in Egypt.

Apocalypse.—The Revelation of St. John, written in the Isle of Patmos, about 95 A.D. It was not finally and fully accepted until the Council of Trent, 1545.

Apocrypha (*Gr. concealed writings*).—The books and treatises which the early church claimed were inspired but were not included in the canon of scripture. The general application of the term is restricted to 14 books added to the Hebrew Bible: I Esdras, II Esdras, Tobit, Judith, Esther, Wisdom of Solomon, Ecclesiasticus, Baruch, Song of the Three Children, History of Susanna, Bel and the Dragon, Prayer of Manasses, I Maccabees, and II Maccabees.

Apollo.—See STORY OF THE ILIAD, 1715.

Apollo.—See GREEK AND ROMAN MYTHOLOGY, 1608.

Apostles (*Gr. One sent forth*).—In 31 A.D. 12 were appointed by Christ, *viz.*, Simon Peter and Andrew (brothers), James and John (sons of Zebedee), Philip, Nathaniel (or Bartholomew), Matthew (or Levi), Thomas, James the Less, (son of Alphaeus), Simon and Jude, or Thaddeus (brothers), and Judas Iscariot. Matthias took the place of Judas Iscariot in 33 A.D., Paul and Barnabas were appointed in 45 A.D.

Apostles' Creed is not of apostolic origin. "The source is supposed to be two sermons spuriously attributed to St. Augustine, and found in the appendix to his works." Its use was ordained by the Greek church at Antioch, and in the 11th century in the Roman Catholic Church, whence it passed to the Church of England.

Apostle of the Iroquois, The.—F. Piquet, which see.

Apostle of the Indians, The.—John Eliot, which see.

Apostolic succession is the claim to the transmission of that authority and power—by the laying on of hands—which Christ gave to his Apostles. The doctrine is held by all Roman Catholics and some Episcopalians. It exacts a form of ordination as a necessary qualification to the ministry.

Appalachian Mountains.—A great mountain system in the eastern part of North America, extending from the Gulf of St. Lawrence to northern Ala. It contains large deposits of coal and iron. Its length is about 1,500 miles and its greatest width is about 130 miles. Its highest point is Mitchell's Peak in N. C. which is 6,710 feet high.

Appian Way (*Via Appia*).—A famous early Roman highway, which ran from Rome to Brundisium (Brindisi). The period of its construction was from 312 to 244 B.C.

Apple Family, The.—284I.

Appleton, John.—(1815-1864.) An American politician and diplomatist. Democratic member of Congress from Me. (1851-53) and minister to Russia under President Buchanan (1860).

Appomattox (Va.), Battle of.—After the battle of Farmville (which see), Apr. 7, 1865, the broken Confederate army which had retreated from Richmond and Petersburg, continued its march westward, still endeavoring to elude the infantry of Meade and the cavalry of Sheridan, the combined Union force being under the direction of Gen. Grant. Lee's retrograde movement was along the line of the Appomattox River, with Meade pressing closely. Sheridan learned that supply trains for Lee's army had arrived at Appomattox station, on the railway to Lynchburg, and pushed forward to that place with all his cavalry. Gen. Custer, commanding Sheri-

dan's advance, reached Appomattox station on the night of the 8th. He at once attacked the van of the Confederate army, which had just arrived, capturing 25 cannon and several trains of supplies. Before daylight Sheridan had come up, together with a large force of infantry, comprising the Fifth corps under Gen. Griffin and the Army of the James under Gen. Ord. Underestimating the Federal strength, Lee directed Gen. Gordon to attack. As the latter advanced Sheridan drew aside his cavalry and disclosed the compact forces of Griffin and Ord. Thus menaced, in front, flank, and rear, Gen. Lee saw the hopelessness of further resistance, which could only result in a useless effusion of blood. For 48 hours he and Gen. Grant had been in correspondence, and he now displayed a flag of truce and asked for an interview with Grant for the purpose of arranging the terms of surrender. The meeting took place at the McLean home at Appomattox Court-house, and resulted in the surrender of Lee with all that remained of his army, about 27,000 men. Officers and men were permitted to retain their horses and personal baggage, and officers their side arms. "The men will need their horses for the spring plowing," said Grant. The terms granted to the vanquished were generous and caused a most kindly feeling throughout the South toward Gen. Grant. The surrender of Lee virtually ended the war. Further resistance on the part of the Confederates would have been folly, and the other armies of the rebellion speedily followed and laid down their arms.

Appraise.—To set a value on goods, commodities, or personal effects.

Appraiser.—One sworn and appointed to place a value on goods and estates.

April.—The Romans gave the name Aprilis to the fourth month. It is derived from the verb *aperire* "to open," perhaps because the buds began to open at this season. The custom of playing little tricks on the first day of this month is almost universal. It is believed that the custom spread to England and Germany from France, but its origin is doubtful.

Apteryx, the bird without wings, is a native of New Zealand. It is as large as a hen and is of a reddish-brown or gray color. It has the rudimentary wings hidden under downy feathers. It lies in holes in the daytime and comes out at twilight. The female lays, twice a year, a very large egg, and the male assists in the process of hatching.

Aquarium, Largest in the World.—The three largest aquariums in the world are those at Brighton, Hamburg, and Paris. The Brighton (England) Aquarium, which takes the lead, has forty-one tanks, containing all varieties of fish, from the stickleback to the sturgeon. Its area is 715 ft. in length by 100 ft. in breadth. Some of the tanks are of vast capacity. There is one in particular, which contains 110,000 gallons of water, and has a plate-glass front, through which the habits of very large fish may be studied. The

Hamburg Aquarium is nearly the same size as that at Brighton. The Paris Aquarium, belonging to the French Acclimatization Society, in the Bois de Boulogne, is fifty yards in length by about twelve in breadth, and contains forty tanks.

Aquarius (The Water Carrier).—See CONSTELLATIONS, 3005.

Aquitaine.—An ancient division of the southwestern part of France, the seat of a West-Gothic kingdom, early in the fifth century. After many historic changes it was finally conquered by the French in 1451-53.

Arabia.—The great southwestern peninsula of Asia. Its greatest length is 1,800 miles, and its greatest width, about 600. Its population does not exceed 5,000,000. It lies between the highlands of Syria and Mesopotamia on the N. and the Arabian Sea on the S. On the W. is the Red Sea and the Suez Canal and on the E. the Persian Gulf and the Gulf of Oman. About two-thirds of the entire country is fertile, one-third is desert and uninhabitable. The interior is not well known yet. The foremost place in the history of the country is occupied by Mohammed, and it is his connection with it that makes it most interesting to us. Arabia gives us coffee, which is indigenous to Arabia and Africa, tobacco, cotton, indigo, tamarinds, frankincense, myrrh, senna, spices, aloes, dates, and kindred products. The land is also rich in mineral products and precious stones. The inhabitants are made up of the wandering Bedouins, and the settled tribes called Hadesi and Fellahs. The Arab is of medium stature, muscular physique, and brown complexion. The most important animals are the camel and the horse. The best are reared in Nejd, but are never sold out of the country.

Arabian Fairy Tales.—1225.

Arabian Nights' Entertainment.—Tales of East Indian, Persian, and Arabian origin, first made known in Europe by Antoine Galland, a French Oriental scholar, who translated them and called them the Thousand and One Nights (from the number of nights occupied in their recital).

Aragon.—A kingdom in N. E. of Spain.

Aralia, The.—See GINSENG, 2881.

Arapaho Indians.—Of Algonquin stock, this tribe dwelt around the sources of the Platte and Arkansas rivers, and representatives of it may yet be found from the Yellowstone to the Rio Grande. Arapaho is said to mean "tattooed people." Nearly all of the tribe occupy two reservations—the Arapaho in Ind. Ter., and the Shoshone in Wyo.

Ararat.—A district in Armenia in Asia Minor. Here are found the twin mountains of Ararat, with the greater of which the landing of the Ark is associated. The Greater has a height of 17,112 feet and Little Ararat rises to a height of 12,840 feet. Great Ararat is a huge, broad-shouldered dome supported by strong buttresses. Little Ararat is an elegant, shapely cone with smooth sides, and very regular in outline.

Arbitrage.—The act of buying stock in one market and selling in another.

Arbitration.—The determination of a cause of dispute between parties in controversy, by representatives chosen by the respective parties.

Arbitration, International.—Resort to this expedient was long agitated, and prominent instances in U. S. history in which it has been employed, are the cases of the Alabama Claims, the North-western Boundary, the Fisheries Dispute, the Bering Sea Seal Fisheries, and the Venezuelan Boundary. A treaty providing for arbitration of all disputes not involving national honor, was signed by representatives of the U. S. and Great Britain in 1897, but it was rejected by the U. S. Senate.

Arbor Day.—A day set apart with the object of restoring forest trees. It was first recommended by Gov. Morton, of Nebraska, to raise a barrier of trees to protect the land from the winds of west and south. Most of the states have legalized the holiday. The public schools have fostered the idea.

Arbor Vitæ, The.—See WHITE CEDAR, 2861.

Arbuthnot and Ambrister, Case of.—Alexander Arbuthnot, a Scotchman, and Ambrister, an Englishman, were alleged to have been implicated in the Indian troubles in Fla. that Gen. Jackson was sent to quell. They were seized by Jackson's order, and tried by court-martial at Fort Marks, Fla., Apr. 26, 1818, charged with inciting the Creek Indians to an uprising against the U. S. Arbuthnot was sentenced to be hanged. Ambrister was first sentenced to be shot, but the sentence was commuted to 50 stripes on the bare back and confinement at hard labor, with ball and chain, for one year. Gen. Jackson disapproved the commutation and ordered the original sentence carried out, which was done. This arbitrary act of Jackson caused great excitement at the time, and the attention of Congress was called to it.

Arcadia.—The central and highest point of the Peloponnesus, which is the almost insular portion of ancient Greece. The early inhabitants remained long in a state of barbarism, tended cattle and hunted among the mountains. Their lives were simple, and they were passionately fond of music, and dancing. They were devoted to the worship of Pan and Artemis. So both ancient and modern poets have regarded Arcadia as an ideal land of peace, innocence, and simplicity.

Arc de Triomphe de l'Étoile (*ârk dé trèdnf' dè lâ-twâl'*).—A triumphal arch at the head of the Champs Élysées, 160 feet high, 146 feet wide. Begun by Napoleon I in 1806, completed in 1836.

Arch.—A concave structure of bricks, stone, or wood, so arranged as to remain in place by the mutual pressure of the component parts, as well as to bear a weight above. It dates back to the time of the Egyptians, and has played an important part in architecture and engineering from earliest times. The sides of an arch are called *haunches* or *flanks* and the highest part is known as the *crown*. The uppermost of the wedge-shaped pieces is called the *key-stone*, the lowest is the *springer*.

- Archangel.**—A city in north of Russia. It was the one seaport of Russia until the docks were formed at Cronstadt, and the foundation of St. Petersburg in 1703. Pop. (1890), 20,000.
- Archery.**—1951.
The Bow, 1951.
The Arrow, 1953.
Stringing the Bow, 1954.
Quivers and Targets, 1955.
- Archilochus** (*är-kil'ōkus*).—A lyric poet of Greece. Lived about 700 B.C.
- Architect, The Education of the,** 5038.
- Arctic Circle.**—A circle drawn around the North Pole, at a distance from it of $23\frac{1}{2}^{\circ}$, the inclination of the earth's axis to the plane of its orbit. Within this area there is a period during which the sun does not set and another when it does not rise, the length of the period increasing as one approaches the Pole.
- Arden, Forest of.**—A dense wooded tract formerly lying between the Avon and the Severn, extending northward indefinitely. It is the scene of Shakespeare's "As You Like It."
- Ardvark, The.**—See ANT-EATER, V, 2471.
- Areopagus.**—The highest court or council of elders of Athens, which sat on the Hill of Ares, or Mars. It is of unrecorded antiquity, and its power and dignity lasted for many centuries.
- Are the Chances for the Young Man Less To-Day?**—5243.
- Ares.**—The Greek name for Mars, 1616.
- Arethusa.**—A fountain in the island of Ortygia in Syracuse. The fable goes that an Arcadian nymph was turned into a fountain by Artemis to save her from the attentions of the river-god Alpheus, then to have flowed under land and sea and reappeared in Syracuse.
- Argentine Republic.**—With an area of 1,118,000 sq. miles it is the largest of the Spanish-American republics. Its great river system is that of the Rio de la Plata. The jurisdiction of the republic covers the whole South Atlantic coast, all of Patagonia east of the watershed of the Andes, and all of Tierra del Fuego east of the meridian of the mouth of the Strait of Magellan. Argentina has been independent since 1816; it consists of 14 self-governing provinces and several territories; only those who can read and write may vote. The Constitution resembles that of the United States, except that it acknowledges a state church, the Roman Catholic, and provides that the President shall be elected for six years and be ineligible for reëlection. It is probably the most prosperous of the Republics of South America. The surface is level; the climate healthful; and the soil fertile and productive. The forests yield timber, and the plains, called pampas, support vast herds of cattle and sheep. The products are wool, hides, wheat, tobacco, flaxseed, sugar, and maize. Population 4,042,990, capital, Buenos Ayres.
- Argon.**—See AIR.
- Argonauts.**—Heroes, who according to the Greek legend, sailed to Colchas in the ship "Argo," to carry off the Golden Flame.
- Argos.**—The oldest of the Greek cities, founded 1850 B.C. or 1807 B.C. It is situated in Argolis, N. E. of the Peloponnesus, or the Morea, a few miles inland from the Argolic Gulf of the Gulf of Nauplia.
- Argus, The Dog of Ulysses.**—See ANIMAL STORIES, 2735.
- Argus-Eyed.**—Watchful and wary. The phrase is derived from Argus, surnamed the "All-seeing," a legendary hero, the guardian of Io, slain by Hermes, and said to have had a hundred eyes.
- Argyle.**—A shire in W. of Scotland. It is the second largest county in Scotland. Its area exceeds 2,000,000 acres, including a number of islands.
- Ariadne.**—1627.
- Arians.**—Followers of Arius, an Alexandrian (336). They held that the Son of God was above all men, but not equal to the Father. Their doctrines have been the cause of violent controversy among the churchmen.
- Aries (The Ram).**—See CONSTELLATIONS, 3000.
- Ariosto, Ludivico.**—(1474-1533.) One of the greatest of Italian poets.
- Aristides.**—(died 468 B.C.) Aristides, the son of Lysimachus, even when a boy, was of a studious and settled temper, and was opposed to falsity and trickery.
- At Marathon, he fought at the side of Themistocles who became his rival on the death of Miltiades. He was liked by all for his integrity. He was devoted to law and justice. He was also cool-headed. He was unmoved by passion, or by popular opinion. He desired to preserve old customs and manners, the rustic life and the labor of the fields. He was strongly opposed to the naval and commercial policy of Themistocles. In 483, he was exiled by ostracism, a method by which Athens got rid of those whose influence or power they thought was becoming too great. He had excited the rivalry of Themistocles who set public opinion against him by charging that he was taking to himself something like regal power by settling law suits by arbitration and leaving the courts idle.
- The ostracism was conducted in this manner: Every citizen took a piece of broken pot or shell, wrote the name of the person to be banished, and carried it to a part of the market place that was inclosed by wooden rails. The magistrates then counted the numbers of shells, and announced the result. The vote resulted in banishment for ten years, and meant the success of the naval policy of Themistocles. It was a time when the people felt that there was danger from Persia and that there should be no divided or conflicting counsels on the question of preparation for defense.
- Aristides was known as the Just. He possessed a virtue which many Greek statesmen lacked. He could not be tempted by bribes. He was loved by the majority of the people; but he was ostracised in the interest of the public welfare.
- The sentence against him was revoked when the Persian invasion again burst upon Greece. He brought to Themistocles at Salamis the news that the Greeks had no chance for retreat and must fight. "Let us be rivals still," he

said: "but let our strife be which can serve our country best. If we have any discretion, Themistocles, laying aside at this time our vain and childish contention, let us enter upon a safe and honorable dispute, vying with each other for the preservation of Greece; you in the ruling and commanding, I in the subservient and advising part; even, indeed, as I now understand you to be alone adhering to the best advice, in counseling without any delay to engage in the straits." He was at once taken into the council. He was one of the most active and courageous in the battle, of the following day, in the straits of Salamis. He flew into the thickest of the fight, and held the positions which he took (480 B.C.).

In the following year, he became a general of land forces. In the great battle near Plataea, he was the worthy leader of the brave men who convinced the Persians that the task of conquering Greece was hopeless. Loaded with military glory, he continued to act with wisdom and prudence, and in perfect harmony with Themistocles. He had learned to take a different view of the growth of democratic feeling. He took an active part in the formation of the great Delian Confederacy, which was made possible only by the naval policy of Athens. By the removal of a restriction, he gave the members of the lowest class the right to hold the highest office in the state. In the supreme struggle at Salamis, he had seen the poorest citizens do their duty bravely.

Aristides died in poverty about 468 B. C. It is stated that he did not leave enough money to pay for his funeral, and that he was buried at public expense. Although there were those who charged him with dishonesty in politics, his reputation has come down to us as that of an honest man.

Aristophanes.—(452-380 B.C.) Most famous Greek comedy writer. His chief writings embrace "The Clouds," which hits at Socrates; "The Acharnians" and "The Frogs," which aim at Euripides; and "The Knights" at Cleon. In his works there is humor and wit as well as satire, and lyric strains of a wild woodland sweetness.

Aristotle.—(384-322 B.C.) Ancient Greek philosopher, pupil of Plato and tutor of Alexander the Great. He was the most prolific writer of the ancient philosophers and most of his works have survived. Taught that all knowledge was obtained from outer sources through experience; that logic is the great instrument; that philosophy includes all sciences except history; that nature is a machine energized by a first cause. His school of philosophy is called the "Peripatetic" (from the Greek "to walk about"), based upon his methods of conducting classes in groves. His works were published in 35 vols. in 1891 by Barthelemy St. Hilaire.

ARITHMETIC.—

Being the foundation of all mathematical computation, arithmetic has become a prominent factor in nearly every calling, not ex-

cepting even those that have to do with the most advanced calculations, or that have no direct connection with mathematical subjects. Especially in the business world do we find a constant demand for accuracy and speed, for there it is the results of many calculations that largely control the exchange of the various commodities. Nine out of every ten advertisements for office assistants contain the sentence, "Must be quick at figures." This means more than the words themselves indicate. It means, must first be accurate, must always get the right result, and be sure that it is right. It also means that the calculation must be performed quickly, and by the clearest and most direct methods.

In discussing the best ways of fitting one's self to meet these requirements, it will be taken for granted that all are acquainted with the ordinary arithmetical methods, and reference will be made only to short processes, by means of which accurate results may be quickly secured. In order to derive the most benefit from these, you should first acquaint yourself with the method, and when once this has been done speed and accuracy can be acquired only by practice.

It is easily possible to read figures as one does words, not by first understanding the parts and then combining them, but by comprehending the whole, as though it were itself a part. Expert musicians read whole musical phrases in this way, not note by note, but a whole group of notes at a time. And this is the result of regular practice each day; in order that the practice may produce the best results it must be regular.

ADDITION.—It has been said that nine-tenths of all the arithmetic used in the commercial world consists of addition. We see from this statement how necessary it is that every one should be able to add rapidly and accurately. There need be but little mental exertion in adding a column of figures. Let your eyes do the work, and instead of computing the result of each union of two or more of the figures in a column, learn to know their sum as soon as you see them. In practising the addition of long columns, group the figures in twos or threes, just as the letters of a long word are grouped in syllables. Learn to know 9 and 8 make seventeen, just as readily as that 9 times 8 is 72, and with no greater mental effort. Repeat mentally the result of each of the separate additions in a column, but not the process by which that result was obtained. In the accompanying example begin at the bottom of the right hand column and read as follows:—

3 9 8	}	50	11, 28, 40, 50.
6 4 2	}	50	Now after writing
9 6 5	}	40	zero below the line, begin at the
8 3 7	}	40	bottom of the middle column, and
4 2 9	}	28	adding the 5 that is carried, pro-
8 8 8	}	28	ceed in the same manner as be-
2 6 2	}	11	fore. The results this time will
3 5 9	}	11	be, 16, 26, 35, 48. In the same way
47 8 0			the left-hand column reads, 9, 21,
			38, 47. It is not necessary to ad-

here to the grouping by twos, but as proficiency is

Arithmetic.—Continued

acquired by practice, groups of three or more may be handled just as readily. After practising this method for a month you will be surprised at the progress made in both speed and accuracy.

26 To add two columns at the same time get
35 separate results as follows: $39 + 6 + 10 + 2$
42 $+ 40 + 5 + 30 + 6 + 20 = 158$. Combine these
16 mentally without regarding the plus sign,
39 and proceed thus: 39, 45, 55, 57, 97, 102, 132,
158 138, 158. After practising upon a great
number of examples, which you can make
up for yourself, you can combine three columns
in the same way as in the accompanying illustration:—

815	761 + 8 + 90 + 400 + 3 + 20 + 600 + 5 + 10
623	+ 800 = 2697.
498	769, 859, 1259, 1262, 1282, 1882, 1887, 1897,
761	2697.
2697	

Where an accountant's attention is likely to be distracted and he is compelled to leave his work unfinished, the following plan will be found helpful and time-saving in four-column addition: Add the thousands first, and set down the result; next add the hundreds, and set the amount one place to the right; do the same with the tens and units. Then add the results. Thus:—

4967	26	A variation of this	24
5832	23	method is to begin with	19
9476	19	the units and set each re-	23
8239	24	sult one place to the left	26
28514	28514	as in the accompanying	28514

example. This same method may be used in the addition of any number of columns.

The great advantage of these methods is that one does not have to remember what to carry, and the work may be resumed after being interrupted.

In very long columns of figures it is often helpful to drop the tens, and make a dot opposite the figure at which the ten is dropped. The result will be found by counting all the dots as tens when the column is finished, and adding to this sum the number less than ten that remains. Thus:—

Drop ten, keep 7, and add 40.	83	Drop ten, keep 3, and add 60
Drop ten and go on with	9. 79	
	56	" " and go on with 1
" " " " " "	7. 42	
	39	" " " " " " 3
	28	" " " " " " 4
	16	" " " " " " 6
" " " " " "	7. 82	
	19	" " " " " " 8
	13	
	16	
	473	

A good method of proving a problem in addition is to begin the addition of each column at the top and add downward, thus avoiding a repetition of any error that may have been made in the first addition. It is even safer to separate the columns into two parts, and after add-

ing each of these to combine the results. The sum thus obtained should correspond with that found in the original addition.

Another method of proving the work is as follows:—

8 3 6 2 5	Add across	$8 + 3 + 6 + 2 + 5 = 24$
9 4 3 2 7	" "	$9 + 4 + 3 + 2 + 7 = 25$
8 1 4 3 2	" "	$8 + 1 + 4 + 3 + 2 = 18$
6 5 9 8 6	" "	$6 + 5 + 9 + 8 + 6 = 34$
3 2 5 3 7 0		101
	" "	$3 + 2 + 5 + 3 + 7 + 0 = 20$
	" "	$\frac{2}{2+0=2}$ and $\frac{1}{1+0+1=2}$

As the sum of the digits in the result of the cross addition is equal to the sum of the digits in the amount, the accuracy of the work is proved.

Sometimes it happens that two columns of figures that are supposed to be exactly alike cannot be made to give the same total. In that case subtract the less of the two from the greater, and if the remainder is equally divisible by 9 some of the figures have been transposed in copying. If not divisible by 9 then wrong figures have been copied or there is a mistake in the addition of one of the columns. For example:—

(1)	(2)
836	863
724	724
598	598
362	362
2520	2547
	2520
	9)27
	3

Since there is no remainder, some of the figures must have been transposed, and on examination we find that the figures 836 in column 1 have been changed to 863 in column 2.

MULTIPLICATION.— Multiplication may be considered merely a short way of adding. Instead of adding 5 and 5 and 5, we multiply 5 by 3, which is a shorter and simpler way of getting the same result. In the operation of multiplying, as in that of adding, we must keep our minds on results and not on methods. Instead of thinking that 8 times 8 are 64, we say mentally, 8, 8, 64. In this way we not only arrive at the result in the simplest, quickest, and most direct manner, but we also give our memories a very beneficial kind of training. One of the most valuable aids in all kinds of multiplication is a thorough knowledge of the multiplication tables. These should be written and rewritten, and practised mentally, until the product of the two numbers is known just as quickly and with as little thought as the familiar words spelled by certain letters. These

Arithmetic.—*Continued*

tables should not be limited to the first twelve figures, as is usually the case, but should include all the numbers up to twenty. This gives us an easy method of multiplying any number by a second number that is less than 20. Suppose for example, that we are to multiply 437 by 16.

$\begin{array}{r} 437 \\ \times 16 \\ \hline 692 \end{array}$ We proceed as follows: $16 \times 7 = 112$, carry 11; $16 \times 3 = 48$, $48 + 11 = 59$, carry 5; $16 \times 4 = 64 + 5 = 69$. After a little practice it will be as easy to multiply by any number between 10 and 20 as by those under 10.

This method may also be employed with numbers greater than 20, but more practice will be required than in the case of the smaller numbers. In multiplying by numbers containing three or more figures, when any two adjoining ones are less than 20, treat these two as a single number, and place the units figure of the second partial product under the hundreds figure of the first partial product, thus:—

$\begin{array}{r} 5734 \\ \times 1613 \\ \hline 74542 \\ 91744 \\ \hline 9248942 \end{array}$ $13 \times 4 = 52$, carry 5; $13 \times 3 = 39$, $39 + 5 = 44$, carry 4; $13 \times 7 = 91$, $91 + 4 = 95$, carry 9; $13 \times 5 = 65$, $65 + 9 = 74$. $16 \times 4 = 64$, carry 6; $16 \times 3 = 48$, $48 + 6 = 54$, carry 5; $16 \times 7 = 112$, $112 + 5 = 117$, carry 11; $16 \times 5 = 80$, $80 + 11 = 91$.

Another method of multiplying by any number between 20 and 30 is as follows: Multiply each figure of the multiplicand in succession by the units figure of the multiplier, and add not only what is carried, but also double the next right-hand figure of the multiplicand: multiply the first figure of the multiplicand by the tens figure of the multiplier, and add only what is carried, thus:—

$\begin{array}{r} 3496 \\ \times 28 \\ \hline 97888 \end{array}$ $8 \times 6 = 48$, carry 4; $8 \times 9 = 72$, $72 + 4 + (2 \times 6) = 88$, carry 8; $8 \times 4 = 32$, $32 + 8 + (2 \times 9) = 58$, carry 5; $8 \times 3 = 24$, $24 + 5 + (2 \times 4) = 37$, carry 3; $2 \times 3 = 6$, $6 + 3 = 9$.

This method may also be employed in multiplying by numbers between 30 and 40, by adding three times the next right-hand figure of the multiplicand, instead of its double; thus:—

$\begin{array}{r} 697 \\ \times 32 \\ \hline 22304 \end{array}$ $2 \times 7 = 14$, carry 1; $2 \times 9 = 18$, $18 + 1 + (3 \times 7) = 40$, carry 4; $2 \times 6 = 12$, $12 + 4 + (3 \times 9) = 43$, carry 4; $3 \times 6 = 18$, $18 + 4 = 22$.

To multiply by any number of 9's, annex to the multiplicand as many ciphers as there are 9's in the multiplier, and from the number thus obtained subtract the multiplicand. Thus in the accompanying example, since there are three 9's in the multiplier, add three ciphers to the multiplicand, and subtract the multiplicand from the amount thus found:

$\begin{array}{r} 35749 \\ \times 999 \\ \hline 35749000 \\ - 35749 \\ \hline 35713251 \end{array}$ By the method of "cross multiplication" two large numbers may be multiplied together in a single line. Write the multiplier below the multiplicand, as in ordinary multiplication, and proceed as follows:—

$\begin{array}{r} 34 \\ \times 23 \\ \hline 782 \end{array}$ $3 \times 4 = 12$; write down the 2 as in the units figure of the product and carry 1. $(3 \times 3) + (2 \times 4) +$ the 1 carried = 18; write 8 as the tens figure of the product and carry 1; $(2 \times 3) + 1 = 7$, which completes the

product. In multiplying a number of three figures by one containing only two, proceed in a similar manner thus:—

$\begin{array}{r} 237 \\ \times 24 \\ \hline 5688 \end{array}$ $4 \times 7 = 28$, write 8 and carry 2; $(4 \times 3) + (2 \times 7) + 2 = 28$, carry 2; $(4 \times 2) + (2 \times 3) + 2 = 16$, carry 1; $(2 \times 2) + 1 = 5$, which completes the product. Two numbers, each containing three figures, are treated in a similar manner, thus:—

$\begin{array}{r} 234 \\ \times 346 \\ \hline 80964 \end{array}$ $6 \times 4 = 24$, write 4 and carry 2; $(6 \times 3) + (4 \times 4) + 2 = 36$, carry 3; $(6 \times 2) + (3 \times 4) + 3 = 39$, carry 3; $(4 \times 2) + (3 \times 3) + 3 = 20$, carry 2; $(3 \times 2) + 2 = 8$, which completes the product.

An even easier method than the one that has just been explained is the "sliding method," which, in reality, is nothing more or less than cross multiplication. It is better for use with large numbers, however, and the mental operations can be performed with less difficulty than in "cross multiplication." After one has become thoroughly familiar with the "sliding method," by constant practice he will be able to perform large operations with astonishing ease and quickness. The best way of learning this method is as follows: Suppose you wish to multiply 735 by 234. Write the multiplicand and the multiplier on separate pieces of paper with the figures of the multiplicand arranged in reverse order; thus, 537. Now place the multiplier directly beneath the multiplicand so that the 4 will come under the 5, thus:

$\begin{array}{r} 537 \\ \times 234 \\ \hline \end{array}$ Obtain the first figure of the product, $\frac{234}{0}$, by multiplying the 5 by the 4, carry 2.

Now slide the upper paper to the left so that 4 will come under 3, and 3 under 5,

$\begin{array}{r} 537 \\ \times 234 \\ \hline \end{array}$ thus: Obtain the second figure of the product thus: $(4 \times 3) + (3 \times 5) +$ the 2 carried =

$\frac{234}{90}$ 29, write 9 as the tens figure of the product and carry 2. Again slide the upper

paper to the left so that 2 falls under 5, 3 under 3, and 4 under 7, thus:

$\begin{array}{r} 537 \\ \times 234 \\ \hline \end{array}$ Obtain the third figure of the product $\frac{234}{990}$ thus: $(4 \times 7) + (3 \times 3) + (2 \times 5) +$ the 2 carried = 49,

write 9 as the hundreds figure of the product and carry 4. Slide the paper again as before and 2 will come under 3, and 3 under 7, thus:

$\begin{array}{r} 537 \\ \times 234 \\ \hline \end{array}$ You now get $(3 \times 7) + (2 \times 3) + 4 = 31$; $\frac{234}{1990}$ write 1 as the thousands figure of the product and carry 3. Slide the paper again and 2 will be under 7,

thus: $\begin{array}{r} 537 \\ \times 234 \\ \hline \end{array}$ You now get $(2 \times 7) + 3 = 17$. This completes the product.

You will see from the foregoing that the figures are used

in exactly the same way as in "cross multiplication." The sliding method, however, saves the mental labor of remembering the different positions of the figures, which is easy only after long practice. When you have become thoroughly familiar with the sliding method by the use of the slide, you may proceed without it and write the multiplier below the multiplicand on the same piece of paper, as in ordinary multiplication. The following is an example worked in this manner, in which

Arithmetic.—*Continued*

only the different results are indicated: To multiply 3547 by 325, reverse the multiplicand

$$\begin{array}{r} 7453 \\ 325 \\ \hline 1152775 \end{array}$$
 and proceed as follows: $5 \times 7 = 35$; $(5 \times 4) + (2 \times 7) + 3 = 37$; $(5 \times 5) + (2 \times 4) + (3 \times 7) + 3 = 57$; $(5 \times 3) + (2 \times 5) + (3 \times 4) + 5 = 42$; $(2 \times 3) + (3 \times 5) + 4 = 25$; $(3 \times 3) + 2 = 11$.

To prove a problem in multiplication divide the product by the multiplicand, and if the quotient gives the multiplier the multiplication is correct. A second method is similar to that employed in proving addition by the cross addition of the digits in the numbers. Multiply the sum found by the cross addition of the digits of the multiplicand by that found in a similar way from the multiplier; add the digits of this product and the sum should be the same as the sum of the digits in sum found by the cross addition of the digits of the original product of the multiplication. Thus:—

$$\begin{array}{r} 234 \\ 145 \\ \hline 33930 \end{array} \quad \begin{array}{l} 2+3+4=9 \\ (3+3+9+3) \text{ annex } 0 = 18^0 \\ 1+8+0=9 \end{array} \quad \begin{array}{l} 1+4+5=10 \\ \hline 9^0 \\ 1+8+0=9 \end{array} \quad \begin{array}{l} 9+0=9 \end{array}$$

Multiplication by Aliquot Parts.—In commercial arithmetic it is very important that one should have a perfect knowledge of aliquot parts of 10, 100, and 1000, and of its practical use. Suppose, for example, that you wish to multiply by $3\frac{1}{3}$. Now since $3\frac{1}{3} = \frac{10}{3}$, you may multiply by 10 and divide by 3. Since $33\frac{1}{3} = \frac{100}{3}$, to multiply by $33\frac{1}{3}$ you may multiply by 100 and divide by 3. You will find that in a similar manner many whole and mixed numbers may be used in fractional form, and a large amount of time saved thereby.

Following is a partial list of such numbers:—

$1\frac{1}{2} = \frac{10}{6}$	$14\frac{2}{7} = \frac{10^0}{7}$	$125 = \frac{10^0 00}{8}$
$1\frac{1}{4} = \frac{10}{8}$	$16\frac{2}{3} = \frac{10^0}{3}$	$150 = \frac{3^0 0}{2}$
$1\frac{2}{3} = \frac{10}{6}$	$25 = \frac{10^0}{4}$	$166\frac{2}{3} = \frac{10^0 00}{4}$
$1\frac{3}{4} = \frac{10}{8}$	$33\frac{1}{3} = \frac{10^0}{3}$	$175 = \frac{7^0 0}{4}$
$2\frac{1}{2} = \frac{10}{4}$	$37\frac{1}{2} = \frac{30^0}{4}$	$250 = \frac{10^0 00}{4}$
$3\frac{1}{3} = \frac{10}{6}$	$50 = \frac{10^0}{2}$	$275 = \frac{11^0 00}{4}$
$5 = \frac{10}{2}$	$62\frac{1}{2} = \frac{50^0}{8}$	$333\frac{1}{3} = \frac{10^0 00}{3}$
$6\frac{1}{4} = \frac{10^0 0}{16}$	$66\frac{2}{3} = \frac{20^0}{3}$	$375 = \frac{30^0 00}{8}$
$8\frac{1}{2} = \frac{10^0 0}{16}$	$75 = \frac{30^0}{4}$	$450 = \frac{9^0 0}{2}$
$12\frac{1}{2} = \frac{10^0 0}{8}$	$87\frac{1}{2} = \frac{70^0}{8}$	$625 = \frac{50^0 00}{8}$
		$875 = \frac{70^0 00}{8}$

SUBTRACTION.—Since subtraction is concerned with only two numbers there is no way of shortening the operation appreciably. In mental subtraction, such as in making change, it is sometimes convenient to subtract the tens figure first, and then the units. Suppose, for example, that you wish to return change from a dollar tendered in payment for an article that cost 32 cents. Subtract 3 from 9, leaving 6, and 2 from 10, leaving 8. In this way you find that you must return 68 cents in change. Of course you would have obtained the same result if you had subtracted the 2 first, but the other method is considered by many to be preferable.

DIVISION.—There are few methods of shortening the operation of division that are at

all practical, for though there are numerous so called "short cuts," their complexity deprives many of them of utility. After acquiring a thorough knowledge of the multiplication tables for the numbers up to 20, it will be found a rapid and convenient method when dividing by one of these numbers to perform the operation by "short division."

Thus: $14 \overline{) 289756947}$ Divide through by 14 as though it were a number of one digit, omit the partial subtractions, and record only the quotient and the remainder. When possible to do so it is sometimes convenient to separate the divisor into factors, and proceed as follows: To divide 485923 by 96, divide 96 into its factors 12 and 8 and divide first by 12, then by 8:

$$\begin{array}{r} 12 \overline{) 485923} \\ 8 \overline{) 40493} \dots 7 \text{ remainder} \\ \hline 5061 \dots 5 \end{array}$$

There is a remainder left after each division, but the true remainder is $(12 \times 5) + 7 = 67$, hence the result of the division is $5061\frac{67}{96}$.

One of the best methods of shortening the operation of division is by the use of aliquot parts in a manner similar to that in multiplication. Suppose, for example, that you wish to divide 896745 by $166\frac{2}{3}$. Now $166\frac{2}{3} = \frac{1000}{6}$, hence

$$\frac{896745}{166\frac{2}{3}} = \frac{896745}{1} \div \frac{1000}{6} = \frac{896745}{1} \times \frac{6}{1000} \text{ You u}$$

therefore, multiply by 6 and point off three places of decimals, the latter being equivalent to division by 1000. Thus the result is:—

$$\frac{896745}{1} \times \frac{6}{1000} = \frac{5380470}{1000} = 5380.47$$

In a somewhat similar manner we may treat the aliquot parts as decimals instead of fractions: thus in the foregoing example instead of multiplying by the fraction $\frac{1000}{6}$ the same result would be obtained by multiplying by the decimal .006. This applies to all of the numbers given in the table of aliquot parts under the subject of Multiplication.

The following hints regarding the divisibility of various numbers will be found useful:—

Any number is divisible by 2 if its last digit is even.

Any number is divisible by 3 if the sum of its digits is divisible by 3.

Any number is divisible by 4 if it ends with two or more ciphers, or if the number expressed by its two right-hand figures is divisible by 4.

Any number is divisible by 5 if its right-hand figure is a 5 or a 0.

To multiply together two mixed numbers in which the whole numbers are the same, and the sum of the two fractions equal 1, as in $7\frac{1}{2}$ and $7\frac{1}{2}$, multiply the whole numbers by the next higher whole numbers, and to this product annex the product of the fractions. Thus: $7\frac{1}{2} \times 7\frac{1}{2} = (7 \times 8) + (\frac{1}{2} \times \frac{1}{2}) = 56\frac{1}{4}$.

Arithmetic.—Continued

To multiply together any two numbers, each of which contains the fraction $\frac{1}{2}$, add to the product of the whole numbers half their sum plus $\frac{1}{4}$. Thus: $6\frac{1}{2} \times 8\frac{1}{2} = (6 \times 8) + \frac{1}{2}(6+8) + \frac{1}{4} = 55\frac{1}{4}$. In a similar manner to multiply together two numbers each containing $\frac{3}{4}$ add to the product of the whole numbers $\frac{3}{4}$ of their sum plus $\frac{9}{16}$. Thus: $6\frac{3}{4} \times 8\frac{3}{4} = (6 \times 8) + \frac{3}{4}(6+8) + \frac{9}{16} = 59\frac{15}{16}$. A similar method may be employed in all cases where the fractions are alike.

Although the foregoing methods will often be found useful, the best general method for multiplying mixed numbers is to reduce them to improper fractions and multiply by cancella-

tion. Thus: $8\frac{1}{2} \times 14\frac{7}{8} = \frac{15}{8} \times \frac{119}{8} = \frac{255}{2} = 127\frac{1}{2}$.

Decimals.—It often happens that in operations involving decimals the result is required to be correct only to two or three decimal places, hence it is advisable to avoid work that gives more decimals than are required. Suppose, for example, that you wish to find to the nearest cent the cost of $26\frac{3}{4}$ bushels of wheat at $62\frac{1}{2}$ cents a bushel. Write the multiplier with the figures reversed under the multiplicand so that the units figure (6) of the former falls directly beneath the units figure (2) of the latter. Now proceed as indicated by the figures at the right, getting the figures to carry by multiplying the figure used in the multiplier by the next figure of the multiplicand to the right of it. In

$$\begin{array}{r}
 6225 \\
 5762 \\
 \hline
 1245 \quad = (2 \times 622) + 1 \text{ (carried from } 2 \times 5 = 10) \\
 373 \quad = (6 \times 62) + 1 \text{ (" " " } 6 \times 2 = 12) \\
 43 \quad = (7 \times 6) + 1 \text{ (" " " } 7 \times 2 = 14) \\
 3 \quad = (5 \times 0) + 3 \text{ (" " " } 5 \times 6 = 30) \\
 \hline
 \$16.64
 \end{array}$$

determining what number to carry if the product from which the carrying number is obtained is between 5 and 14 (inclusive) carry 1; if between 15 and 24 (inclusive) carry 2; and so on. If it is desired to have the product correct to three decimal places, arrange the numbers as before, and in multiplying by each number in the multiplier begin with the first number to the right of it in the multiplicand. Thus, in the same problem; proceed as indicated. It will be observed that there is a difference of 1 cent

$$\begin{array}{r}
 6225 \\
 5762 \\
 \hline
 12450 = 2 \times 6225 \text{ (Nothing to carry)} \\
 3735 = (6 \times 622) + 3 \text{ (carried from } 6 \times 5 = 30) \\
 435 = (7 \times 62) + 1 \text{ (" " " } 7 \times 2 = 14) \\
 16.631 = (5 \times 6) + 1 \text{ (" " " } 5 \times 2 = 10) \\
 \hline
 \$16.651
 \end{array}$$

in the two results, which shows that the latter method is more accurate, and hence is the better to use even in finding the result of the two decimal places.

The division of decimals may be shortened in a nearly similar manner, when the quotient is required to a given number of decimal places. Thus: to divide 65.743 by 3.1846, the result to be correct to two decimal places proceed as follows: Write the dividend and divisor as in ordinary division, without reversing either. You see that the whole number of the divisor is con-

tained in the whole number of the dividend a number of times such that there will be two places of whole numbers in the quotient. Now as you are to limit the number of decimal places in the quotient to two, the entire quotient will contain four places. Hence take only the first four places of the divisor, that is 3184, and strike out the fifth place. Proceeding as in ordinary division, you find that the first figure in the quotient is 2. Now, in multiplying the divisor by this 2 multiply by the 6 that was struck out, so as to get the carrying figure, hence you get $(2 \times 3184) + 1$ (carried from $2 \times 6 = 12$) = 6369. Subtracting, you get 205 as a remainder. Do not bring down the next figure in the dividend, as in ordinary division, but instead strike out the next right-hand figure of the divisor (4). Now since 318 is not contained in 205, write a 0 in the quotient, and strike out the next right-hand figure of the divisor (8). The next figure in the quotient is 6, since 31 is contained 6 times in 205. Proceeding as in the first part of the operation you get: $(6 \times 31) + 5$ (carried from $6 \times 8 = 48$) = 191. Subtract as before and strike out the next right-hand figure of the divisor. The next figure of the quotient, which is obtained as before is 14. This completes the operation, and gives the result to two decimal places. The result may be found to three decimal places in a similar manner by using all of the five places in the divisor, instead of only four.

PERCENTAGE.—The calculation of percentage is an operation that is required very frequently in the commercial world, and speed and accuracy in its computation are very necessary. The various rates per cent. may be expressed in three different ways, namely, with the per cent. sign (%), as fractions, or as decimals. As each of the methods is useful at various times a study of the following table of equivalents may be found to be of benefit:—

1 % = $\frac{1}{100} = .01$	20 % = $\frac{1}{5} = .2$
$2\frac{1}{2}$ % = $\frac{1}{40} = .025$	25 % = $\frac{1}{4} = .25$
$3\frac{3}{4}$ % = $\frac{3}{80} = .033\frac{3}{4}$	$33\frac{1}{3}$ % = $\frac{1}{3} = .33\frac{1}{3}$
5 % = $\frac{1}{20} = .05$	50 % = $\frac{1}{2} = .5$
$6\frac{1}{4}$ % = $\frac{1}{16} = .0625$	$66\frac{2}{3}$ % = $\frac{2}{3} = .66\frac{2}{3}$
8 % = $\frac{2}{25} = .08$	75 % = $\frac{3}{4} = .75$
$8\frac{1}{2}$ % = $\frac{1}{12} = .08\frac{1}{2}$	$87\frac{1}{2}$ % = $\frac{7}{8} = .875$
10 % = $\frac{1}{10} = .1$	$\frac{1}{2}$ % = $\frac{1}{200} = .005$
$12\frac{1}{2}$ % = $\frac{1}{8} = .125$	$\frac{3}{4}$ % = $\frac{3}{400} = .0075$
$16\frac{2}{3}$ % = $\frac{1}{6} = .16\frac{2}{3}$	

Often in commercial transactions two or more discounts are allowed, as, $33\frac{1}{3}$ % and 10%. In

Arithmetic.—*Continued*

computing these, subtract each from 100% and multiply together the two results. This last result will give the desired "net" after deducting the single discount corresponding to the various others taken together. Thus to find the net amount of a bill of \$500 on which there are allowed 25% and 20% discount, proceed as follows: $1.00 - .25 = .75$; $1.00 - .20 = .80$; $1.00 - .10 = .90$; $.75 \times .80 \times .90 = .54$. 54% of \$500 = \$270, which is the "net" of the bill.

To mark goods purchased by the dozen so as to make a certain rate of profit, proceed as follows:—

To make	18 $\frac{2}{3}$ %	move decimal point in cost	one place to the left and add	$\frac{1}{6}$	of itself
" "	16 $\frac{2}{3}$ %	" " " " " " " "	" " " " " " " "	$\frac{1}{3}$	" "
" "	12 $\frac{2}{3}$ %	" " " " " " " "	" " " " " " " "	$\frac{1}{2}$	" "
" "	20%	" " " " " " " "	" " " " " " " "	$\frac{1}{5}$	" "
" "	25%	" " " " " " " "	" " " " " " " "	$\frac{1}{4}$	" "
" "	26%	" " " " " " " "	" " " " " " " "	$\frac{1}{20}$	" "
" "	28%	" " " " " " " "	" " " " " " " "	$\frac{1}{15}$	" "
" "	30%	" " " " " " " "	" " " " " " " "	$\frac{1}{12}$	" "
" "	32%	" " " " " " " "	" " " " " " " "	$\frac{1}{10}$	" "
" "	33 $\frac{1}{3}$ %	" " " " " " " "	" " " " " " " "	$\frac{1}{9}$	" "
" "	35%	" " " " " " " "	" " " " " " " "	$\frac{1}{8}$	" "
" "	37%	" " " " " " " "	" " " " " " " "	$\frac{1}{7}$	" "
" "	40%	" " " " " " " "	" " " " " " " "	$\frac{1}{6}$	" "
" "	44%	" " " " " " " "	" " " " " " " "	$\frac{1}{5}$	" "
" "	50%	" " " " " " " "	" " " " " " " "	$\frac{1}{2}$	" "
" "	60%	" " " " " " " "	" " " " " " " "	$\frac{1}{3}$	" "
" "	80%	" " " " " " " "	" " " " " " " "	$\frac{1}{2}$	" "

If a man buys socks at \$4.50 a dozen pairs, and desires to mark them so as to make 35% on each pair, he may determine the marking price per pair by reference to the table, as,

Removing the decimal point of 4.50 one place to the left, he gets .45. Adding to this $\frac{1}{3}$ of 45 (=5) he finds that the selling price a pair must be \$0.50.

There are numerous methods for shortening the operation of finding the interest on a given sum, at a given rate per cent., for a given number of days, months, or years, but the best practical method for ordinary use is by means of cancellation. Write the principal multiplied by the rate per cent. multiplied by the time in years (for instance), as the numerator of a fraction and 100 as the denominator, then find the result by cancellation. If the time is given in months, write the number of months as a part of the numerator, and 12 as a part of the denominator. Thus to find the interest on \$500, 6% for

9 months we get $\frac{\$500 \times 6 \times 9}{100 \times 12} = \frac{45}{2} = \22.50 .

If the time is given in days, write the number of days as part of the numerator and 360 as part of the denominator, since in ordinary operations in interest the year is regarded as made up of 360 days. As the year really contains 365 days, however, we must write 365 in the denominator instead of 360, if we desire to be exact. Having found the interest, by regarding the year as made up of 360 days, if we desire to

find what it would be on the basis of 365 days, we need only subtract from the interest first found $\frac{1}{365}$ of itself. Thus, if the interest on a certain amount for a certain time is \$146, on the basis of 360 days to the year, we may find what it is on a 365 day basis as follows:—

$\$146 - (\frac{1}{365} \text{ of } \$146) = \$144$. With sums of \$500 or less, or with times of 30 days or less, the difference in the use of the two bases is too small to be appreciable.

Following is a very useful rule for calculating 6% interest on any sum for a given number of days: Multiply the sum of money by the number of days, point off three places of deci-

imals, and divide by 6. The quotient is the desired interest. Thus: Find interest on \$639 at 6% for 11 days. $639 \times 11 = 7029$; $7029 \div 6 = \$1.17$.

Arizona.—One of the territories belonging to the U. S. of America. Bounded on the north by Utah, east by N. Mex., south by Mexico, west by Cal. and Nev. It was explored by the Spaniards in the 16th century; was acquired from Mexico in 1848, and, with an additional part by the Gadsden purchase in 1853, was organized as a territory in 1863. It has often been disturbed by wars with the Apaches and other Indians. Contains twelve counties, its capital is Phoenix; Tucson, Yuma, Prescott, Jerome, Nogales, and Flagstaff are principal towns; area 113,020 sq. miles. Pop. (1900), 122,212.

Arkansas.—One of the group of southern states of the U. S. of America, west of and bordering on the Mississippi River. Bounded on the north by Mo., east by Tenn. and Miss., south by La., west by Tex. and Ind. Ter. The surface is generally level or rolling, with the Ozark Mountains in the northwest; it is an agricultural state and its chief products are cotton and corn. First settled by the French in 1685 and formed part of the Louisiana Purchase of 1803; admitted to the Union in 1836; seceded May 6, 1861, and was one of the Confederate States during the Civil War; readmitted to the Union in June, 1868; capital, Little Rock; has 75 counties; has no large cities but many thriving towns, chief of which are Fort Smith, Heena, Hot Springs,

- Pine Bluff, and Texarkana. Area, 53,850 sq. miles; pop. (1900), 1,311,564; called the Bear State.
- Arkansas Post (Ark.), Battle of.**—In Jan. 1863, Gen. John A. McClernand was placed in command of an expedition to move against Fort Hindman, a post on the Arkansas River, about 40 miles from its confluence with the Mississippi. The infantry was taken up the river on transports, convoyed by Admiral Porter's fleet of gunboats. On Jan. 11, a combined land and naval attack was made, which resulted in the capture of the fort with all its ordnance and stores and above 5,000 prisoners. The Union loss in killed and wounded was about 900.
- Arkansas River.**—The second largest tributary of the Mississippi. It rises in the Rocky Mountains; its length is about 2,000 miles, and its extreme width about one mile. Is navigable 800 miles from its mouth.
- Ark of the Covenant (Exodus XXV).**—The only piece of furniture in the "holy of holies" of the ancient Jewish tabernacle. It was of shittim wood, 2½ cubits long, 1½ cubits broad and high, overlaid with gold within and without. The solid gold lid was the "mercy seat" overshadowed by two golden cherubim facing. It contained the two tables of stone, a pot of manna and Aaron's rod. It was carried during the 40 years wandering of the Israelites, deposited in Solomon's temple in 1004 B.C. and probably destroyed in the destruction of Jerusalem, and burning of the temple by Nebuchadnezzar in 587 B.C.
- Armada, The Spanish.**—A great fleet sent by Philip II of Spain in 1588 to invade England. It comprised 132 vessels, with about 20,000 sailors, commanded by the Duke Medina Sidonia. The fleet was met and defeated by 80 or 90 vessels, under Lord Howard of Effingham, in the English Channel, and what was left of it was wrecked in seeking escape northward.
- Armadio, The.**—2471.
- Armed Neutrality.**—The confederacy against England formed by Russia, Sweden, and Denmark in 1780; dissolved, 1781. Dec. 16, 1800, it was renewed and a treaty to cause their flags to be respected by the belligerent powers was ratified. England denied the principle that neutral flags protect neutral bottoms, and in the ensuing war, Nelson and Parker destroyed the Danish fleet near Copenhagen, Apr. 2, 1801. This event, together with the murder of the emperor, Paul, of Russia, led to the final dissolution of the armed neutrality.
- Armenia.**—A district in southwestern Asia, shared by Turkey, Persia, and Russia. It has belonged successively to Assyria, Media, Persia, Greece, and Rome. The people are Christians governed by patriarchs, not subject to Rome. Turkish cruelties to the Armenian Christians, in 1894 and 1895 aroused the sympathy of the Christian world.
- Armenian Fabrics.**—1377.
- Armies of the Leading World Powers, on a Peace and on a War Footing.**—The number of Men and Guns, System of Service, Term of Service, Liability, and Military Expenditure (in pounds sterling). See table on following page.
- Arminians.**—Protestant followers of James Arminius of Leyden, Holland; founded 1610; separated from Calvinists, rejecting predestination, etc. Its doctrines were condemned in 1619, and their adherents were exiled till 1625. Arminian doctrines were favored by James I and Charles I of England.
- Armistead, George.**—(1780-1818.) An American officer who served with distinction at the capture of Fort George from the British, May 27, 1813.
- Armistead, Lewis Addison.**—(1817-1863.) Served in the Mexican War and was a brigadier-general in the Confederate army in the Civil War. He commanded a brigade of Pickett's division, Longstreet's corps, in the battle of Gettysburg, and was killed in the famous charge of that division to the crest of Cemetery Ridge, on the third day of the battle.
- Armour, Philip Danforth.**—Man of business and philanthropist; sketch of, 20.
- Armour institute of Technology.**—Established in Chicago, by Philip D. Armour, to assist young men and women in preparing themselves for business. (See ARMOUR, PHILIP DANFORTH, 21.)
- Arms and Ammunition.**—The use of firearms is almost coincident with the invention of gunpowder, about the year 1320. Gunpowder was used in military operations in England in 1346. A cannon was employed at the siege of Adrianople by Mahomet II, in 1543. In that year the first English cannon was cast. The Swiss, it is recorded, had 10,000 arquebusiers in 1471, and at Pavia, in 1525, the Spaniards, with 800 musketeers and 2,000 arquebusiers, defeated the French, the firearms deciding the battle. The flintlock was used in the British army from 1630 until 1840. Hessian soldiers had rifles in 1631. The Fergusson breech-loading rifle, as well as the flintlock, was in use during the Revolutionary War. Hall, in 1811, began to make the first practical breech-loading arm manufactured in the United States, and between that year and 1844 he furnished 10,000 to the government. Many experiments in breech-loading rifles were made in the following 17 years, and during the Civil War the government made and bought, here and abroad, more than 4,000,000 small arms of some 30 different patterns. These included, besides the breech-loading rifles, carbines, the Henry magazine gun, and the Spencer repeating rifle. Investigations by military boards led in 1873 to the selection of the Springfield rifle, which was retained for 20 years. Between 1880 and 1890 magazines were substituted for the single breech-loading apparatus, the caliber of the ball was diminished, and smokeless powder was employed. Until a few years ago the different forms of gunpowder used all over the world had been the same for a century. The French were the first to make a satisfactory smokeless powder for small arms. The material is melanite, and when used in individual firing from rifles, the film of smoke it produces is not visible beyond 300 yards. Can-

ARMIES OF THE LEADING WORLD POWERS, ON A PEACE AND ON A WAR FOOTING.

Nation.	System.	Peace Footing.	* War Footing.	Guns (Approximate Number).	Military Expenditure.	Term of Service or Liability.		Total
						Years.		
Austria.	Compulsory Service.	361,693	2,000,000	2,000	£17,000,000	3 A + 7 R + 2 L ¹ + 10 L ²	22	
Belgium	Conscription and Voluntary Compulsory Service.	48,500	150,000	204	£1,936,000	3 A + 5 R.	13	
Bulgaria	Conscription and Voluntary Compulsory Service.	44,000	200,000	492	£934,000	2 or 3 A + 8 or 6 R + 7 L ¹ + 8 or 9 L ²	25	
China.	Enlistment.	About 100,000 trained men.			?			
Denmark	Compulsory Service.	9,769	61,500	96	£650,000	1 or 1½ A + 7½ or 6½ R + 8 L ¹	16	
France	Compulsory Service.	616,475	3,500,000	3,648	£28,500,000	3 A + 10 R + 6 L ¹ + 6 L ²	25	
Great Britain	Voluntary Service.	160,000	430,000†	1,100‡	£27,160,000	7 or 8 A + 5 or 4 R, 3 A + 9 R	12	
India	Voluntary Service.	223,000	280,000	306	£16,000,000	From 3 years upwards for natives.	11	
Germany	Compulsory Service.	585,496	4,000,000	4,524	£30,100,000	2 or 3 A + 4 R + 5 L ¹ + 7 L ²	18	
Greece.	Compulsory Service.	16,000	82,000	114	£650,000	2 A + 8 R + 8 L ¹ + 10 L ²	28	
Holland	Conscription and Voluntary Compulsory Service.	27,696	68,000	108	£2,000,000	1 A + 6 R.	7	
Italy.	Compulsory Service.	324,686	1,138,000	1,726	£10,000,000	2 to 5 A + 7 or 4 R + 10 L ¹	19	
Japan.	Conscription and Voluntary Compulsory Service.	125,000	1,532,000	1,792	£3,700,000	3 A + 4 R + 5 L ¹ + 11 L ²	23	
Mexico.	Conscription and Voluntary Compulsory Service.	32,143	151,000	96	£1,000,000	3 A + 4 R + 5 L ¹ + 11 L ²	30	
Norway	Conscription and Voluntary Compulsory Service.	18,000	72,000	66	£600,000	50 days A + 6 R + 6 L ¹ + 4 L ²	16	
Rumania.	Compulsory Service.	63,660	176,000	384	£1,750,000	3 A + 6 R + 6 L ¹ + 9 L ²	24	
Russia	Compulsory Service.	860,000	5,000,000	5,000	£35,700,000	4 A + 13 R + 5 L ¹	22	
Spain.	Conscription	98,140	700,000	408	£5,800,000	3 A + 3 R + 6 L ¹	12	
Sweden	Conscription and Voluntary Compulsory Service.	40,000	520,000	300	£900,000	68 days or 3 years A + 8 R + 4 L ¹ + 8 L ²	20	
Switzerland	Compulsory Service.	17,800	509,000	288	£1,120,000	1 A + 11½ R + 12 L ¹ + 6 L ²	30	
†Transvaal and Orange Free State	(Now annexed by Britain)							
Turkey	Compulsory Service in War	550†	55,000†	100†	£500,000†	15 to 60 years of age.	..	
United States	Compulsory Service.	250,000	900,000	1,356	£7,000,000	4 A + 2 R + 8 L ¹ + 6 L ²	20	
	Voluntary.	100,000	.....	504	£46,000,000	5 A	5

A = Active Army.

R = Reserve.

L¹ = Landwehr, or Territorial Army.

L² = Landsturm, or Territorial Reserves.

* The war strength of the various armies can only be given in round numbers as official figures are not published.

† Before the late war.

‡ Estimate of 1900-1. This total includes the British forces, regular and irregular, in South Africa, and the regular forces elsewhere, excluding India. Does not include volunteers, militia, etc., at home.

§ Sir C. Dill's figure for British "normal expenditure" at home. || This figure excludes the old muzzle-loading, mountain guns, and the so-called volunteer artillery of position, which is obsolete and useless, but includes siege-train, etc.

nonite, fulgerite, progressite, Americanite, and Schobelite are among the latest explosives made here. The army's main depot for the storage of powder is at Dover, N. J. The government buys from private firms for both branches of the service. Naval projectiles are made at the naval gun foundry, Washington, D. C. Armor-piercing shells, carefully machined and tempered, cost far more than ordinary projectiles. The Krag-Jørgensen cut-off model magazine rifle has been the standard in the United States service since 1892. It weighs 8.7 pounds, has a 30-inch barrel, and its caliber is but three-tenths of an inch. Wetterin smokeless powder gives an initial velocity of 2,000 feet per second to the bullet, and the magazine holds 5 cartridges.

Armstrong, John.—(1758-1843.) An American general, politician, and diplomat; served in the Revolutionary War, and was author of the "Newburg Addresses" to the army in 1783.

Armstrong, John.—(1725-1795.) An American general who served in the French and Indian War; was a delegate from Pa. to the Continental Congress (1778-80 and 1787-88).

Armstrong, Samuel Chapman.—(1839-1893.) An American officer in the Civil War, founder and principal of the Hampton Institute (Virginia) for negroes and Indians.

Army.—The American military establishment may be said to date from 1775. June 15 of that year the Continental army was organized by Congress. Between 1775 and 1781, the aggregate of the troops raised by the latter body and the militia enlisted by the states was about 70,000 men, of whom not more than half were at any one time in active service. Congress established the War Department, Aug. 7, 1789, and Nov. 5, 1783, the Revolutionary army was disbanded, except 1,000 men retained to assist in forming the peace establishment. This number was increased slightly during the Indian and French wars; but up to the outbreak of hostilities with England in 1812, did not, at any time, exceed 5,000 men. From 1812 to 1815, the regular army numbered 30,000, and 470,000 militia were enlisted. Thereafter, and until the Mexican War, the men under arms in the regular army averaged about 9,000. During that conflict it was trebled and 74,000 volunteers were also enrolled. On the proclamation of peace the regular establishment was reduced to 10,000, and later was increased to 12,000. In the first year of the Civil War the regular army was raised to 35,000; but the militia and volunteers actually under arms vastly exceeded this number. President Lincoln's first call, Apr. 15, 1861, was for 75,000 three-months men. Subsequent enlistments were generally for three years. At the beginning of 1862 the volunteers numbered 550,000 and during the next 3 years, the average volunteer strength was 900,000. When the war was ended the Union army numbered above 1,000,000. The grand total of Federal enlistments was 2,688,523. At the beginning of 1862, the Confederate army numbered about 320,000

and averaged about 550,000 during the next three years. All told, 1,600,000 men served in the army of the Confederacy. In 1867 the regular U. S. army peace establishment was fixed at 54,641 and was later reduced until in 1875 it was only 25,000. Just before the Spanish-American War it was composed of 10 regiments of cavalry, 8,410 men; 5 regiments of artillery, 2,900; 25 regiments of infantry, 13,525; 1 battalion of engineers, 216; total, 25,051. These figures did not include brigade and staff officers. When the war with Spain broke out, two regiments of artillery were added to the regular forces and the line was reorganized on the basis of two battalions of four companies each to the regiment and two skeleton companies. Upon a declaration of war, the latter companies are to be manned and with two others, which may be raised, will form the third battalion in each infantry regiment. During the war with Spain, the U. S. had ready for duty an average of above 250,000 men, regulars and volunteers. Only a small fraction of them saw active service and after the war, the actual duration of which was less than three months, most of the volunteers were discharged. During the war in the Philippines, which followed, a force of from 50,000 to 75,000 men was maintained there. With the subsidence of the insurrection, the number was much reduced by the muster-out of the volunteers. At this time (1902), the strength of the U. S. army is about 76,000, but the President has authority to increase it, within fixed limits, in case of emergency.

Army of the Potomac.—See McCLELLAN, GEORGE BRINTON, 405.

Arne, Thomas Augustine.—(1710-1778.) An English composer and author. He produced several operas, and a number of songs; was appointed doctor of music by the University of Oxford in 1759.

Arnold, Benedict.—(1741-1801.) An American general in the Revolutionary War; noted for an act of treason. He was appointed commander of West Point in 1780; he planned with Major André of the British army the surrender of that place to the British. The plan being discovered through the arrest of André, Arnold escaped to a British vessel, receiving the rank of major-general in the British army. Subsequently he conducted expeditions against Virginia and New London, Conn. (1781). The latter part of his life was spent chiefly in London. He never returned to his own country.

Arnold, Benedict.—(1615-1678.) An early colonial governor of Rhode Island.

Aroostook War.—A bloodless conflict that raged from 1837 to 1839, over the question of the boundary line between the State of Maine and the province of New Brunswick, now a part of Canada. The governor of Me. used troops to expel the intruders and built fortifications. Congress authorized the President to resist encroachments, and Gen. Scott went to the scene and arranged a truce whereby the country was jointly occupied by American citizens and Brit-

- ish subjects, until the houndry was definitely fixed by the Ashburton treaty of 1842.
- Arrears.**—A part of an account remaining unpaid.
- Arsenals.**—There were neither armories nor arsenals in the U. S. before the Revolution. Virginia made powder, Philadelphia cast cannon, and an arsenal was established at Carlisle, Pa., in 1776. The Springfield, Mass., arsenal, which dates from 1787, now produces 1,000 rifles a day. The Harper's Ferry arsenal was founded in 1795, and in 1860 there were 23 arsenals in this country. The principal ones now employed are at Allegheny, Pa.; Augusta, Ga.; Benicia, Cal.; Cheyenne, Wyo.; Columbia, Tenn.; Fort Leavenworth, Kans.; Fortress Monroe, Va.; Fort Snelling, Minn.; Frankford, Pa.; Indianapolis, Ind.; Augusta, Me.; Springfield, Mass.; Governor's Island, N. Y.; Rock Island, Ill.; St. Louis, Mo.; San Antonio, Tex.; Dover, N. J.; Vancouver, Wash.; Watertown, Mass., and Watervliet, N. Y. Different arsenals have their specialties. Naval guns and projectiles are made at Washington, D. C.
- Arsenic.**—A name popularly applied to a poisonous substance. Arsenious acid is in reality a metal the symbol of which is As, and the atomic weight 75.
- Art.**—3409.
- Artagnan.**—One of the principal characters of Alexander Dumas's "Three Musketeers," and its sequels.
- Artemis.**—One of the Olympian deities; daughter of Jupiter and Latona and twin sister of Apollo, 1611.
- Artemus Ward.**—The pseudonym of Charles Farrar Browne (which see).
- Artesian Wells** are perpendicular borings into the earth. The most celebrated artesian well is at Grenelle, near Paris. This was bored in 1833-41, and is 1,798 ft. deep. It yields 516½ gallons of water a minute. One at Pesth yields, at a depth of 3,182 ft., water of a temperature of 165° F. In the U. S. numerous wells have been sunk to great depth, two at St. Louis, Mo., 2,197 and 3,843½ ft. deep respectively; several in Chicago of from 700 to 1,200 ft.; one in Louisville, Kentucky, 2,086 ft. One in Columbus, Ohio, 2,775½ ft., with many others from 500 to 2,000 ft.
- Arthur, Chester Alan.**—(1830-1886.) President of the United States (Sept. 22, 1881 to Mar. 4, 1885).
Cabinet—James G. Blaine, Me., Sec. of State; F. T. Frelinghuysen, N. J., Sec. of State, from Dec. 12, 1881; Wm. Windom, Minn., Sec. of Treas.; Chas. J. Folger, N. Y., Sec. of Treas. from Oct. 27, 1881; Walter Q. Gresham, Sec. of Treas., from Sept. 24, 1884; Hugh McCulloch, Ind., Sec. of Treas., from Oct. 28, 1884; Samuel J. Kirkwood, Ia., Sec. of Interior; Henry N. Fuller, Col., Sec. of Int., from Apr. 6, 1882; Robt. T. Lincoln, Ill., Sec. of War; William H. Hunt, Ia., Sec. of Navy; William E. Chandler, N. H., Sec. of Navy, Apr. 1, 1882; Thomas L. James, N. Y., Post-Master-General; Timothy O. Howe, Wis., Post-Master-General, Dec. 20, 1881; Walter Q. Gresham, Ind., Post-Master-General, Apr. 3, 1883; Frank Hatton, Ia., Post-Master-General, Oct. 14, 1884; Wayne McVeagh, Pa., Attorney-Gen.; Benjamin H. Brewster, Pa., Attorney-Gen., Dec. 19, 1881.
- Arthur, Chester Alan.**—Sketch of, 22.
- Arthurian Legend, The,** 1781.
King Arthur, 1782.
Merlin, 1783.
Tristram, 1784.
Launcelot, 1787.
Percival, 1790.
Holy Grail, 1790.
Morte D'Arthur, 1792.
- Arthur, King.**—(502-532 A.D.) A mythical British king, 1782.
- Artist and His Prospects, The.**—5024.
- Art of Conversation, The.**—2249.
- Art of Correspondence, The.**—2259.
- Art of Entertaining, The.**—2213.
The Hostess and Her Guests, 2214.
Introductions, 2215.
Chaperonage, 2216.
Engagements and Weddings, 2218.
Wedding Gifts, 2221.
Dinners, 2222.
Dances, Opera, and Theater Parties, 2225.
Literary Clubs, 2226.
Garden Parties, 2230.
Picnicking, 2230.
Calling, 2232.
Courtesy, 2235.
- Art Will Be Supreme, American.**—5030.
- Arundelian Marbles, or Oxford Marbles.**—Comprise 128 busts, 37 statues, and 250 inscriptions in Greek. These were found in the island of Paros in 1610; collected by W. Petty; purchased by Lord Arundel; given by his grandson Lord Howard, to the University of Oxford, in 1667. The inscriptions have been of the utmost value in fixing dates in history from 1582 to 355 B.C.
- Aryan** is a name applied, since 1845, to the group of languages of modern Europe, which from their similarity point to a common origin from the Aryans. The latter lived in early times in the strip of land lying between the Oxus and Jaxartes rivers, in Western Asia, which flow into the sea of Aral. This group includes (1) the Græco-Latin, comprising the languages of Greece and Rome and the Romance Languages, *i. e.*, Italian, French, Spanish, Portuguese, and Roumanian. (2) The Celtic (which was once the language of nearly all of Europe, but is now confined to parts of France, Scotland, Ireland, Wales, and the Isle of Man). (3) The Germanic, which includes the High and Low German, English, Frisian, and Scandinavian. (4) The Slavonic, which takes in the various dialects of Russia and a great part of Austria. The Indian branches of this group are older and include the Sanskrit, which is the parent language of the Hindoos, and bears the nearest resemblance to the ancient Aryan tongue; and the Zend, which was the language of the ancient Persians. From the similarities which exist between all these languages, the philologist, not only proves that the people who speak the various languages are sprung from the same

- parent stock, but can tell the order of the outgoing of these branches from the original home.
- Asboth, Alexander Sándor.**—(1811-1868.) He served under Louis Kossuth in the Hungarian rebellion of 1848-49 and emigrated to the U. S. in 1851. He volunteered in the U. S. service at the beginning of the Civil War and was commissioned a brigadier-general. He served chiefly in Mo. and Ark., under Fremont and Curtis. In 1866 he was appointed minister to the Argentine Republic.
- Ascension.**—A lonely island nearly in the middle of the South Atlantic, 635 northwest of St. Helena. It is 7½ miles long and 6 miles wide. Used by the English as a coaling and victualing station.
- Ash-leaved Maple, The.**—2812.
- Ashantees.**—War-like negro tribe of W. Africa.
- Ashanti, or Ashantee.**—A Negro kingdom N. of Gold Coast in West Africa. The population exceeds 1,000,000. The principal exports are gold-dust and palm-oil. The slave-trade was formerly extensive. Capital is Coomassie.
- Ashburton Treaty.**—A treaty concluded at Washington, Aug. 9, 1842, between Great Britain and the U. S. The present boundary between Maine and Canada was established and provision was made for the suppression of the African slave trade and the mutual extradition of fugitives from justice. The commissioners were Lord Ashburton for Great Britain, and Daniel Webster for the U. S.
- Ashby, Turner.**—(1824-1862.) A general in the Confederate army.
- Ashe, John.**—(1720-1781.) An American officer in the Revolutionary War, defeated by the British under Gen. Prevost at Brier Creek, Ga., 1779.
- Ashmun, Jehudi.**—(1794-1828.) A chief organizer of the colony of Liberia, Western Africa (1822-28).
- Ashtaroth or Astarte.**—The supreme female divinity of the Phœnicians.
- Ash-Wednesday.**—The first day of Lent; so called from the religious custom of strewing ashes on the head as a sign of penitence.
- Asia.**—The largest of the grand divisions of the earth. It has an estimated area of 17,255,890 sq. miles and an estimated population of about 825,000,000. With more than one-half the inhabitants of the earth, so vast is its surface that the density of its population is only one-third that of Europe. Asia embraces all varieties of climate, physical feature, religion, and civilization. Mongolians predominate in the southeast and north, Aryans in the middle, and the Semitic peoples in the southwest. The countries of Asia are India, China, Japan, Siberia, Korea, Borneo, Sumatra, Annam, Siam, Burma, Tibet, Afghanistan, Baluchistan, Turkestan, Persia, Arabia, Asiatic Turkey, Japan, and the Philippine Islands.
- Asper, The.**—See **POPLAR**, 2830.
- Asphalt, Asphaltum, or Mineral Pitch.**—A form of bitumen of a black or black-brown color. It is found in rock-oil localities, and is formed by the drying up of petroleum. It is most abundant near the Dead Sea, in some of the West Indies (notably Pitch Lake in Trinidad), France, Switzerland, and Dalmatia. It is used for varnish, paving purposes, and paint.
- Aspinwall, William.**—(1743-1823.) An American physician who fought as a volunteer in the battle of Lexington (1775) and became a surgeon in the Revolutionary army. He is said to have been the first to introduce the practice of vaccination in America.
- Assessments, Political.**—The tax levied on officeholders and candidates for office by the political parties to which they belong, to defray the expenses of a campaign. Assessments are sometimes proportioned to the salary of the office held or sought. The system of levying political assessments first received wide publicity from the Swartwout Congressional Investigating Committee, when an ex-deputy collector of the port of New York testified that he had often been asked to contribute while in office. Assessments have been quite general since 1840. Civil-service reformers contend that the system is pernicious and demoralizing, and that an enforcement of the civil service laws would relieve officeholders of the objectionable assessments, insure a tenure of office contingent upon good behavior instead of partisan activity, and raise the standards of public service.
- Assets.**—All the property of every sort, belonging to a business or any individual, solvent, bankrupt, or deceased.
- Assignee.**—A person to whom an assignment is made.
- Assignment.**—The transfer of a whole or part of an interest in an estate or property.
- Associated Press.**—3124.
- Assume.**—To take upon oneself, as a debt or an obligation.
- Assured and Assnrance.**—The same as Insured and Insurance.
- Assyro-Chaldean Mythology.**—1566.
- Aster, The.**—2911.
- Astor Library.**—A library in the City of New York, founded by John Jacob Astor and opened in 1854. It was then a reference library only, consisting about 260,000 volumes. In 1895 it was combined with the Lenox Library and the proposed Tilden Library, as the New York Public Library.
- Astor Place Riot.**—May 10, 1849; between the partisans of the actors Macready and Edwin Forrest. Twenty-two were killed and a large number wounded.
- Astor, John Jacob.**—Pioneer in the fur trade; sketch of, 25.
- Astor, William Backhouse.**—(1792-1875.) Son of John Jacob Astor, American capitalist.
- Astor, William Waldorf.**—Great grandson of John Jacob Astor. United States Minister to Italy 1882-85; author and publisher. Born 1848.
- Astoria.**—A fur-trading post established on the coast of what is now Oregon, about 1808, by John Jacob Astor. (See **ASTOR, JOHN JACOB**, 25.)
- Astrakhan** (*äs-trä-chän'*).—Capital of the government of Astrakhan, in southeastern Russia. Pop. (1897), 113,001.

Astrolabe.—An unfinished work by Chaucer, supposed to have been prepared for the instruction of his son.

Astrology (the science of the stars) formerly included all that is comprehended by the modern term astronomy, and also a study of the effects of the heavenly bodies upon human destiny, to which latter meaning it is now wholly restricted. Ancient races, but most especially the Chaldeans, devoted much attention to it. Whatever may be said concerning the science, it is quite clear that the modern science of astronomy owes much to the study of the heavenly bodies by the astrologists of old.

Astronomy.—2965.

As You Like It.—Comedy by Shakespeare, produced about 1599.

Atalanta.—A mythical personage represented as a huntress, 1630.

Atchafalaya.—A branch of the Mississippi River; flows into the Gulf of Mexico, 120 miles west of New Orleans.

Atchison.—The capital of Atchison Co., Kan. It is situated on the Missouri River, is an important railway center, and has large manufactures of flour, machinery, etc. Pop. (1900), 15,722.

Ate.—Daughter of Jupiter, the goddess of retribution

Athens.—The capital of ancient Attica and modern Greece, was named in honor of Pallas-Athene—the Roman Minerva. It is famous by reason of its power and of the number of its illustrious citizens.

It is situated in the southeast of the mainland. Its port is Piræus, about six miles distant on Phaleron Bay. Among the most important points of interest are the Acropolis, the Parthenon, the Propylæa, the Erechtheum, the temples of Theseus, and Jupiter Olympus. The population in 1896 was 111,486.

Athens.—City, Clarke Co., Ga., on the Oconee River, 135 miles N. E. of Atlanta. Population (1900), 10,245.

Athens.—The capital of Athens Co., Ohio, founded 1801; the seat of Ohio University. Pop. (1900), 3,066.

Athens of America, The.—A name given to Boston, Mass., by reason of its fame as a literary center.

Atherton, Charles Gordon.—(1804-1853.) An American politician. He was a Democratic member of Congress from New Hampshire (1837-43), and U. S. senator (1843-49). He introduced the so-called "Atherton gag," a resolution providing that all bills or petitions on the subject of slavery should be "laid on the table without being debated, printed, or referred," and which remained in force until 1845.

Athos.—A mountainous peninsula extending from the coast of Macedonia into the Ægean Sea. Xerxes cut through this isthmus to escape the rough sea around the promontory.

Atkinson, Edward.—Born at Brookline, Mass., 1827. An American economist and statistician. He wrote "Our National Domain" (1879), "Cotton Manufactures of the United States," "Railroads of the United States," etc. He strongly opposed

the retention by the U. S. of the Philippine Islands and other insular possessions acquired from Spain by the treaty of 1898.

Atkinson, Henry.—(1782-1842.) An American general who defeated the Indians at Bad Axe River in the Black Hawk War (1832).

Atlanta.—The capital of Ga. and of Fulton Co., and the largest city in the state. It is an important railway center, has an extensive trade in cotton, tobacco, etc., and has large manufactures of cotton, iron, flour, etc. It is the seat of Atlanta University (colored), founded about 1845. It was taken by Sherman, Sept. 2, 1864, and was partly burned previous to his departure on his "March to the Sea" (Nov. 15, 1864). It became the state capital in 1868. There was a cotton exposition at Atlanta in 1881. Pop. (1900), 89,872.

Atlanta (Ga.), Battle of.—Although there was much fighting at various times around Atlanta, during July and Aug., 1864, the above designation is given to the action of July 22. Gen. John B. Hood had five days before, superseded Gen. Joseph E. Johnston in the command of the Confederate army that was charged with the defense of Atlanta against the Federal army under Gen. William T. Sherman. During two and a half months Johnston had steadily given ground until he had fallen back more than a hundred miles, from Dalton, near Chattanooga, to the gates of Atlanta. Hood's orders were to fight, and this policy was in accord with his own wish. He determined to attempt the overthrow of Sherman's left flank, which was held by the Army of the Tennessee, under Gen. James B. McPherson. During the night of July 21 he sent on this mission about half of his army, under Gen. William J. Hardee. It was Hood's purpose to strike at dawn, but the march, by a wide detour, was delayed and the attack was not delivered till nearly noon. It was in the nature of a surprise, and at first the Federals were thrown into confusion. They rallied, however, reformed their broken lines, drew reinforcements from the center and succeeded in driving the Confederates from the field. The soldiers of both sides fought with the greatest gallantry. The losses were heavy, that of the Federals being 3,800 and that of the Confederates above 7,000. Among the slain were Gen. McPherson, of the Union army and Gen. William H. T. Walker, of the Confederate army. (See ATLANTA CAMPAIGN.)

Atlanta Campaign (Civil War).—After the battle of Missionary Ridge near Chattanooga, Tenn., in Nov. 1863, Gen. Bragg, withdrew the defeated Confederate army to Dalton, Ga., about 25 miles to the southward, on the railroad to Atlanta. The force was augmented during the winter to about 60,000 men, and about 10,000 additional reinforcements joined it early in the campaign that followed. The army was organized into three corps, commanded by Gens. Hood, Hardee, and Polk. Gen. Joseph E. Johnston was assigned to its command in place of Bragg. Gen. William T. Sherman was in command of a Fed-

eral army of 100,000 men, with 250 pieces of field artillery, assembled at and around Chattanooga. This force was composed of the Armies of the Cumberland, the Tennessee, and the Ohio, commanded respectively by Gens. Thomas, McPherson, and Schofield. Sherman moved against Johnston in the early days of May, 1864, coincident with the advance of Grant upon the army of Lee, in Virginia. Sherman's objective point was Atlanta, which is in northern Georgia, 140 miles east of south from Chattanooga. It was then an important railroad center and supply depot and contained large manufactories of ordnance, clothing, etc., for the Confederate army. As soon as Johnston began to feel the pressure of Sherman's advance, he disposed his forces to make stout resistance. May 8-12 there was sharp fighting at Rocky Face Ridge and Buzzard Roost, strong places for defense in the hilly region to the northward of Dalton. Finding the Confederates intrenched in the passes, and unwilling to make the large sacrifice of life that would result from a direct assault, Sherman sent McPherson with the Army of the Tennessee, by a wide detour through Snake Creek Gap, to strike the railroad at Resaca, 14 miles south of Dalton. This movement was successful and compelled Johnston to let go at Dalton and fall back to meet the menace in his rear. Sherman followed closely with the remainder of his army and joined McPherson. Johnston had taken up a strong position, in which he was attacked by Sherman. The battle of Resaca was fought May 14-15 and resulted in large losses, without decisive advantage to either side. Johnston, however, decided to retreat and with great skill withdrew his army and trains across the Oostanaula River. Sherman pushed hard after, hoping to catch his adversary in the confusion of retreat, but was unable to do so. During the ensuing four weeks Johnston continued his retrograde movement, slowly falling back, stubbornly resisting at every point when attacked but yielding one position after another, as it was overlapped or flanked by his adversary's longer lines. Johnston was advised by some of his subordinate commanders to give battle, but he deemed the hazard too great, in view of Sherman's superior force, and continued to act almost wholly on the defensive. He was ever on the watch for a favorable opportunity to strike his antagonist, but the two commanders were thorough soldiers, well matched, and neither offered a vulnerable point of attack. Johnston took position behind the Etowah River at Kingston, Sherman leaped the stream, and still backward fell the Confederates. The railroad was the source of supply for both armies — Sherman's from Chattanooga and Johnston's from Atlanta. Toward the end of May Sherman filled his wagons with supplies for 20 days, left the railroad and swung away 20 miles to the southwest, to Dallas and New Hope Church. Here he found Johnston confronting him, and for several days there was much se-

vere and bloody fighting, though nothing in the nature of a general battle. The middle of June found the armies back to the railroad about Acworth and Big Shanty. The pressure of Sherman continued to force Johnston, and the latter took up a strong defensive position near Marietta. June 27 Sherman made a desperate attempt to breach the Confederate line by an assault upon Little Kennesaw Mountain. It was unsuccessful, entailing a Union loss of 2,500 men, while the loss of the Confederates was scarcely a fifth of that number. Sherman again resorted to his favorite method of turning the enemy's position by a flank movement, and early in July Johnston abandoned his strong line and fell back across the Chattahoochee River. Sherman at once passed the stream, and soon after the middle of July the Confederate army was occupying the strong forts and intrenchments that had been built around the city of Atlanta. It had been pressed back, in ten weeks, more than a hundred miles from its first position at Dalton. The Confederate authorities at Richmond were greatly displeased with Johnston for his disinclination to fight, and alarmed by the advance of Sherman to the very gates of Atlanta. On the night of July 17 a telegraphic order was received relieving Johnston of the command of the army and appointing Gen. John B. Hood, one of his corps commanders, as his successor. The change was made at once, and Hood knowing what was expected of him inaugurated a fighting policy. July 20, he assailed with the greatest fury, at Peachtree Creek, Sherman's Twentieth and Fourth corps, but the Confederates were beaten off after a bloody contest. July 22, Hood massed half his army against Sherman's left and hurled it upon the Army of the Tennessee. This engagement is known as the Battle of Atlanta, and was one of the fiercest encounters of the campaign. Gen. James B. McPherson, one of Sherman's ablest lieutenants, was among the slain. Another sortie, July 28, at Ezra Chapel met with a bloody repulse, the Confederate loss being above 3,000. For nearly six weeks the hostile armies confronted each other, in positions made impregnable to assault. Sherman determined to cut loose and again strike the Confederate rear. At the end of August, at night, his army left its trenches and moved silently and swiftly by a detour to the west and south, around Atlanta. Next morning the dawn revealed the deserted Federal intrenchments, and the Confederates leaped to the conclusion that Sherman had raised the siege and retreated. This was telegraphed to all parts of the south and for a day there was great rejoicing. But Sherman's army debouched from the woods 25 miles below Atlanta and began the destruction of two railroads. Then Hood blew up his magazines, destroyed such stores as he could not carry away, and evacuated the city. Sherman telegraphed to Washington: "Atlanta is ours and fairly won." The campaign lasted four months. During that time Sherman's

- losses were 5,300 killed, 26,000 wounded, and 6,000 prisoners, a total of above 37,000. No official statement of the Confederate losses was ever made, but they may be safely estimated at about 28,000. Atlanta was not again occupied by the Confederates during the war. The principal battles of the campaign are detailed in this volume under their respective names.— See **SHERMAN, WILLIAM TECUMSEH**, 533; **JOHNSTON, JOSEPH EGGLESTON**, 351; **HOOD, JOHN BELL**, 297.
- Atlantic City.**— Seaside resort in Atlantic Co., N. J., 60 miles from Philadelphia and 146 from New York.
- Atlantic Telegraph.**— See **FIELD, CYRUS WEST**, 186.
- Atlantis.**— A mythical island in the Atlantic Ocean, referred to by ancient writers.
- Atlas.**— In Greek Mythology a Titan. Son of Tapetus and Clymene, father of the Pleides, the Hyades, and the Calypso. He was believed to support the world upon his shoulders.
- Atlixco (Mexico), Battle of.**— An action between Gen. Lane, American, and Rea, a commander of Mexican guerrillas, Oct. 19, 1847. The Mexican loss was 519 killed and wounded and the American loss only two.
- Atomic Theory** is, as its name implies, only a theory regarding the ultimate forms of matter, yet it is so supported by both physical and chemical facts, that it may be regarded as almost a full established law. It is merely a hypothesis, but withal a very useful one, as it enables physicists and chemists to prove and explain many facts concerning matter which would otherwise be inexplicable. The atomic theory that a molecule of matter, which is the smallest particle of matter that can exist alone, and which is the ultimate form from the physicist's standpoint, is composed of smaller particles called atoms. These atoms are the smallest particles of matter which can enter into chemical combination. In this theory the hydrogen atom is taken as the standard, chiefly because hydrogen is the lightest substance known. The weight of each substance is compared with the weight of a like quantity of hydrogen, and this gives use to the law of atomic weight. Thus it has been found that 35.4 parts of chlorine, replace one part of hydrogen in a given compound, so that the atomic weight or the equivalent of chlorine is said to be 35.4. Again, 16 parts of oxygen replace one part of hydrogen, so the atomic weight of oxygen is said to be 16. In arranging the elements in order of their atomic weight a remarkable regularity of succession is noticed. This gives rise to a Periodic Law, which states that the properties of an element are a function of its atomic weight.
- Attachment.**— A taking of the person, goods, or any property by legal process, to secure a debt or demand.
- Attorney.**— One legally appointed by another to transact business for him. Such power is called power of attorney.
- Attorney-General.**— The first ministerial law officer of the U. S. There was also an attorney-general under the Colonial system. The judiciary act of 1789 provided for the existing office. The incumbent in 1814 became a member of the Cabinet, and in 1858 the office of assistant attorney-general was created. All U. S. district attorneys and marshals are accountable to the attorney-general, whose office with its auxiliaries have, since 1870, constituted the Department of Justice.
- Attucks, Crispus.**— Died at Boston, 1770. A half-breed Indian or mulatto, the alleged leader of the mob at the "Boston Massacre," Mar. 5, 1770, in which he was the first to fall.
- Auber** (*ô-bâr'*) (1782-1871) **Daniel François Esprit.**— French musician, composer of many operas, among others "Fra Diavolo," and "Les Diamants de la Couronne."
- Aubigné d', Theodore Agrippa.**— (1550-1630.) Famous French scholar.
- Auburn.**— (1) The capital of Androscoggin Co., Me. It has manufactures of cotton, boots, and shoes, etc. Pop. (1900), 12,951.
- Auburn.**— The capital of Cayuga Co., N. Y., situated at the outlet of Owasco Lake, the seat of a state prison, conducted on the "silent" or "Auburn" system. Pop. (1900), 30,345.
- Auchmuty, Sir Samuel.**— (1756-1822.) British general.
- Auckland.**— A seaport of New Zealand on the northern part of North Island. Population, 1891, about 50,000.
- Auction.**— A public sale of property to the highest bidder.
- Audit.**— To examine and adjust accounts.
- Audubon, John James.**— (1780-1851.) A celebrated American ornithologist. His original researches and studies of birds in the American woods rendered him famous as a scientist.
- Augean Stables.**— Stables or stalls in which Augeas, the Greek King of Elis, kept uncleansed for 30 years a herd of 3,000 oxen. It was the task undertaken by Hercules, a mighty mythological hero, worshiped for his courage and secret physical strength, to cleanse this stable, which he did by causing two rivers to run through it.
- Augeas.**— King of Elis, noted for his wealth in oxen, of which he fed 3,000 head in his stables, 1624.
- Augsburg.**— A city of Bavaria, which flourished greatly in the Middle Ages. It has been the scene of several memorable church councils, notably that held in 952, when the celibacy of the priesthood was ordered. It has sustained several severe sieges in war, having been last taken by the French in 1805, by whom it was, in 1806, restored to Bavaria.
- Augsburg Confession.**— The chief standard of faith in the Lutheran Church. It was erected at a diet held at Augsburg in 1530.
- Augur, Christopher Colon.**— (1821-1898.) A general in the U. S. army. He was graduated from West Point in 1843; served on routine duty till the Civil War, when he was made a brigadier-general of volunteers and later a major-general. He commanded a division under Banks at Cedar Mountain; was transferred to the Department of the Gulf and commanded the left wing of Bank's army during the operations against Port Hudson; in 1864 he served in Va.; was

made a brigadier-general in the regular army in 1869, and was retired in 1885.

Augur, Hezekiah.—(1791-1858.) An American sculptor and the inventor of a wood-carving machine.

Augusta.—The capital of Me., situated on the Kennebec River. It has manufactures of cotton, etc., and a U. S. arsenal. Pop. (1900), 11,683.

Augusta.—The capital of Richmond County, Ga., situated on the Savannah River. It has a large cotton trade and important manufactures, especially of cotton, and is the seat of the Medical College of Ga. It was besieged and taken by the American Revolutionary troops, in 1781. In the Civil War, it was taken by Gen. Sherman in December, 1864. Pop. (1900), 39,441.

Augusta, (Ga.) Siege of.—Late in 1780, Cornwallis garrisoned Augusta with a loyalist force commanded by Lieut.-col. Brown. Col. Clark later attacked the town, inflicting some loss upon its defenders. Early in 1781, while Gen. Greene was striving to reduce Fort Ninety-six, Lee, Pickens, Clark, and other Southern Continental officers laid siege to Augusta which capitulated on June 5, of the same year, with a loss of 52 killed, while the American loss was 51. The prisoners taken and the British wounded numbered 334.

Augustus, Caius Julius Cæsar Octavianus.—(63 B.C.—14 A. D.) Roman Emperor, succeeded to the chief power after the assassination of his uncle Julius Cæsar. Fought against the conspirators and defeated them at Philippi and Actium. His was the Augustan age of literature, and after his death he was numbered among the gods by the bereaved people.

Auk, The.—2601.

Aurelius, Marcus.—(121-180 A.D.) Marcus Anrelius was one of the best of the Roman emperors. He has been called the noblest of the pagans. He was very carefully reared and educated. He studied under many good teachers, and left a record telling what particular moral lessons he learned from each. He afterwards said that he had good parents, good teachers, good associates, and good friends.

He was not a Christian, but he practised many Christian virtues. He was a Stoic, and was ready to do the duties and bear the burdens and ills of life without complaining. He liked to read the teachings of Epictetus, the patient philosopher, which helped him to love simplicity, truth, temperance, duty, and right. His life was devoted to doing good. He was the flower of the Stoics. He never ceased to study and think, even in the tumults of war.

By his fine qualities he early attracted the notice of the Emperor Hadrian, who conferred many honors on him while he was yet a child. At the age of seventeen years, he was adopted by Antoninus Pius, the successor of Hadrian. He married Fustina, the daughter of Pius. At the age of nineteen, he was made consul. He discharged all of his official duties with fidelity and promptness, and lived on the friendliest terms with the emperor. After the death of Pius in 161

A.D., he succeeded to the throne, and ably managed the affairs of the empire. He was interested in the welfare and happiness of the people. Finding that the people were burdened by taxes, and were in arrears in paying them, he caused all the tax-claims to be burned. He was benevolent. He established a home for orphan girls.

Though he was fond of peace, he did not enjoy much of it during his reign. The Parthians having violated their treaty with Rome, he sent lieutenants who subdued them and again brought Mesopotamia under Roman authority. In the distress, pestilence, and panic which followed this war, he allowed a persecution of the Christians whom the superstitious people accused of causing the anger of the gods to be sent upon them. Though he clung to the faith of his ancestors, he was very liberal in all of his views; but he had been led to believe that there was much immoral superstition in Christianity.

He did not hesitate to use the sternest vigor in suppressing the revolts of the barbarians. He was kept busy much of the time in quelling the disturbances in Germany. He finally took command of the army and endured all of the hardships of the march and the camp. For several years, exposed to the snows of winter and the heat of summer, he strove to beat back the assailants of the empire. He gained an almost miraculous victory over the Quadi. Rain fell in abundance at a crisis when his soldiers were perishing from thirst and heat. Later, a severe storm arose just in time to scatter the terrified barbarians who had begun an attack which might have resulted in the annihilation of his army.

He was an able, brave commander, and carried on his campaigns with success, but he could not free the empire from the perils resulting from the great forward movement of the Germanic race, which was becoming aggressive in its policy. Rome had now passed the age of conquest, and began to show inability to defend what she had acquired. Her prosperity and power began to decline soon after Marcus's death, which occurred in his camp at Vienna in 180.

The Romans felt that the death of their good emperor was a national calamity. The senate pronounced him a god, and divine worship was accorded his statue. People throughout the empire secured images of him, which in some cases were preserved in the households of their families for over a century.

John Stuart Mill said of him, "If ever any one possessed of power had a right to think himself the best and most enlightened among his contemporaries, it was the Emperor Marcus Aurelius. Absolute monarch of the whole civilized world, he preserved life, not only the most unblemished justice, but what was less to be expected from his stoical breeding the tenderest heart. The few failings which are attributed to him were all on the side of indulgence, while his writings, the highest ethical product

of the ancient mind, differ scarcely perceptibly, if at all, from the most characteristic teachings of Christ. This man, a better Christian in all but the dogmatic sense of the word, than almost any of the ostensibly Christian sovereigns who have reigned, persecuted Christianity. Placed at the summit of all the previous attainments of humanity, with an open unfettered intellect and a character which led him, of himself, to embody in his moral writings the Christian ideal, he yet failed to see that Christianity was to be a good and not an evil to the world. . . . No Christian more firmly believes that atheism is false, and tends to the dissolution of society than Marcus Aurelius believed the same things of Christianity.

He had amiable weaknesses, but he was never cruel from personal choice. He was naturally kind and lenient toward those who opposed him. He had a forgiving spirit. Once, upon hearing of the death of one of his Asiatic governors, who had plotted and rebelled against him, he lamented that the official had not lived long enough to receive his forgiveness. He treated rebellious provinces with great gentleness. He did not act the part of a spy. He once burned some official papers without reading them, because he did not desire to suspect any person of treason.

He was the philosopher of the empire. He was a practical moralist. His sentences are the gospel of life. His precepts are the record of his life. He lived them as a man of the world before he wrote them for his son. He held that the highest aim of life is tranquillity or equanimity, which is to be reached by living in harmony with nature — by cultivating wisdom (the knowledge of good and evil), justice, fortitude (endurance of labor or pain), and temperance or moderation. He believed that it is man's duty to live the life of the "social animal," but that he should obey the conscience or reason, and not yield to the temptations of the body which do not conform to reason.

The following thoughts are from his "Meditations": —

"The pride which is proud of its want of pride is the most intolerable of all."

"One man, when he has done a service to another, is ready to set it down to his account as a service conferred. Another is not ready to do this, but still, in his own mind, he thinks of the man as his debtor, and he knows what he has done. A third in a manner does not know what he has done, but he is like a vine which has produced grapes, and seeks for nothing more after it has once produced its proper fruit. So as man, when he has done a good act, does not call out for others to come and see, but he goes on to another act as a vine goes on to produce again the grapes in season."

"Neither in writing nor in reading wilt thou be able to lay down rules for others before thou shalt have first learned to obey rules thyself."

"Begin the morning by saying to thyself: 'I shall meet with the busybody, the ungrateful,

arrogant, deceitful, envious, unsocial. All these things happen to them by reason of their ignorance of what is good and evil. But I who have seen the nature of the good, that it is beautiful, and of the bad, that it is ugly, and the nature of him who sins, that it is akin to mine, and participates in the same divinity, I can neither be injured by any of them, for no man can fix a foulness on me; nor can I be angry or hate my brother.'"

"Suppose that men kill thee, curse thee If a man should stand by a pure spring and curse it, the spring never ceases sending up wholesome water; and if he should cast clay into it, or filth, it will speedily disperse them, and wash them out, and will not be at all polluted. . . . What, then, is that about which we ought to employ our serious pains? This one thing: just thoughts and social acts; and words which never lie; and a temper which accepts gladly all that happens. . . . Everything harmonizes with me which is harmonious to thee, O Universe. Nothing is too early or too late for me, which thy seasons bring, O Nature; from thee are all things; in thee are all things; to thee all things return. . . ."

Aurora.—A city in Kane Co., Ill., on the Fox River. It has railroad shops and manufactures of machinery, flour, etc. Pop. (1900), 24,147.

Aurora.—The Greek goddess of the dawn. 1623.

Aurora Borealis.—A northern polar light or shifting play of colors on the sky at night, seen at greatest brilliance within the Arctic circles, is supposed now to be caused by the passage of electric light through rarefied air. The similar phenomenon within South polar regions is called *Aurora Australis*.

Au Sable Chasm.—A deep, narrow, and picturesque chasm, formed by the Au Sable River, near Keeseville, N. Y.

Austen, Jane.—(1775-1817.) A famous English novelist. Among her works are "Sense and Sensibility," "Pride and Prejudice," "Emma," and "Persuasion."

Austerlitz.—In Moravia, between the Danube and Germany, in the north of Austro-Hungary. The battle between the French and the allied forces of Austria and Russia was fought here Dec. 2, 1805. Napoleon of France, Francis of Austria, and Alexander of Russia commanded, hence the name "the battle of the three emperors." The French gained a decisive victory over the allies who suffered fearful loss.

Austin.—The capital of Tex.; situated on the Colorado River; the seat of a state university and other institutions. It was founded by Stephen F. Austin, a pioneer (1793-1836). Pop. (1900), 22,258.

Austin, Alfred.—Born 1835; English poet-laureate; novelist, and journalist.

Austin, Jane Goodwin.—(1831-1894.) An American author.

Austin, Jonathan Loring.—(1748-1826.) An American Revolutionary patriot, who was sent to Paris (1777) with dispatches to Dr. Franklin, announcing the surrender of Gen. Burgoyne; he

remained two years with Franklin as his private secretary.

Austin, Stephen Fuller.—(1793-1836.) The founder of the State of Texas.

Australasia.—A general name given to Australia and the large islands between the Indian Archipelago and Polynesia, including New Guinea, New Zealand, New Caledonia, New Hebrides, New Ireland, and New Britain. The total area exceeds 3,500,000 square miles, and the population is estimated at 5,500,000.

Australia.—The southwestern division of Australasia, lying wholly south of the equator, and is bounded on the east by the Pacific Ocean, on the west, northwest, and southwest by the Indian Ocean, and on the north by the Arafura Sea and Torres Strait, which separates it from New Guinea and other Pacific Islands. Tasmania lies toward the south. Australia's area is about 3,000,000 square miles and its population is about 3,750,000. The natives, though lighter in color, otherwise resemble Africans. The coasts are rocky and mountainous and the interior contains large deposits of animal bones, while the general physical features suggest that at one time Australia was the bed of an ocean. Its principal products are gold and wool; its fauna and flora are peculiar to itself, and its climate is warm.

Australian Colonies.—Comprise the colonies of New South Wales, South Australia, Victoria, Western Australia, Queensland, Tasmania, New Zealand, Fiji Islands, part of New Guinea, all of which belong to the British Empire. The climate is healthful. As they are all south of the equator, the seasons are the reverse of those in the Northern Hemisphere. The principal products are wheat, oats, maize, barley, wool, gold, copper, tin, and diamonds. In Jan. 1901, the Commonwealth of Australia was formed, federating the five colonies of the continent, including Tasmania, but excluding New Zealand. The area of the new Federation is 2,972,573 sq. miles, with a population (1899) of 3,756,894.

Australian Fairy Tales.—1237.

Austria-Hungary.—A bipartite European state composed of the Cisleithan Empire of Austria and the Transleithan Kingdom of Hungary. Each country has its own parliament, but both acknowledge the same hereditary sovereign and have an army, navy, and diplomatic corps in common, as well as a controlling body known as the Delegations. This latter constitutes a parliament of 120 members, one-half representing Austria, and the other half, Hungary. The Austrian and Hungarian members usually act separately, but when unable to agree they are obliged to sit as one body. Their jurisdiction extends to foreign affairs, finance, and war. Three-fourths of Austria-Hungary, which has an area of 230,942 sq. miles, is mountainous. It has about 500 miles of seacoast on the Adriatic, and a population of about 47,000,000. All of the useful minerals are to be found, and the principal occupations are fruit culture, mining, and wine making.

Austria-Hungary is extremely mountainous, by reason of the Alps forming its chief physical feature. The extensive forests furnish occupation to nearly one-third of the people. The chief products are grain, potatoes, beets, wine, barley, horses, sheep, cattle, and silk. Hungary ranks high among the mineral producing countries of the world. Area, 230,942 sq. miles; population, 47,015,855. Capital, Vienna (pop. 1,500,000).

Austrian Fairy Tales.—1302.

Austrian Succession, War of.—(1740-1748.) Charles IV., emperor of Germany, having no male heirs desired that his daughter, Maria Theresa, queen of Hungary and Bohemia, should succeed him. In 1731 he drew up the pragmatic sanction, to which England and nearly all the powers of Europe consented. France, Spain, and Sardinia opposed it. The emperor died in 1740 and Maria Theresa succeeded him. The electors of Bavaria and Saxony, the kings of Poland and Spain, Sardinia, and Frederick II., of Prussia, set up claims against the throne and territory. France assisted Bavaria, and England alone supported the queen. Nearly all Europe engaged in the war that followed. The treaty of Aix-la-Chapelle (1748) confirmed the queen's succession.

Author and the Publisher, The.—4998.

Authors, Hints to.—3069.

Autocrat of the Breakfast Table, The.—By Oliver Wendell Holmes. First published serially in the "Atlantic Monthly." In book form in 1858.

Autose Towns, Destruction of.—Settlements of Autose Indians who in 1813 massacred the whites at Fort Minnis. Brig.-gen. John Floyd, at the head of 950 Ga. militia and 400 friendly Indians, overwhelmed the village and almost exterminated the hostile savages.

Autun (*ô-tun'*).—A city of Saone-et-Loire, of France. Has much historical interest, and is the seat of the medieval cathedral of St. Lazare, and theological seminaries. Pop. (1891), about 15,000.

Aux Canards (Canada), Battle of.—Memorable as the first action between British and Americans in the War of 1812. General William Hull, governor of the Northwest Territory, assumed command of the forces in Ohio, and, crossing into Canada, sent Col. Lewis Cass with 280 men toward Fort Malden. Cass drove the British before him and won a complete victory.

Avails.—Profits resulting from trade.

Avens, The Yellow.—2902.

Aventine Hill.—The largest of the seven hills, upon which Rome is built.

Averages.—In marine insurance there are two kinds, particular and general. A particular average is a *pro rata* contribution levied upon all underwriters to cover damages to a vessel from "accidents of the sea." A general average is a contribution levied upon ship-owners, and owners of cargo or freight for mutual protection as the cutting away of masts or rigging, etc., or throwing goods overboard.

Averell, William Woods.—Born 1832. An American soldier and inventor. He was graduated from West Point in 1855; during the Civil War he

- was a cavalry commander, noted for his raids upon the Confederates in Va., in 1863-64; resigned in 1865 with the rank of brevet major-general. He had a scientific mind and invented valuable improvements in steel working, the use of asphalt for pavements, and electrical appliances.
- Averysboro** (N. C.) **Battle of.**—One of the closing engagements of the Civil War, fought Mar. 16, 1865.
- Avesta** (*a-ves'tā*).—The Bible of the Zoroasters and the Parsees.
- Avicenna** (*av-i-sen'ā*).—(980-1037.) A celebrated Arabian philosopher and physician; author of a number of medical treatises, and commentaries on the works of Aristotle. Born at Af-hena, Bokhara; died at Hamadan, Persia.
- Avignon** (*ā-vēn-yēn'*).—Capital of Vaucluse, France. A city of much historical interest; the residence of the popes 1309-76, now actively engaged in commercial interests. Pop. (1896), 45,107.
- Avoirdupois.**—System of weights and measures applied to all goods except precious metals and precious stones. The grain is the foundation of the system. A cubic inch of water weighs 252.458 grains; 7,000 of such grains make an A. lb.; and 5,760 a Troy lb. The A. lb. is divided into 16 ounces of $437\frac{1}{2}$ grains and each of these again into 16 drams of $27\frac{1}{2}$ grains each. (See TABLES OF WEIGHTS AND MEASURES.)
- Award.**—The decision of a board of arbitrators in a case.
- Ayr.**—The county town of Ayrshire in Scotland, on the river Ayr. Pop., 25,000.
- Aytoun, William Edmonstoune.**—(1813-1865.) A Scottish literary writer and frequent contributor to "Blackwood's Magazine." His best known work is his "Lays of the Scottish Cavaliers."

Azof, Sea of.—An arm of the Black Sea, with which it is connected by the Strait of Yenikale. The peninsula of the Crimea shuts the sea off from the Black Sea. This was the scene of the greatest activity during the Crimean War, 1855. Known also as Azov. Area 14,000 sq. miles.

Azores.—Islands in N. Atlantic belonging to Portugal, 1,005 sq. miles in area. Pop. 260,000.

Aztecs, or Aztecas.—A tribe or nation of Mexican Indians, speaking the Nahuatl tongue, and inhabiting the Anahuacan table-land of Mexico at the time of the Spanish conquest. They were a warlike people, whose dominions, in the 16th century, extended across the South American continent from the Atlantic to the Pacific. They were good cultivators of the soil, despite their warlike habits, were somewhat advanced in civilization, and had considerable knowledge of astronomy and practised astrological arts. Their religion was a gross polytheism, sacrificing human victims to their gods on a devastating scale in their mighty temples, and were especially lavish in their immolations in honor of their god Huitzilopochtli. Attached to this god's temple were no less than 5,000 priests. The Aztecs seem to have wandered into Mexico from the north, where they formed a strong confederacy, supplanting that of the Toltecs, who built the City of Mexico, and dominated the petty tribes of the region and the alcorigues of Central Mexico until the coming of Cortez, in 1519, when an end was put to their power. They seem to have been without horses, oxen, or other beasts of burden, though they had some knowledge of agriculture, and an acquaintance with the metals, especially the alloy bronze, which they used largely in the fashioning of their weapons and tools.

B

Baal.—A Semitic word signifying lord, master, or, in its highest sense, the deity. It was never applied by the Hebrews to their own deity, but to indicate some god of the surrounding nations. As a prefix, in connection with some name or attribute, it was used to distinguish a particular deity, as Baal-Zebub or Baal-peor; and as Baal, Bel, or Bal, it enters largely into many proper names of persons and places. Whenever the Israelites fell into idolatry, their tendency was to worship the Baal of the people with whom they were most nearly associated.

Baalbec (*Heliopolis*).—An ancient city of Syria, which was of considerable importance because of its situation in the direct line of trade between Tyre and the East. The tradition that it was founded by Solomon is believed to be unfounded, and the date of its beginning is not known. It abounded in luxury and was embellished with magnificent temples all of which fell into disuse and decay, when Christianity

became the religion of the Roman Empire, except the great temple, which was considered one of the wonders of the world, and which was made a Christian church. As late as the 8th century, Baalbec was still a beautiful and opulent city, and for a long time resisted the Moslem invasion, but was finally overcome in 748 and partially destroyed. It suffered during the Crusades; was afterward repeatedly sacked, and in 1759 its destruction was completed by an earthquake. Its ruins are among the most imposing in the Orient, a portion of the portico, and lofty columns, and of the walls of the great temple, being still visible.

Ba'ba.—A Turkish word meaning "father," often added out of courtesy to other names as, Ali-Baba.

Babbage, Charles.—(1792-1871.) English mathematician and early student of the method of constructing tables of logarithms.

Bab Ballads.—The title of a volume of amusing verse, by W. S. Gilbert, published in 1868.

Babbitt, Isaac.—(1799-1862.) American metal worker. He made the first britannia-metal ware manufactured in this country. Also invented babbitt-metal, an alloy of copper, tin, and zinc, used to reduce friction.

Babcock, Orville E.—(1835-1884.) An American officer, was appointed colonel and aid-de-camp to Gen. Grant in 1864, and later his military secretary. He was engineer in charge of the Washington Aqueduct.

Babcock, Rufus.—Born at North Colebrook, Conn., 1798; died at Salem, Mass., 1875; founder and editor of the "Baptist Memorial."

Babel.—The Hebrew name for Babylon or the Babylonian Empire, which signifies "to confound," in allusion to the confusion of tongues in the building of the tower of Babel. In it may also be found the probable origin of the word babble. The building of the tower of Babel is shrouded in tradition and mystery, but according to the best authorities, the time was about 2250 B. C., and the place, the plains of Shinar. Tradition confirms the scriptural account that the tower was never finished. But the spot may have been held sacred in memory;

and it is believed that the temple at Borsippi, known as the citadel of Nimrod, the ruins of which still remain, was one of a series of temples erected on this site. It is probable that the temple was at first consecrated to the worship of the one God, but passed through the successive stages of idolatry until the rites performed in it were those of the lowest stages of heathenism. The Babylonians were given to the study of astronomy, and it is believed that the tower of Babel may have served a useful purpose as an observatory.

Baboon, The.—See **MONKEY**, 2453.

Babylon, Babylonia, was the name given to the level country along the lower course of the Euphrates; the modern Irak-Arabi. It has also been called by ancient writers Shinar, Babel, "land of the Chaldees," and Chaldea. The Temple of Baal and the "hanging gardens" are among the most noteworthy points of interest. The ruins of the city have yielded tablets and sculpture which have thrown much light upon ancient history.

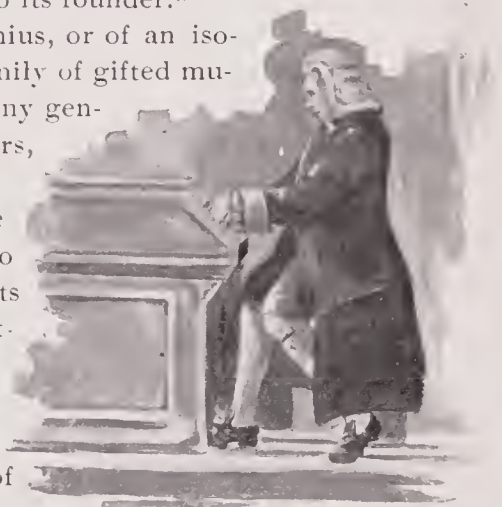
Bacchus.—See **GREEK AND ROMAN MYTHOLOGY**, 1618.

BACH—(1685-1750)

THE first name preëminent in the history of music is that of Johann Sebastian Bach, a giant among composers, whose greatness rests not only upon the degree of perfection which he achieved in his art, but also upon the mighty influence which his works have had on all the subsequent development of music,—an influence that was not recognized until fifty years after his death. He was more than an influence, however; he was a prime factor in the development of music. Schumann said: "To Bach, music owes almost as great a debt as a religion owes to its founder."

Bach was not an example of the sudden outcropping of genius, or of an isolated blossom upon the family tree. He came of a numerous family of gifted musicians, who had been prominent in the history of their art for many generations, and not one of whom, for more than two hundred years, followed any calling except that of music.

This wonderful family gift reached its ripe fruition in the genius of Johann Sebastian. In this young man, its hitherto scattered strength was concentrated, and in him it reached its climax. In him, too, the artistic power of the family exhausted itself, for after him it quickly diminished, and in two generations was entirely extinct. The greatest of the Bachs was born at Eisenach, in 1685, the birth-year also of another king among musicians, Friedrich Händel. As a matter of course in such a family, his instruction in music was begun early, by his father, who, however, died when the boy was ten years of age. After his father's death, Johann Sebastian went to live with an elder brother, Johann Christopher, an organist, who superintended Sebastian's musical education, and who seems to have tried to hold in check the precocity which his brother already exhibited. He forbade Sebastian the use of certain manuscripts which the latter was especially fond of studying. The little musician, however, discovered the



hiding place of the coveted compositions, took them by stealth, night after night, and laboriously copied them. This work was done by moonlight, as any other light would have led to his detection. The copying occupied the moonlight nights for six months, but just as it was near completion, the elder brother discovered the young culprit, and took from him the result of his patient and painful labor. If, as Carlyle said, "genius is an infinite capacity for taking pains," the little Sebastian certainly showed, by this self-assumed task, signs of the divine spark.

At the age of fifteen, upon the death of his brother, the young Bach obtained, on account of his beautiful soprano voice, a choir position at Lüneberg, where he pursued his musical studies to better advantage, devoting himself especially to organ-playing. After three years in Lüneberg, he was appointed to a position as violinist in the duke's orchestra at Weimar. In the same year, 1703, he accepted the position of organist at Arnstadt, which gave him an opportunity to develop in his chosen branch of music. Later, his growing reputation for organ-playing and for improvisation procured for him the place at the organ of St. Blasius's Church, in Mühlhausen; and, in 1708, he was appointed organist at Weimar. From this time Bach's studies may be regarded as completed. Here his fame as an organist reached its zenith, and here many of his greatest organ compositions were written.

In 1717, Bach was appointed chapel-master to the prince of Anhalt-Köthen. In 1723, at the age of thirty-eight, the master received the greatest appointment of his simple and uneventful life,—that of organist and cantor of St. Thomas's school at Leipsic, a post which he retained until his death. His duties, however, were onerous, and his lifelong struggle against poverty was not ended; for he had been twice married, and his children now numbered twenty, while his salary amounted only to a hundred dollars a year. He was, therefore, compelled to eke out a livelihood by giving lessons, and by performing services outside of the school.

About 1747, Bach's health began to fail. His eyes had been troubling him for a long time, and he was now threatened with total blindness. To avert the calamity, an operation was resorted to which, however, proved unsuccessful. The blindness came upon him, but, ever pious and devout, he even then composed and dictated the choral, "When We in Sorest Trouble Are." A long illness followed a second operation, after which his sight suddenly returned. He was so overcome with joy at being able to see again, that he was seized with a fit of apoplexy, and died July 28, 1750.

Bach's works include the *Preludes and Fugues*, or the *Well-tempered Clavichord*, the well-known *Inventions*, the *Passion Music*, the *Mass in B Minor*, the *Magnificat* for five voices, and a vast number of other compositions. His last work, *The Art of Fugue*, was never finished. He represents the completion and the perfection of musical development during the Middle Ages and the epoch of the Reformation, and he is the father of all modern music. He created many new forms of composition, which subsequent composers have used until they have become established as permanent art-forms. He also created a new vocal style and carried it to perfection. He is, in the opinion of many, the first and greatest real tone-poet. The *48 Preludes and Fugues* reflect all the moods and emotions of the human mind. His music is characterized by the purity and the grandeur of his own nature, and is imbued with religious fervor. Bach was the greatest performer on the organ the world has ever known, and many of his organ compositions are masterpieces which will probably never be surpassed. He established, through his *48 Preludes and Fugues*, the division of the scale into twelve equal semitones. He changed the fingering previously in use, adding the thumb and the little finger, and thus laid the foundation for modern pianoforte playing.

- Bache, Alexander Dallas.**—Born at Philadelphia, 1806; died at Newport, R. I., 1867. An American physicist; organizer and first president of Girard College; was also superintendent of the Coast Survey (1843-67).
- Bache, Franklin.**—Born at Philadelphia, 1792; died there, 1864. An American physician and chemist. He founded, with Dr. Wood, the "United States Pharmacopœia" and edited the "Dispensatory" (1833-64).
- Bache, Richard.**—(1737-1811.) Postmaster-general U. S. 1776. Son-in-law of Benjamin Franklin.
- Back Bay, The.**—A wealthy residential quarter of Boston.
- Backgammon.**—1869.
- Backus, Isaac.**—Born at Norwich, Conn., 1724; died, 1806. An American Baptist minister; author of a "History of New England" (1777-96).
- Bacon, Delia.**—Born at Tallmadge, Ohio, 1811; died at Hartford, Conn., 1859. An American writer, sister of Leonard Bacon. She attempted to prove in "The Philosophy of the Plays of Shakespeare Unfolded." that the plays of Shakespeare were the work of Lord Bacon and others.
- Bacon, Francis, Lord Verulam, Viscount, St. Albans.**—(1561-1626.) The greatest of modern philosophers and writers on philosophy; was knighted in 1603; held several state offices before his appointment to the Lord chancellorship of England in 1619. His greatest work, the "Novum Organum" appeared in 1620.
- Bacon, Leonard.**—Born at Detroit, Mich., 1802; died at New Haven, Conn., 1881. An American clergyman, editor, and author, also one of the founders of the "New Englander" and of the New York "Independent."
- Bacon, Nathaniel.**—Born in England about 1642; died, 1676. An Anglo-American lawyer. He emigrated to Va. and led an expedition against the Indians but was refused a commission by the governor. He captured and destroyed Jamestown, but died before he could accomplish his projects of reform. (See BACON'S REBELLION.)
- Bacon, Roger.**—(1214-1292.) A learned English monk, who made wonderful discoveries in science and the realm of nature. Is rather doubtfully credited with the discovery of gunpowder.
- Bacon's Rebellion.**—A revolt in 1676 of the people of Va., led by Nathaniel Bacon, against their governor, Sir William Berkeley. The Crown, in 1673, assigned the province for 31 years to Lord Arlington and Lord Culpeper, granting to them almost absolute power over the conduct and property of the inhabitants. This authority, delegated to Berkeley, was so grossly abused by him that the people rebelled. Not only was he a petty tyrant, levying exorbitant taxes and antagonizing free education and a free press, but he was either unable or unwilling to protect the colonists against the Indians. When the settlers chose Bacon to lead them against the savages, the governor declined to commission him, but he headed the expedition, nevertheless, and was victorious. Berkeley then proclaimed Bacon a rebel, and the people re-
- torted by electing Bacon to the assembly. He was arrested and tried, but was released on parole and left the capital, Jamestown, to which he soon returned at the head of 600 men. This time his commission was given to him. While he was absent on another successful campaign against the Indians, Berkeley once more proclaimed him a rebel and traitor. Bacon retaliated by burning Jamestown, the governor seeking safety aboard an English vessel. The rebellion was thereafter conducted fitfully until the death of Bacon in 1676, when it collapsed. It is worthy of note that it was the first revolt against British rule in America, and that it occurred just one hundred years before the Declaration of Independence.
- Badger, The.**—2446.
- Bad Lands.**—Certain lands of the northwestern part of the U. S., almost destitute of natural vegetation and characterized by the varied and fantastic forms into which the soft strata have been eroded. The name is also applied to the region of the Black Hills in S. D., along the White River.
- Baedeker, Karl.**—(1801-1859.) A German publisher; he originated the guidebook series now known throughout the world.
- Baffin's Bay.**—A gulf or inland sea on the northeast coast of North Amer. It extends 800 miles in its longest direction, northeast to southwest, and has an average width of 250 miles; its depth varies from 200 to 1,000 fathoms. Its coasts are rocky and precipitous, and between the cliffs innumerable sounds and bays open into it. Its waters abound in whales, seal, and walrus, and its shores in wild animals and sea fowl. It is connected with the Atlantic by Davis Strait, and with the Arctic by Smith and Lancaster sounds. The first voyage was made from Bering Strait to Baffin's Bay about 1852.
- Bagby, Arthur Pendleton.**—Born in Va., 1794; died at Mobile, Ala., 1858. An American politician; governor of Ala. (1837-41), and U. S. minister to Russia (1848-49).
- Bagby, George William.**—Born in Va., 1828; died at Richmond, Va., 1883. A physician, journalist and humorist, who wrote under the pseudonym "Mozis Addums."
- Bagdad.**—A city of Asiatic Turkey, built upon both sides of the river Tiber, the two divisions connected by bridges of boats. It is inhabited by Jews, native Christians, Arabs, Persians, and Turks, and is well fortified. The city as viewed from a distance is beautiful, the groves of palms and orange trees forming an agreeable contrast with the domes and minarets. It was built by caliph Al Mansur in 762-66, and a century later was said to have a population of 2,000,000. It is in a region prolific with oriental grains and fruits, and, besides these, it exports horses, pearls, coral, honey, raw silk, bitumen, salt-peter, etc. It imports manufactured cloths, coffee, and drugs, but it has declined from its early commercial importance. It was conquered several times by the Turks and Persians alternately, and finally by the Turks in 1638.

- Bahama Islands.**—Formerly Lucayos. They number about 3,000, all very small except 30, and the chain stretches from a point near the north coast of Haiti to the east coast of Fla. The main islands are the Great Bahama, the Abacos, Eleuthera, New Providence, Andros, Guanahani or Cat Island or San Salvador, Watling, Exuma, Long Island, Crooked Islands, Mariguana, Inagua, Little Inagua, and Turks Island. The climate of the Bahamas is extremely mild and healthful in all seasons. They produce cotton, maize, and many tropical fruits. They were the first land seen by Columbus in 1492, were occupied by the English in 1629, and further secured to them by treaty in 1783. The capital is Nassau, New Providence. Area, 5,794 sq. miles; pop. (1901), 53,725.
- Bahia, or San Salvador.**—Cap. of Bahia province in Brazil, on Bay of All Saints, pop., 200,000.
- Baikal.**—A fresh-water lake in South Siberia. It ranks third among the lakes of Asia, being 370 m. long and from 20 to 70 miles wide, and its depth is very great.
- Bailey, James Montgomery.**—Born in Albany, N. Y., 1841; died at Danbury, Conn., 1894. An American humorist, and editor of the "Danbury News." He was widely known as the "Danbury Newsman."
- Bailey, Joseph.**—Lieut.-col. of the Fourth Wisconsin Volunteers in the Civil War, and promoted to brig.-gen. for a great service rendered by him, in the saving of Commodore Porter's fleet from destruction, during the Red River expedition under Gen. Banks, in 1864. (See BANKS, NATHANIEL PRENTISS, 39-40.)
- Baillie, Joanna.**—(1762-1851) An eminent modern Scottish poetess.
- Bain, Alexander.**—(1818—) A Scottish writer on mental philosophy and psychology.
- Bainbridge, William.**—Born at Princeton, N. J., 1774; died at Philadelphia, 1833. An American naval officer; appointed commodore in 1812; captured the British frigate "Java," Dec. 29 1812.
- Baird, Charles Washington.**—Born at Princeton, N. J., 1828. A Presbyterian clergyman and author of a "History of the Huguenot Emigration to America" (1885).
- Baird, Henry Martyn.**—Born at Philadelphia, 1832. Professor of Greek in the University of the City of New York, and author of a "History of the Rise of the Huguenots" (1879).
- Baird, Robert.**—Born in Fayette Co., Pa., 1798; died at Youkers, N. Y., 1863. An American clergyman and historical writer. His chief works are, "A View of Religion in America," "History of the Temperance Societies," and a "History of the Albigenses, Waldenses, and Vaudois."
- Baird, Spencer Fullerton.**—Born at Reading, Pa., 1823; died at Wood's Holl, Mass., 1887. A noted American naturalist. Among his numerous works (over 1,000 titles) are a "Catalogue of North American Reptiles," "Mammals of North America," and a history of "North American Birds."
- Baker, Edward Dickinson.**—Born at London, Eng., 1811; killed at Battle of Ball's Bluff, Va., Oct. 21, 1861. An officer of the U. S. army and a politician. He was a member of Congress from Ill. (1845-46 and 1849-51); during the interim he went to Mexico as colonel of a regiment and served through the war; was elected a U. S. senator from Ore. in 1860; at the outbreak of the Civil War he left his seat to enter the Union army as a brigadier-general; was killed as above stated, while serving under Gen. Charles P. Stone.
- Baker, George Augustus.**—Born in New York City, 1821; died there, 1880. A noted American portrait-painter.
- Baker, Lafayette.**—Born at Stafford, N. Y., 1826; died at Philadelphia, Pa., 1868. An American brigadier-general, and head of the bureau of secret service during the Civil War. He organized the pursuit of Wilkes Booth who killed President Lincoln, and was present at his death. He wrote a "History of the United States Secret Service in the Late War."
- Baker, Mount.**—A volcanic peak in the Cascade Mountains, in northern Washington, near the Canadian frontier, 11,000 feet high.
- Baker, William Mumford.**—Born at Washington, D. C., 1825; died at Boston, Mass., 1883. A Presbyterian clergyman and novelist. His chief works are, "Inside; a Chronicle of Secession," "Oak-Mot," "His Majesty, Myself." He sometimes used the pseudonym George F. Harrington.
- Baker's Creek (Miss.), Battle of.**—A name sometimes given to the battle (May 16, 1863) of Champion's Hill (which see).
- Baking, as a Business and as a Trade,** 5275.
- Balaklava.**—A small seaport in the Crimea, opposite Sebastopol. It was here that those memorable cavalry charges were made in 1854 (Oct. 25). Pop., 1,000.
- Balance.**—The difference between the debit and credit sides of an account.
- Balance Account.**—A general account in the Ledger to which are transferred at a certain date the balances of all other accounts. This then indicates the financial condition of the business.
- Balance Sheet.**—A statement of affairs at a given period based upon the books and accounts. It sets forth the capital, liabilities, assets, and funds on hand.
- Balance of Trade.**—The difference in value between the exports and the imports of a country.
- Balbóia de Vasco Nuñez.**—(1475-1517.) A Spanish conqueror, who is regarded as the discoverer of the Pacific Ocean. He caught the first sight of it on Sept. 25, 1513.
- Balder, Death of.**—(Norse Mythology) 1640.
- Bald Mountain.**—A peak in the Front Range, Col., 12,500 feet high.
- Baldwin I.**—(1058-1118.) King of Jerusalem. Son of Godfrey de Bouillon, was made protector of the Holy Sepulcher at Jerusalem and was proclaimed king. He reigned 18 years.
- Baldwin, Matthias William.**—Born at Elizabethtown, N. J., 1795; died at Philadelphia, 1866. An American inventor, noted as an improver and manufacturer of locomotive engines.

- Baldy Peak.**—A peak 12,660 ft. high, northeast of Santa Fé, N. Mex.
- Bale.**—A bundle of goods in a cloth cover, ready for carriage.
- Balearc Islands.**—A group of 5 islands in the Mediterranean Sea, off the coast of Valencia. They are called Majorca, Minorca, Iviza, Formentera, and Cabrera. They form a Spanish province, pop. 313,000.
- Balestler, Charles Wolcott.**—Born at Rochester, N. Y., 1861; died at Dresden, Germany, 1891. American journalist, novelist, and publisher. He was the author of "A Patent Philtre," "The Naulahka" (in collaboration with Rudyard Kipling), "Benefits Forgot," etc.
- Balfe, Michael William.**—(1808-1870.) Composer of a number of operas; also a violinist and a singer.
- Balkans.**—A range of mountains in S. E. Europe, dividing Bulgaria from Eastern Rumelia. The highest point is 8,340 feet above sea-level.
- Ball, Ephraim.**—Born at Greentown, Ohio, 1812; died at Canton, Ohio, 1872. An American inventor and manufacturer of plows, mowers, and harvesters.
- Ball, Thomas.**—Born at Charlestown, Mass., 1819. An American sculptor. Among his best works, are a statue of Webster, the "Emancipation" statue, and busts of Everett, Choate, and others.
- Ballo in Maschero** (*bäl'lo ên mäs'ke-rä*), **Un** (A MASKED BALL).—Opera by Verdi, 1859.
- Ballot.**—A little ball. The term covers all forms of secret voting, as in early times such votes were determined by balls of different colors deposited in the same box, or balls of one color placed in various boxes. The Greeks used shells (*ostrakon*), whence we derive the term ostracism. In 139 B.C. the Romans voted by tickets. The ballot was first used in America in 1629, when the Salem Church thus chose a pastor. It was employed in the Netherlands in the same year, but was not established in England until 1872, although in Scotland it was used in cases of ostracism in the 17th century. In 1634 the governor of Mass., was elected by ballot, and the constitutions of Pa., N. J., and N. C., adopted in 1776, made this method of voting obligatory. The ballot progressed slowly in the Southern States, Ky. retaining the *viva voce* method until a comparatively recent date. In certain states, the constitutions stipulate that the legislatures shall vote *viva voce*. Since 1875 all congressmen have been elected by ballot. In 1888 the Australian ballot system, which requires the names of all the candidates for the various offices to be placed on one large sheet of paper, commonly known as a "blanket" ticket, was adopted in Louisville, Ky., and some sections of Mass. It is now in very general use in this country. The voter, in the privacy of an individual booth, indicates his preference by making a mark opposite a party emblem or a candidate's name. This system originated in 1851 with Francis S. Dutton of South Australia, and Henry George, in a pamphlet, "English Elections," published in 1882, was the first to advocate it in the U. S. The first bill enacting it into a law here was introduced in the Michigan legislature in 1887, but it did not pass until 1889.
- Ballou, Hosea.**—Born at Richmond, N. H., 1771; died at Boston, Mass., 1852. One of the founders of Universalism in America.
- Ball's Bluff** (Va.) **Battle of.**—This action took place Oct. 21, 1861, early in the Civil War, near Leesburg, Va. Gen. Charles P. Stone had been directed by Gen. McClellan to demonstrate against a Confederate force encamped at that place. Col. Devens, with about 400 men of the 19th and 20th Mass. regiments, crossed the Potomac River, in furtherance of the plan. He was attacked by the Confederates in largely superior numbers and was compelled to give ground. He was reinforced by two regiments under Col. Edwin D. Baker, who assumed command. Baker was killed in the action and the Union troops gave way in confusion. They were driven in panic to the river, where many were captured and many were drowned while attempting to escape by swimming. The Union loss was 900—about half of the entire force. The Confederate loss was about 300. Col. Baker was a U. S. senator from Oregon, and colonel of a California regiment. For alleged mismanagement which led to the disaster, Gen. Stone was arrested and kept in confinement for several months.
- Balsam Poplar, The.**—See **POPLAR**, 2833.
- Baltimore.**—The sixth city in the U. S. It is the chief city of Md. on the N. bank of the Patapsco River, 14 miles from its entrance into Chesapeake Bay. Pop. (1900), 508,957.
- Baltimore, The.**—A U. S. armored cruiser, which participated in the battle of Manila, May 1, 1898.
- Baltimore Oriole, The.**—2550.
- Bal'zac de Honoré.**—(1799-1850.) One of the best of modern French novelists.
- Banana, The.**—2883.
- Bancroft, Aaron.**—Born at Reading, Mass., 1755; died at Worcester, Mass., 1839. An American clergyman who wrote a "Life of George Washington" (1807).
- Bancroft, George.**—Historian and statesman; sketch of, 31.
- Bancroft, Hubert Howe.**—Born at Granville, Ohio, May 5, 1832. An American historian. Having established an extensive book business in San Francisco, he began to collect books and documents relating to the Pacific states, upon which after acquiring a large number of manuscripts and tracts, he founded his "History of the Pacific States," part of which relating to the Indian tribes, Central America, and Mexico, are completed (1901); the remainder is in course of preparation.
- Banded Peak.**—A summit in Colo., 12,860 feet high.
- Banberry, The.**—2000.
- Bangkok.**—The capital city of Siam, at the head of the Gulf of Siam, on the Menam River. Pop., 250,000.
- Bangor.**—City and cap. of Penobscot Co., Me., on the Kenduskeag River. Pop. (1900), 21,850.
- Bank, Keeping an Account.**—4179.

Bank, Savings.—4198.

Bank, The Management of a.—5304.

Banker, The Making of a.—5301.

Banking, Elements of.—4163.

Banking, The Ladder to Success in.—5298.

Bankrupt.—One who fails or cannot pay his just debts.

Bankruptcy has a dual meaning; it is a state of inability to pay all debts, and the word also designates the process by which an individual or a corporation may obtain a discharge of his or its indebtedness, by surrendering his or its property and otherwise complying with the law. A bankruptcy law enacted by Congress in 1800 was repealed in 1803. In 1837 a commercial crisis in this country resulted in failures to the extent of about \$100,000,000. In consequence of the panic that ensued, Congress passed another bankruptcy act in 1841, but repealed it in 1843. Most of the banks suspended specie payment in 1857, during the financial panic. The Lowell act, passed in 1867, was in force until 1878. The existing law dates from 1898. During the intervals when there was no national bankruptcy law, all matters pertaining to insolvencies were under the control of the states.

Bankrupt Law.—A law under which a man surrenders all his property to assignees for the benefit of his creditors, and receives a discharge from all indebtedness and freedom from liability against future acquired property.

Banks.—A bank is an institution for receiving, holding, and lending money, and, when a national bank, for the issue of money. The banking institutions of this country are national, state, private, savings, and loan and trust companies. In 1780 the Continental Congress granted a charter to the Bank of North America. Doubt arose as to the power of that body to perform this act, and the bank was rechartered by Pa. in 1781. By 1791 two other banks, one in Boston and one in New York, had been founded. In that year Congress established the Bank of the U. S., which had an authorized existence of 20 years and a capital of \$10,000,000, one-fifth to be supplied by the Federal Government. In 1811, Congress declined to recharter the bank, and the country had no other than state banks until, in 1816, the Second U. S. Bank was established to run 20 years, with a capital of \$35,000,000, of which \$28,000,000 was represented by government stocks. It had 25 directors, of whom five were appointed by the U. S. This bank was the custodian of the public funds, and the veto by President Jackson of the act renewing its charter was made an issue in the presidential campaign of 1832. After the election, the national funds were removed from the bank and deposited in state banks, which emitted bills indifferently secured and of various denominations. This system worked so disastrously to the commercial interests of the country that a national bank act, suggested by Secretary Chase, was passed in 1863 and amended in 1864. It is modeled on the old New York State bank-

ing law, by which the circulating notes of all the banks of that state were secured by stocks and bonds, one-half of which had to be securities of the state itself. Under the existing national banking law, any five persons with a total capital of \$50,000 are empowered to open a bank and issue circulating notes to the amount of 90 per cent. of their capital invested in U. S. bonds, but not to exceed 90 per cent. of the par value of those bonds. In cities of more than 6,000 population, the minimum capital is \$100,000 and where the population is more than 50,000, double that amount. The same ratio of circulating medium to capital is maintained everywhere. The existing law has added some \$350,000,000 to the currency.

Banks, Nathaniel Prentiss.—Statesman and soldier; sketch of, 36.

Banks, Postal Savings.—Originated in England, where they were established in 1861. The system was not general at first, but it was eventually extended to all the money-order offices in the kingdom. The depositor is given a pass-book, in which his deposit is credited, whereupon the postmaster-general is notified of the transaction by the official and immediate receiver of the money, and the deposit is acknowledged by the department. The government, which is responsible for all money received, invests the latter in national funds and the depositors are in every conceivable way secured against loss. So elastic is the system that a depositor may apply for repayment at any post-office in the kingdom and may direct that payment be made to him there or at any other postal savings bank. His order is sent to the postmaster-general, from whom he receives a warrant on the office named. When he presents this, with his pass-book, the money is paid. Deposits may range from one shilling to £50 in one year, but the total, including interest, which is 2½ per cent., must never exceed £200. The system is especially adapted to the needs of people who are remote from any regular savings institution and it has found favor in continental countries. Several postmasters-general, endorsed by the Presidents, have urged its adoption in the U. S., and bills to that end have been repeatedly introduced. The system is growing in public favor and there is little doubt that something of its kind will be established in the United States in the near future.

Bannockburn.—A small village 3 miles from Stirling, in Scotland. Near here Bruce with 30,000 men gained a decisive victory (June 24, 1314) over Edward II. who had 100,000 men. (See BRUCE, ROBERT THE.) Pop. 2,258.

Bannocks.—A tribe of North American Indians; also called "Robber Indians."

Barbados, or Barbadoes, Island.—One of the British West Indies, near the Windward group. It produces rum, sugar, and molasses, and is ruled by a governor, executive committee, legislative council, and house of assembly. Colonized about 1625, it now (1902) has a population of 195,000; area, 166 sq. miles.

- Barbary States.**—The northern section of Africa, bordering on the Mediterranean Sea. In ancient times, the soil, which is rich, yielded abundant crops. It then included what were known as Mauritania, Numidia, Africa Propria, and Cyrenaica. It now embraces Barca, Tripoli, Tunis, Algeria, and Morocco. Exclusive of Europeans, seven races—Berbers, Moors, Bedouins, Jews, Turks, Kabyles, and Negroes—inhabit the Barbary States. The commercial language is Arabic, except in Tunis and Tripoli, where the Turkish language and government prevail.
- Barbe-Bleue (BLUE-BEARD).**—1. Comedy by Sedaine, 1789. 2. An opera bouffe by Meilhac, Halévy, and Offenbach, 1866.
- Barber, Francis.**—Born at Princeton, N. J., 1751; died at Newburg, N. Y., 1783. An American officer in the Revolutionary War. In 1781 he was selected by Washington to quell the mutiny of the N. J. and Pa. troops.
- Barber, John Warner.**—Born at Windsor, Conn., 1798; died, 1885. An American historical writer; author of "History and Antiquities of New England, New York, and New Jersey" (1841), etc.
- Barbier de Séville** (*bār-bē-ā' dē sā-vēl'*), **Le** (BARBER OF SEVILLE).—1. Comedy by Beaumarchais, 1772. 2. An opera bouffe by Paisiello, 1780.
- Barbison, or Barbazon.**—A village near Fontainebleau, about 40 miles from Paris. It is the resort of the modern French School of landscape painters.
- Barbour, James.**—Born in Orange Co., Va., 1775; died near Gordonsville, Va., 1842. An American statesman. He was Secretary of War under President John Quincy Adams, and was minister to England (1828-29).
- Barbuda.**—An island in the British Caribbees (Leeward group), 30 miles N. of Antigua.
- Barcelona.**—The most important manufacturing town in Spain, is situated in N. E. of Spain on the Mediterranean Sea, south of the Pyrenees Mountains. Pop. (1897), 509,589.
- Bard, Samuel.**—Born at Philadelphia, 1742; died at Hyde Park, N. Y., 1821. An American physician and medical writer; president of the College of Physicians and Surgeons at New York (1813-21).
- Bargiel** (*bār-gēl'*) **Woldemar.**—Distinguished German composer and instructor of music. Born at Berlin, 1828; died, 1897.
- Barham, Richard Harris.**—An English clergyman and poet; author of the "Ingoldsby Legends." Born, 1788; died, 1845.
- Bar Harbor.**—A noted summer resort on the island of Mount Desert, Me.
- Baring-Gould, Sabine.**—English clergyman and author. Born, 1834.
- Barker, Jacob.**—Born on Swan Island, 1779; died at Philadelphia, 1871. An American politician and financier; was employed by the government on the outbreak of the War of 1812, to raise a loan of \$5,000,000.
- Barker, James Nelson.**—Born at Philadelphia, Pa., 1784; died at Washington, D. C., 1858. An American politician, poet, and playwright. He was Comptroller of the U. S. Treasury (1838-58).
- Barkis.**—The carrier in Dickens's "David Copperfield" who signifies his desire to marry Peggotty by sending to her, through little David, the message "Barkis is williu'."
- Barksdale, William.**—Born in Tenn., 1821; killed at Gettysburg, Pa., July 2, 1863. A southern politician and Confederate general in the Civil War. He was a member of Congress from Mississippi before the war (1853-61), and was most strenuous in the defense of slavery and the advocacy of state rights. His wig was once pulled from his head during an altercation on the floor of the House, growing out of a debate on slavery. He was killed while leading his men in an assault on the Federal line at the Peach Orchard, during the fierce fighting of the second day at Gettysburg.
- Barlow, Francis Channing.**—Born in N. Y., 1834; died, 1896. A lawyer and a prominent soldier of the Civil War. He entered the Union army as colonel of the 61st N. Y. Volunteers and rose to the rank of maj.-gen.; served in the Army of the Potomac and participated in nearly all the battles of its campaigns. He was desperately wounded at Gettysburg and his life was despaired of; but he recovered and led a division in Grant's campaign of 1864-65.
- Barlow, Joel.**—Born at Reading, Conn., 1754; died near Cracow, Poland, Dec. 24, 1812. An American poet and diplomatist, one of the "Hartford Wits." He was consul to Algiers (1795-97) and U. S. minister to France (1811-12). He was a voluminous writer; his most notable works are "The Columbiad," "Hasty Pudding," and "Advice to the Privileged Orders." While minister to France, he was on his way to have an official interview with Napoleon, who was then engaged in his Russian campaign. Severe exposure brought on a sudden illness and he died as above stated.
- Barmecides** (*bār'mē-sīdz*).—A noted Persian family founded by one Barmek, who attained power in the service of the calif Abd-ul-Malik.
- Barmecide's Feast.**—A feast at which everything was imaginary—empty dishes being set upon the table, originated in one of the stories of the "Arabian Nights' Entertainments."
- Barnacle, The.**—See CRUSTACEAN, 2706.
- Barnard College.**—An institution for the higher education of women, founded in New York City in 1889.
- Barnard, Daniel Dewey.**—Born in Berkshire Co., Mass., 1797; died at Albany, N. Y., 1861. An American politician and diplomatist. Was U. S. minister to Prussia (1850-53).
- Barnard, Edward Emerson.**—Born at Nashville, Tenn., 1857. An American astronomer. He made a number of scientific discoveries, the most notable of which was that of the fifth satellite of Jupiter, made at the Lick Observatory, in Cal., Sept. 9, 1892.
- Barnard, Frederick Augustus Porter.**—Born at Sheffield, Mass., 1809; died at New York, 1889. An American educator, scientist, and author. He was president of the University of Mississippi (1856-61), and of Columbia College (1864-89); was U. S.

- commissioner at the Paris Exposition of 1867, and assistant commissioner-general at the exposition of 1878.
- Barnard, John.**—Born at Boston, Mass., 1681; died, 1770. An American Congregational clergyman; author of "The Strange Adventures of Philip Ashton" (1725), etc.
- Barnard, John Gross.**—Born at Sheffield, Mass., 1815; died at Detroit, Mich., 1882. A noted military engineer. He served in the Mexican War, winning the rank of brevet major; in 1850-52 he made valuable surveys of the Isthmus of Tehuantepec and the mouths of the Mississippi River; was supt. of the U. S. Military Academy at West Point (1855-56); was chief engineer of the Army of the Potomac during the Civil War, and his services were conspicuously able, for which he was made a major-general. He had high literary and scientific attainments and wrote many valuable papers on topics pertaining to his profession.
- Baraby, Sir Joseph.**—English organist composer and conductor. Born, 1838; died, 1896.
- Barnegat Bay.**—East of New Jersey; connects with the Atlantic Ocean through Barnegat Inlet.
- Barnes, Albert.**—Born at Rome, N. Y., 1798; died at Philadelphia, 1870. A noted Presbyterian divine and biblical commentator. He is best known by his "Notes" on the New Testament, Job, Psalms, Isaiah, etc. He was tried for heresy and acquitted.
- Barney, Joshua.**—Born at Baltimore, Md., 1759; died at Pittsburg, Pa., 1818. An American naval officer in the Revolutionary War; was sent to France with dispatches for Franklin in 1782; commanded in Chesapeake Bay, 1814, and was taken prisoner at Bladensburg in the same year.
- Barnstable.**—A seaport of Massachusetts, on Cape Cod Bay. Fishing interests and coast trade. Pop. (1900), 4,364.
- Barnum, Phineas Taylor.**—Born at Bethel, Conn., 1810; died at Bridgeport, Conn., 1891. A famous American showman; was proprietor of Barnum's Museum in New York City started in 1841; managed Jenny Lind's concert tour through America (1850-51); established his menagerie and circus in 1871. He was a member of the Conn. legislature (1865-69) and was elected mayor of Bridgeport (1875). He wrote "The Humbugs of the World," "Struggles and Triumphs, or Forty Years' Recollections" (1869), etc.
- Barometer** (*Gr.*, *baros*, "weight," and *metron*, "a measure").—An instrument for measuring the weight of the atmosphere. See AIR.
- Baron, Michel.**—A celebrated French actor and playwright. Born, 1653; died 1729.
- Barr, Mrs.** (AMELIA EDITH HUDDLESTON).—Novelist; born at Ulverston, Lancashire, Eng., 1831.
- Barratry.**—Cheating or fraud on the part of a ship master against the owners or insurers of a vessel.
- Barrett, Lawrence.**—Born at Paterson, N. J., 1838; died at New York, 1891. An eminent American actor of Irish extraction, the family name being Brannigan. He served for a time in the Civil War as a captain in the 28th Massachusetts Volunteers; was closely associated with Edwin Booth, a sketch of whose life he wrote in "Actors and Actresses of the Time."
- Barrett, Wilson.**—An English actor; born, 1846.
- Barricades, Days of the.**—Applied in French history, to several insurrectionary wars in Paris, chiefly to those of 1830 and 1848.
- Barrie, James Matthew.**—A Scottish writer and journalist. Author of several popular novels and a number of shorter works. Born at Kirriemuir, Forfarshire, 1860.
- Barron, James.**—Born in Va. about 1768; died at Norfolk, Va., 1851. An American commodore. He was court-martialed and deprived of his rank and pay for five years on account of misconduct when in command of the "Chesapeake" (1807). On his return to duty, being refused an active command he fought a duel (1820) with Commodore Stephen Decatur, who had opposed him, in which the latter was killed. See DECATUR, STEPHEN, 151.
- Barron, Samuel.**—Born in Va. about 1763; died, 1810. An American commodore who commanded a squadron in the Tripolitan War in 1805.
- Barrow, Frances Elizabeth Mease.**—Born at Charleston, S. C., 1822. An American writer, principally of juvenile books, the best known of which are "Little Pet Book," "Good Little Hearts," "Nightcap Series," "The Pop-Gun Stories," and the "Six Mitten Books." She wrote under the pseudonym of "Aunt Fanny."
- Barry, Sir Charles.**—(1795-1860.) An English architect; the designer of the Houses of Parliament, London.
- Barry, Countesse du.**—(1746-1793.) Mistress of Louis XV. Guillotined at Paris.
- Barry, John.**—Born at Tacunshane, County Meaford, Ireland, 1745; died at Philadelphia, 1803. An American naval commander, distinguished in the Revolutionary War. In command of the "Lexington," he captured the British tender "Edward" (1776), also the British ships "Atalanta" and "Trepassy" in 1781 when commanding the "Alliance," and in the same year conveyed Lafayette and Noailles to France; was appointed commodore in 1794.
- Barry, John Stetson.**—Born at Boston, Mass., 1819; died at St. Louis, Mo., 1872. An American Universalist clergyman and historical writer. He wrote a "History of Massachusetts" (1855-1857).
- Barry, Patrick.**—Born in Ireland, 1816; died at Rochester, N. Y., 1890. An American horticulturist and pomologist; was editor of the "Genesee Farmer"; wrote "A Treatise on the Fruit Garden," and prepared the catalogue of the American Pomological Society (1851), etc.
- Barry, William Farquhar.**—Born in N. Y., 1818; died at Fort McHenry, Baltimore, 1879. A distinguished artilleryman in the U. S. army. Before the Civil War he was a subaltern in the 2d U. S. Artillery, but was advanced to the rank of brigadier-general. He rendered important service as chief of artillery of the Army of the Potomac (1861-63), and in a similar position (1864) in the army of General Sherman, during the Atlanta and subsequent campaigns.

- Barry, William Taylor.**—Born at Lunenburg, Va., 1785; died at Liverpool, Eng., 1835. An American politician and jurist; was postmaster-general (1829-33) and the first incumbent of that office after it was raised to a cabinet position; was appointed minister to Spain in 1835.
- Barter.**—To trade or exchange goods without the intervention or use of money in the transaction.
- Bartholomew Fair.**—Originally the great cloth fair or market of the kingdom. Held annually on St. Bartholomew's Day at Smithfield, London, until 1840, then removed to Islington, where it ceased to exist in 1855.
- Bartlett, John.**—Born at Plymouth, Mass., 1820. An American book publisher and editor. He compiled a collection of "Familiar Quotations"; also a "Concordance to Shakespeare" (1894).
- Bartlett, John Russell.**—Born at Providence, R. I., 1805; died there 1886. An American antiquarian and historian. He was a commissioner to establish the boundary line between the U. S. and Mexico (1850); and was secretary of state for R. I. (1855-72). He wrote "Dictionary of Americanisms," "Bibliography of Rhode Island," "Primeval Man," etc.
- Bartlett, Joseph.**—Born at Plymouth, Mass., 1762; died at Boston, 1827. A satirical poet, author of "Physiognomy," which was recited before the Harvard Phi Beta Kappa Society in 1799. His life was that of an adventurer.
- Bartlett, Josiah.**—Born at Amesbury, Mass., 1729; died 1795. An American patriot and statesman. He was a member of the Committee of Safety of N. H. (1775); was one of the signers of the Declaration of Independence in 1776; was president and governor of N. H., (1790-94).
- Bartlett, Samuel Colcord.**—Born, 1817; died, 1898. An American educator and Congregational clergyman. He became president of Dartmouth College (1877) and wrote "From Egypt to Palestine" (1879), etc.
- Bartolini, Lorenzo.**—3591.
- Bartolommeo, Fra.**—3419.
- Barton, Benjamin Smith.**—Born at Lancaster, Pa., 1766; died at Philadelphia, 1815. An American physician, naturalist, and ethnologist, and author of "New Views on the Origin of the Tribes of America" (1797), etc.
- Barton, Clara.**—An American philanthropist, identified with the work of the Red Cross Society. Born, 1830, at Oxford, Mass. See sketch of. 41.
- Barton, William.**—Born at Warren, R. I., 1748; died at Providence, R. I., 1831. An American Revolutionary officer who planned and, with 38 men, executed the capture of the British general, Robert Prescott, at his headquarters in a farmhouse near Newport, R. I. (1777).
- Barton, William Paul Crillon.**—Born at Philadelphia, 1786; died there, 1856. An American botanist. He wrote "Flora of North America," "Lectures on Materia Medica and Botany," "Medical Botany," etc.
- Bartram, John.**—Born in Chester County, Pa., 1699; died at Kingsessing, Pa., 1777. A noted American botanist and founder of the first botanical garden in America, at Kingsessing, near Philadelphia.
- Bartram, William.**—Son of the above; born at Kingsessing, Pa., 1739; died there, 1823. An American botanist and ornithologist. He prepared the most complete list of American birds before Wilson, and wrote "Travels through North and South Carolina, Georgia, East and West Florida," etc. (1791).
- Barye, Antoine Louis.**—(1795-1875.) A famous French sculptor, especially noted for his studies of animals.
- Bascom, Henry Bidleman.**—Born at Hancock, N. Y., 1796; died at Louisville, Ky., 1850. An American bishop (1850) of the Methodist Episcopal Church (South), and President of Transylvania University, Ky. (1842-50).
- Bascom, John.**—Born at Genoa, N. Y., 1827. An American educator and philosophical writer. He was president of the University of Wisconsin (1874-87) and wrote "Political Economy," "Principles of Psychology," "Natural Theology," "Problems in Philosophy," etc.
- Baseball.**—1974.
- Bashl-Bazouk.**—In the Turkish army, volunteer enlistment; those who serve without pay or uniform, expecting in return only their maintenance.
- Bashkirtseff, Maria Constantinovna.**—(1860-1884.) A young Russian painter.
- Basillisk, The.**—See LIZARD, 2644.
- Basket-Ball.**—1859.
- Basque.**—Provinces in N. W. of Spain. The origin of the peculiar inhabitants of this area presents great difficulties to ethnologists and linguists.
- Bass, The.**—2690.
- Bassanio.**—A character in Shakespeare's "Merchant of Venice."
- Basse Terre.**—Capital of the island of Guadeloupe, in the French West Indies, pop., 8,800.
- Bastien-Lepage (*bās-tyan'le-pāzh'*), Jules.**—(1848-1884.) A distinguished French painter.
- Bastille.**—A famous state prison at Paris; the scene of many tragedies, especially during the ministry of Richelieu. Founded 1370; razed 1790.
- Basutoland**—In South Africa, a colony of natives (Basutos) under the direct control of the British government. Area 10,293 sq. m. Pop. (1891), about 250,000.
- Bat, The.**—2449.
- Batavia.**—Seaport and capital of the Dutch East Indies. Pop. (1897), 115,567.
- Bctavia**—A town in New York. Pop. (census of 1900), 9,180.
- Bate, William B.**—Born in Tenn., in 1824. A Confederate general in the Civil War and a politician. He rose to the rank of major-general; served in the Army of Tennessee, and commanded a division in its later campaigns; was governor of Tenn. (1883-87); was elected U. S. senator from that state in 1887 and reelected in 1893.
- Bates, Ario.**—Born at East Machias, Me., Dec. 16, 1850. An American author and journalist. He became editor of the "Boston Sunday Courier" in 1880 and is author of "The Pagans."

- Bates, Charlotte Fiske.**—Born in New York City, 1838. An American poet. She assisted Longfellow in compiling his "Poems of Places"; edited the "Cambridge Book of Poetry and Song," and is the author of "Risk and Other Poems."
- Bates College.**—A coeducational institution of learning at Lewiston, Maine; controlled by the Freewill Baptists. It was chartered as a college in 1864 and named after one of its chief patrons, Benjamin E. Bates, of Boston, Mass.
- Bates, David.**—Born about 1810; died at Philadelphia, Pa., 1870. An American writer; author of the familiar poem "Speak Gently." His poems were published under the title of "The Eolian."
- Bates, Joshua.**—Born at Weymouth, Mass. 1788; died at London, Eng., 1864. A banker of the firm of Baring Brothers and Co., and chief founder of the Boston Library (1852-58).
- Bath.**—A town in Somersetshire, Eng. Pop. (1901), 51,843.
- Bath.**—A town and port of entry in Maine. Pop., (1900), 10,477.
- Bath, The.**—See HEALTH, 1811.
- Baton Rouge.**—The capital of La., on the Mississippi River, 75 miles above New Orleans. It was captured from the Confederates by the Federals in May, 1862. In Aug. of the same year Gen. John C. Breckinridge with a strong Confederate force attempted to retake it. He made a furious assault, but was repulsed with heavy loss. The Union commander, Gen. Thomas Williams was killed. The name, Baton Rouge, signifies "red staff"—so named from a red boundary mark which separated the lands of the Indians from those of the whites. Pop. (1900), 11,269.
- Battenberg.**—In the province of Hesse-Nassau, Prussia, a small town, from which is derived the name of the Battenberg family.
- Battersea.**—In Loudon, a suburb on the south side of the Thames.
- Battersea Park.**—One of London's parks, situated on the Thames.
- Battery, The.**—A name applied to the lowermost point of Manhattan Island, on which stands the city of New York—or, to be more exact, Manhattan borough of "Greater New York." The Battery is so named from an old Dutch fort which stood on the point of the island in the early days. Battery Park, a beautiful reservation, covers about 20 acres.
- Battey, Robert.**—Born at Augusta, Ga., 1828; died at Rome, Ga., 1895. An American physician and surgeon, editor of the "Atlanta Medical and Surgical Journal." In 1872 he performed what is known as Battey's operation for the removal of the ovaries.
- Battle above the Clouds.**—The battle of Lookout Mountain, near Chattanooga, fought in Nov., 1863. During the engagement at the summit, low-hanging clouds enveloped the combatants and hid the battle from the view of those on the plain below—hence the popular name.
- Battle Hill.**—A height in Greenwood Cemetery, Brooklyn, the scene of a part of the battle of Long Island, in 1776.
- Battle Hymn of the Republic.**—The finest lyric poem inspired by the Civil War. (See HOWE, JULIA WARD, 307.)
- Battle Monument.**—A memorial structure in Baltimore, Md., erected in 1815, in honor of the soldiers who defended the city against the British troops in 1814. Its height is 72 ft.
- Battles of the World, Five Decisive.**—First, Arbela (or more properly Gaugamela, a little to the northwest of Arbela, a town in Assyria), where was fought the battle which led to the final overthrow of the Persian empire. Here in 331 B.C., the Macedonians (47,000 in number) under Alexander the Great defeated the Persian army (about a million strong) under King Darius III. (Codomannus).
- Second, Marathon, the scene of the great defeat of the Persian hordes of Darius I. by the Greeks under Miltiades, in 490 B.C., stands on a plain in ancient Attica, 18 miles N. E. of Athens. The Greeks in the battle had only 11,000 men, while the Persians had 100,000; the Greek loss was but 200; that of the Persians 6,500. The victory balked Darius's designs against Greece, and forced the Persian army to retreat to Asia.
- Third, Châlons, or Troyes, in France, was in 451 A.D. the scene of a great battle, in which Aetius, the Roman general, assisted by the Visigoths under their King Theodoric, defeated Attila and his Huns. The encounter is said to have been one of the most desperate in history, its effect being to check Attila and cause him to retire into Pannonia (now Hungary).
- Fourth, Saratoga (2d battle of), fought Oct. 7, 1777, near the Hudson, 12 miles E. of Saratoga Springs, N. Y., during the Revolutionary War. The Americans, under Gates, held a strong position at Bemis Heights, and this the English General Burgoyne sought to take by storm, and so cut in twain the American military line. The battle was followed (Oct. 17) by the surrender of Burgoyne and his army (6,000 men) to the Americans. Both British and Americans lost a fourth of their number.
- Fifth, Waterloo, a decisive victory gained near Waterloo (a village south of Brussels), June 18, 1815, by the allied British, Dutch, and Germans over Napoleon and his French army. The allies (about 67,000 strong) were under the Duke of Wellington, aided by about 50,000 Prussians under Blücher. The French numbered 72,100, losing half of their army, besides prisoners. The loss of the allies was over 21,000. Waterloo brought about the deposition of Napoleon and his exile to St. Helena.
- Baucis.**—A heroine of Greek legend.
- Baudelaire** (*bôd-lâr'*), **Pierre Charles.**—(1821-1867.) A French poet and critic.
- Baudry** (*bô-dré'*), **Paul Jacques Aimé.**—(1828-1886.) A French painter of portraits—historical and decorative subjects.
- Bavaria.**—A kingdom, the second in area and population of the states that form the German empire. It is composed of two parts, unequal and disconnected, the eastern the larger, and

- the western the smaller. Cereals, tobacco, potatoes, hops, flax, and wine are the principal products. It is a monarchy with an upper house and a chamber of deputies. It entered the German Empire in 1871. Area, 29,286 sq. miles: Pop. 1900, 6,175,153.
- Baxter, Richard.**—(1615-1691.) A noted nonconformist divine of England, the author of a number of religious works, of which the best known is "The Saints' Everlasting Rest."
- Bayard, Chevelier de (PIERRE DU TERRAIL).**—(1475 (?)—1524.) A French hero, distinguished in the Italian campaigns. He is termed "The Knight without fear and without reproach."
- Bayard, James Ashton.**—Born at Philadelphia, 1767; died at Wilmington, Del., 1815. An American statesman, and one of the commissioners in negotiating the treaty of Ghent, 1814.
- Bayard, Thomas Francis.**—Born at Wilmington, Del., 1828; died, 1898. An American statesman and politician. He served 16 years in the U. S. Senate (1869-85); was a member of the Electoral Commission (1877); was secretary of state in the first administration of President Cleveland (1885-89); was appointed ambassador to England (1893), and was the first to hold that diplomatic rank; was twice (1880 and 1884) an unsuccessful candidate for the Democratic nomination for President.
- Bayeux Tapestry.**—A famous piece of embroidery in the Library at Bayeux, France. The embroidery representing scenes from the Norman Conquest—of England—is done upon a strip of linen 231 ft. long and 20 inches wide. It is supposed to be the work of Matilda, wife of William the Conqueror.
- Bayley, James Roosevelt.**—Born in New York City, 1814; died at Newark, N. J., 1877. An American Roman Catholic prelate. He was the first bishop of Newark (1853) and archbishop of Baltimore (1872-77), author of a "History of the Catholic Church in New York" (1853), etc.
- Baylies, Francis.**—Born at Taunton, Mass., 1783; died there, 1852. An American politician who wrote a "Memoir of the Colony of New Plymouth."
- Baylor, Frances Courtenay (MRS. GEORGE SHERMAN BARNUM).**—An American novelist and short story writer. Born in Arkansas in 1848.
- Bayly, Ada Ellen (pseudonym EDNA LYALL).**—English novelist; author of several popular books.
- Bay of Biscay.**—An arm of the Atlantic Ocean lying west of France and north of Spain. It is subject to remarkably severe storms.
- Bayonne.**—1. A seaport and fortress of France. Pop. (1891), 27,192. 2. A city and port of New Jersey. Pop. (1900), 32,722.
- Bay Psalm Book, The.**—The first New England version of the Psalms. Published by Richard Mather, John Eliot, and Thomas Welde in 1640. There are but eight copies known to be extant.
- Bayreuth (bî'roiit), or Balreuth.**—The capital of the province of Upper Franconia, Bavaria. It is noted for its musical interests, especially for its Wagnerian festivals. Pop. (1895), 27,693.
- Bazaine, Francois Achille.**—(1811-1888.) A French marshal. Passed with credit and promotion through the several foreign campaigns in Algeria, Spain, the Crimea, Italy, and Mexico. He gained the Cross of the Legion of Honor, rose to be its commander, won the Grand Cross. He took an active part in the war against Germany; became commander of the French forces; was besieged at Metz when he capitulated, was charged with neglect of duty and sentenced to degradation and death. The sentence was commuted to 20 yrs' imprisonment, but after one year at the Isle St. Marguerite he escaped to Madrid in 1874, where he died in 1888.
- Beacon Hill.**—An elevation north of Boston Common, named from the beacon fires which were formerly lighted upon it.
- Beaconsfield, Earl of.**—See DISRAELI, BENJAMIN.
- Bear.**—A term used, in Stock Exchange, to designate a man who has agreed to deliver more stock than he possesses.
- Bear, The.**—2422.
- Bear Flag War.**—In June, 1846, American settlers seized several Mexican horses and took the town of Sonoma, where they raised a flag on which was the figure of a bear. This proceeding is supposed to have been instigated by Capt. John C. Fremont, U. S. A. In July the Mexican War began. Monterey fell, and a company known as the Bear Flag battalion actively coöperated in the conquest of Cal. and the expulsion of the Mexicans from that territory.
- Bear Lake.**—Situated on the border between Utah and Idaho. About 20 miles in length.
- Bear Mountain.**—A high hill in the northeastern part of Dauphin Co., Pa., with large coal deposits in its vicinity.
- Bear River.**—In northern Utah and southern, a river about 400 miles long which flows into Great Salt Lake.
- Beard, George Miller.**—Born at Montville, 1839; died, New York City, 1883. An American physician, author of "Stimulants and Narcotics," "Eating and Drinking," "Hay Fever," etc.
- Beard, William Holbrook.**—Born, 1825; died, 1900. An American painter, chiefly of humorous pictures; was well known as a caricaturist.
- Beardsley, Eben Edwards.**—Born at Stepney, Conn., 1807; died, New Haven, Conn., 1891. An American Protestant Episcopal clergyman and historical writer, author of "History of the Episcopal Church in Connecticut" (1865).
- Beardsley, Samuel.**—Born at Hoosick, N. Y., 1790; died Utica, N. Y., 1860. An American politician and jurist; was associate judge of the supreme court of New York (1844-47) and chief-justice (1847).
- Beatrice Cenci (bâ-â-trê'che chen'chê).**—Guido Reni's celebrated portrait in the Barberini Palace, Rome. See CENCI, BEATRICE.
- Beattie (bê'ti) James.**—(1735-1803.) Scotch poet, essayist, and philosophical writer.
- Beatty, John.**—Born at Sandusky, O., 1828. A general of volunteers in the Union army during the Civil War. Early in 1864 he volunteered in the 3d Ohio regiment; was soon promoted to

- colonel and in 1862 to brigadier-general; was a brigade and division commander in the Army of the Ohio (Cumberland) under Buell and Rosecrans; resigned from the army in 1864; was a member of Congress from Ohio (1868-73); engaged in banking in Columbus, O. He wrote "The Citizen Soldier, or Memoirs of a Volunteer."
- Beau Brummel.**—1. A play by William Blanchard Jerrold, produced in London 1859. 2. A successful play brought out in New York, 1891, by Richard Mansfield.
- Beaufort.**—A seaport and watering-place, the capital of Beaufort Co., S. C.; has a good harbor; was captured by the Federals in 1861, early in the Civil War. Pop. (1900), 4,110.
- Beauharnais, Vicomte de.**—(1760-1794.) A French soldier, born at Martinique, took part in the Am. War of Independence, was beheaded during the Reign of Terror. His widow married Napoleon I.
- Beaumarchais** (*bō-mār-shā'*), **Pierre Augustin Caron de.**—(1732-1799.) French writer and dramatist. Among his noted works are "Le Barbier de Séville," "Le Mariage de Figaro," and four volumes of "Memoirs," the latter written in vindication of himself after a court litigation in which he had been involved.
- Beaumont, Francis.**—(1584-1616.) An English dramatist and poet.
- Beauregard, Pierre Gustave Toutant.**—Soldier; sketch of, 44.
- Beauty, the Value of.**—4678.
- Beauvoir.**—The name of the home occupied by Jefferson Davis, in Mississippi, after the Civil War, during which all of his property had been confiscated or destroyed. (See DAVIS, JEFFERSON, 151.)
- Beaver Dam** (Canada), **Battle of.**—Resulted in the surrender of Lieut.-col. Boerstler, who with a U. S. force of 542 men had been sent by Gen. Dearborn to capture Beaver Dam. The capitulation took place June 24, 1813, and was effected by a British lieutenant who had only 40 or 50 men. He convinced Boerstler that he commanded the advance guard of 1,500 troops and 700 Indians.
- Beaver Falls.**—A borough in Beaver Co., Pa., has various manufactures and is largely controlled by the Harmony Society of Economy. Pop. (1900), 10,054.
- Beaver, The.**—2438.
- Bechuanaland.**—An English colony and protectorate in South Africa, lying to the west of the Transvaal. Area 213,000 sq. miles.
- Beckwith, James Carroll.**—Born at Hannibal, Mo., 1852. An American portrait and genre painter; a pupil of Carolus Duran; became a member of the National Academy in 1894.
- Becky Sharp.**—One of the principal characters in "Vanity Fair," by Thackeray.
- Bedbugs.**—See HOUSEHOLD PESTS, 2300.
- Bede, Adam.**—The name and principal character of a novel by George Eliot.
- Bedel, Timothy.**—Born at Salem, N. H., about 1740; died, Haverhill, N. H., 1787. An American officer in the Revolutionary War. He was commander of the force which was attacked by Brant's Indians at the Cedars, near Montreal, and which was surrendered without resistance, by Capt. Butterfield, the subordinate officer in command. The blame for this affair was thrown by Gen. Arnold on Bedel, who at the time of the attack lay ill at Lachine.
- Bedell, Gregory Thurston.**—Born at Hudson, N. Y., 1817; died, New York, 1892. An American bishop of the Protestant Episcopal Church. He resigned his bishopric through illness in 1889; was author of "Canterbury Pilgrimage to the Lambeth Conference," "The Pastor," and "Centenary of the American Episcopate."
- Bedell, Gregory Townsend.**—Born on Staten Island, N. Y., 1793; died at Baltimore, Md., 1834. An American Protestant Episcopal clergyman and hymn writer.
- Bedford, Gunning S.**—Born at Baltimore, Md., 1806; died, New York City, 1870. An American physician and professor of obstetrics in the University of New York (1840-62); wrote "Diseases of Women and Children," "Principles and Practice of Obstetrics," etc.
- Bedlam.**—In London, a famous asylum for the insane. Founded about 1247; originally a priory.
- Bedott, Widow.**—Pseudonym of Mrs. Frances Miriam Witcher, author of the "Widow Bedott Papers."
- Bee, The.**—2765.
- Bee, Bernard E.**—Born in S. C., 1823; killed at Bull Run, Va., July 21, 1861. A general in the Confederate army, who fell at the head of his brigade, in the first great battle of the Civil War. It was he who gave the sobriquet of "Stonewall" to Gen. Thomas J. Jackson. Bee's line wavered before the biting blast from the Federal line, and to steady his men he pointed to a Virginia brigade and exclaimed, "See Jackson's men standing like a stone wall" (See THOMAS J. JACKSON).
- Beech Tree, The.**—2839.
- Beecher, Catherine Esther.**—Born at East Hampton, L. I., 1800; died, Elmira, N. Y., 1878. An American educator and writer, daughter of Lyman Beecher; author of "An Appeal to the People," "Common Sense Applied to Religion," "Domestic Service," etc.
- Beecher, Edward.**—Born at East Hampton, L. I., 1803; died, 1895. An American Congregational clergyman and theological writer; son of Lyman Beecher.
- Beecher, Henry Ward.**—Born Litchfield, Conn., 1813; died, Brooklyn, N. Y., 1889. A noted American Congregational clergyman, lecturer, reformer, and author; son of Lyman Beecher. He was pastor of Plymouth Congregational Church, Brooklyn, for forty years, from 1847 to 1887. He was one of the early editors of the "Independent"; founder and editor of the "Christian Union," and one of the most prominent of anti-slavery orators. In 1863 he visited England and delivered several addresses on subjects relating to the Civil War, then in progress in the

U. S. He wrote "Lectures to Young Men," "Star Papers," "Freedom and War," "Eyes and Ears," "Aids to Prayer," "Earlier Scenes," "Evolution and Preaching."

Beecher, Lyman.—Born in New Haven, Conn., 1775; died Brooklyn, N. Y., 1863. An American Congregational clergyman and theologian; president of Lane Theological Seminary, Cincinnati, O. (1832-51); worked as a temperance and anti-slavery reformer and controversialist; author of "Views in Theology," "Six Sermons on Temperance," etc.

Beelzebub (God of Flies).—A name for Baal among Philistines. Later, the name was given to the chief of evil spirits.

Beers, Ethelinda Eliot.—Born at Goshen, N. Y., 1827; died there, 1879. An American poet, best known as author of that touching lyric of the Civil War, "All Quiet along the Potomac To-night." She wrote under the pseudonym, Ethel Lynn.

Beers, Henry Augustin.—Born at Buffalo, N. Y., 1847. An American man of letters. He edited "A Century of American Literature," and is the author of a "Sketch of English Literature."

BEETHOVEN—(1770-1827)

IN THE history of every art, there is an epoch of genius toward which all previous development tends, and the achievement of which form the model and the goal of all subsequent effort. The genius epoch in the art of music is constituted by the quintet of the greatest composers the world has ever seen, Bach, Händel, Haydn, Mozart, and Beethoven, all of whom were born within a century. It is impossible to compare justly the works of these five unchallenged masters, as each is without a peer in his own field; but when his work is considered as a whole, Beethoven is superior to them all.

Ludwig van Beethoven was born at Bonn, in Germany, December 16, 1770. His name was of Dutch origin, and hence the "van" does not imply nobility, as does the "von" in German nomenclature. Both his father and his grandfather were musicians by profession, but the former was a dissipated, and a worthless, man, and the latter died when Ludwig was only three years old, so that the child had little advantage in the way of a musical home atmosphere. In fact, his home was a most unhappy one on account of his father's habits, and, for the same reason, his general education did not go beyond elementary instruction, so that the great composer remained somewhat illiterate throughout his life.

The father soon perceived the boy's taste for music, which was not, however, exhibited to so marvelous an extent in his early years as was Mozart's, and he hoped to reap a golden harvest by such tours as the Mozarts had recently made. With this object in view, he attempted a forcing process in his son's musical education. The first instruction, which was carried on by himself, aided by a boon companion, equally dissolute, was irregular but very severe. It was said that the boy of five years was often kept at the keyboard, weary, and in tears, far into the night. Although he was not a prodigy, he made good progress. Fortunately, however, this haphazard teaching did not last long, and at an early age, Beethoven was put under the care of two court organists, from whom he received instruction in organ playing and in the theory of music. During this course of lessons, when about twelve years old, he composed a two-voiced fugue and three sonatas, which bear testimony that he was being trained to advantage in the classical forms.

About this time, Beethoven made the acquaintance of a family named Von Breuning, the members of which took a great interest in his education, and in his musical progress; these people remained his steadfast friends throughout his life. At their home, where he was always received as one of the family, he came under the refining influence of domestic life, which in his own family was totally lacking, and through this influence, the nobler impulses and the higher aspirations of his nature were awakened

At about the age of fifteen, Beethoven was appointed assistant organist to the electoral chapel. Two years later, the elector, impressed with the young man's extraordinary gift, furnished him the means to go to Vienna to pursue his studies. He was well received at the great musical center, and played before Mozart, who, upon hearing an example of his wonderful power of improvising, exclaimed: "Keep watch of this youngster, he will some day make a noise in the world."

Beethoven returned to Bonn during the same year, presumably recalled by the death of his mother, of whom he always cherished an affectionate remembrance. When Haydn came home from England, he passed near Bonn, and the young musician took advantage of the opportunity to submit a cantata to the judgment of the elder. Haydn praised the composition and advised Beethoven to continue his studies.

When the young composer was twenty years old, he was freed from the burden of supporting his dissolute father, by the latter's death, and he obtained permission from the elector to reside in Vienna, in order to put himself under the instruction of Haydn. He found here a musical atmosphere, most congenial to his taste. Enthusiastic, and strong-willed, he determined to stay, even though the elector of Bonn should cut off his salary, and Vienna was thenceforth his home.

The relations between Haydn and Beethoven were far from cordial. The pupil accused the master of carelessness in teaching, and always claimed that he never learned anything through his instruction. Beethoven was stubborn, and self-willed, and Haydn used to call him the "Great Mogul."

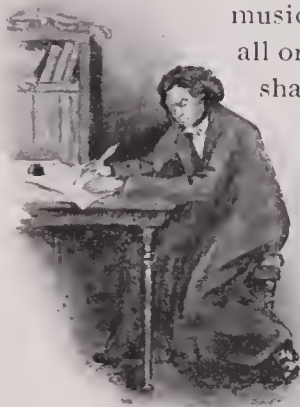
The young man placed himself successively under the instruction of most of the musicians in Vienna,—instructors of the voice, of the piano, of the organ, and of all orchestral instruments,—and the same opinion of his autocratic disposition was shared by all his teachers. His logical mind, his austere conscientious principles, and his wonderful musical ability, could be satisfied with nothing short of consummate knowledge, skill, and painstaking care on the part of a teacher.

Beethoven became a remarkable pianoforte player, though he himself regarded his training as insufficient. He had what is called the "composer's touch," and his playing, though not technically brilliant, and often lacking in delicacy, and sometimes even in accuracy, was full of soul, and fire, and had a wonderful power over an audience. It was "as if a naked soul were pouring out its sorrows, or unfolding its hopes and its longings."

From the time of Beethoven's arrival in Vienna, his life was a comparatively uneventful one, though so rich in events of paramount importance in musical history. His first, and only, professional tour was made during his early manhood. With the exception of this trip, which included Leipsic and Berlin, one or two visits to health resorts, and a journey a short time before his death to his brother's home, he never left Vienna, save for his summer sojourns in its suburbs.

As early as 1795, Beethoven was recognized as one of the foremost musicians of his time, and for twenty years his popularity steadily increased. He was petted and humored in aristocratic circles in Vienna, as few erratic geniuses have ever been indulged, and his democratic opinions, and eccentricities of behavior, which grew in later years to actual bearishness, seemed only to add to the charm of his personality. He was made an honorary member of many European academies; he was presented with the freedom of the city of Vienna; and the empress of Russia sent him a gift amounting to \$5,000.

Already he was receiving more commissions than he could execute; for this work he was fairly well paid, even from the beginning. He attached to himself many true friends, who—later on—stood by him loyally in the time of his neglect by the fickle public. Of these, the Lichnowsky family, his pupil, and patron, the Archduke



Rudolph, Prince Kinsky, and Prince Lobkowitz, deserve the gratitude of all lovers of Beethoven for their kindness and generosity to him, notwithstanding the trials to which his peculiarities of disposition put their good-will.

In 1800, when the master was but thirty years old, he became conscious of the approach of the most terrible calamity that could befall a musician — the loss of hearing. The deafness grew upon him so rapidly, that by 1801, we find the composer withdrawing from society on account of his difficulty in understanding conversation, and because of his proud aversion to showing his infirmity. Shut out from the world of sound which was almost life to him, and over which he had such magic sway, he gradually retired within himself, and thenceforth lived alone with his art, in a world of his own. But his transcendent genius did not forsake him. His affliction seemed to increase his power of expressing in music the inmost feelings of his soul, even though not a sound could penetrate his sealed ears, unless it were the symphonies of heaven, or the music of the spheres. Pathetic as was his calamity, art is the richer for it; for only the life of introspection which it made necessary, could have enabled him to portray so faithfully the struggles and the emotions of the human heart.

In 1802, Beethoven's life was threatened by a severe illness. On his recovery he wrote a will addressed to his brothers, which is a pathetic defense of his eccentricities on the ground of his affliction, and a touching appeal to be better understood, and freely forgiven, by his brother-men.

In 1809, Beethoven was offered the position of chapel-master to Jerome Bonaparte, king of Westphalia, the only offer of an appointment he ever received. But the prophet was not without honor even in his own country. Three of his noble friends and patrons, the Archduke Rudolph, Prince Kinsky, and Prince Lobkowitz, banded together to provide the composer with an annuity of four thousand florins as long as he should have no permanent appointment, on the condition that he should not leave Austria.

Upon the death of a brother in 1815, Beethoven was left guardian of his nephew, a boy of eight years. He gladly accepted the trust, for in the tenderness underlying the gruffness of his nature, he longed for domestic ties, of which his life had known so few. But, anxious as he was to do the best thing for the boy, he was not fitted for the task, and the combination of indulgence, and of despotic authority, with which he brought him up, in conjunction with the boy's natural waywardness, resulted disastrously for both. He was involved in a lawsuit with the boy's mother, who desired to secure the custody of her son.

Shortly after this, owing to the reduction of his income and through mismanagement in his erratic housekeeping, Beethoven began to suffer pecuniary distress to such an extent that on the days marked in his journal as "bad days," he was unable to procure more than "a few biscuits and a glass of beer." Yet in fear of ultimate destitution, he held back a number of bank shares, the sale of which would have relieved his needs.

The great master's popularity among his countrymen was now on the wane, and he lived to feel himself displaced by the Italian composer, Rossini, who captivated audiences by his gay, sensuous music, but whose talents were to Beethoven's genius but as a single star to the glory of the sun.

The German master felt so keenly the neglect of the Viennese public, that he determined to bring out in Berlin his great Choral Symphony, and the Mass in D, and was altogether discouraged from the thought of a grand oratorio, the composition of which he had in contemplation. The friends of German music in Vienna, however,



sent him a letter signed by thirty of the most distinguished musicians, and music lovers, in the city, with Prince Lichnowsky at the head, entreating him to reconsider his decision, to remain in Vienna, and by repelling the invasion of foreign art, to rescue German opera from its impending fate.

This letter, and the feeling of which it was an expression, so gratified the master that he allowed the two great works to be produced in Vienna, in 1824. Beethoven led on these occasions, but it became pathetically evident when he remained unconscious of the thunders of applause with which the glorious music was greeted, how little of it he heard. Despite this success, the second performance of the symphony was a failure.

In 1825, Beethoven effected a profitable sale of some of his works. The money which he obtained thereby, he doggedly refused to use for his own benefit, but, instead, put it aside as a fund for his nephew. This boy is described as being clever, but lacking in moral principle and in loyal feeling; he became so notoriously bad that at the age of twenty, he was expelled from the University.

The composer's anxiety and grief, on his nephew's account, and a long journey in midwinter, which he was obliged to make in connection with the young man's affairs, brought on the illness which resulted in his death. The morbid fear of final destitution, which had possessed him during the last few years, was intensified during his illness, and led to his soliciting aid from the Philharmonic Society of London, which promptly responded to the master's appeal. He was carefully attended in his last illness by his lifelong friends, the Von Breunings, and by the musicians, Schindler, and Ries. At Vienna, on March 26, 1827, during a violent storm of thunder and hail, passed the soul of the mighty musician.

Beethoven's funeral was a great contrast to the burial of Mozart. As if to atone for her recent neglect of Beethoven living, Vienna heaped honors upon Beethoven dead. The services were elaborate and impressive, and thousands of people gathered to pay homage to the genius whose work was finished. The body was borne on the shoulders of eight principal singers of the Viennese opera house, while thirty-six well-known authors, and composers, among them Czerny, Schubert, and Lablache, escorted it, as torchbearers, to its long rest. The foremost poet of the time wrote the funeral oration, which the foremost actor recited. Among its many beautiful sentences was this: "Come, make a circle round his grave, and strew it with laurel, for we bury one who was in every respect a man." Upon his tomb is an inscription more eloquent than the most glowing tribute of praise, the single word "Beethoven."

Beethoven never married, but he had many violent, though brief, love affairs. The object of his devotion was usually some lady of rank, whose noble birth was an almost insurmountable barrier to her marriage with a mere genius.

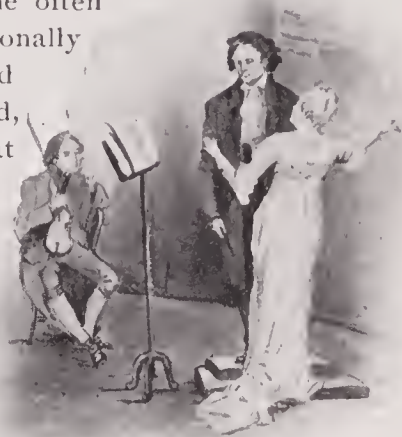
Soon after his arrival in Vienna, the master began the habit of life which he ever afterward followed. In the winter he took lodgings in the city. He was constantly changing his place of abode on account of some objection, real, or fancied. On one occasion, he precipitately left a country house, the use of which a friend had given to him, because it irritated him to return his host's salutations when the two met in the park. These removals were often made at a moment's warning, and regardless of pre-paid rent, so that the composer often had several different lodgings on his hands at once.

Beethoven's deep love of nature led him to intersperse his hours for composition, which began at daybreak, with walks in the open air, through the green fields, from which he seemed to gather fresh inspiration. His usual after-dinner exercise when in the city, whether the weather was warm or cold, whether the heavens smiled or the elements raged, was a long run, in double-quick time, "as if hunted by bailiffs." He

was accustomed also to seek inspiration in cold water, pouring it over his hands, and dabbling in it abstractedly, while his mind was busy with the great thoughts which struggled for expression.

The composer had a strange aversion to teaching, which he took no pains to overcome or to conceal, behaving in the capacity of instructor, as he, himself, said, "like an ill-tempered donkey." He would invent any excuse rather than be put to the trouble of dressing in order to attend a pupil, and he often imagined he felt ill when a lesson hour arrived. He was occasionally even violent with his pupils, regardless of their sex, and it is said that the Countess Guilletta Guiccardi, his favorite, and beloved, pupil, carried on her shoulder for a time the marks of a blow that the master had impatiently dealt her in the course of a lesson.

He also had an intense dislike to playing in public, and it was impossible to persuade him to play unless he happened to feel in the mood for it. Any inattention among his hearers, irritated him exceedingly. On one occasion, while playing before a distinguished company of nobility, he was so annoyed at the whispered conversation of a young lady, that he stopped abruptly with the exclamation: "I play no more for such swine!"



It is difficult to name Beethoven's works chronologically, since they were not published in the order of their composition.

Beethoven's work has been divided by critics into three periods. But this does not imply degrees of merit, since some of his earliest compositions are among his best. His writings were more progressive than those of any other composer, but it was a progression in style, rather than in excellence. In fact, they are nearly all masterpieces, and few of them are far below the level of the highest. The first period extends to 1803, and shows the influence of Haydn, and Mozart. This group of compositions includes the first symphony in C major; a number of sonatas, including that now known as the *Pathétique*, the C minor concerto for piano, the song *Adelaide*, six string quartets, and the second symphony in D.

In the second period, from 1803 to 1816, beginning with the third, or *Heroic* symphony, Beethoven's strong individuality had shaken off all foreign influences and asserted itself. This period also includes his only oratorio, *The Mount of Olives*; the *Kreutzer Sonata*, the opera *Fidelio*, the *Sonata Appassionata*, the fourth symphony in B flat major, the fifth symphony in C minor, the *Pastorale* or sixth symphony, the music to *Egmont*, the seventh symphony in A, and the eighth in F major, together with other sonatas and other forms of composition.

During the third and last period, were written many sonatas, and string quartets, the *Missa Solemnis*, or Mass in D minor, and the *Choral* or ninth symphony.

Of Beethoven's many masterpieces, the nine symphonies are the grandest. Each is a great tone poem, full of the deep thought, strong passion, and changing emotion, which are the chief characteristics of his music, and unequalled by any save by its fellows of the nine. The third, symphony, in which the master first appears wholly himself, and in which the grandeur of his genius first reveals itself, was written to epitomize his staunch republican principles, and in honor of the great Napoleon, who at that time was a republican leader. Before this work, which occupied a year, was finished, however, the general had assumed the imperial robes, and Beethoven, in disgust, tore out the dedication page, and threw the great masterpiece upon the floor, with maledictions upon his fallen idol. The work was eventually rechristened and came out under its present name, representing an abstract sentiment.

The fourth symphony is described as an "epitome of happy love." With the exception of the ninth, which is not, strictly speaking, a symphony, on account of the vocal parts introduced, the magnificent fifth is the crowning work, the nearest approach to an ideal symphony ever written. It portrays the struggle of the individual with fate, ending with his jubilant victory. The third, and the fifth, symphonies are epic tone poems of unsurpassed grandeur.

The seventh is the most generally pleasing of the symphony group. Wagner calls it the "Apotheosis of the dance; the ideal embodiment in tone of bodily movements."

The ninth shows the culmination of Beethoven's genius in orchestral composition. Finding that the instruments alone could no longer suffice to embody his ideas, he introduced the voice to supplement the power of the instruments.

Beethoven is best known to the public by his sonatas, in which form of composition he is supreme. They are symphonies in miniature, and, like the preludes and fugues of Bach, contain a portrayal of every feeling of which the human heart is capable.

It is greatly to be regretted that Beethoven composed but one opera. It was first known as *Leonore* and was written in three acts, but after two productions, in successive years, both of which were failures, it was reduced to two acts and brought out under its present name of *Fidelio*. A gratifying success crowned the third presentation, a success which was, however, scarcely proportionate to the great merit of the work. Four overtures were written for the opera, of which the second is acknowledged the finest, though too difficult for most orchestras. The theme of *Fidelio* is "wedded love," and the opera "stands alone in purity of sentiment and in moral grandeur." In Beethoven's only oratorio, *The Mount of Olives*, a personal part is assigned to Christ, the treatment of which the composer himself afterward condemned as too dramatic. The libretto is poor.

The *Missa Solemnis* or Grand Mass in D, was written to celebrate the installation of the composer's friend, pupil, and patron, the Archduke Rudolph, as archbishop of Olmütz, and it was intended to be the masterpiece of his life. But so lofty were his aspirations, and so infinite his pains, that the mass was too late by two years for the event it was intended to commemorate, and while it is one of the grandest and most profound sacred works ever written, it is in its very grandeur and in its profundity far beyond popular comprehension, and unsuited for use in a church service. It has been said that by the composition of the *Missa Solemnis*, Beethoven erected for himself an eternal cathedral. The *Credo*, the *Sanctus*, and the *Benedictus* are pronounced among the loftiest creations of the human mind.

Beethoven is the most original and the most individual of all composers. He is spontaneous in composition, yet rigidly self-critical. In spite of all the sadness in his life, his music, though often exquisitely pathetic, never becomes morbid, never despondent. His most passionate, stormy, and somber, moods always end with victory, peace, and hope. There is a vein of grotesque humor in some of his works, appearing in the seventh and the eighth symphonies, and in nearly all of his *scherzos*.

Of the other composers, Beethoven placed Händel and Mozart first, and Bach next. When a copy of the works of Händel was presented to him during his last illness, he exclaimed with enthusiasm: "There is the truth." He greatly admired the songs of Schubert, and despised the showy, but superficial, music of the Rossini school. Although Beethoven outlived his popularity, there has been of late years a growing reaction in the appreciation of his music, until now the sale of his works far exceeds that of any other composer.

It is impossible to define the music of this great master; to say that it possesses strength, pathos, depth, grandeur, is to say nothing. It is the soul of music itself. His

friend, Moscheles, the composer, said: "We musicians, whatever we may be, are mere satellites of the great Beethoven, the dazzling luminary." Another critic said: "He, of all musicians, has thought with most grandeur, force, order, and liberty; beside him, Bach is scholastic, Haydn, and even Mozart, a little thin, Mendelssohn too elegant, Schumann obscure, and Wagner extravagant."

Beggar's Opera, The.—A famous opera written by John Gay and produced at Lincoln's Inn Fields, London, 1728.

Beirut, or Beyrout, or Bairut.—The chief seaport of Syria, Asiatic Turkey. It has considerable commerce with Great Britain and other countries; also much historical interest. Pop. (1889), 118,800.

Belfast.—A capital city of Ireland: the second in point of population and first in manufactures and trade. It contains a number of leading educational institutions. Pop. (1901), 348,965.

Belgium.—A kingdom of Europe bounded on the northwest by the North Sea; on the north by the Netherlands; on the east by Prussia and Luxemburg; on the west and southwest by France. The government is a hereditary constitutional monarchy, having a king, senate, and chamber of representatives. It comprises the lower part of the former kingdom of the Netherlands, as recognized by the Congress of Vienna. It has nine provinces, and is not only one of the smallest, but is the most densely settled country in Europe. It is an agricultural and manufacturing country; coal and iron abound and the useful metals are extensively worked. Brussels and Tournay are famous for their carpets, Bruges for its lace, and other sections for linen, cotton, and wool. The people are of German and Celtic stock. The constitution was liberalized in 1893. The Congo Free State in Africa virtually belongs to Belgium. Area, 11,373 sq. miles; pop. (1899), 6,744,532.

Belgrade.—The capital of Servia, and the center of trade between Austria-Hungary and the Balkan Peninsula. A place of much historical interest. Pop. (1895), 59,115.

Belgravia.—A fashionable quarter of London, which includes Belgrave Square, Grosvenor Place, etc.

Belknap, Jeremy.—Born at Boston, Mass., 1744; died there, 1798. An American historian and Congregational divine. He wrote "History of New Hampshire"; "American Biographies," etc., and was the founder of the Mass. Historical Society.

Belknap, William Worth.—(1829–1890.) An American politician and general; served in the volunteer army during the Civil War.

Bell, Alexander Graham.—Perfector of the telephone; sketch of, 51.

Bell, Sir Charles.—(1774–1842.) A distinguished English physiologist and anatomist. The discoverer of important physiological facts, and the author of "Anatomy of Expression," "Anatomy of the Brain," "System of Comparative Surgery."

Bellamy, Edward.—Born, 1850; died, 1898. An American economist and journalist; was widely

known as the author of "Looking Backward" and "Equality."

Bellamy, Joseph.—Born at North Cheshire, Conn., 1719; died at Bethlehem, Conn., 1790. An American Congregational clergyman and theologian, author of "True Religion Delineated."

Belle Héliène.—An opera bouffe by Offenbach, first presented in 1864.

Bellerophon.—See GREEK AND ROMAN MYTHOLOGY, 1629.

Bellingham, Richard.—Born in England, 1592; died in Mass., 1672. A colonial governor of Mass. He came to America in 1634 and was governor of Mass. many years. His wife having died he contracted a second marriage, and performed the marriage ceremony himself, without proclamation of banns. He was presented by the great inquest for breach of the order of court; but refusing to vacate the bench, the other magistrates were at a loss how to proceed, and he escaped censure.

Bellini, Giovanni.—3418.

Bellows, Henry Whitney.—Born at Boston, 1814; died, 1882. An American Unitarian divine and writer. He was president of the U. S. Sanitary Commission during the Civil War.

Bells, The King cf.—The largest bell in the world is at Moscow. It is 19 feet 3 inches high, and measures, around the mouth, 60 feet 9 inches. It is estimated to weigh 443,732 pounds.

Bellwort, The.—2921.

Belmont, August.—Born in Germany, 1816; died at New York, 1890. A German-American banker and politician. He served as Austrian Consul at New York, and U. S. minister to the Netherlands; was chairman of the Democratic National Committee (1860–72). He was a patron of the turf and an art collector.

Belmont (Mo.), Battle of.—One of the early actions of the Civil War in the West, and the first in which General Ulysses S. Grant commanded. Grant with headquarters at Cairo, Ill., was in command of a large Union force which occupied various points in Illinois and Missouri, along the border. Columbus, Ky., on the east bank of the Mississippi River, was held by a large Confederate force under General Polk. Strong works at this point, mounting many heavy guns, completely blocked the navigation of the river. At Belmont, on the Mo. bank opposite Columbus, the Confederates established a camp under Gen. Pillow. Grant planned an attack on this camp, with 3,000 men, transported on steamboats from Paducah, Ky. The battle took place Nov. 7, 1861. None of the troops engaged, on either side, had ever before been in action. Grant took the Confederate camp, but his men became unsteady and he was forced to

- abandon the enterprise. Amidst much confusion the troops reëmbarked, after having sustained a loss of nearly 500 men, half of whom were captured. Grant took with him nearly an equal number of prisoners, and the total Confederate loss was above 600. The Union force returned to Paducah.
- Beloit College.**—An institution of learning at Beloit, Wis., founded in 1847 and controlled by the Congregationalist denomination.
- Beloochistan, or Baluchistan.**—In Asia, a district lying south of Afghanistan and west of India. It is mountainous and to a large extent a desert. It is under British management as to its foreign interests. Area, 130,000 square miles. Pop., about 500,000.
- Belot** (*bā-lō'*), **Adolphe.**—(1829-1890.) A French novelist and dramatist.
- Belshazzar.**—The last king of the Chaldean dynasty in Babylonia.
- Benares.**—A division of British India. Area, 18,338 square miles. Pop. (1891), 10,632,190.
- Benares.**—The capital of the division of Benares, India. Founded about 1200 B.C.; it is one of the largest cities of northern India, and being the principal Hindu holy city, is a resort for pilgrims. Pop. (1901), 203,095.
- Benedict I.**—Bishop of Rome, (574-578.)
- Benedict, Saint.**—(480-543.) An Italian monk, founder of the order of the Benedictines (529) at Monte Cassino.
- Benevento.**—The capital of the province of Benevento, Italy. The seat of a cathedral and a famous arch erected in honor of Trajan (114 A.D.).
- Bengal.**—A presidency and province in western Hindustan. The presidency is made up of the four provinces, Bengal proper, Bahar, Chota Nagpur, and Orissa tributary states. Area, 151,543 sq. m. Pop., 74,713,020.
- Ben Hur.**—The title and principal character of a novel by Lewis Wallace; the scene is laid in the time of Christ. The story has been successfully dramatized.
- Benjamin, Park.**—Born at Demerara, British Guiana, 1809; died at New York, 1864. An American journalist and poet. With C. F. Hoffman, he was joint editor of the "American Monthly Magazine"; he established the "New World" in 1840 and was connected with various other journals.
- Bennett, James Gordon.**—Born at New Mill, Banffshire, Scotland, 1795; died at New York, 1872. An American journalist; founder of the "New York Herald" (1835). He sent Henry M. Stanley as an explorer to Africa (1871-72).
- Bennington.**—A town in southeastern Vt., near which the Americans under Stark defeated the British forces under Baum and Breyman, Aug. 16, 1777. Pop. (1900), 5,656.
- Bennington, Battle of.**—A notable engagement of the Revolutionary War, fought August 16, 1777, between 2,000 Americans, principally N. H. and Vt. militia, commanded by Col. John Stark, and 800 British with their Indian allies, led by Lieut.-col. Baum. The British force had been sent by Gen. Burgoyne from Fort Edward, Aug. 11, to forage for supplies and cattle. In the action, which followed five days later, Baum, deserted almost at the first fire by the Indians, and his force was signally defeated. Col. Breyman, who was sent with 500 men to his aid, met a similar fate. The British lost 850 in killed, wounded, and prisoners, 4 pieces of artillery, and 1,000 stand of arms. About 40 Americans were killed and as many wounded.
- Benson, Carl.**—The pseudonym of Charles Astor Bristed (which see).
- Benson, Egbert.**—Born at New York, 1746; died at Jamaica, L. I., 1833. An American jurist and politician. He wrote a "Vindication of the Captors of Major André," and other works.
- Benton.**—An ironclad gunboat of 1,000 tons, which served on western rivers during the Civil War. She was altered in 1861 from a powerful U. S. snag-boat, and took part in the fighting at Island No. 10, Fort Pillow, Vicksburg, and in the Yazoo and Red River expeditions.
- Benton, Jessie.**—A daughter of Senator Thomas H. Benton, of Mo. A romantic courtship culminated in elopement and marriage with John C. Fremont. She was a woman of extraordinary force of character and graces of mind and person, and in her devotion to Gen. Fremont throughout his career she became widely known and admired. (See FREMONT, JOHN CHARLES, 204.)
- Benton, Thomas Hart.**—Born at Hillsborough, N. C., 1782; died at Washington, 1858. An American Democratic statesman. Was U. S. senator from Mo. (1821-51), and author of "Thirty Years' View," "Abridgment of the Debates of Congress from 1789 to 1856," etc. He was popularly known as "Old Bullion," because of his advocacy of gold and silver money and his opposition to issues of paper currency.
- Bentonville (N. C.), Battle of.**—The last action of consequence of Sherman's campaign in the Carolinas, near the end of the Civil War. After the battle of Averysboro (which see), Sherman continued his march toward Goldsboro, N. C. Near Bentonville, Mar. 18, 1865, his advance encountered a Confederate force above 20,000 strong, including the fragments of Hood's army which, after the Confederate defeat at Nashville, had been sent to the Carolinas. This force, under the command of "Joe" Johnston, made such vigorous resistance as to arrest for two days the progress of Sherman. As soon as he could draw together his scattered columns, he assailed Johnston, Mar. 20, and a spirited engagement ensued. The Confederates retreated after nightfall. The Union loss was 1,600, and that of the Confederates above 2,000, including several hundred prisoners.
- Beowulf.**—1775.
- Berea College.**—A school at Berea, Ky., founded 1856-58. non-sectarian and coeducational; usually 60 per cent. of the students are colored.
- Bergh, Henry.**—Born at New York, 1823; died there, 1888. The founder and president of the Amer-

ican Society for the Prevention of Cruelty to Animals. Was secretary of legation and acting vice-consul at St. Petersburg, Russia (1862-64).

Bering Sea Fisheries.—The U. S. Government, in 1886, advanced the claim that Bering Sea was a *mare clausum* (a closed sea), and that the U. S. had jurisdiction over its eastern half. In the cession of Alaska in 1867, Russia pretended to grant such rights, although in 1882 the U. S. had questioned Russia's claim to sovereignty beyond the usual three miles from the shore. Under the new contention, both Canadian and American vessels were seized for catching seals in violation of the laws of the U. S., which had granted a monopoly of seal fishing to the Alaska Commercial Company. The capture of Canadian vessels resulted in a claim for damages by the British Government. Secretary Blaine and Sir Julian Pauncefote, the British ambassador, conferred over the affair, but reached no conclusion. The whole subject was eventually referred to a board of arbitration, two members of which were appointed by the U. S., two by Great Britain, and one each by the president of France, the king of Italy and the king of Sweden and Norway. The sessions of the tribunal were held in 1893, and Aug. 15 of that year a decision denying the right of the U. S. to jurisdiction outside the three mile limit was rendered. To protect the seals against extermination, the board designated May to Aug. 1, as a closed season in the disputed waters, and prohibited pelagic sealing within 60 miles of

the Pribyloff Islands; also sealing with firearms or in steam vessels.

Berkeley.—A town in Alameda County, Cal., the seat of the University of California, also of the State Agricultural College and other public institutions. Pop. (1900), 13,214.

Berkeley Springs or Bath.—A watering-place in W. Va. noted for its medicinal springs.

Berlin Decree.—Nov. 21, 1806, Napoleon I. issued from Berlin an edict by which he declared a blockade of the British Islands, and decreed that all Englishmen in countries held by the French troops should be treated as prisoners of war. Dealing in English merchandise was prohibited, and letters in the English language were not permitted to pass through the French post-offices. Vessels directly from England or English colonies were barred from admission to French ports and merchandise from England or her colonies was liable to seizure wherever found and by whomsoever owned. The decree further menaced all English ships and English commerce by reserving for consideration the question whether vessels with British cargoes might not themselves be captured and confiscated. The decree was intended to ruin the foreign trade of Great Britain, as well as punish the latter for an order in council issued May 16, 1806, by which a blockade of the ports of Germany, Holland, Belgium, and France was proclaimed. There were no condemnations under the Berlin decree. (See **EMBARGO**; **MILAN DECREE**; **ORDER IN COUNCIL**; **RAMBOUILLET DECREE**.)

BERLIOZ—(1803-1869)

HECTOR BERLIOZ was born in 1803, at Côte St. André, a small town in the department of Isère, in France. His father, a physician, was an opium-eater, and to this fact the morbid and erratic nature of the son may be largely attributed.

Berlioz's father intended him for the medical profession, notwithstanding his great love for music, and at the age of nineteen, Hector was sent to Paris to continue his studies in the art of healing. It was not long, however, before he abandoned his medical lectures and entered the classes of the *Conservatoire*. The discovery of the operatic scores of Glück in the library of that institution finally decided his choice of a career, and he announced to his parents his intention to devote himself to music. His mother was enraged, his father discarded him, and he was thrown entirely upon his own resources. He avoided starvation by entering the chorus of a theater, and by eking out the small salary thus earned, with the meager proceeds of flute and guitar lessons.

Berlioz soon attracted the attention of some of the professors of the *Conservatoire*, but as the strict classical style of music was not to his taste, he left the classes, in 1825, and by himself took up the study of composition. During the same year, he wrote the overture to *Les Francs-Juges* and that to Scott's *Waverley*; and after a deep study of Goethe's *Faust*, he composed a setting to eight scenes, which he published at his own expense. He was not satisfied with the work, however, and immediately bought up all the copies. He afterward used parts of it in his *Damnation of Faust*. About this time, he fell deeply in love with Henrietta Smithson, a talented Irish actress who was playing Shakespearean rôles in Paris. He embodied this attachment in his *Symphonie Fantas-*

tique, Episode de la Vie d'un Artiste. It was some time before the poor young musician could bring himself to the notice of the successful actress, and the rejection of his advances was such a bitter disappointment that his friends feared he would kill himself. On one occasion, it is said, when he had gone off alone, in a fit of melancholy, Liszt and Chopin spent the night in searching for him.

In 1826, Berlioz returned to the *Conservatoire*, where, in spite of a great obstacle in the form of the prejudice and dislike of Cherubini toward him, he gained the second prize, in 1828, and two years later, the first prize, with his cantata *Sardanapalus*. This success gave him a pension from the Academy of Fine Arts, which enabled him to spend eighteen months in Italy. Meanwhile, his parents had become reconciled to his musical career, and friendly family relations were restored.

Berlioz went to Rome in 1831, and took up his residence in the *Villa de Medici*, in company with a number of French artists, including the celebrated painter, Horace Vernet. Here he wrote the overtures to *Rob Roy*, and *King Lear*, the *Scenes aux Champs* for the *Symphonie Fantastique*, *La Captive*, and several other works. While at Rome, he was subject to fits of mental depression, during which he was accustomed to wander, with gun or guitar, for miles among the hills and valleys, unmolested by the *banditti* who infested the region. The ideas and impressions he gathered during these rambles were afterward expressed in his symphony *Childe Harold*.

In 1832, the composer suddenly returned to Paris, although the eighteen months' limit of his stay in Rome had not expired. He saw the object of his affection in the part of *Fuliet*, and thereupon declared his intention to win the actress and to write his greatest symphony upon the play. Soon after this, she heard his symphony *Lelio, ou le Retour à la Vie* which so deeply impressed her that she accepted the composer, and they were married in 1833. Berlioz, true to his word, now wrote the choral symphony, *Romeo and Fuliet*.

The marriage was not a happy one, however. Madame Berlioz was compelled to withdraw from the stage because of a broken leg, resulting from an accident. They had much financial and domestic trouble, which, in 1840, culminated in a divorce. Upon her death, in 1854, Berlioz married a young singer whom, also, he outlived.

Soon after his return from Italy, Berlioz produced his symphony *Childe Harold*, the subject of which is taken from Byron's poem. This composition contains an important part for the violin, written, it is said, at the suggestion of Paganini, who was so pleased with the manner in which his idea had been carried out, that he overcame his notorious avarice and presented the composer with twenty thousand francs.

The public was divided as to the merits of the works of Berlioz, but the performance, in 1837, of his *Requiem*, at the Church of the *Invalides*, established his reputation. In 1840, on the occasion of the erection of the July Column, his *Sinfonie Funèbre et Triomphale* was given. The failure of his opera *Benvenuto Cellini*, in Paris, two years before, so preyed upon his mind, that in the winter of 1842, he sought relief in a concert tour in Germany. He was well received, and at Dresden, Berlin, Stuttgart, and Brunswick, he raised his audiences to a high pitch of enthusiasm. At Leipsic, he renewed the acquaintance formed at Rome with Mendelssohn, and the two composers, in token of friendship, exchanged their *bâtons*.

In 1845, Berlioz undertook a second concert tour through Vienna, Prague, Pesth, and Breslau. While in Austria, he wrote the *Damnation of Faust*, afterward produced at the Paris *Opera Comique*. During a trip in Russia, two years later, he received much attention. Thence, by invitation of the king of Prussia, he went to Berlin, to give a performance of the *Damnation of Faust*, which was arousing great interest in Germany. After a visit to London, the composer made his third trip to Germany, this time to see Liszt, and at the latter's invitation. Liszt had previously

prepared the way for a warm reception of his friend's works, and had arranged the celebration of a "Berlioz Week."

Berlioz's next work, on his return to Paris, was his trilogy, *L'Enfance du Christ*. Concerning the production of this work, there is an interesting story. Berlioz was denounced as sensational by all of the musical critics of his day in Paris, and between them and himself considerable animosity existed. He now offered this work to the world as the composition of a seventeenth century composer, Pierre Ducré, which he pretended he had stumbled upon in an old library. The piece was performed, and all of the Parisian critics were loud in their praise of its beauty. One of them even told Berlioz that he would do well to study the pages of Pierre Ducré; and the musical sages vainly tried to find other works by this unknown master. When the sensation was at its height, Berlioz announced, and proved, the authorship of this much-lauded composition to be his own. This ruse did not soften the feud between himself and the reviewers. By the efforts of Liszt, the first part of *L'Enfance du Christ* was performed at the Rhenish Musical Festival at Aix-la-Chapelle, where it scored a great success.

A *Te Deum*, produced in Paris in 1856, gained for the composer membership in the Academy of Fine Arts. Later, he was the recipient of several decorations, among them that of Officer of the Legion of Honor.

The most important of Berlioz's latest works are the comic opera, *Benedict and Beatrice*, based upon Shakespeare's *Much Ado about Nothing*; the grand opera, *Les Trojans*; and an oratorio, *Le Temple Universel*, written for the opening of the Paris Exhibition of 1867. The news of the death, abroad, of his only son, brought on a fatal illness, and Berlioz died in 1869.

Hector Berlioz was the founder of what is known in musical histories as the New Romantic School of Music, a school that has exercised a powerful influence upon modern art, and to which Liszt, Chopin, Meyerbeer, and Wagner, belong. The development of the orchestra, which is a feature of the history of modern French music, finds its beginning in Berlioz's scores, and his marvelous skill, brilliancy, and new effects in orchestration, powerfully influenced orchestral music, not only in France but everywhere.

Berlioz brought to light program music, a style of composition which had been known centuries before; and he introduced the form of the symphonic poem. His symphonies are generally considered his best works, although some critics hold the *Requiem* in highest esteem, as did the composer himself. In number of parts and instruments, this work is probably the most ambitious score in existence. Berlioz's symphonies are not in the established form, but they are matchless in their orchestration. His music is at times morbid and sensational, in which respect his work has been compared to that of Edgar Allan Poe, and it is sometimes intricate to the extent of affectation. But in spite of faults, he has the distinction of being the first Frenchman who developed the resources of the orchestra, the pioneer in a new field of art.

In spite of the surprise and doubt which Berlioz's bold departure from the old rules of art awakened in the minds of classicists like Mendelssohn and Moscheles, they were compelled to admit his great natural power. Moscheles said, after some points of criticism on the *Symphonie Fantastique*, which he confessed he did not know just how to take: "The young man, however, has warmth and poetic feeling, and certain isolated passages remind me, in their grandeur, of an ancient torso." After looking over the score of *Romeo and Juliet*, he said that he found the work so complicated, and the noise at first glance so overwhelming, that he could not venture, without further study, to give an opinion of the work. "One thing, however," he concludes, "is certain,— that there must be new effects in it." And there were.

Berlioz was an accomplished art critic, and for a time was music reviewer for the *Journal des Debats*. He also published a number of literary works, chief of which are his celebrated *Grand Traite d' Instrumentation et d' Orchestration*, and *Le Chef d' Orchestre*, which is acknowledged to be the best and most instructive work of its kind.

Berlioz's influence upon German music was similar to that of Byron upon romantic poetry. There are many points of resemblance between the English poet and the French composer. Both were passionate, and pessimistic, and the existence of each was a constant succession of struggles, failures, and disappointments, which developed in both men bitterness and irony, and which inclined them toward gloomy, and demoniacal, subjects in their art.

Bermuda Hundred.—A locality on a bend of the James River in Va., near City Point. Was occupied by part of the Federal army under Butler, in 1864 as a base of operations. Part of the time the troops were hemmed in within the lines, "bottled up at Bermuda Hundred."

Bermudas.—A group of small islands owned by Great Britain and lying about 600 miles east-southeast of Cape Hatteras. They are sometimes called the Somers Islands, after Lord John Somers, who was shipwrecked on them in 1609. England took possession in 1611, and has used them for naval purposes. There are between 350 and 500 islands, the largest being St. George and Great Bermuda. Only about twenty of the islands are inhabited: they are governed as a crown colony. The population is about 17,535 and the group derives its name from Juan Bermudez, who discovered them in 1522. Bishop Berkeley, who wrote the poem in which occurs the prophetic line, "Westward the course of empire takes its way," resided at one time in the Bermudas.

Bernard, Simon.—Born in France, 1779; died 1839. A French general and engineer in the service of Napoleon I. and of the U. S. The chief work executed by him in the U. S. was the construction of Fort Monroe; he took part in other important engineering works, notably the Chesapeake and Ohio Canal and the Delaware break-water.

Berruguete, Alonzo.—3447.

Berruguete, Pedro.—3447.

Bhunder Monkey, The.—See MONKEY, 2454.

Bhután.—A country in the eastern Himalaya Mts: extremely mountainous, which gives the country every variety of climate and range of products. Magnificent forests yield valuable timber products. Other productions are silk, cloth, and arms. Capital, Punakha. Area, 16,800 miles; pop., 30,000.

Bi.—A prefix indicating the number 2; used especially in scientific terms.

Bia'fra, Bight of.—A large bay at the head of the Gulf of Guinea, on the west coast of Africa.

Biard, Auguste François.—(1800-1882.) Celebrated French painter.

Biarritz (*bê-âr-rêts*).—A watering-place on the Bay of Biscay, 5 miles from Bayonne. Napoleon III. and the Empress Eugenie made it their summer residence. Pop., 9,000.

Bias (middle of the 6th cent.).—One of the "seven sages" of Greece.

Bible, Facts about.—It contains 3,566,480 letters, 773,746 words, 31,173 verses, 1,189 chapters, and 66 Books. The word "and" occurs 46,277 times. The middle verse is the 8th chapter of the 118th Psalm. The longest verse is the 9th of the 8th chapter of Esther. The shortest verse is the 35th of the 11th chapter of John. The Bible was divided into chapters in the 13th century by Cardinal Hugo. It was divided into verses in 1551 by Robert Stephens, the printer.

The Roman Catholic Bible is called the Douay version, on account of the translation made at that place in 1609-10.

The Mazarin Bible was the first book ever printed by movable types and was done by Gutenberg and Faust. Four have been sold in recent years, at prices ranging from \$19,500 to \$10,000.

The Bible has been printed by the British and Foreign Bible Society in 300 languages.

The Bug Bible, printed by Matthew in 1551, made the word "terror" in Psalm XCI. 5, read "bugges," "Thou shalt not be afraid for the *bugges* by night."

The Breeches Bible, published in 1560 says that Adam and Eve made "breeches" of leaves for themselves instead of "aprons."

The Treacle Bible, published in 1568 asks, "Is there no *trayacle* in Gilead" instead of *balm*.

The Rosin Bible was the Douay version of 1610 which rendered that same word "balm" by the word "rosin."

Bible, The Influence of.—3021.

Bicycling.—1957.

Vacation Tours, 1960.

Racing, 1961.

Fancy Riding, 1962.

Polo, 1962.

Physical Advantages, 1963.

Care of Wheel, 1963.

Biddeford.—A city in York County, Me., 17 miles from Portland on the Saco. Pop., 16,145.

Biddle, Clement ("The Quaker Soldier").—Born at Philadelphia, 1740; died there, 1814. An American Revolutionary officer, one of the signers of the non-importation resolutions framed at Philadelphia, 1765, and served as colonel in the battles of Trenton, Princeton, Brandywine, and

- Monmouth. He was a personal friend and correspondent of Washington.
- Biddle, John.**—Born at Philadelphia, 1784; died there, 1848. An American naval commander, distinguished in the War of 1812 by the capture of the British brig, "Penguin." 1815.
- Biddle, Nicholas.**—Born at Philadelphia, 1750; killed at sea, 1778. An American naval commander, distinguished in the Revolutionary War. He was blown up with his ship, the "Randolph," in action with the British ship, "Yarmouth."
- Biddle, Nicholas.**—Born at Philadelphia, 1786; died there, 1844. An American financier, president of the U. S. Bank, 1823-36.
- Biddle, Richard.**—Born at Philadelphia, 1796; died at Pittsburg, Pa., 1847. An American lawyer and author. He wrote a "Memoir of Sebastian Cabot," etc.
- Big Bethel (Va.), Battle of.**—The first actual engagement, between land forces, of the Civil War, June 9, 1861. Gen. B. F. Butler had collected 10,000 Union troops at Fortress Monroe, and on the day mentioned sent Gen. E. W. Pierce, with 3,500 men, composed of N. Y., Vt., and Mass. soldiers, to dislodge a Confederate force of 1,500 men at Big Bethel, under Gen. J. B. Magruder. The attack, intended to be a surprise, was made on the morning of June 10. The Union force was repulsed, with a loss of 76. Among the killed was Maj. Theodore Winthrop, of Mass., a scholar and author of high repute. The Confederate loss was trifling.
- Big Black (Miss.), Battle of.**—Fought May 17, 1863, during the operations of Gen. Grant preliminary to the siege of Vicksburg. The day after the battle of Champion's Hill (which see), Grant's army pushed on toward Vicksburg. His advance, under Gen. McClernand, came upon the Confederate army under Gen. Pemberton, strongly intrenched on both sides of the Big Black River. The Federals assaulted at once, and with such vigor that they quickly carried the works, capturing 17 cannon and 1,200 prisoners. The Confederate army, much demoralized by its successive defeats, fell back rapidly to the fortifications around Vicksburg. Grant's loss was less than 300.
- Big Bone Lick.**—A salt spring in Boone Co., Ky., noted for its fossil deposits.
- Bigelow, John.**—Born at Malden, N. Y., 1817. An American author, journalist, and diplomat. Editor and one of the proprietors of the New York "Evening Post"; consul at Paris and minister to France (1865-66). He edited Franklin's "Autobiography" and published "Jamaica in 1850," "Life of Fremont," "Molinos, the Quaker," etc.
- Big Horn, or Rocky Mountain Sheep.**—2419.
- Biglow Papers, The.**—A series of humorous and sarcastic poems of a political character by James Russell Lowell, in the New England dialect, under the pseudonym of "Hosea Biglow." The first series appeared during the Mexican War and the second during the Civil War.
- Big Trees of California.**—See SEQUOIA.
- Bile.**—1042.
- Bill.**—An account of goods sold or delivered or for work done, with items, price, and dates.
- Bill Clerk.**—One who makes out the bills of goods sold.
- Billings, William.**—Born at Boston, 1746, died there, 1800. An American music composer, noted as being the first; he published "The Singing-Master's Assistant" and the "Psalm-Singer's Amusement."
- Bill of Entry.**—A written account of goods entered the custom house for importation or for exportation.
- Bill of Exchange.**—An order, drawn on a person in a distant place, requesting the payment of a sum of money to another person or his order.
- Bill of Health.**—A certificate from the health authorities that a ship's company is in good health on leaving port.
- Bill of Lading.**—An account of goods shipped and an acknowledgment of their receipt and promise to forward safely made by the agent of the transportation company.
- Bill of Parcels.**—A bill accompanying a sale of goods fully itemized.
- Bill of Right.**—A form of entry at the custom house which provides for a provisional landing of goods pending further information.
- Bill of Rights.**—An instrument to which, in 1689, William and Mary subscribed when they accepted the crown of England from the Convention Parliament. By it the right of subjects to petition, the right of Parliament to freedom of debate, and the right of electors to choose representatives and other privileges were guaranteed; but its provisions did not extend to the Colonies. In their definition of the rights of the citizen, other state constitutions adhere closely to the Bill of Rights. It was the basis of the Virginia constitution of 1776; and the Constitution of the U. S., when drafted, was denounced because it did not contain some such guarantee of personal rights as is found in the English instrument. It might have failed of ratification had not the Federalists pledged themselves to remedy this defect. The first ten amendments to the Constitution form a partial redemption of their promise.
- Bill of Sale.**—A writing which conveys personal property to another for a consideration. It corresponds to a deed of real estate.
- Bills Payable.**—Promissory notes or drafts held against a firm by other parties.
- Bills Receivable.**—Promissory notes of drafts due to an individual or firm from others.
- Bimetallism.**—The use of two metals as money, at relative values fixed by law; the doctrine that two metals can and should simultaneously and in the same country be established as standards of value and bear to each other an arbitrary ratio. As here used, the term generally refers to the use of gold and silver at a relative value fixed by the government. Monometallism is the theory that only one metal should be used as a money standard.
- Bingham, John A.**—(1815.) American lawyer; congressman (1854-63); judge-advocate of the army

(1864); solicitor of the court of claims; congressman (1865-73); U. S. minister to Japan (1873-1885).

Binghampton.—County seat of Broome County, New York, at the junction of the Susquehanna and Chenango rivers. Pop., 39,647.

Binney, Amos.—Born at Boston, Mass., 1803; died at Rome, Italy, 1847. An American naturalist and patron of science. He wrote "Terrestrial and Air-Breathing Mollusks."

Binney, Horace, LL.D.—(1780-1875.) American lawyer. In 1843, he argued the case of *Vidal vs. The Mayor of Philadelphia*, an oft-cited case.

Birch Family, The.—2847.

Bird, Longest Time That Any, Has Existed Without Food.—The South American Indians assert that the condor can fast for forty days. The raptorial birds are satisfied with a single repast, and as those which feed upon carrion and do not capture their own prey cannot find the wherewithal to satisfy their appetites at will, they are frequently compelled to endure long periods of hunger. An eagle can live twenty-eight days without food. There are instances on record of hens being left accidentally without food for three or four weeks. When discovered they were in a very exhausted state, but soon regained their appetites.

Bird, Robert Montgomery.—Born at New Castle, Del., 1803; died at Philadelphia, Pa., 1854. An American physician and novelist; author of several tragedies, one of which, "The Gladiator," was a favorite with Edwin Forrest. He wrote "Calavar," "The Infidel," and other novels.

Bird, The, Which Is the Best Foreteller of the Weather.—The crow as a weather prophet is entitled to the highest distinction. When rain is approaching a whole community will rise from their nests or perches, wheel about for some time, and then return to their haunts. Weather watchers state that there is a remarkable correspondence between the length of time spent in these aerial evolutions and the duration of the disturbance when it comes. When the birds remain unusually long on the wing, and indulge in loud clamor, the ensuing shower or tempest will not only be the longer delayed, but will be one of greater proportions and duration than ordinary. The peacock indulges in shrill screams when wet weather is approaching. High-flying swallows are a sign of fair weather, and when their insect-prey flies low, and the pursuing swallow skims over the surface of the earth, wet weather is foretold. Rooks and gulls and other far-flying birds do not venture far from home when heavy weather is approaching. In the English Channel the fishermen regard the curlew on dark nights as the certain precursor of an east wind. An appearance of the sea-mew promises rain and high southwest winds. Seagulls in the field mean a storm from the southeast.

Bird of Paradise, The.—2593.

Bird Rocks.—2620.

Birds, at What Hour Do They Go to Sleep.—Many birds, probably the great majority, go to sleep within a very short time of sunset, while numbers con-

tinue to roam, and, like the nightingale, pour forth their song for hours up to near midnight. The blackcap is occasionally known to trill as late as ten o'clock on a fine evening in June; the woodlark also frequently sings till late at night, and has on that ground been mistaken for the nightingale. The sedge-warbler keeps up continual chirping for an hour or two after sunset. The thrush does not go to sleep in the summer evenings till half-past nine. The robin is the latest retiring bird in the United Kingdom; it may often be heard singing until midnight in the early summer, and in the winter is to be seen hopping about long after all other birds have sought repose. The cuckoo is the earliest riser in the morning, followed by the greenfinch at 1:30 A. M., the blackcap at 2:30, the quail at 3, the blackbird at 4, the robin and wren at 4:30, the thrush about 4:50, followed by the house sparrow, tomtit, and lark at a later hour.

Birds' Eggs.—2500.

Birds, Smallest, Where They Are Found.—In the New World exclusively. The humming-birds, of which there are nearly four hundred species, include the minutest specimens of bird-life known to zoölogists. They are found on the American continent, and nowhere else, and range from the neighborhood of Cape Horn in the south to as far north as Sitka, and some species are found as much as 15,000 ft. above the level of the sea. The smallest species of humming-bird is known to ornithologists as *Mellisuga Minima*. It only measures $1\frac{1}{4}$ in. in length, and weighs but 20 grains. The finest collection of the skins of these birds ever made by a single collector was that exhibited by Mr. John Gould at the Zoölogical Gardens in 1851. It was bought by the British Museum for \$15,000. Mr. Gould's elaborate work on "Humming Birds" extends to 5 vols. folio, with richly colored plates, and took thirteen years to prepare, having been commenced in 1849 and completed in 1862. A copy of this book, with the supplement, cannot be procured now for less than \$375.

Birmingham.—A city in the center of England, in Warwickshire. The fourth city in size in Great Britain. Noted especially for metallic manufactures. It is mentioned in the Domesday Book. Pop. (1901), 522,182.

Birmingham.—The capital of Jefferson Co., Ala., one of the chief iron manufacturing cities in the U. S. It is also an important railroad center. Pop. (1900), 38,415.

Birney, David Bell.—Born at Huntsville, Ala., 1825; died at Philadelphia, Pa., 1864. A Federal general in the Civil War. He entered the service in 1861 as colonel of the 23d Pa. Volunteers; was promoted in Feb., 1862, to brigadier-general and in June of the same year to major-general. He served with conspicuous gallantry and distinction in the Army of the Potomac, especially at Gettysburg and Chancellorsville. During the summer of 1864 he was stricken with a fatal illness from which he died in October.

Birney, James Gillespie.—Born at Danville, Ky., 1792; died at Perth Amboy, N. J., 1857. An American politician, candidate of the Liberal party for President in 1840 and 1844.

Birth-Stones.—See SYMBOLS OF PRECIOUS STONES, 2367.

Bishop's Cap, The.—2925.

Bishopsgate.—The principal gate of the north wall of Old London. Bishopsgate Street now passes over the site of the old gate.

Bismarck.—(1815–1898.) Rough and rugged Bismarck, the man of blood and iron, was one of the ablest statesmen of the nineteenth century—one of the world's political giants. By his fertile, courageous mind, his exhaustless energy, and his firm hand he secured the union of Germany, a project that had been the dream of generations.

Otto von Bismarck was born April 1, 1815,—a few weeks before the battle of Waterloo, in the village of Schönhausen, Magdeburg. He could trace his ancestors from the nobles of the Mark. He belonged to a sturdy race who were remarkable for high character, firm principles, candid minds, and uncompromising loyalty. He was early accustomed to hardy field sports and stimulated to a vigorous physical development and a love of nature. At the Plamann boarding school at Berlin, which he entered at the age of six, he was subjected to a diet of "elastic meat with parsnips and a rigid Spartan discipline which was far from pleasant; but he was dutiful and studious. He never had enough to eat except when he was invited to visit friends. He complained that the meager quantity which he received was badly cooked. He was often homesick."

After the age of twelve, he continued his studies at the home of Professor Bonnell, then in the Friedrich Wilhelm Gymnasium. He was especially interested in history, but also acquired a thorough knowledge of the elements of English and French.

In 1832, he entered the University of Göttingen, where he devoted himself largely to the follies and excesses of student life, but studied enough to pass the examinations in 1835. In the course of his stay at the university he fought twenty-eight duels, and only received one scar.

After practicing law for a while, he entered the agricultural college to prepare himself to take charge of the family estates. From 1839 to 1844 he resided on one of the estates, where he became known as "the mad Junker"—on account of his eccentric behavior and disregard for etiquette. He was rather unsuccessful at first but did better later. As his youthful ardor diminished he devoted much time to the study of history and politics. In 1845, after his father's death, he went to live on the estate at Schönhausen. He soon became inspector of dykes on the river Elbe.

In 1847, he married Johanna von Buttamer and began a worthier and happier life. From her good influence he received a firm mooring

for his naturally loving and generous disposition. In a letter written to his wife in 1851, four years after his marriage, he shows a change of attitude toward religion:—

"The will of God be done! Everything here is only a question of time—races and individuals, folly and wisdom, war and peace, come and go like waves, but the sea remains still."

In 1847 (as a delegate to the assembly of Saxony), he became a member of the Prussian Parliament, where he soon became a powerful leader of the conservatives. He maintained that the Prussian kings held their throne by divine right, and not by the will of the people. He was always a proud aristocrat. He was opposed to the measures of reform granted by the king in 1848, and failed to be reelected, but after the reaction of the following year, he was returned to oppose the policy of the democratic party. He protested against the proposal to grant an amnesty to those who had taken part in rebellion.

In 1850, he advocated an alliance between Prussia and Austria, even in the face of almost unanimous opposition to his policy but as a result of his experience in the following two years, he changed his kindly feeling to one of aversion.

Soon after he was sent to Frankfort as minister to the Diet of the Germanic Confederation, in 1851, he began to watch for a chance to free Prussia from the dictation of Austria. He lost no opportunity to challenge the authority and prestige of the Austrian president of the Diet. He became a unique element in the polished circles of the old diplomacy. He could drink the other diplomats under the table and overmatch them in artful reticences and wily schemes. He successfully opposed every attempt to involve the Confederation in Austria's external complications. When Austria proposed that the decisions of the majority of the Diet should be binding on the minority, he upheld the rights of the separate states.

He hesitated at no means by which he could advance the interests of Prussia and reach the practical aims which he had in view. He impressed his views with such force that he dictated the whole foreign policy of the government. Gradually, he gained an ascendancy over princes and their ministers and won them over to the policy he had prescribed for Prussia. Desiring to preserve and cultivate Russia's friendship in the Crimean War he drove a wedge between Austria and Germany by holding the Confederation entirely aloof.

In 1859 he was sent to St. Petersburg where he strengthened the friendships of Russia, and began to prepare the way for reorganizing Germany into a confederation under the leadership of Prussia. He was accused of seeking an alliance between France, Russia, and Prussia, but gave a strong denial.

In July, 1862, he was sent as an ambassador to Paris, and soon, at Biarritz (in July) where he met the emperor and in quiet walks with

him on the seashore, laid the foundation of that intercourse which served him so well in the later struggle with Austria.

Later in the same year, after a brief insight into French politics, he was recalled to Berlin to serve as minister of state, and president of the cabinet—and to assist King William in the angry struggle with the Prussian Parliament, which refused to vote the increased budget for the army. In the ten years that followed, so full of critical events, he played his part with such vigorous ability that he was everywhere recognized as a great statesman of far-seeing and brilliant diplomacy. By his policy he at last united Germany in a compact and powerful empire.

In meeting the grave crisis, in which the Parliament threatened to tie the hands of the king, and of Prussia, he first tried conciliation, hinting that the government had a grand foreign policy in view, but he could not induce the Liberals to yield. When the Lower House voted a reduced budget, he got the Upper House to reject it, and proceeded to act upon the principle that when the government and the legislature could not agree the last budget would remain in force till an arrangement could be concluded.

Gradually, when conciliation failed, he put on a bolder front, which provoked his opponents to firmer resistance. Finally, he dissolved the Diet, bluntly stating that the great questions of the time were "to be decided not by speeches and resolutions, but by blood and iron." Though he felt the difficulties of his position, he resolved to stand by his king without flinching. He was determined, if necessary, to rule without Parliament and without a budget. Desiring to make Prussia strong for the coming conflict, he said if the Diet would not vote money he would take it where he could get it. For four years he braved the storm of national indignation, and weathered crisis after crisis while increasing the strength of the army.

Though the conflict became more bitter from session to session, he was made of too stern stuff to yield. In 1866, he had his reward in the entire change of feeling, caused by the triumphant vindication of his policy at the battle of Sadowa, which gave Prussia the mastery over Austria.

In the peace negotiations with Austria he showed masterly skill. He modified the extreme demands of the emperor, withstood every encroachment of France, and gained terms which brought to a happy issue the question of German unity, and paved the way for the empire. He became the hero of the hour. He met the House of Deputies in a conciliatory spirit and secured its approval of all that had been done for army organization. He was made chancellor of the North German Confederation which was now formed, and was also appointed president of the Federal Council.

As the next step in his foreign policy, he was determined to seize Alsace from France and make it, as of old, the outpost of the German Empire, on the Rhine. Working with skilful

diplomacy and watching with eternal vigilance he managed to precipitate France into a declaration of war at a moment favorable to his plans. In his Jäger uniform he joined the army in its rapid and victorious advance, directed the government from the moving camp, and finally established himself in the Palace at Versailles, where (January 1871) he dictated the terms of peace.

Of the German Empire which he had founded he was made chancellor, with full power in internal and external affairs. He also received the title of Prince of the Empire and received as a gift the estates of Friedrichsruh and Varzin.

After the Franco-Prussian War, his policy was one of peace. He regarded war as a terrible evil only to be justified as the means for securing a permanent peace. To avert the danger of a coalition against the German Empire, he secured a league of the emperors of Austria, Germany, and Russia. At the Congress of Berlin, he reached the zenith of his power in Europe.—Assuming to dispose of the fortunes of nations, he secured the triple alliance of Austria, Germany, and Italy, which did much to assure the permanent peace of Europe. He also had a secret understanding with Russia, which lasted till 1890, binding Germany to neutrality in case Austria should begin a war against Russia.

After 1877 Bismarck applied himself to domestic legislation with the same dominating force and courage that he had previously shown in foreign affairs. He reformed the tariff so as to protect German industry, and started a system of insurance, and to provide help for workmen in case of accident or old age.

In 1884, he energetically began a colonial policy establishing protectorates in Africa and in the Pacific and Indian Oceans.

After the death of his "old master" in 1888, he soon found that the younger Wilhelm who succeeded to the throne had a more masterful will than the grandfather. When he had quarrels with his young master, he found that his stock threat of resigning failed to produce the usual effect. In March, 1890, confronted by a hostile majority in the Reichstag and scolded by the young emperor, who insisted on having all the secrets of Bismarckian diplomacy, he resigned, and retired with all the honors of a first-class funeral.

He spent the remainder of his life at Friedrichsruh and Varzin. With anger toward the emperor and his new chancellor, he criticised and denounced the policy of the government; but in 1896 he agreed to a formal reconciliation with the emperor.

Bismarck lived a busy life, with many cares and responsibilities. He had to fight his way through gigantic obstacles, which kept him so busy that he had little time for cultivating an affable or eloquent mode of expressing himself. He spoke and wrote the language of unadorned truth—blunt, but often seasoned with a grotesque and caustic humor. Though he excelled in the latter, he lacked the power of pathetic or

indignant declamation and was very unskilful in the use of invective. He showed childish petulance in answering hostile criticism. He too easily lost his temper when censured or criticised, and gave vent to his passion by unmanly sneers or coarseness of speech. Under keen personal thrusts, he lost self-command and betrayed his irritation in many ways; but when thoroughly aroused he could sting with a repartee equal to the best of that produced by his assailants.

He was a born autocrat and commander of men, and always felt that his will must be obeyed. He insisted upon accomplishing his objects in his own way. He used men only as his instruments, which were thrown aside when they ceased to be useful. He acted upon no political principle, except the idea of German unity. He had no respect for political parties except so far as they could be used to serve his purpose. He accepted the advice only of those who agreed with him. If he met with strong opposition, he sometimes yielded temporarily, but he resumed the struggle later until he managed to carry his point.

Though his manner was overbearing his policy won Germany her laurels. He was the man for the times in which he lived. He was entitled to the admiration which he won by his patriotism, courage, and diplomatic skill. Thomas Carlyle once described him as "the strongest force in Europe."

Bismuth.—A very brittle, crystalline metal, of a reddish-white hue. Specific gravity, 9.822. Melts at 476 degrees, which makes it an important ingredient in alloys, especially those which are required to melt at a low temperature.

Bison, American The.—2425.

Bit, Brace and.—3881.

Bittern, The.—See HERON, 2613.

Bitternut, The.—See HICKORY, 2851.

Bitumen.—See COAL.

Bituminous Coal.—See COAL.

Bivalves.—2714.

Björnson (*byérn'søn*), **Björnstjerne.**—Born, 1832. Norwegian dramatist, poet, and novelist.

Black.—Is the absence of color, as cold is the absence of heat. It may be produced by the mixture of unequal proportions of the three primary colors. In clothing it indicates mourning; in blazonry, constancy, prudence, and wisdom. Blackened surfaces absorb heat readily. For this reason dark clothing is warmer than white or light-colored.

Black, Jeremiah Sullivan.—(1810-1883.) An American jurist and statesman. Secretary of state, 1860-61.

Black, William.—(1841-1898.) British novelist and journalist.

Black Ash, The.—2821.

Black Bass, The.—2692.

Black Bear, The.—See BEAR, 2423.

Blackberry, The (*Rubus fruticosus*).—A plant with prickly stems, bearing leaves, flowers, and fruit resembling those of the raspberry, except that the latter is black in color, whence the name. A very profitable fruit for cultivation.

Blackbird, The.—2563.

Black Cockade.—This was worn originally by American soldiers in the Revolution, and later was used by the Federalists, in 1797, during the trouble with France, as a patriotic emblem, in contradistinction to the tricolored cockade affected by the Republicans or followers of Jefferson, as an evidence of their sympathy with the radical and violent political movement in that country.

Black Code, The.—The system of laws regulating the treatment of the colored race which prevailed in the Southern States before the emancipation of the slaves.

Black Death.—A widespread epidemic of plague which afflicted Asia, Europe, and Africa in the 14th century. It is estimated that the loss of life consequent upon its ravages was, in Europe alone, over 25,000,000.

Blackfeet Indians.—Now confined to their reservation in Mont. They belong to the Siksika confederation of the Algonquin stock and were, when unconfined, quarrelsome and warlike. They were formerly of the Kino tribe, from which they separated and migrated up the Missouri River. The term Blackfoot, or Blackfeet, was also applied to the Sidasapa Indians, whose leader was John Grass.

Black Forest, The.—A famous region in the eastern part of Baden and the western part of Würtemberg, lying between the valleys of the Neckar and the Rhine.

Blackfriars.—A historical locality in London, once the site of the monastery of the Black Friars, of the Dominican order, who established themselves in London in 1221.



- Blackfriars Theatre.**—A famous theatre of London, established in the latter part of the 16th century. It was destroyed in 1655. Shakespeare wrote his plays for this theatre and for the Globe.
- Black Friday.**—In England, Good Friday is so-called because on that day the vestments of the clergy are black. 2. Also in England, Dec. 6, 1745, the day on which news reached London that Charles Edward, the Young Pretender, had reached Derby. Another Black Friday in England was the day of the great commercial panic caused by the failure of the banking house of Overend and Gurney, May 11, 1866. In New York, a memorable Black Friday was Sept. 24, 1869, when a great panic was caused by reckless gold speculation in New York City.
- Black Hawk.**—Born, Kaskaskia, Ill., 1767; died near the Des Moines River, Ia., 1838. An American Indian, chosen chief of the Sacs about 1788. He was the leader in the revolt of the Sacs and Foxes in 1832.
- Black Hawk War.**—Arose from the refusal of Black Hawk, a powerful chief of the Indian tribe of Sacs and Foxes, to abide by a treaty made by them, July 15, 1830, by which they ceded all their lands in Ill. and Wis. to the U. S. Black Hawk opposed surveys of land at Rock Island, Ill., and in 1831 descended upon some villages in that state, but was repelled by the militia under Gen. Gaines. In the spring of 1832 he reappeared with a large force and massacred many whites. Gen. Scott with U. S. troops pursued him, and he was defeated by Gen. Dodge at Wisconsin River, July 21, and by Gen. Atkinson at Bad Axe River, Aug. 2, after which he was obliged to surrender.
- Black Hills.**—A group of mountains in S. D. and Wyo., noted for their mineral wealth and the discovery of gold in 1874. The highest point is Harney's peak, 7,215 ft. in height.
- Blackie, John Stuart.**—(1809-95.) A Scotch poet and philologist; professor of Greek at Edinburgh, 1852-82.
- Black Jack.**—A nickname applied to Gen. John A. Logan, by his soldiers, on account of his dark complexion and black hair.
- Black-letter.**—The name given in England and America to the Gothic types. It was the form of type used in books, which makes black-letter books and Mss. much prized by book-lovers and collectors.
- Blacklock, William James.**—(1815-1858.) A noted Scottish landscape painter.
- Blackmore, Richard Doddridge.**—(1825-1900.) An English lawyer and novelist. "Lorna Doone" is his most noted book.
- Black Mountains.**—A group of mountains in western N. C., the highest in the Appalachian system. The chief peak is Mount Mitchell, 6,711 ft. high.
- Black Oak, The.**—2866.
- Black Prince, The.**—Edward, Prince of Wales, son of Edward III. of England. He was so called from the color of his armor.
- Black Rock.**—A district in the municipality of Buffalo, N. Y., situated on the Niagara River; the scene of several engagements between the Americans and British (1812-14).
- Black Rock (N. Y.), Battles of.**—July 11, 1813, Lieut.-col. Bishop, with a British force of 400 men from the camp at Lundy's Lane, reduced the blockhouse at Black Rock which contained a large quantity of ammunition and naval stores. It was garrisoned by Gen. Peter B. Porter and a few artillerists with 300 militia and friendly Indians. Most of these fled at the approach of the enemy, and Porter himself barely escaped. Retreating toward Buffalo, he met 100 regulars, with whom he returned and drove the British out of the blockhouse and to the boats. Bishop lost his life in the action. After this battle the larger part of the American army fell back to Fort Erie, Gen. Drummond pursuing. The latter determined to take the fort, and as a preliminary step, resolved to capture Black Rock. Aug. 3, 1814, Lieut.-col. Tucker, with 1,200 men, made the attack and was driven away by 300 Americans, under Lieuts. Ryan, Smith, and Armstrong, the British losing severely and the Americans slightly.
- Black Sea.**—A large sea lying between Europe and Asia. It is 700 miles long and 380 miles wide, presenting a total area of 172,000 sq. miles. It was known to the Ancients as the Euxine Sea. It communicates with the Mediterranean by the Bosphorus, Sea of Marmora, and the Dardanelles. The waters are tideless and brackish.
- Blacksmith's Trade, The Decline of the.**—5167.
- Black Snake, The.**—See SERPENTS, 2639.
- Blackstock's (S. C.), Battle of.**—A skirmish, Nov. 20, 1780, on Blackstock's plantation, Tiger River, S. C., between Gen. Sumter, who was on his way to attempt the capture of Fort Ninety-six, and Col. Tarleton, British. The latter was defeated, losing nearly 200 dead and wounded, while the Americans lost but eight.
- Blackstone, William.**—Died near Providence, R. I., 1675. An English colonist in America, the first white settler in Boston, about 1623.
- Blackstone, Sir William.**—(1723-1780.) Eminent English jurist and commentator on English law.
- Black Thorn.**—2826.
- Black Walnut, The.**—2857.
- Black Warrior.**—A river in Ala. which joins the Tombigbee; length about 300 miles.
- Black Warrior, The.**—An American merchantman, seized and confiscated by the Spanish customs officials at Havana, Cuba, Feb. 28, 1854. Excitement against Spain ran high in the U. S. in consequence of this proceeding, and a messenger was sent to our minister at Madrid with instructions to demand immediate redress to the extent of \$300,000 indemnity to the owners. The evident unwillingness of Spain to comply with the terms led to the Ostend Manifesto (which see). Spain finally made compensation for the seizure; but the occurrence was used later as a pretext for filibustering expeditions to Cuba.
- Blackwell, Elizabeth, M. D.**—The first woman to obtain a medical diploma in America. After private instruction she succeeded in entering the

- University of Geneva, N. Y., in 1847, from which she graduated in 1849 with the highest honors.
- Blackwell's Island.**—In the East River, New York City. Contains several city institutions.
- Blackwood, William.**—(1776-1834.) Scotch publisher and bookseller. He was founder and editor of "Blackwood's Edinburgh Magazine."
- Bladensburg (Md.), Battle of.**—An engagement fought five miles from Washington, D. C., Aug. 24, 1814, between 5,000 British regulars under Gen. Ross and about as many Americans, 4,000 of whom were untried militia. The battle raged four hours, and although the British lost more than 500 men and the Americans only 77, the latter were overwhelmingly defeated. The invaders then descended upon the capital and burned the public buildings.
- Blaine, James Gillespie.**—(1830-1893.) An American statesman. Republican member of the House 1862-76; speaker 1869-75; United States senator 1876-81; Secretary of State from March 4 to Dec. 19, 1881, and 1889-92. Defeated as Republican presidential candidate 1884. See sketch of, 55.
- Blair, Francis Preston.**—Born at Abingdon, Va., 1791; died at Silver Spring, Md., 1876. An American journalist and politician, editor of the Washington "Globe" (1830-45).
- Blair, Francis Preston.**—Born at Lexington, Ky., 1821; died at St. Louis, Mo., 1875. An American politician and general in the Civil War. He commanded a corps in the Army of the Tennessee under Sherman, and was esteemed a capable officer. After the war he was prominent in politics and in 1868 was the Democratic candidate for vice-president, on the ticket with Horatio Seymour of N. Y.; was U. S. senator from Mo. (1870-73).
- Blake, William.**—(1757-1827.) A distinguished English painter, engraver, and poet.
- Blakeley, Johnston.**—(1781-1814.) An American naval officer; commander of the "Wasp." He was lost at sea.
- Blanchard, Thomas.**—Born at Sutton, Mass., 1788; died at Boston, 1864. An American inventor of a machine for cutting and heading tacks by a single operation, and of a lathe for turning irregular forms.
- Bland-Allison Act.**—See BLAND DOLLAR.
- Bland Dollar.**—An unofficial, but popular, designation of that silver dollar which was coined by the U. S. for the first time in 1878. It takes its name from Richard P. Bland, of Mo., who in the House of Representatives, in 1876, introduced a bill for the free and unlimited coinage of silver. It passed the House and, in modified form, the Senate. It was vetoed by President Hayes, Feb. 28, 1878, but was carried over his veto the same day. In the form in which it became a law, it provided that the Secretary of the Treasury should each month purchase not less than \$2,000,000 nor more than \$4,000,000 worth of silver bullion to be coined into dollars of 412½ grains each. It was repealed by the Sherman Act of 1890.
- Bland, Theodoric.**—Born in Prince George Co., Va., 1742; died at New York, 1790. An American patriot who joined the Continental army in 1777 and was a representative from Virginia to the first Congress under the Federal Constitution (1789-90). He left memoirs of the Revolutionary period, now known as "The Bland Papers," published in 1840.
- Blank Verse.**—3066.
- Blarney.**—A village near Cork, Ireland; the seat of the Castle, built in 1446, which contains the famous Blarney Stone.
- Blarney Stone.**—In Blarney Castle, near Cork, Ireland, a block of stone bearing the name of the founder of the castle, together with the date, and said to possess the power of imparting, to those whose lips touch it, a gift of persuasive speech.
- Blast furnace.**—See IRON.
- Blavatsky, Madame.**—(1831-1891.) A noted Russian theosophist, largely instrumental in the founding of the "Theosophical Society," and the author of several books.
- Bleak House.**—A novel by Charles Dickens, by many considered his greatest work. Published 1852-53.
- Bleeding.**—If blood spurts from a wound an artery has been cut; bind *above* the wound, with India-rubber tubing, handkerchief, or strap. If the blood does not spurt, a vein has been cut, apply the same means *below* the wound. Pressure, in cases of scalp wounds, may easily be applied on one or other sides of the wound directly upon the bone.
- Blenheim (blen'im).**—A village in Bavaria, situated on the Danube, the scene of the battle of Höchstädt, in which the Bavarians were defeated by the English, and allied forces, under the Duke of Marlborough and Prince Eugene.
- Blenhelm Palace.**—A noted palace at Woodstock, Oxfordshire, Eng. It was erected by the state, 1705-16, for the first Duke of Marlborough.
- Blennerhasset, Harman.**—Born in Hampshire, Eng., 1765; died at Guernsey, Channel Islands, 1831. An Englishman of Irish extraction noted for his connection with Burr's alleged conspiracy. He settled and resided on a small island in the Ohio River near Marietta, since called by his name, Blennerhasset's Island, where he erected a fine mansion, surrounded with gardens and conservatories and furnished with a splendid library and other facilities for the gratification of intellectual tastes. In 1805 he was induced by Burr to join his enterprise, probably without knowing its real character, and was arrested and indicted for treason. On Burr's acquittal in 1807, Blennerhasset was liberated, his home having in the meantime been sold to satisfy his creditors. The tradition that his last days were spent in poverty is not correct.
- Blennerhasset's Island.**—A small island in the Ohio, two miles below Parkersburg, W. Va., so called from Harman Blennerhasset, who was famous in connection with Burr's conspiracy.
- Blimber, Dr.**—In Dickens's "Dombey and Son," the head of the school to which Paul Dombey was sent.
- Bliss, Cornelius, N.**—Born 1833, at Fall River, Mass. An American financier, Sec. of the Interior under Pres. McKinley, 1897.

Blockade.—A well-settled principle of international law provides that a nation, in time of war, may make intercourse with its enemy's ports unlawful, hazardous, or impossible on the part of neutrals. The Dutch introduced this principle as early as 1584 and it was gradually exercised by the other powers, with the proviso that to be binding a blockade must be effective. Warships, which patrol the entrances to the enemy's harbors, arrest such vessels as attempt to enter or leave its ports. When a vessel of this character contains goods or persons contraband of war, it is condemned by a prize court and sold, the officers and crews of the blockading squadron dividing the proceeds among themselves. This course is now approved by the general usage of the most advanced nations. It was exercised by Great Britain on the Elbe in 1803;



by Denmark in the Baltic in 1848-49 and in 1864, and by the Allies in the Gulf of Finland in 1854. In 1861, immediately upon the breaking out of the Civil War, the U. S. Government declared a blockade of all the southern sea and gulf ports. The Confederate government stipulated that every vessel entering its ports should carry arms and ammunition as part of its cargo. Plymouth, Newbern, Wilmington, Charleston, and Mobile were among the southern ports favored by blockade-runners, and they were vigilantly watched by U. S. cruisers, which captured many foreign vessels as well as Confederate ships. The blockade was an important factor in the success of the Union cause, as, to a large extent, it prevented the Confederates from securing external assistance. In 1898, Acting Rear-admiral Sampson blockaded the Cuban ports, from the outbreak of the war with Spain until the destruction of Cervera's fleet.

Block Island.—An island in the Atlantic Ocean, off Point Judith, in R. I., to which it belongs; it is a noted summer resort.

Block System of Signaling Trains on Railroads.—It is the division of a railroad into telegraphic districts or blocks, at each of which there is a station.

When a train enters one block, a semaphore is shown and no other train is allowed within that area at that time.

Blodgett, Lorin.—Born at Jamestown, N. Y., 1823. An American physicist and statistician; author of "Climatology of the United States," etc.

Blodgett, Samuel.—Born at Woburn, Mass., 1724; died at Haverhill, N. H., 1807. An American inventor; constructor of a machine for raising sunken vessels. He began the canal around Amoskeag Falls, at Haverhill, N. H., which bears his name.

Blois (*blwā*).—The capital of the department of Loir-et-Cher, France; the seat of a magnificent castle of great historical interest.

Blondel.—A celebrated French minstrel of the 12th century. He was a favorite of Richard the Lion-heart of England. It is said that Blondel assisted in the release of King Richard from imprisonment by the Duke of Austria.

Blondin (*blōn-d-an*), **Charles** (ÉMILE GRAVELE).—(1824-1897.) A famous French tight-rope performer, who crossed Niagara River several times on a taut rope.

Bloodroot.—2909.

Bloody Brook.—A brook near Deerfield, Mass., the scene of an Indian massacre in 1675.

Bloody Shirt.—Speakers and writers who, after the Civil War attempted to revive its animosities by appeals to passion and prejudice, were described as "waving the bloody shirt," hence the origin of the phrase.

Bloomer, Mrs. (AMELIA JENKS).—Born at Homer, N. Y., 1818. An American reformer and lecturer on temperance and the rights of women, but chiefly known by her adoption of a reformed dress consisting of Turkish trousers and a dress with short skirts. This garb, known as "bloomers," was adopted and worn for a time by a few women, but it was finally discarded and is now rarely seen.

Bloomfield.—A town in Essex Co., N. J., 12 miles from New York. Pop. (1900), 9,668.

Bloomington.—The capital of McLean County, Ill.; a railroad center; has several educational institutions and some manufactures. Pop. (1900), 23,286.

Bloomsbury Square.—A famous square in London.

Blotter.—A book used for making temporary entries to be copied later into the proper book.

Blount, William.—Born in N. C., 1744; died at Knoxville, Tenn., 1800. An American politician, one of the signers of the Constitution in 1790, and U. S. senator from Tenn. in 1796. Was expelled in 1797 for instigating the Cherokees to aid the British in conquering the Spanish territory of west Florida.

Blowitz, Stephane Adolphe Opper de.—Born in Bohemia, 1825. A noted journalist, representative in Paris of the London "Times." For his aid in the suppression of the Commune, 1878, he was decorated with the badge of the Legion of Honor.

Blücher von, Gebhard Leberecht.—(1742-1819.) Field-marshal of Prussia. Took part in the Seven Years' War, the battles of Auerstädt, La Rothière, Laon, Ligny, and Waterloo.

- Blue, Victor.**—A daring officer who volunteered as a scout, when Commodore Schley was endeavoring to locate the Spanish fleet under Admiral Cervera, which was believed to be in one of the Cuban ports. Lieut. Blue, in disguise landed near Santiago, and ascertained to a certainty that the hostile fleet was in that harbor. The settlement of this question was of the highest importance. The U. S. battleships and cruisers, under the command of acting Rear-admiral Sampson, were at once assembled to establish a blockade. On July 3, 1898, Cervera's fleet issued from the harbor and was totally destroyed.
- Blue Ash, The.**—2822.
- Bluebird, The.**—2545.
- Blue-Books.**—A name given to reports and other papers printed by order of the British Parliament, so called from the color of their wrapper. Also applied to the book issued by the U. S. Government, containing lists of all government employees, in the civil, military, and naval departments, the cover of which is blue.
- Blue Fish, The.**—2670.
- Blue Flag, The.**—See IRIS, 2907.
- Blue-Grass Region.**—A tract in central Ky. and Tenn., noted for its luxuriant growth of blue-grass. This grass has an especial value for pasturage and hay; and in this region are produced some of the finest horses and cattle in the world. The people are prosperous and are renowned for their hospitality. Lexington is in the blue-grass region of Ky.
- Blue Hen, The.**—A nickname of the state of Del. The regiment furnished by Del. in the American War of Independence, on account of its fighting qualities, was known as the "game cock regiment." One of its officers, Capt. Caldwell, noted as a fancier of game-cocks, maintained that a true game-cock must of necessity be the progeny of a blue hen. Hence arose the application of this epithet to the state.
- Blue Hills.**—A range of hills in Norfolk Co., Mass. The height of Great Blue Hill is 635 ft.
- Blue Jay, The.**—2540.
- Blue Laws.**—A term applied in derision to some of the early laws of the New England colonists. These laws were designed to regulate minutely the conduct, labors, and limited pleasures of the early settlers, and their extreme narrowness, rigidity, and inquisitorial character made their enforcement difficult and incomplete.
- Blue Licks, Battle of.**—Aug. 19, 1782, about 200 Ky. pioneers were ambuscaded by Indians at Blue Licks, Ky. The settlers lost 62, including a son of Daniel Boone.
- Blue Lights.**—The term originated from the belief that in the summer and fall of 1813, while Commodore Decatur's fleet was blockaded in the harbor of New London, Conn., advanced information of his preparations and plans to escape, was flashed by blue signal lights from the shore to the British squadron in the vicinity. The phrase was applied to the opponents of the war, who became known as Blue Light Federalists.
- Blue Mountains.**—Mountain ranges in Jamaica, Australia, Oregon, Pennsylvania, and New Jersey, respectively.
- Blue Ridge.**—A chain of the Appalachian Mountains in Virginia and North Carolina. Highest peak 5,897 ft.
- Bluets, The.**—2902.
- Bluff City.**—An epithet sometimes given to Hannibal, Mo., from its position on a high bluff overlooking the Mississippi River.
- Blum, Robert Frederick.**—An American artist. Born at Cincinnati 1857.
- Blunt, Edmund March.**—Born at Portsmouth, N. H., 1770; died at Sing Sing, N. Y., 1862. An American hydrographer, author of the "American Coast Pilot" (1796), etc.
- Boabdil (bō-āb-dēl')**, or **Abu Abdullah.**—The last Moorish king of Granada. Dethroned by Ferdinand and Isabella in 1491.
- Boa Constrictor, The.**—See SERPENTS, 2638.
- Boadicea (bō-ā-di-sē'ā).**—An ancient British queen, much persecuted by the Romans. The subject of a number of plays and poems.
- Boardman, George Dana.**—Born at Livermore, Me., 1801; died near Tavoy, British Burma, 1831. An American Baptist missionary in Burma.
- Board of Trade.**—A body of business men voluntarily associated to promote commercial interests.
- Boats, Kinds of.**—*Long-boat:* The largest boat of a ship; provided with masts and sails. It is used for defensive as well as for general purposes.
Launch: Longer and more flat-bottomed than the long-boat, has a greater number of oars, and can be rowed faster.
Barge: A narrow, long, light boat, used to carry the chief officers to and from ship.
Pinnace: Used by inferior officers. A barge has 10 or more oars, while a pinnace has only 8.
Cutter: Shorter but deeper and broader than either barge or pinnace; used for carrying light stores, provisions, and crew.
Jolly-boat: A small cutter with 4 oars.
Yawl: Small and used for the same purposes as cutters and jolly-boats.
Gig: Long and narrow; rowed by 6 or 8 oars, and used when speed is required.
- Boat-Sailing.**—2146.
- Bobbin Boy, The.**—A nickname of Nathaniel P. Banks, given him because he worked as a boy in the cotton factory of which his father was superintendent. A book for boys with this title, containing his early life, has been published.
- Boboli (bō'bō-lē) Gardens.**—The public grounds about the Pitti Palace in Florence. The gardens were laid out in the 16th century, by the sculptor Tribolo.
- Bobolink, The.**—2544.
- Bob White, The.**—See QUAIL, 2512.
- Boccaccio (bok-kä'chō), Giovanni.**—A celebrated Italian writer; best known by his "Decameron."
- Bodley, Sir Thomas.**—(1545-1613.) An English diplomatist and scholar; the founder of the Bodleian Library.
- Body of Liberties.**—A code compiled by Nathaniel Ward, a clergyman of Ipswich, Mass., and adopted in 1641 by the general court of that

colony, as the basis of the common law. The Body of Liberties safeguarded life, liberty, property, and reputation, as well as prescribing some general rules for judicial procedure.

Bœotia (*bē-ō'shiā*).—In ancient geography, a division of Central Greece. Its chief city was Thebes.

Bœotian League.—A confederacy of independent cities of Bœotia, finally dissolved 171 or 146 B.C.

Boer Wars.—See TRANSVAAL.

Boffin's Bower.—A successful charity for working girls in Boston, established by Miss Jeunie Collins in 1870.

Bog, Iron Ore.—2947.

Bogardus, Everard.—The first Dutch pastor of New York (1633); was drowned off the coast of England.

Bogotá (*bō-gō-tā'*).—The capital of the Republic of Colombia. Founded by the Spaniards 1538. Pop. (1891), about 120,000.

Bohemia.—1. In Austria-Hungary; a crownland, the capital of which is Prague. Agricultural and mining interests. Area, 20,060 sq. m. Pop. (1890), 5,843,094. 2. The term applied to a place frequented by professional people—particularly writers, musicians, and artists—who lead an unconventional life.

Bohemia Manor.—A tract of 5,000 acres in the Elk River district, Md., granted in 1666 by Lord Baltimore to Augustine Herman, a Bohemian surveyor, who had become a denizen, and had taken advantage of the first naturalization act passed in the province.

Bohemian Girl.—A popular opera by Balfe; produced in 1843.

Bohn, H. G.—(1796-1884.) German author, publisher, translator, and founder, in London, England, of Bohn's Library of most valuable works in every department of knowledge published at a cheap rate.

Boileau-Despreaux (*bwā-lō'dā-prā-ō'*), **Nicholas**.—(1636-1711.) A distinguished French poet and critic.

Boiling-Point.—The temperature of a liquid cannot rise higher than its boiling-point, which is the temperature at which the liquid turns into vapor. The boiling-point of some of the liquids are as follows:—

- Ether, 93° Fahr.
- Alcohol 173° Fahr.
- Nitric Acid 187° Fahr. •
- Water 212° Fahr.
- Turpentine (oil) 312° Fahr.
- Phosphorus 554° Fahr.
- Sulphuric Acid 600° Fahr.
- Mercury 662° Fahr.
- Sulphur 822° Fahr.

The boiling-point of water decreases with an increase of elevation; an elevation of 510 ft. above the sea-level makes a diminution of one degree.

Bolls.—1105.

Bols de Boulogne.—One of the famous parks of Paris, covering an area of 2,158 acres.

Boisé City.—The capital and chief town of Idaho. Has important mining interests. Pop. (1900), 5,957

Boisgobey (*bwā-gō-bā'*), **Fortuné Abraham du**.—(1821-1891.) A noted French novelist.

Boito (*bō-ē'tō*), **Arrigo**.—Born 1842. Italian poet and musical composer.

Bokhara.—Central Asia, a Khanate under Russian influence. It is bounded on the north, east, and west by Asiatic Russia; on the northwest by Khiva, and on the south by Afghanistan. Area, 92,000 square miles. Pop., 2,500,000. The chief town of the Vassal state of Bokhara has a population of about 75,000.

Bolivar.—(1783-1830.) Simon Bolivar was born at Caracas, the capital of Venezuela. His parents were of noble family, and had large estates, but they did not live after their son had passed from childhood. At about the age of fourteen, he went to Madrid, where he paid some attention to the study of law. He also visited France and Italy. In 1809 he returned to Caracas, stopping in the United States on the way.

He took part in the revolt in Caracas which began in 1810. He received a colonel's commission and was sent to get aid from England. A year later he was governor of a strong seaport town (Puerto Cabello) which was the chief depot of the "patriots." After the earthquake of 1812, the royalists gained and obtained control of the city.

For a while Bolivar retired to his estates; but he soon entered the service of the "patriots" of New Grenada. He undertook an expedition against the Spaniards, and gained public notice by the success of his bold exploit. He was promoted, and obtained consent to march against the royalists in Venezuela. With a small force of about five hundred men he boldly crossed the frontier. It seemed to be a rash act but the people of the country rose in arms and flocked to his banner. After several successful battles, he defeated the Spanish forces under Monteverde and finally entered Caracas in triumph (Aug. 4, 1813) where he soon received the powers of a dictator.

In the desperate contest that followed, between the royalist and patriot forces, he was defeated, and compelled to retreat. He had not the resources to carry out his bold plans. Once more he returned to New Grenada, where he received the praise of the congress. He was intrusted with an expedition against Santa Fé de Bogotá which soon surrendered to him.

Later, a private enmity, between himself and the governor of Carthagená, led to unfortunate strife, which caused Bolivar to give up his command and retire to Jamaica. He claimed that his retirement was with a desire to secure harmony in the patriot forces. He remained in Jamaica while Morillo, the royalist general, was reducing Carthagená and overrunning New Grenada.

In May, 1816, he returned with a force which he had raised in Haiti. He was defeated by Morillo, but he was not conquered. Going to Barcelona, he organized a government of the province and gathered forces by which he won in a desperate conflict against Morillo. He

went on in his career of victory, and in February, 1819, called a congress (on the Orinoco) which gave him the executive power, with the title of "Provisional President of Venezuela." In March, he reorganized his forces, and marched to join the patriots in New Grenada. After two smaller battles he gained a great victory at Boyacá, by which he secured possession of Santa Fé and all of New Grenada. He called a congress by which he was appointed President and Captain-general of the Republic. With new troops and supplies he returned to Venezuela, quieted party dissension, and called a general convention by which Venezuela and New Grenada were united under the name of the Republic of Colombia.

Bolívar was made President of the united republics. He soon took the field again at the head of a large force, and in 1821 he closed the war in Venezuela by an important victory over the Spaniards at Carabobo. He was received with great joy by Caracas, which he had for the third time rescued from oppression.

Taking the lead of the liberating army, he went to assist Quito and Peru. In June, 1822, he drove the Spaniards from Quito, and in January, 1823, he reached Lima amid the shouts of the people, who made him Dictator of Peru with supreme power. In 1825, he was declared perpetual protector of Bolivia, which was formed from upper Peru. About this time he proposed the well-known congress of Panama to secure a stable alliance between all of the American states. In May, 1826, he presented to the Bolivian congress his plan of a constitution and a government. His code was adopted, and he was made President, and invested with great power. Many in Buenos and Chile began to fear an invasion by him, and others in Peru accused him of a design to unite that republic permanently with Colombia and Bolivia and to make himself perpetual dictator.

In September, 1826, he left Lima for Colombia, where his presence was necessary to settle internal division and strife. In January, 1827, in order to repel the accusation that he had designs to secure the dictatorship of Colombia he wrote from Caracas, stating his intention to resign from the presidency and retire to his estates; but the congress after much discussion refused to accept his resignation.

Meantime a speedy revolution had occurred in Peru. In December, 1826, when the Bolivian code became the constitution of Peru, Bolívar was pronounced President for life. The Colombian troops quartered at Lima, fearing that he was getting ready to overthrow the Colombian constitution, planned a revolt by which the Bolivian code was thrown aside, and a new government organized.

In March, 1828, Bolívar opened the proceedings of a general convention which met at Ocaña to revise the Colombian constitution. He urged that the president should have greater power, in order to prevent internal troubles. The convention was suspicious of the Presi-

dent's intentions; but, after it closed its sittings, a meeting of the principal civil and military residents was held at Bogotá, and Bolívar was invested with great power as Supreme Chief of Colombia. A few days later, he made a solemn entry into Bogotá and assumed the supreme power. He soon found that there was a strong opposition to him, especially shown in the case of Venezuela which decided to secede.

Notwithstanding the jealousy and distrust of rival factions, he continued to act as the chief authority until May, 1830, when he resolved to retire. Many urged him to resume the government, but he held to his purpose, and went to Carthagena, exhausted both in body and mind. He died December 17, 1830, but his name will not soon be forgotten.

Bolivia.—A republic in western South America, named in honor of Simon Bolívar, who wrested it from Spain in 1825. In the north are the extensive plains of the Madeira; in the southeast is the Gran Chaco, imperfectly explored, often inundated, and the home of many uncivilized Indians. The western plateau is crossed by the Andes. Wholly within the tropics, Bolivia, nevertheless, in consequence of the diversity of its physical features, has all the climates of the world, each with the vegetation peculiar to itself. Lying between the Andes and Brazil, it and Paraguay are the only two countries of S. A. which have no seacoast. The forests yield rich cabinet, dye and building woods, cinchona, and India-rubber. Rich in the variety of its minerals, its silver mines alone have produced \$3,000,000,000, and appear even now to be inexhaustible. There are large deposits of gold, lead, tin, salt, sulphur, niter, and copper. Bolivia is composed of 9 departments, with a president, two houses of Congress, and a constitution resembling that of the U. S. It has had many revolutions, and sided with Peru in the war with Chile, 1879-83. The latter triumphed and annexed the western seacoast, including the Bolivian niter beds. A treaty of peace and amity in which the rights of neutrals were defined, was concluded with the U. S. in 1858. Area, 567,271 sq. miles; pop., exclusive of Indians, 1,300,000. La Paz is the capital. (Pop. 62,320.)

Bollman Case.—A Supreme Court case that embraces a definition of treason and maintains the right of that tribunal to issue writs of *habeas corpus ad subjiciendum*. Bollman was accused of being a party to a treasonable scheme to levy war upon the U. S., in that in 1805, he had conspired with Aaron Burr to found an independent state in the southwest. The court's decision was that a conspiracy to subvert the government by force is not, in itself, treason, a specific act of war being necessary to complete that crime. Bollman and one Swartwout, who had been charged with the same offense, were released.

Bologna.—1. A province of Italy; area 1,448 square miles. 2. The capital of the province of Bologna; originally an Etruscan town and later a Roman colony. In the 16th and 17th centuries

- a noted Italian art center. United to the kingdom of Italy in 1860. Estimated pop. (1899), 158,957.
- Bombay.**—A city on an island of the same name in the W. of Hindustan, or British India. Pop., 821,764. Also, a province or presidency; area 125,144 sq. miles; pop. 18,901,123, besides tributary states.
- Bomford, George.**—Born in New York City, 1870; died at Boston, Mass., 1848. An American military officer, colonel, and chief of ordnance and the inventor of the heavy gun called the Columbiad.
- Bonaparte.**—See EUROPE AFTER NAPOLEON.
- Bond.**—A written obligation to pay a debt or to faithfully perform some duty. A mortgage as an additional security usually accompanies a bond. The penalty attached to a bond is usually twice the sum for which one is bound. Witnesses and formal acknowledgment are necessary.
- Bond, George Phillips.**—Born at Dorchester, Mass., 1825; died at Cambridge, Mass., 1865. An American astronomer and director of the observatory of Harvard University. He wrote "On the Construction of the Rings of Saturn," etc.
- Bond, William Cranch.**—Born at Portland, Me., 1789; died at Cambridge, Mass., 1859. An American astronomer; he superintended the erection of the Harvard observatory, of which he became the director. He was noted for his observation of the rings of Saturn and for his work in celestial photography.
- Bonded Warehouse.**—A government warehouse for storing goods until duties are paid.
- Bond Street.**—A leading London thoroughfare, once a fashionable promenade, but now a part of the business district.
- Boneset.**—2914.
- Bonheur, Rosalie Marie.**—French painter.
- Bonhomme Richard, The.**—An East India merchantman, equipped as a man-of-war by the French in 1779. One of five that Benjamin Franklin persuaded France to provide and arm, it was named in his honor "Bonhomme Richard." Commanded by John Paul Jones, flying the American flag and accompanied by two French vessels, it attempted to enter the harbor of Leith, Scotland, but gales frustrated this plan. Off Flamborough Head, Sept. 23, 1779, the three vessels bore down on a British merchant fleet under the protection of the war vessels "Serapis" and "Countess of Scarborough." The former in every way superior to the "Richard," was savagely attacked by Jones in the presence of thousands of spectators who, in the moonlight, crowded the nearby shore. Jones lashed the bowsprit of the "Serapis" to the "Richard's" mizzenmast and swept her deck with musketry. During an engagement that continued three hours each ship poured broadside after broadside into the other until a bucketful of hand grenades was thrown down the hatchway of the "Serapis," when its commander was obliged to strike his colors. Jones and his men took possession of the "Serapis" at once, and the "Bonhomme Richard" sank soon afterward. (See JONES, JOHN PAUL, 355.)
- Bonito, The.** See TUNNY, 2683.
- Bonn.**—A city of Prussia, situated near Cologne, on the Rhine. In former times a Roman fortress. It contains an interesting cathedral and a notable university; and is also noted as being the birthplace of Beethoven. Pop. (1890), 39,805.
- Bonnat (bo-nä'), Léon Joseph Florentin.**—Born, 1833. A noted French painter, distinguished especially in his portrait work.
- Bonner, Robert.**—(1824-1899.) An American publisher; founder of the "New York Ledger." A fancier of fine horses.
- Bonneville, Benjamin L. E.**—Born in France, about 1793; died at Fort Smith, Ark., 1878. An American soldier who fought with distinction in the Mexican War and commanded the Gila expedition (1857). He was commandant of Benton Barracks, St. Louis, in the Civil War (1862-65). In earlier life he took part in explorations in the Rocky Mountains and Cal. His journal was amplified by Washington Irving and published under the title of "Adventures of Capt. Bonneville, U. S. A., in the Rocky Mountains of the Far West" (1837).
- Bonus.**—A premium paid for a loan, charter, or privilege.
- Bonus Bill.**—Introduced in Congress by John C. Calhoun in 1816. It appropriated \$1,500,000 for building roads and canals and making water courses navigable. The first work contemplated, in the event of the passage of the bill, was a canal from Albany to the Lakes. It passed Congress, but President Madison vetoed it on the ground that the general government could not aid internal improvements without a constitutional amendment.
- Bonny Castle.**—The home of Josiah G. Holland, one of the picturesque Thousand Islands, in the St. Lawrence River; from it came the title of one of his stories—"Arthur Bonnicastle."

BOOK-KEEPING.—

Book-keeping is the art of recording business transactions in a systematic manner, so that a proprietor may know the true state of his business and property at any time.

The same system is not used by all business houses, but the difference is only in *form*, not in the principles employed. If these principles are once learned, a set of books can be kept in whatever enterprise the book-keeper may obtain employment.

There are two methods of book-keeping in general use, termed *Single Entry* and *Double Entry*. In single entry book-keeping only personal accounts are kept in the ledger. In double-entry book-keeping, accounts are kept in the ledger with things as well as persons.

SINGLE ENTRY.—The books to be used depend much upon the character and extent of the business. Those usually employed are Cash Book, Bill Book, Journal, and Ledger. Other books, such as Sales Book, Order Book, Shipping Book, etc., are sometimes used.

Book-keeping.—*Continued*

The *Cash Book* contains the receipts and payments of cash. The difference between the sum of the receipts of cash and the sum of the payments of cash will show at any time the amount of cash on hand.

The *Bill Book* contains a record of all written obligations issued by the proprietor to others, and of those in his possession made by others. Such obligations in favor of the proprietor are called *Bills Receivable*, and those made by him in favor of others are called *Bills Payable*.

The *Journal* contains all debits and credits to persons growing out of transactions with such persons. An explanation of each transaction should be made, so that anyone may understand all important facts regarding them.

A clear and complete history of every transaction should be kept, and the book formerly used for this purpose is called a *Day Book*, or *Blotter*, though the *Journal* is now generally used instead.

The *Ledger* is the account book. In it the debits and credits are called *Accounts*, and the grouping of these is called *Posting*.

Debit, abbreviated Dr., shows either that the person after whose name it is entered has become indebted to the proprietor, or that the proprietor has got out of his debt, in part or in whole.

Credit, abbreviated Cr., shows that the proprietor has become indebted to the person after whose name it is entered, or that such person has got out of the proprietor's debt, in part or in whole.

A *Resource* is any kind of property belonging to the business; as, bills receivable, an account owing to the proprietor, cash on hand or in bank, real estate, stocks, bonds, mortgages, stock, furniture, fixtures, unpaid interest, etc.

A *Liability* is a debt of any kind owing by the proprietor, as an outstanding note or a debt due to another person.

Investment, as used in book-keeping, means the capital put into the business. It may be cash, property, real estate, amounts due from others; in short, anything of value.

The *Present Worth* of the proprietor is the net amount of his interest in the business at any stated time. To ascertain present worth, find the difference between the resources and the liabilities. If the resources exceed the liabilities, the difference shows that the proprietor has property in the business to that amount. If the liabilities exceed the resources, the business is *insolvent*; that is, there is not sufficient property in the business to pay its debts.

Net Gain is the excess of present worth over the investment.

Net Loss is the excess of investment over present worth.

The term *Cash* is applied to specie, government bills, bank bills, bank checks, sight drafts, postal notes, money orders, and all other paper that is payable on demand.

In keeping books by single entry, the following rules for debit and credit should be observed:—

The *Proprietor* is *credited* with the sum of his resources at beginning of business; with subsequent investments; and with his net gain, if any, when books are closed.

The *Proprietor* is *debited* with the sum of his liabilities at beginning of business; with sums he draws from the business; and with his net loss, if any, when the books are closed.

Others are *debited* in the *Journal* when they get into the proprietor's debt; and when the proprietor gets out of their debt, partly or wholly.

Others are *credited* in the *Journal* when the proprietor gets into their debt; and when they get out of his debt, partly or wholly.

Cash is *debited* in the *Cash Book* when it is received into the business from any source.

Cash is *credited* in the *Cash Book* when it is paid out, for whatever purpose.

Bills receivable are entered in the *Bill Book* as soon as received, together with the date of the note or acceptance, the date on which it will fall due, the name of the party who will pay it, name of endorser, if any, name of the place where payable, and the amount. When paid, this fact is indicated in the proper place.

Bills payable are entered in the *Bill Book* with date of issue, date of maturity, name of the payee, where payable, and amount; when paid, entry of that fact is made in the proper column.

THE CASH BOOK.—There are two methods of making entries in the *Cash Book*. One is to have its pages ruled for two sets of figures, the left-hand column being used for receipts of cash, and the right-hand column for payments of cash. The other method, which is safer and more commonly used, is pursued by using the opposite pages, the left-hand page being used in place of the left-hand column in the first method and the right-hand page being used in place of the right-hand column.

Suppose the following transactions to have been made:—

January, 1901.

1. Commenced business this day, investing as capital \$1,000 cash.
2. Bought iron safe for which I paid cash \$100.
3. Bought 20 barrels of flour at \$4 per bbl., for which I paid cash, \$80.
4. Bought a horse and wagon for which I paid cash \$100 and \$75 respectively.
5. Sold for cash 4 barrels of flour at \$7 per bbl., \$28.
6. Sold for cash 2 barrels of flour at \$7 per bbl., \$14.
7. Bought, for cash, 100 bushels of oats at 50 cents per bushel, \$50.
8. Sold, for cash, 25 bushels of oats at 60 cents per bushel, \$15.

Book-keeping.—Continued

9. Bought, for cash, 200 pounds of Java coffee at 20 cents per pound, \$40.
 10. Bought, for cash, 50 pounds of Oolong tea at 50 cents per pound, \$25.

11. Sold, for cash, 10 pounds of coffee at 30 cents per pound, \$3.

The Cash Book entries covering these transactions should be made as shown by Diagram No. 1.

DIAGRAM NO. 1—CASH BOOK

January, 1901							
1	Investment		\$1000				
5	4 bbls. flour	\$7	28	2	Safe		\$100
6	2 bbls. flour	\$7	14	3	20 bbls. flour	\$4	80
8	25 bushels oats	.60	15	4	Horse		100
11	10 lbs. coffee	.30	3	4	Wagon		75
				7	100 bushels oats	.50	50
				9	200 lbs. Java coffee	.20	40
				10	50 lbs. Oolong tea	.50	25

The entries for the remainder of the month of January should be made in a similar manner, when the month of February should be started.

To balance the Cash Book, add the amounts on the left hand, or debit, side of it, and enter the total as shown in the illustration. Do the same with the right hand, or credit, side. If there be an excess of received cash over cash paid out, it will represent the balance on hand, which amount should be entered below the total of the entries on the credit side and a total entered at the bottom of the page, which total will obviously balance the total on the debit side. It is customary to balance, or *close*, the Cash Book at the end of each day, carrying the balance to the following day.

THE JOURNAL.—The Journal, as previously stated, contains all debits and credits to persons arising from transactions with such persons, with clear explanations of such transactions.

The following transactions are represented by the Journal entries shown by Diagram No. 2:—

January, 1901.

1. Commenced business this day with a cash capital of \$1,000.
2. Bought of John Smallwood, on account at 10 days 50 barrels of flour at \$5, \$250.
3. Sold Henry J. Miller, on account at 5 days, 10 barrels of flour at \$6, \$60.

4. Bought of S. M. Smith, on account at 30 days, 40 pounds of coffee at 20 cents, \$8; and 40 pounds of tea at 50 cents, \$20.

8. Credit Henry J. Miller, Cash, \$60.

DIAGRAM NO. 2.—JOURNAL

January, 1901.			
1.	Proprietor	Cr.	\$1000
	Investment.		
2.	John Smallwood	Cr.	
	50 bbls. flour at	\$5	250
3.	Henry J. Miller	Dr.	
	10 bbls. flour at	\$6	60
4.	S. M. Smith	Cr.	
	40 lbs. coffee at	.20	8
	40 lbs. tea at	.50	20
			28
8.	Henry J. Miller	Cr.	
	Cash in full of $\frac{a}{c}$		60

THE LEDGER.—Posting the Ledger is performed by carrying to that book all of the debits and credits to persons that are contained in the Journal, opening an account with each of

Book-keeping.—Continued

such persons by placing the amounts for which he is debited in the left hand, Dr., side of his account, and the amounts for which he is credited on the right hand, or Cr., side.

The proprietor's name is usually the first that appears in the Journal, hence his account is naturally the first to be opened in the Ledger. Whenever an entry is made in the Ledger the page on which such entry is made in the Jour-

nal is shown also, and, similarly, an entry of the Ledger page is made opposite the corresponding entry in the Journal. These figures operate as a check, showing that the entry in the Journal has been posted to the Ledger. *Always check each entry.*

The entries shown on the sample leaf of the Journal (Diagram No. 2) should appear then, under their proper dates in the Ledger as shown by Diagram No. 3.

DIAGRAM NO. 3.—LEDGER

1901			Journal Page	PROPRIETOR	1901			Journal Page	
				John Smallwood	Jan.	1	Investment	1	\$1,000
				Henry J. Miller		2	Mdse.	1	250
Jan.	3	Mdse.	1	60		8	Bal. of acct.	1	60
				S. M. Smith		4	Mdse.	1	28

NOTE.—Enter only two accounts on each page of the Ledger, one occupying the upper half, and one occupying the lower half.

When an account in the Ledger is made to balance by a payment, it should be ruled and footed at once. See ledger account of Henry J. Miller.

From the rules and examples given the student should now be able to know immediately in what book or books every transaction should be entered. Suppose a record of the business to have been kept in the manner indicated up to February 1, 1901, and that on that date the proprietor desired to know the results of his business operations. As previously stated, the present worth may be ascertained by finding the difference between the amount of resources and the amount of liabilities, and the net gain or net loss may be ascertained by finding the difference between the investment and the present worth. To find the exact results, therefore, the following directions should be carefully observed:—

First, make an inventory of all stock and property on hand, estimating the stock at cost unless there has been a material change in its value since it was purchased. To this result add the amount of cash in hand which is obtained by deducting from the amount of cash received, as shown by the debit side of the Cash Book, the amount paid as shown by the credit side of it. To this second total add the net amount of personal accounts in the proprietor's favor. These items constitute the resources of the business.

Next, find the total liabilities of the business which are made up of the personal accounts

which the proprietor has to pay. The difference between the resources and liabilities will be the present worth of the proprietor's business, and the net gain or net loss will, as stated, be the difference between the present worth and the original investment. This is called a "Statement of Resources and Liabilities." It is customary to make a statement of this kind semi-annually or annually. The period of one month here given is only for the purpose of illustration.

When the proprietor keeps accounts at a bank, a Bank Account should be kept which will be the same as a personal account. Debit the bank with all deposits made and credit it with all checks drawn. There is, however, no necessity of keeping a Ledger account with the bank, as the record of the currency and checks on hand, and the cash in the bank, may all be kept in the Cash Book as though it were all currency. This last observation presupposes a record of checks to be kept in the Cash Book, which is always done.

DOUBLE ENTRY.—As before stated, in double entry book-keeping, accounts are kept in the Ledger with things as well as persons. Every kind of property belonging to the business is represented by some account in the Ledger, and every obligation due the proprietor, as well as his obligations to others, is represented by some account.

The books usually employed are *Cash Book*, *Journal*, *Ledger*, and *Bill Book*. Sometimes a

Book-keeping.— *Continued*

Day Book, Sales Book, and Invoice Book are used. Whether the latter books should be used depends upon the nature and extent of the business. The *Day Book* is seldom used, the entries being made with full explanations in the *Cash Book, Journal, and Sales Book*.

The *Cash Book, Journal, Ledger, and Bill Book* have already been described in connection with the single entry method. The *Sales Book* is designed to contain a record of all sales of merchandise. The *Invoice Book* is for the purpose of keeping a record of all purchases of merchandise.

In keeping books by double entry, the following rules of debit and credit should be observed:—

The *Proprietor* is credited with the sum of his resources at the beginning of business; with subsequent investments in the business; and with his net gain, if any, when the books are closed.

The *Proprietor* is debited with the sum of his liabilities, at the beginning of business; with such sums as he may draw out of the business from time to time; and with his net loss, if any, when the books are closed.

Persons are debited when they become indebted to the proprietor; and when the proprietor gets out of their debt, in whole or in part.

Persons are credited when the proprietor gets into their debt; and when they get out of the proprietor's debt, in whole or in part.

Cash is debited when it is received into the business from any source.

Cash is credited when it is paid out for any purpose.

Bills Receivable is debited with all negotiable written obligations of other persons when they are received.

Bills Receivable is credited with all negotiable written obligations of other persons when they are paid or otherwise disposed of.

Bills Payable is credited with all negotiable written obligations of the proprietor when issued.

Bills Payable is debited with all negotiable written obligations of the proprietor when they are paid or otherwise canceled.

Merchandise is debited with the cost of all merchandise purchased.

Merchandise is credited with the proceeds of all sales of merchandise.

Expense is debited with all expenses of the business; as, clerk hire, fuel, light, feed, and miscellaneous expenses.

Expense is credited when anything of value is disposed of, which was previously debited to expense.

Interest is debited when interest or discount is allowed to others.

Interest is credited when interest or discount is allowed to the proprietor.

Suppose a business to have been started on January 1, 1901, and transactions to have been made during the first few days of the month as follows:—

January, 1901.

1. Commenced business this day with a cash capital of \$3,000.
2. Bought a horse and wagon for use of the business for which I paid cash, \$200.
3. Bought of John Simms, for cash, 100 bbls. of flour at \$5, \$500.
4. Bought of Chas. Smith, on account, at 30 days, 100 pounds of coffee at 20 cents, \$20.
5. Sold J. R. Smallwood, for cash, 5 bbls. of flour at \$6, \$30.
6. Sold J. T. Anderson, on account, at 30 days, 10 pounds of coffee at 30 cents, \$3.

Such transactions should be shown in the *Journal* as indicated by Diagram No. 5.

DIAGRAM NO. 5.— JOURNAL (DOUBLE ENTRY)

		January 1, 1901			
		Commenced a general produce business with a cash capital of \$3000.			
Cash	Investment	\$3000			
	To Proprietor			\$3000	
		2.			
Expense	Horse & Wagon	200			
	To Cash			200	
		3.			
Mdse.	100 bbls. flour at \$5	500			
	To Cash bought of John Simms			500	
		4.			
Mdse.	100 lbs. coffee at .20	20			
	To Chas. Smith at 30 days			20	
		5.			
Cash	5 bbls. flour at \$6	30			
	To Mdse. Sold J. R. Smallwood			30	
		6.			
J. T. Anderson	10 lbs. coffee at .30	3			
	To Mdse. at 30 days			3	

Book-keeping — Continued

From the rules for debit and credit above given it will be seen that instead of only one posting being required for each Journal entry, as in the Single Entry method, two postings are necessary in every case, and sometimes three. Thus, in posting Journal entry No. 2, Expense is debited \$200 and Cash credited with the same amount. Suppose the history of a transaction to be that on Jan 21, 1901, John Steady proposes to pay his note of \$157.50, due Feb. 8, providing the proprietor will allow him discount (amounting to 47 cents) on the amount

for the time the note has yet to run; which proposition is accepted: Cash should be debited, Bills Receivable \$157.03; Interest should be debited, Bills Receivable \$.47; and Bills Receivable should be credited, Sundries \$157.50. *Sundries* here means two debits, thus saving the entry of one credit in the Bills Receivable Account.

The Ledger entries covering the Journal entries in Diagram No. 4, would, therefore, appear as in Diagram No. 5. In observing Diagrams Nos. 4 and 5 reference should be made to the rules for debit and credit, so that the student may see which one is applicable in each case.

DIAGRAM NO. 6. — LEDGER (DOUBLE ENTRY)

1901				Jour- nal Page	PROPRIETOR	1901		Jour- nal Page	
					Cash	Jan.	1	1	\$1,000
Jan.	1	Proprietor	1		\$1,000			2	Expense
	5	Mdse.	1		30			3	Mdse.
					Expense				
	2	Cash	1		200				
					Mdse.				
	3	Cash	1		500			5	Cash
	4	Chas. Smith	1		20			6	J. T. White & Co.
					Chas. Smith				
					J. T. Anderson			4	Mdse.
	6	Mdse.	1		3				

NOTE.—Enter only two accounts on each page of the Ledger, one occupying the upper half and one occupying the lower half.

The Cash Book does not differ from that in Single Entry.

THE TRIAL BALANCE

The *Trial Balance* is a test employed to determine whether the Ledger is in balance, or whether the sum of all the debits is equal to the sum of all the credits. Add your Ledger accounts, making the totals with lead pencil so that they may be erased after they have served their purpose. Transfer to your Trial Balance book from the Ledger the names and footings of the accounts in which the footing of the debit column is not equal to the footing of the credit column, placing the debit footings in the left-hand column and the credit footings in the right-hand column. Add each column, and if their footings are the same your Ledger is in balance. If the footings do not agree, there is an error somewhere, which must be located. To do this the following rules will be found effective:—

1. Make sure that the columns of the trial balance are correctly added.

2. Test the footings of the accounts in the ledger.

3. Find out whether the footings are transferred correctly to the balance sheet.

4. Add the columns of the Journal to see if the Journal is in balance.

5. Examine each Journal entry by itself, and also the posting of it, checking both the Journal and the Ledger with a mark (✓).

6. Look through the Ledger for unchecked entries, and when one is found search for the cause of its appearance.

It will not, perhaps, be necessary to resort to all these rules; but until the error is located the foregoing should be applied in the order given.

The net gain or net loss of the business may be ascertained by exactly the same process as in Single Entry. This operation may be proved by making a statement of resources and liabilities which is also done as in Single Entry.

CHANGING FROM SINGLE ENTRY TO DOUBLE ENTRY.—In order to change from Single to Double Entry it is necessary to open

Book-keeping.—*Continued*

an account for every resource and liability, except those connected with personal accounts, these being already represented. The balances representing these resources and liabilities should be entered on the proper side in these new accounts, and the net gain or net loss transferred to the proprietor's account, after which, if the work be correct, the Ledger will be in balance.

It is customary to *close* the Ledger, but it is not really necessary to do so, as the balances can all be found without closing the books. Of course they must be closed, if a new set of books is to be used after the change.

Petty Cash Book.—In this book are entered the small sums of cash received or paid out. At the close of each day it is balanced, and the amount representing the difference between the Dr. and the Cr. sides is transferred to the main Cash Book. The object of this is to save space in the main book.

Petty Ledger.—When persons are not likely to do much business on credit, it will be found convenient to open accounts with them in this book. Care must be taken, however, not to open two accounts, one in the Ledger and one in the Petty Ledger, with any person, as confusion would result. The indexing, therefore, should be properly attended to.

Sundry Debtors' Account.—This account is sometimes kept when transactions are had with persons who are likely to purchase but little. The object of it is to save space in the Ledger. If such persons buy on credit oftener than once, an account should be opened with them in the regular way, and their entry in the Sundry Debtors' Account should be closed into the new account.

TRANSFERRING ACCOUNTS FROM AN OLD LEDGER TO A NEW ONE

When a ledger is filled and it becomes necessary to transfer the accounts from it to a new one, the following course should be adopted:—

1. See that the old Ledger is in balance.
2. Mark the old one "Ledger A," and the new one, Ledger "B."
3. Close the first account in Ledger A "By (or To) Balance to Ledger B," making the entry in red ink.
4. Open a new account in Ledger B, having the same heading as the one just closed, and make the entry To (or By) Balance from Ledger "A" in black ink.
5. Index the account as soon as opened, and indicate in each Ledger the page of the other on which it appears.
6. Treat all the accounts in a similar manner.

INFORMATION NECESSARY FOR INTELLIGENT BOOK-KEEPING

Bank Checks.—A check is an order for money, drawn by one who has funds in the bank, payable on demand. It is practically the same as a sight draft. Exercise the utmost

care in drawing checks and all forms of commercial paper. A carelessly drawn check may be *raised*, that is, it may be made to read for a larger amount than that for which it was originally drawn, by a dishonest holder. The bank cannot be held responsible for carelessness of this character.

Identification.—It is the rule in this country not to cash a check that is drawn payable to order unless the person presenting the check is known at the bank. It should be remembered, however, that a check drawn to order and then endorsed in blank by the payee, is really payable to bearer, and all that is necessary in order to get it cashed is that the bank be satisfied of the genuineness of the endorsement.

When checks are to be deposited, the words "For Deposit" should be written above the endorsement. When so endorsed, the bank will refuse to cash them, which operates as a safeguard in case they are lost or stolen.

In drawing money from the business account for use in the business, the check should be written "Pay to the order of Cash." This differs from a check drawn to "Bearer." The paying teller will not then cash the check unless presented by the proprietor or some one well known as the latter's representative. If the check is drawn payable to the proprietor he will be required to endorse it before it will be cashed.

If you wish to draw a check to pay a note, write "Pay to the order of Bills Payable"; if for money for wages, write "Pay to the order of Pay Roll"; if to pay for a draft which you are buying, write "Pay to the order of N. Y. Draft and Exchange"; or whatever the circumstances may call for.

If it is desired to stop the payment of a check which has been issued, notify the bank at once, giving a full description of the check.

Checks should be numbered so that each can be readily accounted for. It is important that the check book be correctly kept, so that the exact amount of money in the bank may be ascertained at any time.

Bank Drafts.—A Bank draft is the bank's check, drawing on its deposit with some other bank. Banks sell these drafts to their customers. Merchants make frequent use of them in making remittances from one part of the country to another. They pass as cash anywhere within a reasonable distance from the money center upon which they are drawn.

A draft on a foreign bank is usually called a *Bill of Exchange*. They are, as a rule, drawn in duplicate, one of which is forwarded and the other retained, and are so worded that when the original is paid the duplicate becomes void.

Promissory Notes.—A promissory note is a written promise to pay a certain sum of money. At the time of making the note there are two parties: the maker and the payee. The maker is the person who signs the note, and the payee is the person to whom, or to whose order, the

Book-keeping.—*Continued*

note is made payable. Negotiable means *transferable*, and, therefore, a negotiable note is one that can be transferred from one person to another. To be negotiable, a note must contain the word *order* or the word *bearer*, that is, it must be made payable to bearer or to the order of the payee. A non-negotiable note is payable to a particular person only; but notes of this character are not frequently accepted for the reason that they possess none of the attributes of currency, differing in this respect from negotiable paper.

The date of a note is a very important item, and great care should be exercised in writing it. A note made on Sunday is generally considered void, but this is not strictly correct. If made and issued on Sunday it is void, but if made on Sunday and issued on any other day, it is legal. "Issue" means delivery.

The words "value received" are usually inserted in a note but they are not legally necessary. A promise to pay anything but money is not a note; it is simply a form of contract.

A note does not draw interest until after maturity unless the words *with interest* appear on its face. After maturity it draws interest at the legal rate until paid.

An endorser of a note is any person who writes his name on the back of it, thereby guaranteeing its payment. Notes are usually endorsed in blank, which leaves the receiver free to endorse it or not at his pleasure if he wishes to transfer it. The endorser is liable for its payment if the maker fails to meet it. If the endorser desires to escape this liability he should write above his signature the words "*Without recourse.*"

A note should be presented for payment on the exact date of maturity and at the bank or place where it is made payable. In finding the date of maturity, remember that when a note is drawn payable *so many days after date*, the actual number of days must be counted; and when drawn payable *so many months after date*, the time is reckoned in calendar months.

If a payment is made on a note, such payment should be endorsed on the back of the note, with the date. It is unnecessary to affix any signature to the entry.

Drafts.—It is quite a common practice to collect debts by draft. When the messenger from a bank presents a sight draft he is not authorized to accept a check in payment, but the person upon whom the draft is drawn may, if he chooses, write across the face of the draft, "Accepted June —, 190—, payable at Second National Bank," and sign his name. Such a draft is then practically converted into a check, and the particulars must be entered in the check book in the same manner as if an actual check had been issued.

Discounting.—It sometimes happens that drafts are discounted before they are accepted. If a merchant has accounts out and desires immediate capital, he draws on his customers and sells his drafts to a bank, either directly or through a broker.

Notes may be discounted as well as drafts. The rates of discount vary according to the paper offered and the state of the money market. The rates usually run from 4 to 8 percent, per annum.

Having made your statement of liabilities and resources, you should now make your Ledger show the proprietor's real present interest in the business. In the proprietor's account, place on the credit side, in black ink, the net gain. If there has been a loss, the amount of such loss should, by force of the rules for debit and credit, be shown on the debit side. The date on which you close the account should be shown opposite such entries. The difference between the sides of your account will now show the proprietor's present worth, as shown by your statement of resources and liabilities. On the opposite side of the account you will now write in red ink the date of closing and "Present Worth, \$——," and foot up both sides of the account. Under these footings rule two lines in red ink next, transfer the amount of "Present Worth" to the credit side of the account in black ink, dating the entry the day after that on which you close the account, as that amount will be your capital at the commencement of the new account. Your Ledger will then show the proprietor's interest in the business.

The Ledger should now be "closed" by finding the difference between the two sides of each account in that book. Add each difference to the smaller side of the account, showing the date of closing.

"To Balance," foot up both sides of the account. The totals will, of course, agree. Make the entries, rulings, and footings in red ink.

To open the proprietor's new account in the Ledger, bring forward the amount of "Present Worth" as "Investment." The date of this entry will be the day on which the new account is commenced.

To open the other accounts, bring forward the balance in black ink, entering them as "Balance" under the date of the new account on the proper side of the page.

Let us now proceed to close the Ledger account. Make the Ledger account as indicated by Diagram No. 3, show the proprietor's present worth and close the Ledger accounts preparatory to the commencement of a new set of accounts.

Suppose it to have been ascertained that the present worth is \$1,050.00, and the net gain \$50.00. The closed Ledger should appear as in Diagram No. 4:—

DIAGRAM No. 4—CLOSED LEDGER

1901		PROPRIETOR		1901			
Jan.	12	Present Worth	\$1050	Jan.	1	Investment	\$1000
			1050	Jan.	12	Net Gain	50
			John Smallwood				1050
Jan.	12	By Balance	250	Jan.	13	Present Worth	1050
			Henry J. Miller	2		Mdse.	250
Jan.	3	Mdse.	60	8		Bal. of Acct.	60
			S. M. Smith				
Jan.	12	By Balance	28	4		Mdse.	28

To close the double entry Ledger, first enter the amount of the inventory on the credit side of the merchandise account as "Inventory," showing the date of closing in red ink. Next, find the difference between the two sides of the account, entering the amount of each difference also in red ink, on the smaller side of the account as "Loss" or "Gain."

If the total of the credit side be larger than the debit side, the difference will obviously be a gain. If the total of the debit side exceeds that of the credit side, the difference will be a loss. Now foot up both sides of the account, making the rulings and figures in red ink.

Second, open an account with "Loss and Gain," one-fourth of a page below the Interest account. Transfer to the Loss and Gain account in black ink the amount of loss or gain, as shown in the Merchandise account with date of closing, placing the amount on the proper side of the account, *i. e.*, to the debit side if a loss; to the credit side if a gain.

Third, refer to the Interest account and ascertain whether it shows loss or gain, and how much, by comparing the totals of the two sides of the account. Balance the account by entering on the smaller side in red ink this difference, showing it "Loss" or "Gain," as the case may be. Now transfer in red ink the loss or gain, as shown by the interest account, to the proper side of the Loss and Gain account, showing it as "Interest."

The Loss and Gain account now contains all of the items of gain and loss, and it may now be closed. To do this, compare the totals of both sides of it and placing the difference on the smaller side in red ink, as "Proprietor." If the debit side exceeds that of the credit, the difference is loss; if the credit exceeds the debit side, the difference is gain. Now rule and foot up the account in red ink.

Fourth, transfer the amount shown by the Loss and Gain account as "Proprietor" in black

ink to the proprietor's account, debit if loss, credit if gain.

Fifth, close the proprietor's account. To do this, enter in red ink the amount of "Present Worth," excess of resources over liabilities, and the amount of the Loss or Gain in his account, and bring down the totals of both sides in red ink. Enter in black ink the amount of "Present Worth" below the red ink footings on the credit side, showing the date as that on which you are to start the new account.

Sixth, close the other accounts in the Ledger the same as in single entries. This completes the closing of the Ledger.

Supposing the present worth to be \$2,012.50, net gain \$1,812.50, inventory \$1,499.50, interest, loss \$50.00. The closed Ledger page should appear in Diagram No. 7.

To open the new Ledger, bring forward in black ink the entries in all of the accounts in the old Ledger, except the "Loss and Gain" account. Date the entries in the new Ledger the day on which the new account is opened.

To ascertain the amount of discount on a time draft, first find its present worth. To do this, it is only necessary to divide the face value of the draft by the amount of \$1 at the given rate and time. The difference between the present worth and the face of the draft will be the discount.

Thus, if a draft for \$750.00 due in 4 months, is discounted at the rate of 6%, the amount of the discount will be: \$750.00 divided by \$1.02 (\$1.00 and interest at 6% for 4 mos.) = \$735.29 (present worth). \$750.00 - \$735.29 = \$14.71 or the amount of discount.

This is called true discount, but the custom among business men is to use what is called "Business discount," that is, simply the interest on the face of the draft taken in advance. Thus, if a draft for \$106.00, due in one year, is

Book-keeping.—Continued

discounted when money is worth 6% per annum, the discount will be 6% of \$106.00 = \$6.36, which deducted from the face of the draft leaves \$99.64, the present worth or the amount for which the draft is to be sold. This princi-

ple also applies to non-interest bearing promissory notes.

If an interest bearing promissory note is discounted, the present holder is simply paid the face value and the interest to and including the day of discount.

DIAGRAM No. 7.—CLOSED LEDGER

1901				PROPRIETOR		1901			
Jan.	31	Present Worth		\$2012.50		Jan.	1	Net Gain	1 \$1000
							31		1012.50
				2012.50					2012.50
				Expense		Feb.	1	Present Worth	2012.50
	2	Cash	I	200		Jan.	31	Inventory	200
				Mdse.					
	3	Cash	I	500			5	Cash	30
	4	Chas. Smith	I	20			6	J. T. White & Co.	3
Jan.	31	Gain		1012.50		Jan.	31	Inventory	1499.50
				1532.50					1532.50
				Interest					
Jan.	21	Bills Receivable	I	.50		Jan.	31	Loss	.50
				Loss and Gain					
Jan.	31	Interest		.50		Jan.	31	Mdse.	1012.50
Jan.	31	Proprietor		1012					
				1012.50					

“Book of Snobs.”—A work by Thackeray, published first as a series of papers in “Punch.”

Books and Reading.—4617.

Books, Love of.—3147.

Books, Sizes of.—When a sheet is folded in 2 leaves it makes a folio of 4 pp.

- 4 “ “ “ “ quarto, 4 to, of 8 pp.
- 8 “ “ “ an octavo, 8vo, of 16 pp.
- 12 “ “ “ a duodecimo, 12mo, of 24 pp.
- 16 “ “ “ “ 16mo, of 32 pp.
- 18 “ “ “ an 18mo, of 36 pp.
- 24 “ “ “ a 24mo, of 48 pp.

The following are the approximate sizes of books:—

Royal Folio	.....19 inches	× 12
Demy	.....18 “	× 11
Super Imp. Quarto (4to)	.....15½ “	× 13
Royal 4to	.....12½ “	× 10
Demy 4to	.....11½ “	× 8½
Crown 4to	.....11 “	× 8
Royal Octavo	.....10½ “	× 6½
Medium 8vo	.....9½ “	× 6
Demy 8vo	.....9 “	× 5½
Crown 8vo	.....7½ “	× 4½
Foolscap 8vo	.....7 “	× 4
12mo	.....7 “	× 4
16mo	.....6½ “	× 4
Square 16mo	.....4½ “	× 3½
Royal 24mo	.....5½ “	× 3¼
Demy 24mo	.....5 “	× 2¾

- Royal 32mo..... 5 inches × 3
- Post 32mo..... 4 “ × 2½
- Demy 48mo..... 3¾ “ × 2¼

Book-Type, Smaller Sizes of.—Semi-nonpareil is the smallest size of type, 288 lines being required to make a foot. There are no fewer than 190 different widths or thicknesses of types used in printing, which are of all sizes, from the immense poster types one is accustomed to see on hoardings, down to an infinitely small size that can be read only by the aid of a magnifying glass. The body of *Til-Bits* is printed in bourgeois type, of which 102 lines go to the foot. There are, at least, eleven sizes of type smaller than the bourgeois, as shown in the following list, namely:—

Types.	Lines to the ft.
Bourgeois	.....102
Brevier	.....111
Minion	.....122
Emerald	.....128
Nonpareil	.....144
Ruby Nonpareil	.....162
Ruby	.....166
Pearl	.....179
Diamond	.....204
Gem	.....222
Brilliant	.....238
Semi-Nonpareil	.....288

- A little book called the "Mite" was recently published. It is set in brilliant, and the pages are ten centimeters by seven centimeters. The Oxford University Press publish an edition of the Bible in this small type. Another typographical curiosity is a copy of a French translation of Dante's "Divine Comedy," which was exhibited at the Paris Exhibition of 1882. The tiny volume is less than half an inch square, and consists of 500 pages, to make which only two sheets of printer's paper were required. It contains in all 14,323 verses, and is set in semiparalel.
- Boone, Daniel.**—Born in Bucks Co., Pa., 1735; died at Charette, Mo., 1820. A famous American pioneer and Indian fighter in Ky. He first explored that region in 1769 and founded Boonsborough in 1775. In 1795 he emigrated to Missouri, then a possession of Spain.
- Boonville, or Booneville.**—A city in Mo. where the Confederates under Gen. Marmaduke were defeated by the Federals under Gen. Lyon, June 17, 1861. Pop. (1900), 4,377.
- Boonville (Mo.), Battle of.**—At the beginning of the Civil War Gov. Jackson, of Mo., who favored the Secession cause, refused to furnish, in response to the proclamation of President Lincoln, the quota of troops for the U. S. The Union men of the state, however, immediately raised more than the number of regiments called for and they were mustered into the U. S. service. Nathaniel Lyon, a very capable and enterprising officer, was made a brig.-gen. and placed in command. Gov. Jackson called out the militia and established a camp at Boonville, intending the troops there assembled for the Confederate service. Gen. Lyon made a swift march and, June 17, 1861, fell upon the camp, captured it entire, and dispersed the militia, taking many prisoners. But few, on either side, were killed or wounded.
- Boötes, or Ursa Major, or The Dipper.**—2995.
- Booth, Edwin Thomas.**—Born at Bel Air, Md., 1833; died in New York City, 1893. A noted American tragedian. His first appearance as a "star" was at Boston, as "Sir Giles Overreach." In 1861, he went to London and played an engagement there. After the assassination of President Lincoln by his brother, John Wilkes Booth, he retired temporarily from the stage and never again played in Washington. He reappeared as Hamlet, in New York in 1866, and acted in Shakespearean plays at the Winter Garden Theater until its destruction by fire in 1867. He then erected a theater of his own, which proved a financial failure. His last appearance was in Brooklyn in the part of Hamlet. In 1888 he founded in New York, "The Players," a club designed for social intercourse between the dramatic and kindred professions.
- Booth, John Wilkes.**—Born at Bel Air, Md., 1839; shot near Bowling Green, Va., Apr. 26, 1865. An American actor, a brother of Edwin Booth. He assassinated President Lincoln at Ford's theater, Washington, Apr. 14, 1865. He fled and was pursued for several days. He took refuge at night in a barn and refused to surrender. The barn was set on fire and through an aperture, by the light of the flames, Booth was shot and killed by Boston Corbett, a U. S. cavalry soldier.
- Booth, Junius Brutus.**—Born at London, 1796; died on a Mississippi steamboat, 1852. An Anglo-American actor. His career, though brilliant, was erratic, and his rivalry with Kram whom he somewhat resembled, led to exciting incidents in the Covent Garden Theater, London, that resulted in his departure for America, where he played with great success. In 1822 he bought a farm in Harford County, Md., where his family lived and to which he retired when at leisure.
- Borax** is the biborate of soda. It occurs native on the shores of certain lakes in Thibet and Persia. It is also found in South America, California, Ceylon, India, and China. It is much used in soldering, brazing, and casting.
- Bordeaux.**—The third city of France, capital of the Gironde. It has a fine harbor and extensive commercial interests. Pop. (1896), 256,906.
- Border States.**—The term formerly applied to those of the slave states lying near to the free states. These were Delaware, Maryland, Virginia, Kentucky, and Mississippi; the name more strictly speaking, included also North Carolina, Tennessee, and Arkansas.
- Boreas.**—The personification of the north wind; son of Astræus and Eos.
- Borghese.**—A family of marked distinction in Siena and later in Rome. Camillo Borghese became Pope Paul V. (1605), and Camilla Filippo Ludovico Borghese (1775-1832) became closely associated with Napoleon.
- Borgia, Lucrezia.**—(1480-1519.) Daughter of Pope Alexander VI. and sister of Cesare Borgia, Duchess of Ferrara. Accused of many crimes, but largely vindicated by modern writers.
- Borneo.**—Excluding Australia, now classed as a continent. Borneo is the second largest island in the world, having an area of 285,000 sq. miles and a population of 1,750,000, composed of Dyaks, Malays, Negritos, Bugis, Chinese, and Dutch. Borneo, which is situated in the Indian Ocean, is mountainous, has a very rich soil and produces many of the costlier woods and fine spices. The elephant, rhinoceros, tapir, and birds of brilliant plumage abound. The Dutch are the rulers, although British interests are important. A treaty concerning the trade relations of the U. S. and Borneo was concluded with Holland in 1850.
- Borodino.**—A village in Moskva, Russia. It was the scene of a great battle between the Russians and the French under Napoleon, Sept. 7, 1812, involving a loss of life in both armies of 80,000 men. The orderly retreat of the Russians caused them to regard it as a victory; but Napoleon pushed on unhiudered to Moscow, which city he entered Sept. 14, to find it in flames.
- Boron.**—A chemical element, non-metallic,—a constituent of borax and boracic acid.
- Borriboola-gha.**—In Dickens's "Bleak House"; the imaginary place in Africa, to which Mrs. Jellyby directed her missionary efforts.

- Bosnia.**—A province of the Ottoman Empire, occupied and governed by Austria since 1878. It now includes Herzegovina and the Turkish parts of Dalmatia and Croatia. It touches the Adriatic Sea at a few points. The population is made up of Christians, Moslems, and Jews, and is 1,148,517.
- Bosporus.**—A strait connecting the Black Sea and the Sea of Marmora, and separating Europe from Asia. In length, 18 miles.
- Bossut, Charles.**—(1730-1814.) A noted French mathematician.
- Boston.**—The capital of Mass. It is the largest city in New England and one of the chief commercial cities and literary centers in the country. Its foreign and coasting trade is large, as it is the terminus of many railroads and foreign and coastwise steamship lines. It was at first named Trimonutain, from the three summits of Beacon Hill, and later received its present name in honor of Rev. John Cotton, who came from Boston in Lincolnshire, England. It expelled Governor Andros in 1689; was involved in the witchcraft delusion in 1692; was the scene of the "Boston Massacre" in 1770, and of the "Boston Tea-party" in 1773. It was besieged by the American army under Washington (1775-76), and was evacuated by the British, Mar. 17, 1776. It was incorporated as a city in 1822. It has frequently suffered from fires, especially Nov. 9-11, 1872, when the estimated loss was \$30,000,000. Pop. (1900), 560,892.
- Boston Case.**—So-called from the fact that a runaway slave in Ga., took refuge on the "Boston," a vessel bound thence for Me. The captain of the ship, accused of stealing the slave, refused to surrender the fugitive to the executive of the former state, and its legislature later petitioned Congress to compel the governor of Me. to restore the negro. Congress did not act in the matter.
- Boston Common.**—A tract of about 44 acres in the heart of Boston, which was a "common" in the early days and has been so preserved to this day. No encroachment upon it was allowed, for either business or residence purposes. It is a popular resort and is much used as a place for public outdoor assemblages, such as political or other meetings. (See COMMON.)
- Boston, Evacuation of.**—The British evacuated Boston, Mar. 17, 1776, without the firing of a gun by the British army and fleet that had been for some time in and about the city. Washington, who had received considerable ammunition captured by privateers, and ordnance from Ticonderoga, had occupied Nooks Hill, on Dorchester Neck, and Dorchester Heights, which commanded both the hill and the town. Mar. 4, at night, he strongly fortified the heights and the British had to choose between an attempt to dislodge the Americans and the abandonment of Boston. They decided upon the latter.
- Boston, The.**—An armed cruiser which was one of the fleet of Commodore Dewey, at the battle of Manila, May 1, 1898.
- Boston Massacre.**—The British navigation acts had irritated the Americans and had caused them so much loss that the execution of the laws was generally resisted. The presence of troops, sent to compel compliance with the obnoxious legislation, further angered the citizens, who in 1769-70 had many encounters with the soldiery. The massacre appears to have been the outcome of a riot precipitated by the course of a press-gang that landed from the frigate "Rose," late in Feb., 1770, and boarded a ship owned by one Hooper of Marblehead. The indignation of the citizens smoldered for a few days, but on the night of Mar. 5, the fire bells were rung, the people assembled and came to blows with the troops, who fired, killing three and wounding many. The details of the massacre were soon known in all the Colonies and greatly strengthened the spirit of revolt.
- Boston Port Bill.**—An act of the British Parliament that discriminated against Boston and Boston Harbor for the receipt or shipment of merchandise. The measure was introduced by Lord North in retaliation for the destruction of cargoes of tea in Boston Harbor, and was passed Mar. 7, 1774. Shipping was transferred to Salem and Marblehead, and when Gen. Gage arrived in Boston, June 1, 1774, to enforce the law, he found the populace aroused and sympathy for the Bostonians universal in the Colonies. In some places the feeling was so pronounced that the people would not buy British goods. Oct. 20, 1774, the American Association, which included 52 men who afterward became members of the Continental Congress, was formed and pledged to non-intercourse with Great Britain, Ireland, and the British West Indies and the non-consumption of their products.
- Boston Tea Party.**—On the evening of Dec. 16, 1773, after an excited meeting of the citizens at Faneuil Hall, some 50 men disguised as Indians, boarded three British ships in the harbor and tossed their cargoes of tea, 342 chests, into the water. About the same time a similar scene was enacted at New York. These proceedings were expressions of the people's determination that they would not pay the tax on tea sold in the Colonies, a tax that Great Britain originally imposed on the East India Company in 1767 and, at the instance of the latter, transferred to the consumers in 1773.
- Boston University.**—An institution of learning, situated at Boston, Mass., chartered in 1869. It comprises departments of the liberal arts, music, theology, law, medicine, etc.
- Boswell, James.**—(1740-1795.) The author of the famous "Life of Samuel Johnson," considered the greatest of biographical works.
- Botany Bay.**—An inlet on the eastern coast of New South Wales, Australia, long used by England as a convict station.
- Bothnia, Gulf of.**—The northern arm of the Baltic Sea, lying between Sweden and Finland.
- Botticelli, Sandro.**—3412.
- Bottom, Nick.**—A character in Shakespeare's "Midsummer Night's Dream."

- Bottomry Bond.**—A mortgage given on the hull of a vessel to secure payment of money raised in a foreign country in times of emergency.
- Boucher** (*bö-shä'*), **François.**—(1703-1770.) A distinguished French painter.
- Boucicault** (*bö'sē-kō*), **Dion.**—Born at Dublin, (Irel'd), 1822; died at New York, 1890. An Anglo-American dramatist, manager, and actor. His plays include "London Assurance," "Colleen Bawn," "Arrah-na-Pogue," "The Shaughraun," and many others.
- Boudinot, Elias.**—Born at Philadelphia, 1780; died at Burlington, N. J., 1821. An American patriot and philanthropist, president of the Continental Congress in 1782.
- Boughton, George Henry.**—Born 1834. An English-American painter. Royal academician, 1896.
- Bougnereau** (*bög-rō*), **William Adolphe.**—Born 1825. A noted French painter.
- Boulanger** (*bō-lon-zhā'*), **Georges Ernest Jean Marle.**—(1837-1891.) A French general and politician.
- Boulogne.**—A town in France, 5 miles W. of Paris.
- Boulogne-sur-Mer.**—A fortified seaport on the English Channel.
- Bourbon.**—The most notable French family. It takes its name from the castle and seigniory of Bourbon in the center of France. The Bourbon dynasty began with Henry IV. who died in 1610 and lasted until the Duke of Orleans' reign as king of the French, from 1830-1848.
- Bourget, Paul.**—A French novelist and critic. Born 1852.
- Bourse.**—A board of trade building in European cities; an exchange.
- Bow and Arrow.**—See ARCHERY.
- Bowditch, Nathaniel.**—Born at Salem, Mass., 1773; died at Boston, 1838. An American mathematician. He translated Laplace's "Mécanique céleste," and wrote "The New American Practical Navigator."
- Bowdoin College.**—An institution of learning at Brunswick, Me.; it is among the oldest colleges in the country, having been opened in 1802.
- Bowdoin, James.**—Born at Boston, Mass., 1727; died there, 1790. An American politician, governor of Mass. (1786-87). He suppressed Shay's rebellion. Bowdoin College, Me., was named in his honor.
- Bowen, Francis.**—Born at Charlestown, Mass., 1811; died at Cambridge, Mass., 1890. An American writer on philosophy and political economy. Was editor and proprietor of the "North American Review," and professor of moral philosophy and civil polity in Harvard University in 1853. His chief works are, "American Political Economy," and "Modern Philosophy."
- Bowery, The.**—A wide thoroughfare in New York. It received its name from the fact that it ran through Peter Stuyvesant's farm or bouwerie. It was at one time noted as a haunt of ruffians, known as the "Bowery Boys."
- Bowie, James.**—Born in Burke Co., Ga., about 1790; killed at Alamo, Tex., 1836. An American soldier, notorious from a duel in 1827 which resulted in a general mêlée, in which he killed Major Norris Wright with a weapon made from a large file or rasp. After the fight, it was made by a cutler into the kind of knife which is still known as a bowie-knife. He was engaged in the Texan revolution and became a colonel in 1835.
- Bowles, Samuel.**—Born at Springfield, Mass., 1826; died there, 1878. An American journalist and author, editor of the Springfield "Republican." His chief works are, "Across the Continent," "The Switzerland of America," "Our New West."
- Bowling.**—1847.
Cocked Hat, 1855.
Cocked Hat and Feather, 1855.
Quintet, 1856.
Nine Up and Nine Down, 1856.
Head Pin and Four Back, 1856.
Four Back, 1857.
American Ninepins, 1857.
Five Back, 1857.
Newport Game, 1858.
Tenpin Head-Pin Game, 1858.
Duck Pin Game, 1858.
- Bowling Green.**—A town in Warren County, Ky. It was an important strategic point during the Civil War, in 1861-62. Pop. (1900), 8,226.
- Bowling Green.**—A small open space in New York, at the foot of Broadway, in the old governmental and aristocratic center of the city.
- Box and Cox.**—A famous comedy, written by John M. Morton.
- Box Elder, or Ash-Leaved Maple.**—2812.
- Boxing.**—1930.
- Boxing the Compass** is a rehearsal of the points, half-points, and quarter-points of the compass. Commencing with the north and going around with the sun this order is observed:—
- | | |
|----------------------|----------------------|
| North. | South by West. |
| North by East. | South South-West. |
| North North-East. | South-West by South. |
| North-East by North. | South-West. |
| North-East. | South-West by West. |
| North-East by East. | West South-West. |
| East North-East. | West by South. |
| East by North. | West. |
| East. | West by North. |
| East by South. | West North-West. |
| East South-East. | North-West by West. |
| South-East by East. | North-West. |
| South-East. | North-West by North. |
| South-East by South. | North North-West. |
| South South-East. | North by West. |
| South by East. | North. |
| South. | |
- Boyesen, Hjalmar Hjorth.**—(1848-1895.) A Norwegian-American novelist and littérateur.
- Boylston, Jabdiel, F. R. S.**—(1680-1766.) An American physician who first practised vaccination in Boston.
- Boys Can Do, Great Things Dull.**—4240.
- Boythorn, Lawrence.**—A character in Dickens's "Bleak House," said to be a portrait of Walter Savage Landor.
- Boz.**—A pseudonym used by Charles Dickens in some of his early sketches.

Bozman, John Leeds.—Born at Oxford, Md., 1757; died there, 1823. An American jurist and historian. He wrote a "History of Maryland" and other works.

Bozzaris, Marcos.—An illustrious Greek patriot who fell, in 1823, while successfully leading 1,200 men against 4,000 Turco-Albanian troops.

Brace, Charles Loring.—Born at Litchfield, Conn., 1826; died in the Tyrol, 1890. An American traveler, author, and philanthropist. He took great interest in the redemption of the criminal and pauper classes in New York City and was the chief founder of the Children's Aid Society in 1853. Besides books of travel he wrote on sociological subjects.

Braddock, Edward.—(1715-1755.) A major-general commanding the British forces against the French in America. In 1755, he led a force of 2,000 regulars and provincial troops to invest Fort Duquesne, now Pittsburg, Pa. An ambush of Indians fell upon them in a forest and over half the force was slain. Braddock was mortally wounded and died after a journey of 40 miles in a cart.

Braddon, Mary Elizabeth (MRS MAXWELL).—Born 1837, an eminently popular English novelist.

Bradford.—A town in Mass., in Essex Co. on the Merrimac River. It has been annexed to Haverhill since 1890.

Bradford.—A city in Pa., in McKean Co. Noted for its oil-production, which exceeds its many other important industries. Pop. (1900), 15,029.

Bradford, Alden.—Born at Duxbury, Mass., 1765; died at Boston, 1843. A historical writer and journalist, originally a Congregational clergyman; was secretary of state for Massachusetts (1812-24), and edited the "Boston Gazette" in 1826. His chief work was a "History of Massachusetts."

Bradford, William.—Born at Philadelphia, Pa., 1755; died there, 1795. An American lawyer; attorney-general of the U. S. (1794-95).

Bradford, William.—Born at Ansterfield, Eng., 1590; died at Plymouth, Mass., 1657. An American pioneer and historian, one of the "Pilgrim Fathers." For many years he was governor of Plymouth and wrote a "History of the Plymouth Plantation," the manuscript of which, after being lost for a long time was found at Fulham Library, Eng., and printed in 1856.

Bradford, William.—Born at New Bedford, Mass., 1827; died at New York, 1892. An American artist, painter of coast scenes, and especially of the scenery of the Arctic regions. His chief works are "The Land of the Midnight Sun," "Crushed by Icebergs," "Arctic Wreckers," "Sunset in the North."

Bradford, William.—Born in Leicestershire, Eng., 1663; died at New York, 1752. An Anglo-American printer, the founder, in 1725, of the "New York Gazette," the first newspaper in New York. He sailed with Penn for America, 1682, returned to Eng., and again sailed for America in 1685. The first book issued from his press was an almanac, "America's Messenger," for 1686.

Bradlaugh, Charles.—(1833-1891.) An English agitator. He was editor and lecturer. In 1880 he was elected M. P. for Northampton, but was expelled from the House of Commons for refusing to take the oath, as he was a strong atheist. He appealed to his constituents in 1882 and was reelected; but was not allowed to take his seat. In 1885 he was permitted to do so without being obliged to take the oath.

Bradlee, Nathaniel.—(1829-1888.) A prominent architect in Boston, who attracted wide attention by removing large brick buildings bodily.

Bradley, Edward.—(1827-1889.) English novel writer and humorist, wrote under the name, "Cuthbert Bede."

Bradstreet, Anne.—Born at Northampton, Eng., 1612; died at Andover, Mass., 1672. An Anglo-American poet, daughter of Governor Thomas Dudley. In 1628 she was married to Simon Bradstreet, afterward governor of Mass., with whom she emigrated to New England in 1630. A collection of her poems was published in London in 1650 under the title, "The Tenth Muse," the second edition of which (Boston, 1678) contains the best of her poems, "Contemplations."

Bragg, Braxton.—Born in N. C., 1815; died at Galveston, Tex., 1876. An officer of the U. S. army and a general in the Confederate service. He was a graduate of West Point, entered the artillery, and served with the highest credit in the Mexican War as captain of a battery. "A little more grape, Captain Bragg," addressed to him by his commander in one of the battles, was adopted into the parlance of the army. He entered the Confederate service at the beginning of the Civil War and soon reached the full rank of general. In the field he was not successful. He commanded the Army of Tennessee (1862-63); was defeated by Rosecrans at Stone River; won a barren victory at Chickamauga (Sept. 1863), but two months later his army was routed at Lookout Mountain and Missionary Ridge, losing heavily in prisoners and cannon; was superseded in command by Gen. Joseph E. Johnston; was called to Richmond as military adviser to President Jefferson Davis, and served in that capacity until the war ended.

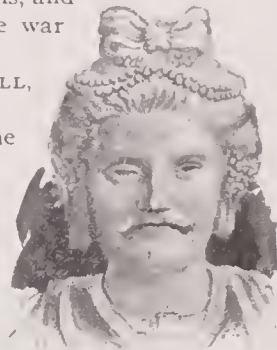
Bragg's Invasion of Kentucky.—See BUELL, DON CARLOS, 94.

Bráhe, Tycho.—(1546-1588.) One of the most noted astronomers, was born in Denmark. He, among many great and important contributions to the science of astronomy, discovered the Star of Bethlehem.

Brahm.—See HINDOO MYTHOLOGY, 1522.

Brahma and Saraswati. See HINDOO MYTHOLOGY, 1523.

Brahmaputra.—A river which rises in Tibet and flows into the Bay of Bengal by three mouths, after a course of 1,700 miles.



BRAHMS — (1833–1897)

DURING the last quarter of the nineteenth century, musical Germany was divided into two factions, the adherents of Wagner and the "Music of the future," and the admirers of the greatest modern exponent of the classical style, Johannes Brahms. The latter was the leader in the classical advance of his time, the deepest thinker, and the most learned of the composers of the epoch. He had no theories to preach; he let his music speak for itself.

Johannes Brahms was born at Hamburg, in 1833. His life was singularly uneventful; there was in it little of what the Germans call "storm and stress," such as checked the lives of so many of the great musicians. His was the life of a student, whose highest desire was to devote himself solely to his art.

At the age of fourteen, Brahms made a successful public appearance as a pianist. After he had given a few concerts, he was kept for several years in retirement, engaged in his musical studies. In 1851, he started upon a concert tour with the Hungarian violinist, Remenyi. They went to Weimar to see Liszt, to whom Remenyi introduced his youthful companion as a coming genius. Brahms had with him his first trio, in B flat, which Liszt examined and greatly admired; and the elder pianist thereafter took a deep interest in the younger one's career.

At Göttingen, Brahms gave a wonderful exhibition of his mastery of the piano. At a concert given there by the two artists, they found the piano which had been provided for their use so low in pitch that when they came to play Beethoven's *Kreutzer Sonata*, which was on the program, it was impossible to tune the violin down to the piano, without much sacrifice of brilliancy and effect. The youth of nineteen thereupon transposed from memory the entire work, raising it half a tone. The master violinist, Joachim, was present, and was so impressed with Brahms's wonderful feat that he gave to the pianist a letter of introduction to Schumann.

Brahms remained with Liszt at Weimar for several weeks, and then went with Joachim's letter to Schumann, who was at Düsseldorf. The lad's playing, composition, and personality, made a profound impression upon the elder musician, who, although he had long since retired from active journalism, wrote an article entitled *New Paths* for the *Neue Zeitschrift für Musik*, in which he introduced Brahms to the world as "a youth at whose cradle, graces and heroes kept watch."

After a few seasons spent as director at Detmold, Brahms devoted himself once more to study and composition, and remained for five years almost in seclusion at Hamburg. Brahms went to Vienna in 1862, and remained there almost constantly until his death, with only occasional tours as a pianist, or to conduct his own works. In 1863, he was appointed director of the Vocal Academy; and the year during which he held this post was memorable for the great performance of Bach's *Passion Music*, which he gave. Brahms's reputation was established by his *German Requiem* — written in his grief at the death of his mother. Brahms received degrees of honor from the universities of Cambridge and of Jena, and orders of knighthood from the emperors of Austria and Germany. In his personal character, Brahms was not unlike Beethoven. He was arbitrary in all matters relating to music, rough in manner, and uncompromisingly severe with those who trifled with the art that to him was sacred. The fatal nature of the disease that attacked him was known to his physicians and a few intimate friends for some time before his death. But he was kept in ignorance of it, and worked on calmly to the end. He died at Vienna in 1897, and the world realized that it had lost one of the greatest of modern composers. Brahms produced masterpieces in every form of composition except opera. As a song writer, he holds a high position.

- Brainard, John Gardiner Calkins.**—Born at New London, Conn., 1796; died there, 1828. An American poet and journalist and editor of the "Connecticut Mirror" (1822-27). He wrote a volume of poems, a second edition of which appeared in 1832, with a sketch of the author by John G. Whittier, under the title of "Literary Remains."
- Brainerd, David.**—Born at Haddam, Conn., 1718; died at Northampton, Mass., 1747. An American missionary among the Indians. His biography was written by Jonathan Edwards.
- Brains, Mixing with the Soil.**—5220.
- Bramante, Donato Lazzari.**—(1444-1514.) One of the most celebrated Italian architects.
- Brandenburg.**—A province and city of Germany. Berlin is the capital of the province. The city is about 27 miles from Berlin, and has a pop. of 37,817. The province (area 15,381) had a pop. in 1900 of 3,107,951.
- Brandon.**—The largest grain market in the province of Manitoba in Canada. Pop. (1901), 5,380.
- Brandy Station (Va.), Battle of.**—For several weeks immediately after the battle of Chancellorsville (May 1-3, 1863) the Army of the Potomac, then commanded by Gen. Hooker, lay inactive on the north bank of the Rappahannock River. June 9, 1863, Gen. Pleasonton was directed to cross the river and develop the Confederate position. His force consisted of two divisions of cavalry under Gens. Buford and Gregg, supported by two brigades of infantry. Pleasonton encountered a large body of Confederate horse and one of the fiercest cavalry fights of the Civil War resulted. The Union troops yielded the field, after each side had sustained a loss of above 500. The movement, however, developed the important fact that Gen. Lee was marching his infantry northward by way of Culpeper. He was then preparing for his campaign into Pennsylvania. On Aug. 1, 1863, another spirited cavalry fight took place at Brandy Station, between Gen. Buford and Gen. Stuart, the famous Confederate leader, in which the latter was victorious.
- Brandywine, Battle of.**—Fought at Chadd's Ford, on Brandywine Creek, 30 miles southwest of Philadelphia, Sept. 11, 1777. Late in May of that year Washington left Morristown, N. J., and assumed a strong position behind the Raritan. Aug. 25, Gen. Howe, the British commander, with about 18,000 men, landed at Elk Ferry, 50 miles from Philadelphia. Washington, who had been joined by Lafayette, De Kalb, and Pulaski, advanced to defend the city. He had only 11,000 effective men. Howe moved slowly and the opposing armies did not meet until Sept. 11. The result of the battle was a victory for the British, the Americans losing about 1,000 killed, wounded, and missing, while the enemy's loss was somewhat greater. The British then took possession of Philadelphia.
- Brandywine Creek.**—A river in southeastern Pa., where Gen. Howe, British, defeated the Americans under Washington, Sept. 11, 1777
- Brant, Joseph Thayendanegea.**—(1742-1807.) A Mohawk Indian chief who fought in the British army during the Revolution.
- Brasidas.**—A Spartan general noted for his bravery in the Peloponnesian War. In the battle of Amphipolis he met the Athenian army under Cleon, in B. C. 422. Brasidas and Cleon were both killed, but the army of the latter was almost wholly destroyed.
- Brattle, Thomas.**—Born at Boston, Mass., 1657; died there, 1713. A merchant and writer on astronomical topics. In 1692 he protested, in a private letter, printed by the "Massachusetts Historical Society," against the proceedings of the court in the so-called witchcraft cases.
- Brattleboro.**—A town in Vt., in Windham Co., on the west side of the Connecticut River, 119 miles from Boston. Pop. (1900), 5,297.
- Bray.**—A parish in England. "The Vicar of Bray" changed his formal religion three times to hold his position.
- Brazil.**—The largest and most populous of the South American Republics. It lies on the eastern coast of South America and has an area of 3,218,000 square miles and 18,000,000 inhabitants. It produces more coffee than all other countries combined, and has also gold, diamond, iron, and salt mines. Sugar, tobacco, hides, horns, tallow, rubber, drugs, and dyes are largely exported. The Portuguese settled the country about 1530, and it afterward successively passed under the rule of Spain and Holland. In 1808, the king of Portugal, deprived of his throne by France, took up his residence in Brazil, which in 1815 became a kingdom. In 1822, a national Congress elected Dom Pedro, eldest son of King João, of Portugal, Perpetual Defender of the newly created kingdom. The complete independence of Brazil was proclaimed later in the same year and Dom Pedro was crowned Constitutional Emperor. He abdicated in favor of his son, Dom Pedro II., in 1831, and the latter monarch reigned until 1889, when he was de-throned. The republic dates from 1891, and Fonseca, Peixoto, Moraes, and Campos Salles have since held the office of president. The Congress consists of a senate and a chamber of deputies. There are 20 states in the republic.
- Brazing** is brass soldering, and consists in joining together, by means of a solder more or less like brass, two pieces of brass, two of copper, or one of each. The edges are first filed bright to cleanse them, the surfaces are covered with solder and borax and heat applied.
- Brazito (Mexico), Battle of.**—An engagement Dec. 25, 1846, between 500 Americans and 1,220 Mexicans, the latter were completely defeated and lost heavily, their commander, Gen. Ponce de Leon, being among the slain. The Americans formed a part of the army of the West which was organized in June, 1846 and was composed of 1,658 men and 16 pieces of ordnance under command of Col. Philip Kearny. His orders were to go to New Mexico, seize Santa Fé and formally place the entire territory and

California under the jurisdiction of the U. S. Aug. 18, 1846, after a march of 883 miles in 50 days, Kearny took the capital and upon establishing civil rule, started for California, Sept. 25, with 300 U. S. dragoons and a few topographical engineers. The main supply train and 200 dragoons were left at Albuquerque. Col. Doniphan, with his regiment and Weightman's artillery, were ordered south to join Wool in Chihuahua. The whole force then numbered 856 effective men. It was the advance guard of this body that engaged the Mexicans and routed them at Brazito, or Bracito.

Brazos.—A river in Texas, one of the largest in the state. It empties into the Gulf of Mexico, about 40 miles west of Galveston, after a course of 900 miles.

Bread.—2952.

Bread Riots.—Violent disturbances by the poor in New York City during the panic of 1837, when flour warehouses were sacked. Rents and all the necessities of life were exorbitant and multitudes were unemployed. Militia suppressed the riots.

Breasts, Care of the.—673.

Breathing.—3103.

Breckenridge, John Cabell.—Born at Lexington, Ky., 1821; died there, 1875. A distinguished southern politician, and a Confederate general during the Civil War. He was a member of Congress (1851-55) and was the successful Democratic candidate for Vice-president in 1857, elected on the ticket with James Buchanan. In 1860 he was the unsuccessful candidate of the southern Democrats for President, with Joseph Lane of Ore. for Vice-president. He was elected a U. S. senator from Ky., and took his seat in that body Mar. 4, 1861, the day his term as Vice-president expired. His sympathies were strongly with the South, and he soon resigned his seat to enter the Confederate army. He was commissioned a brigadier-general and a few months later, a major-general. He commanded the reserve at Shiloh; made an unsuccessful attempt to capture Baton Rouge, La., in Aug., 1862; commanded Bragg's right wing at Stone River, Dec. 31, 1862 and Jan. 1-3, 1863; was also at Chickamauga and Chattanooga; served in Va. and east Tenn. in 1864; was Secretary of War in the cabinet of the Confederate President, from Jan., 1865 till the end in Apr. After the dissolution of the Confederate government and the surrender of its armies, Breckenridge expatriated himself, and lived in Europe about ten years. He then returned home, broken in health, and died as above, at his old Ky. home in Lexington.

Breed's Hill.—An eminence in Charlestown, Mass., connected with Bunker Hill, and fortified by Prescott on the occasion of the battle of June 17, 1775.

Bremen.—A German city on the Weser about 50 miles from the mouth, an important commercial and shipping center. Pop. 155,684.

Bremen.—A state of the German Empire; it includes the city of Bremen, its environs and two

outlying districts. The city of Bremen is a free city and the second in importance of the German seaports. It was, for a brief period, incorporated with France during the Napoleonic wars, but soon regained its independence and has since been identified with the Germanic Confederation, the North German Confederation, and the German Empire. It joined the Zollverein in 1888. Pop. (1900), 224,697.

Breslau.—The capital of the province of Silesia, Prussia, ranks second in population among the cities of Germany. Noted for its library of 300,000 volumes, and its cathedral, the spire of which (364 ft.) is the highest in Prussia. Pop. (1900), 422,738.

Bretagne or Brittany.—A peninsula in the N. W. of France.

Breton, Jules Adolphe.—A distinguished French painter of rural life, was born in 1827. One of his pictures "The First Communion" was sold for \$45,000 in 1886.

Brewster, William.—Born at Scrooby, Nottinghamshire, Eng., about 1560; died at Plymouth, Mass., 1644. One of the founders of Plymouth Colony in New England. He arrived in America by the "Mayflower" in 1620, and became ruling elder of the Brownist or Independent church at New Plymouth.

Brick Work, Measurement of.—Work is generally estimated by the 1,000 brick, on the basis of a wall a brick and a-half thick, which is regarded as the standard to which all work must conform.

To find the contents of a wall which varies from the standard,—

Multiply the superficial contents of the wall by the number of half bricks in thickness and take one-third of the product.

A brick is $8\frac{1}{2}$ inches long, 4 inches wide, and $2\frac{1}{2}$ inches thick; 20 bricks, laid dry, form a cubic foot. So that, with the dimensions of a wall given, we may find the number of bricks required by multiplying the length, breadth, and thickness in feet and fractions of a foot, and dividing the product by 20—or by $22\frac{1}{2}$ if the bricks are smaller than the average given. The quotient will be the number of bricks required.

Bridal Veil Fall.—A noted fall in the Yosemite Valley, Cal. The height of the main fall is 630 feet, and that of the cascades about 300 feet. The total fall, nearly vertical, is about 900 feet.

Bridgeman, Frederick Arthur.—Born at Tuskegee, Ala., 1847. An American genre painter, a pupil of L. Gérôme, resident in Paris. His subjects are chiefly Oriental.

Bridgeman, Laura Dewey.—Born at Hanover, N. H., 1829; died at South Boston, Mass., 1889. A blind deaf-mute, noted in connection with educational methods for unfortunates of her class. Through scarlet fever she lost sight and hearing and partially the sense of taste and smell, when three years of age. Eventually she became an inmate of the Blind Asylum at South Boston, where she was educated by means of a raised alphabet devised by the principal, Dr. S. G. Howe.—See HOWE, JULIA WARD, 308.

Bridge of Hell (Koran).—1745.

Bridgeport.—A city in Conn., situated on an islet of Long Island Sound, and one of the chief manufacturing cities in the state; formerly called Newfield. Pop. (1900), 70,996.

Bridges, Longest in the World.—The longest bridge today in the world is that of the Tay, in Scotland, and the next longest is also in Scotland across the Firth of Forth. Modern bridge construction has since the era of railroads been greatly developed, and is now, by reason of our superior steel manufacture, largely in the hands of American firms. Several new bridges have of late years been constructed in Siberia, for the Russian government, and many have also been built in British India, while some new ones are contemplated; among these projects are one to be erected over the river Takolo, in the French Sudan; another is designed to cross Sydney harbor in New South Wales; while others have been recently constructed in Europe to cross the Rhone, the Moselle, etc., and one is contemplated to bridge the arm of the sea at Jutland, Denmark. The following gives the length of the chief bridges in various continents:—

	Meters	Feet
Tay, Scotland,.....	3,200	9,696
Forth, ".....	2,394	5,552
Moyerdyck, Holland.....	1,470	4,820
Volga, Russia.....	1,438	4,715
Weischel, Germany.....	1,325	4,346
Thoen, Germany.....	1,272	4,172
Grandenz (Elbe), Germany.....	1,092	3,580
New East River Bridge, Brooklyn, N. Y.....		2,202
New East River Bridge, length of main span, between the towers.		1,600

Bridgeton.—The capital of Cumberland County, N. J. It has manufactures of iron, woolens, and glass. Pop. (1900), 13,913.

Bridgewater.—A town in Mass.; the seat of the State Normal School. Pop. (1900), 5,806.

Brief Biographies of Great Heroes and Leaders.—1794.

- Romulus, 1794.
- Cyrus, 1796.
- Confucius, 1797.
- Themistocles, 1799.

Brier Creek (Ga.), Battle of.—An action, Mar. 3, 1779, at a stream in eastern Ga. between Gen. Ashe with 1,500 N. C. militia and some Ga. continentals, and 2,000 British under Lieut.-col. Prevost. The battle was fought where Brier Creek meets the Savannah River, and resulted in the overwhelming defeat of the Americans, who lost several officers, had nearly 200 men captured and many killed. The British had 16 killed and wounded.

Briggs, Charles Augustus.—Born at New York, 1841. An American theologian. In 1874 he became professor of Hebrew and the cognate languages in Union Theological Seminary, and was one of the editors of the "Presbyterian Review." Owing to advanced views in biblical criticism, he was condemned and suspended for heresy by the general assembly. He has since been ordained a priest of the Episcopal Church (1899).

Briggs, Charles Frederick.—Born at Nantucket, Mass. 1804; died at Brooklyn, N. Y., 1877. An American journalist and author. He wrote the novels "Harry Franco; A Tale of the Great Panic." "Trippings of Tom Pepper," etc.

Bright, Jesse D.—Born at Norwich, N. Y., 1812; died at Baltimore, Md., 1875. An American politician. He was a Democratic U. S. senator from Ind., and was expelled from the Senate for disloyalty, Feb. 2, 1862.

Bright, John.—(1811-1889.) An English statesman, was one of the foremost members of the Anti-Corn Law League. In this movement he was closely allied with Richard Cobden. Though John Bright held office only once in the Cabinet, he wielded more influence in home and foreign affairs than perhaps any other man of his era.

Brindisi (the ancient Brundisium).—A seaport of Italy of great antiquity. Pop., 14,508.

Brinton, Daniel Garrison.—Born in Chester Co., Pa., 1837; died at Atlantic City, N. J., 1899. An American surgeon and ethnologist. His works include "The Myths of the New World," "Aboriginal American Authors and Their Productions."

Brisbane.—Capital of Queensland, Australia, is an important seaport. Pop., 93,657.

Bristed, Charles Astor.—Born at New York, 1820; died at Washington, 1874. An American author. He wrote "Five years in an English University," "The Upper Ten Thousand of New York," etc. His pseudonym was "Carl Benson."

Bristed, John.—Born in England, 1778; died at Bristol, R. I., 1855. An Anglo-American clergyman and author. He came to New York in 1806 and married a daughter of John Jacob Astor. He wrote "Resources of the United States."

Bristol.—(1) A town in Hartford Co., Conn. Pop. (1900), 9,643.

(2) A town in Bucks Co., Pa., on the Delaware River. Pop. (1900), 7,104.

(3) A town of Bristol Co., R. I., on Narragansett Bay. Pop. (1900), 6,901.

(4) A city of Sullivan Co., Tenn. Pop., 6,056, with Bristol City, Va. Pop. (1900), 9,850.

(5) An important seaport in England on Bristol Channel. Pop. (1901), 328,842.

Bristow, or Bristoe, Station (Va.), Battle of.—After the battle of Gettysburg (July 1-3, 1863), Gen. Lee withdrew the Confederate army into Va., and took up his old position near the line of the Rappahannock River. On Oct. 14, a force from the Army of the Potomac was sent forward to reconnoiter. It consisted of the 2d corps (Warren), part of the 5th corps (Sykes), and a division of cavalry. A large Confederate body was encountered at Bristow Station and a brisk engagement followed. But the purpose of the Union commander was not to fight a battle but to develop the enemy's strength and position. This having been accomplished, he drew away and the troops returned to their camps. The losses in the action were not large,—less than 300 on either side.

- British Empire** has great colonial possessions in Asia, Africa, Australia, and North America. The center of the Empire is Great Britain and Ireland. The colonies are almost independent and self-governing. Area, 11,335,806 sq. miles; 381,037,874. Capital, London.
- Brittania Metal** is generally composed of 90 parts tin, 8 parts antimony, and 2 parts copper. It is largely used as a basis for electroplate.
- Broadhead, John Romeyn.**—Born at Philadelphia, 1814; died at New York, 1873. An American historian, author of the "History of the State of New York."
- Broad Seal War.**—This was precipitated by the action of a clerk of Middlesex County, N. J., who, on account of the defects in the returns, rejected the vote of South Amboy in the Congressional election of 1838. As a consequence the Whigs were declared elected, and the candidates of that party were given certificates under the broad seal of the state. When Congress met, Dec. 1839, it was found that, exclusive of the N. J. delegation, there were 118 Whigs and 119 Democrats. The clerk of the House amid great excitement, refused to recognize the N. J. Whigs. John Quincy Adams was chosen speaker *pro tem.*, Dec. 5, and Dec. 17, R. M. T. Hunter, of Va., was elected permanent speaker. The contested seats were finally given to the Democrats.
- Broadway.**—The principal business street of New York, extending from Bowling Green northward to Central Park, for about five miles.
- Brockton.**—A city in Plymouth Co., Mass. It has large manufactures of boots and shoes; formerly called North Bridgewater. Pop. (1900), 40,063.
- Broderick, David Calbreth.**—Born at Washington, D. C. 1820; killed in a duel in Cal., 1859. A noted lawyer and politician. He went to Cal. in 1847, and in 1849 was a member of the constitutional convention of that state. He served in the state senate, and was later elected to the U. S. Senate. In 1859 he became involved in a personal conflict with David S. Terry, chief-justice of the supreme court of Cal., growing out of political antagonism. Broderick accepted Terry's challenge to a duel and they fought Sept. 13. Broderick fell at the first fire, mortally wounded. He died three days later at Merced.
- Broken Arm.**—Pull till arms are of the same length. Bind on two splints on opposite sides with handkerchiefs. Newspapers folded make good splints.
- Broken Collar-bone.**—Bend the arm over the front of the chest and fasten it in a sling.
- Broken Leg.**—Pull — do not jerk — on the limb until it is of the same length as the sound one. Place the limb upon a cushion or folded garment; then bind both legs together. Do not move the patient more than is necessary, and then only upon a stretcher. Take great pains that in removing the end of the bone is not forced through the skin.
- Broken Ribs.**—To reduce the pain caused by motion of the chest in breathing, bind a towel firmly around the chest and fasten it well with safety pins or by sewing.
- Broken Thigh.**—After steady pulling has made both limbs of the same length, bind both legs together at the knees and at the ankles. Place the patient so that his limbs are bended at the knees.
- Broker.**—An agent or factor employed on commission or fee to buy or sell commodities.
- Brokerage.**—Commission charged by a broker.
- Bromine.**—One of the chemical elements occurring in sea-water and obtained from sea-weeds. It is a very disagreeable smelling substance.
- Bronchitis.**—1089.
- Brontë, Charlotte.**—(1816-1855.) A well-known English novelist who wrote under the name of "Currer Bell." Her best-known work is "Jane Eyre."
- Bronze.**—An alloy of copper and tin of varying proportions. It is largely used for house and church bells, cannon, speculum, and telescope metal. Silico-Bronze and Phosphor-Bronze have silicon and phosphorus mixed with the bronze and are used to conduct electricity. Manganese Bronze is used for making screw-propellers.
- Brooke, Stopford Augustus, Rev.**—An eminent English Unitarian minister and literary writer. Was born 1832, in Dublin. He was a clergyman of the Church of England until 1880 when he became a Unitarian.
- Brook Farm.**—A farm at West Roxbury, near Boston, Mass., and headquarters of the "Brook Farm Association," founded by Ripley, Hawthorne, C. A. Dana, and others, as an experiment in agriculture and education. "Founerism" was introduced in 1844 and the "Brook Farm Phalanx" was incorporated in 1845. The organization was dissolved in 1847.
- Brookline.**—A village suburb of Boston, in Norfolk Co., Mass. Pop. (1900), 19,935.
- Brooklyn.**—Situated on the western end of Long Island; formerly a separate city, now one of the boroughs of the new municipality of New York. It is called the "City of Churches." It has large docks and basins and contains a U. S. navy yard. It was settled about 1637 and at first called Breukelen. The battle of Long Island was fought on its sight. It was incorporated in 1834. Pop. (1900), 1,166,582.
- Brooklyn, The.**—The flagship of Commodore Schley during the battle of Santiago. See SCHLEY, WINFIELD SCOTT, 505.
- Brooklyn Bridge.**—A suspension bridge, the largest in the world, over the East River, uniting the boroughs of Manhattan and Brooklyn in New York City. It was begun in 1867 and completed in 1884. The bridge crosses the river by a single span, 1,595½ ft. long and 135 ft. above high water level, and is suspended from two massive piers on the opposite sides, which measure 50 by 140 ft. at the water level, and 40 by 120 ft. at the summit, and are 277 ft. high. The total length is 5,989 ft. There are four main cables of steel wire, each 15¾ inches in diameter. The width of the bridge is 85 ft., and is sub-

- divided into two driveways and two railway tracks, between which is a promenade for pedestrians. It was planned and constructed by the Roebings. A second and similar bridge across the East River is now (1902) in course of construction in order to facilitate the enormous traffic between New York City and Brooklyn.
- Brooks, Charles Timothy.**—Born at Salem, Mass., 1813; died at Newport, R. I., 1883. An American Unitarian clergyman and author, noted chiefly as a translator from the German.
- Brooks, James Gordon.**—Born at Claverack, N. Y., 1801; died at Albany, N. Y., 1841. An American poet and journalist. He married Mary Elizabeth Aiken (pseudonym, "Norna,") in 1828, and together they published a volume of poems entitled, "The Rivals of Este, and Other Poems."
- Brooks, John.**—Born at Medford, Mass., 1752; died, 1825. An American Revolutionary officer and politician. He carried the German intrenchments at the battle of Saratoga. Was governor of Mass. (1817-23).
- Brooks, Maria Gowen.**—Born at Medford, Mass., about 1795; died in Cuba, 1845. An American poet, author of "Zophiël, or the Bride of Seven." She was known as Maria del Occidente, a sobriquet given, her by Southey.
- Brooks, Phillips.**—Clergyman; sketch of, 64.
- Brooks, Preston Smith.**—Born in Edgefield County, S. C., 1819; died at Washington, D. C., 1857. An American politician, notorious for his assault on Charles Sumner in the Senate Chamber at Washington, May 22, 1856. He was a member of Congress from S. C. (1853-57). See CHARLES SUMNER.
- Brougham, Henry Lord Brougham and Vaux.**—(1778-1868.) A many-sided statesman who will be best remembered as a law reformer.
- Brouwer, Adrian.**—3491.
- Brown, Benjamin Gratz.**—Born at Lexington, Ky., 1826; died at St. Louis, Mo., 1885. An American politician and journalist. Was U. S. senator from Mo. (1863-67); governor of Mo. (1871-72); was the unsuccessful candidate of the Democrats and liberal Republicans for Vice-president in 1872.
- Brown, Charles Brockden.**—Born at Philadelphia, 1771; died, 1810. An American novelist. Among his productions are, "Wieland, or The Transformation," "Ormond," "Arthur Mervyn," "Edgar Huntley," etc.
- Brown, George Loring.**—Born, 1814; died, 1889. An American landscape painter.
- Brown, Gould.**—Born at Providence, R. I., 1791; died at Lynn, Mass., 1857. An American grammarian. He conducted an academy in New York City for many years. He wrote "Institutes of English Grammar," "Grammar of English Grammars."
- Brown, Henry Kirke.**—Born, 1814; died, 1886. An American sculptor. His chief productions were an equestrian statue of Washington at New York and of Gen. Scott at Washington.
- Brown, Jacob.**—Born in Bucks County, Pa., 1775; died at Washington, D. C., 1828. An American general. He was appointed brigadier-general in 1813 and placed in command of the army of the Niagara; he gained victories over the British, at Chippewa, Lundy's Lane, and Fort Erie, 1814, and became general-in-chief of the U. S. army in 1821.
- Brown, John.**—Abolition agitator; sketch of, 69.
- Brown, Nicholas.**—Born at Providence, R. I., 1769; died in 1841. An American merchant, patron of Brown University (formerly Rhode Island College), to which he gave in the aggregate \$100,000.
- Brown, Tarleton.**—Born in Barnwell District, S. C., 1754, died, 1846. An American Revolutionary soldier. He served throughout the War of Independence, and wrote "Memoirs" pertaining to contemporaneous events in the Carolinas, which were privately printed with notes by Charles J. Bushnell (1862).
- Browne, Charles Farrar** (*pseudonym*, ARTEMUS WARD).—Born at Waterford, Me., 1834; died at Southampton, Eng., 1867. An American humorist. His chief works are "Artemus Ward: His Book," "Artemus Ward: His Travels," "Artemus Ward in London."
- Browne, John Ross.**—Born in Ireland, 1817; died in Oakland, Cal., 1875. An Irish-American traveler and humorist. Was U. S. minister to China (1868-69). He wrote "Yusef, or the Journey of the Fragi: a Crusade in the East," etc.
- Browne, Junius Henri.**—Born about 1837. A journalist and man of letters. He was a correspondent of the New York "Tribune" during the Civil War, was captured by the Confederates while on one of the vessels of the U. S. fleet that "ran" the batteries at Vicksburg, early in 1863, and was kept in confinement for some months.
- Brownell, Henry Howard.**—Born at Providence, R. I., 1820; died at East Hartford, Conn., 1872. A poet. His works include "Poems," "Lyrics of a Day," "War Lyrics and Other Poems," etc.
- Brownell, Thomas Church.**—Born at Westport, Mass., 1779; died at Hartford, Conn., 1865. A bishop of the Protestant Episcopal Church, and president of Trinity College, Hartford. He was author of "Religion of the Heart and Life," etc.
- Browning, Robert.**—(1812-1889.) An English poet. For the study of his works numerous Browning Societies have been formed, both in England and America.
- Browning, Elizabeth Barrett.**—(1806-1861.) An English poetess, married Robert Browning in 1846.
- Brownlow, William Gannaway** (PARSON BROWNLOW).—Born in Wythe Co., Va., 1805; died at Knoxville, Tenn., 1877. An American journalist and politician. In 1839 he became editor of the Knoxville "Whig," in which, although an advocate of slavery, he opposed secession. The paper was suppressed by the Confederate government in 1861. He was arrested for treason, but was released and sent inside the Union lines, Mar. 3, 1862. He was governor of Tenn. in 1865 and became U. S. senator in 1869.
- Brown's Insurrection.**—In 1859, John Brown, an extreme Abolitionist, with a small band of adherents, leased a farm in Md., near Harper's Ferry, Va. (now W. Va.), in furtherance of a

- plot to seize the U. S. armory and its contents at Harper's Ferry. He smuggled arms to the farm and on Sunday evening, Oct. 16, 1859, with a force of 22 men, he descended on the buildings, cut telegraph wires and stopped trains. After a struggle which continued more than 24 hours, during which many citizens and nearly all of Brown's force were killed or wounded, Brown and the survivors of his band were overpowered by U. S. troops and captured. They were tried and convicted, and were executed Dec. 2, 1859. (See **BROWN, JOHN**, sketch of, 69.)
- Brownson, Orestes Augustus.**—Born at Stockbridge, Vt., 1803; died at Detroit, Mich., 1876. An American journalist and theologian. At first a Presbyterian, he became a Universalist minister in 1825, a Unitarian preacher in 1832, and a Roman Catholic in 1844.
- Brownstown (Mich.), Battle of.**—An engagement Aug. 5, 1812, in which Maj. Thomas B. Van Horne, with 200 men of an Ohio regiment were ambuscaded and almost surrounded by Indians under Tecumseh. The detachment lost heavily and retreated in disorder. It had been sent by Gen. Hull, who had invaded Canada, to meet and escort reinforcements that had, with cattle and provisions, been dispatched to him by Gov. Meigs of Ohio. Gen. Hull was aware that the British had been informed of the approaching relief expedition and intended to intercept it.
- Brownsville.**—A city in Cameron County, Tex., bombarded by the Mexicans, May, 1846. Pop. (1900), 6,305.
- Brown University.**—An institution of learning situated at Providence, R. I., founded in 1764, and until 1804 was known as "Rhode Island College." It is under the control of the Baptists. It has about 900 students and 70 instructors, and a library of 90,000 volumes.
- Bruges.**—In Belgium; the capital of the province of West Flanders. At one time the commercial center of Europe; now noted for its laces. It is the seat of a famous cathedral. Pop. (1899), 53,050.
- Brummel, George Bryan (BEAU BRUMMELL).**—(1778-1840.) A famous leader in his day of fashionable society in London.
- Brunswick.**—(1) A town in Cumberland Co., Me.; the seat of Bowdoin College. Pop. (1900), 2,321. (2) A seaport, the capital of Glynn Co., Ga. It exports lumber, cotton, and naval stores. Pop. (1900), 9,081.
- Brush, Charles Francis.**—Born at Euclid, O., 1849. An American electrician and inventor of the Brush dynamo-electric machine and the Brush electric arc lamp, both of which are extensively used in the U. S.
- Brush, George de Forest.**—Born at Shelbyville, Tenn., 1855. An American painter. His best-known works are paintings of American Indian subjects. In 1888 he won the Hallgarten prize at the National Academy exhibition.
- Brussels.**—The capital of Belgium, on the river Senne and is connected with Antwerp and with the Baltic Sea by the Schelde Canal. Pop. (1899), with its nine suburbs, 570,844.
- Brutus, Marcus.**—(85-42 B.C.). Marcus was a nephew of Cato the philosopher, whom he loved and tried to imitate. When still a young man, he went with his uncle to Cyprus to fight King Ptolemy, and received much praise on his return to Rome. He was remarkable for his honesty, his mild disposition, and his fondness for study. He was generous and honorable, and simple in his manners. When once he was convinced that a thing was right and honest, he could not be turned from his purpose.
- When the empire was divided into two parties under Pompey and Cæsar, he joined Pompey, feeling that he was doing what was best for the public good.
- He was much loved by Cæsar, who ordered his commanders never to kill him, but to try to take him alive. After the famous battle of Pharsalia, in which his party was defeated, he wrote to Cæsar who forgave him and invited him to Rome. He obeyed, and was welcomed by the conqueror as one of his best friends. He pleaded earnestly for his friend and brother-in-law, Cassius, who was also forgiven. He was left to govern Cisalpine Gaul while Cæsar made an expedition to Africa against Cato and Scipio. He showed himself worthy of the trust, and ruled so mildly that the people of the province were happy and contented.
- Cæsar, on his return, made him prætor. Cassius felt slighted, and soon began to plan to crush the dictator. He knew he could not succeed unless he could get the help of Brutus whom the people liked, so he sent his friends to Brutus to poison his mind against the man who loved him. Finally, he himself went to make friends, and by use of a "slick tongue" led him to join a plot to prevent Cæsar from being made king. On the ides of March (March 15, 44 B. C.) at the Roman senate, Cæsar met his death; but Brutus refused to consent to the death of Antony. He acted from good motives. He had been led to believe that the liberty of the state was in danger; at the Forum he stated his views in a speech which was loudly applauded by the crowd. In opposition to Cassius, he agreed with Antony that Cæsar should have a public funeral. He soon found that the people were much excited by Antony's oration, and threatened those by whom Cæsar had fallen. Thinking discretion the better part of valor, he stole out of the city to remain until the fury of the people had calmed.
- While Octavius and Antony were quarreling at Rome, he went to Athens. Here he soon became absorbed in study with the learned men, but he was also getting ready for war. From Roman students at Athens, and Roman soldiers who had been wandering about Thessaly, and by the aid of the governor of Macedonia, he soon formed a splendid army, and joined Cassius in Asia. Hearing that Octavius after driving Antony out of Italy had made friends with him and Lepidus, and formed an alliance with them, he urged Cassius to move with him to

Europe without delay. He put his whole soul into the enterprise and worked far into the night with his plans. Moving westward, he met the armies of Octavius and Antony on the plain of Philippi. Though the signs were not favorable, and Cassius urged delay, Brutus was impatient for the fight, and arranged for an attack at once. He gained a victory, but failed to prevent the defeat of Cassius.

Gathering the remnants of Cassius's army, he prepared for a new fight. On the following day, he again confronted Antony, who was anxious to lose no time. He led his men out like a brave soldier who was determined to spare himself no peril if only he could gain the victory. He was so well loved by his men that many were slain while defending him. Though he fought heroically, he was defeated. When he escaped from the battlefield, he shook hands with each of his companions, and in the face of death, said: "It is a great satisfaction that all of my friends have been faithful. If I am angry with my fortune it is for the sake of my country. As for myself, I am more happy than my conquerors, for I leave behind me that reputation for virtue which they, with all their wealth and power, will never acquire. It will always be said of them that they were an abandoned set of men, who destroyed the virtuous for the sake of the empire to which they had no right."

He then fell upon the point of his sword, and soon died (42 B.C.). The dead body was found by Antony, who gave orders that his richest purple mantle should be thrown over it. After the body was burned, the ashes were sent to Brutus's mother, Servilia.

Bryan, William Jennings.—Statesman and politician; sketch of, 76.

Bryant, William Cullen.—Poet and editor; sketch of, 82.

Bucentaur was a galley about 100 feet long by 21 feet wide, propelled by 32 banks of oars manned by 168 rowers. It was once a year used by the Doge of Venice when he married the Adriatic.

Bucephalus.—The name of the favorite warhorse of Alexander the Great. He died during Alexander's Indian expedition, and the town of Bucephalia on the Hydaspes marks the place where he was buried.

Buchanan, Franklin T.—Born in Baltimore, Md., 1800; died there, 1874. An officer of the U. S. navy and, during the Civil War, an admiral in the Confederate navy. He commanded the Confederate ironclad "Merrimac" in the fight with the "Monitor," early in 1862. (See JOHN ERICSON, 173.) In 1864 he was in command of the naval force in Mobile Bay, and was defeated, wounded, and captured by Farragut. (See DAVID G. FARRAGUT, 179.)

Buchanan, James.—Fifteenth President; sketch of, 87.

Bucharest.—The chief city of Wallachia, Rumania, has the reputation of being the most dissolute capital in Europe on account of its numerous cafés and gaming-tables. Pop. (1899), 282,071.

Buck, Dudley.—Born at Hartford, Conn., 1839. An American composer and organist. Has written cantatas, church music, etc.

Buckeye, The.—See CHESTNUT, 2856.

Buckingham Palace.—In St. James's Park, London. The city residence of royalty. It was settled upon Queen Charlotte, 1775, by an act of Parliament; was remodeled by George IV., and added to by the late Queen Victoria.

Buckner, Simon Bolivar.—Born in Ky., 1823. A general in the Confederate army during the Civil War, most noted in connection with the capture of Fort Donelson by Grant, Feb. 16, 1862. Gen. Floyd was in command of the Confederate force within the fort when it was invested by Grant; Pillow was second in rank, and Buckner third. A council was held the night of Feb. 15, and it was decided that the fort could not be held. Floyd and Pillow escaped with part of the troops, passing the command to Buckner, who the following day surrendered 13,000 men to Grant. (See FORT DONELSON.) After some time Buckner was exchanged and commanded a corps at Chickamauga. He continued in service till the end of the war. He was governor of Ky. (1887-81); in 1896 he was the unsuccessful candidate of the National or Sound Money Democrats for Vice-president, on the ticket with Gen. John M. Palmer, of Ill. (See NATIONAL DEMOCRATIC PARTY.)

Buckshot War.—Upon the result of the election in Philadelphia, Oct. 9, 1838, depended the control of the legislature which was to elect a U. S. senator. The Democratic legislative ticket was successful by narrow majorities, but the congressional candidate of that party was beaten, whereupon the election judges of the latter threw out 5,000 Whig votes, alleging fraud. The Whig judges retorted by granting certificates of election to all of their candidates, and these certificates were accepted by the Whig Secretary of State. When the legislature met, Dec. 4, 1838, armed friends of the contestants were present. Whigs controlled the state senate, which was overawed by the mob and adjourned. The Whig governor called out the militia and vainly sought federal aid. The Democrats organized the house, Dec. 25. A remark when the excitement was greatest, that the mob would feel "ball and buckshot before night," gave the political incident its name.

Bucyrus.—A town in Ohio, Crawford County, noted for the discovery there of the skeleton of a mastodon. Pop. (1900), 6,560.

Buda.—A city, forming with Pesth, the capital of Hungary. It is situated on the banks of the Danube. The chief industry is wine production, its chief product being the Ofenerwein. Pop. (1896), 600,000.

Buddha Legend, The.—1693.

Buddhism.—See CHINESE MYTHOLOGY, 1562.

Buell, Don Carlos.—(1818-1898.) An American general; served in the Mexican War; was placed in command of the Ohio division in 1861; played an important part in Grant's victory over Beau-

regard. He was removed from his command for allowing Gen. Bragg to escape.

Buena Vista (Mexico), Battle of.—Fought, Feb. 22 and 23, 1847, between Gen. Taylor with less than 5,000 men, and Gen. Santa Anna with 21,000. Taylor held the pass of Angostura, in the Sierra Madre Mountains on the road to San Luis Potosi, where he was attacked by Santa Anna. The fighting was very severe, particularly on the second day, toward the close of which the Mexicans fled to Agua Nueva, with a loss exceeding 2,000, while that of the Americans was 740. In the second day's engagement Jefferson Davis, then colonel of a Miss. regiment, determined the result by forming his riflemen in a V and repelling a charge of the Mexican lancers.

Buenos Ayres (*bwā'nōs i'vez*).—The capital of the Argentine Confederation in South America, is the first city of S. A. in size, is situated on the La Plata; pop., 556,934.

Buffalo.—A port of entry on Lake Erie, the chief city of Erie Co., N. Y., and the second city in the state. It has a good harbor protected by breakwaters, is the terminus of the Erie Canal, and is an important railway center. It has a large trade in grain, live stock, lumber, coal, cement, and salt and also manufactures of flour, iron, steel, oil, leather, etc. It was founded in 1801 and incorporated as a city in 1832. In 1892 it was the scene of extensive railroad strikes. Pop. (1900), 352,387. The Pan-American Exposition, in 1901, was held there.

Buffalo, The.—2428.

Buffalo (N. Y.), Destruction of.—Was effected on the night of Dec. 29, 1813, by Maj.-gen. Riall, who, with 1,500 British regulars and a party of Indians, crossed the Niagara River at Black Rock, 800 American troops fleeing at the approach of the enemy. Gen. Amos Hall, who had been intrusted with the defense of the place, was, however, so gallantly supported by Canadian refugees and Chatauquan troops that he held the foe in check until the inhabitants had escaped. He was finally obliged to abandon the town to the invaders, who sacked it and left only four buildings standing.

Buford, Napoleon Bonaparte.—Born in Ky., 1807; died, 1883. An officer and military engineer in the U. S. army. He entered the service, at the beginning of the Civil War, as colonel of the 27th Ill. Volunteers; was promoted, successively, to brigadier-general and major-general; he showed great skill in military engineering operations. He was commissioner of Indian Affairs (1868-69).

Building and Loan Associations.—First devised and organized in England, early in the 19th century. Their purpose is to enable persons of small means to secure homes, and at stated intervals to put aside fixed sums to make the investment safe and profitable. Formerly the home-building or home-buying fund was derived wholly from the periodical payments of members (shareholders). Now prepaid, full paid, and permanent shares are sold by the associations,

payable in full in advance or by installments as the subscribers may elect. Special deposits in any amount may be made, and shares partly paid are raised to their par value by adding to payments made, the dividends apportioned to such payments. Special deposits may usually be withdrawn by the depositor at will, but installment and prepaid shares must remain in until they reach par value. Full-paid shares must remain in a certain time and permanent shares until the corporation dissolves. The first association in the U. S. was the Oxford Provident Building Association, founded at Frankford, Pa., in 1831. Now this country has more than 6,000 such organizations, with assets exceeding \$650,000,000.

Building and Loan Societies.—5295.

Buildings, High,

Eiffel Tower, Paris, 1,000 feet.

Washington Monument, 555 feet.

City Hall, Phila., 535 feet.

Cathedral of Cologne, 511 feet.

Cathedral of St. Stephen, Vienna, 470 feet.

Cathedral at Strasburg, 468 feet.

St. Martin's Church, Landshut, 463 feet.

Chimney at Glasgow, 460 feet.

Great Pyramid of Cheops, 450 feet.

St. Peter's Cathedral at Rome, 448 feet.

King Shafra's Pyramid, 447½ feet.

St. Paul's Cathedral, London, 404 feet.

Torazzo Tower, Cremona, 396 feet.

Florence Cathedral, Italy, 387 feet.

Cathedral at Fribourg, Switzerland, 386 feet.

Amiens' Cathedral, 383 feet.

Aqueduct delle Torre, Spoleto, Italy, 380 feet.

Hôtel de Ville, Brussels, 364 feet.

Cathedral at Milan, Italy, 360 feet.

Victoria Tower, Westminster, 340 feet.

Bartholdi Statue, New York, 329 feet.

St. Patrick's Cathedral, New York, 328 feet.

Dashur Pyramid, Egypt, 326½ feet.

St. Mark's, Venice, 323 feet.

Norwich Cathedral, England, 315 feet.

Lincoln Cathedral, England, 300 feet.

Belfry Tower, Bruges, Belgium, 290 feet.

Trinity Church, New York, 84 feet.

St. Botolph's, Boston, England, 282 feet.

Pantheon, Paris, 258 feet.

Monument, London, 240 feet.

Canterbury Cathedral, England, 235 feet.

Masonic Temple, Philadelphia, 230 feet.

Bunker Hill Monument, Boston, 221 feet.

Mosque of St. Sophia, Constantinople, 182 feet.

Albert Memorial, London, 180 feet.

Leaning Tower of Pisa, 179 feet.

Tower of Chicago Waterworks 175 feet.

Arc de Triomphe, Paris, 162 feet.

Trajan's Column, Rome, 127½ feet.

High Bridge, New York, 116 feet.

Pompey's Pillar, Alexandria, 100 feet.

Cleopatra's Needle, New York, 68 feet.

Bulgaria.—An independent European principality, on the Balkan Peninsula, composed of Bulgaria as organized in 1878 and Eastern Rumelia. It is a constitutional monarchy; Sofia is the capital. Area, 37,860; pop., 3,733,000.

Bull.—A term applied in the stock market to one who buys with the expectation of an advance in prices.

Bull, John.—(1563-1628.) (1) An English composer and organist. (2) The personification of the English nation.

Bull, Ole Bornemann.—(1810-1880.) A Norwegian violinist and musical composer of world-fame. He made five visits to America professionally.

Bullion.—Gold and silver uncoined.

Bullock's Lungwort.—See MULLEIN, 2895.

Bull Run (Va.), Battle of.—This battle, fought July 21, 1861, was the first important engagement of the Civil War. It was the result of the first attempt to advance a large Federal army into Va., toward Richmond. Under President Lincoln's calls for volunteers, a force of 40,000 men had been assembled, organized, and drilled at and near Washington. The impatience of the people of the North for a forward movement of the army was excessive. The mistaken idea that the war would last but three months was yet very generally entertained. Many believed that the Union army could march straight to Richmond, capture the Confederate capital, and then continue upon its conquering way until all opposition to the authority of the U. S. had been overcome. They did not realize that south of the Potomac had been assembled an army equal in strength, courage, and determination, that would resist to the uttermost. The desperate contest that took place at the first grapple removed the scales from the eyes of the people and aroused them to the unwelcome truth that the struggle would be long and bloody. The Confederate army was encamped in the vicinity of Manassas, about 40 miles southwest of Washington. A small stream called Bull Run gave the name to the battle there fought. The movement of the Union army began July 16. The column had a strength of 28,500 and was commanded by Gen. Irvin McDowell. The Confederate army, commanded by Gen. P. G. T. Beauregard, was at this time 24,000 strong. The Federal advance was slow and cautious and the attack was not delivered till the morning of the 21st. The troops on both sides were raw and comparatively undisciplined. A few of them had participated in trifling skirmishes, but none had been through the test of battle. The fighting was severe from the beginning. The fortunes of the day wavered, but until noon the advantage was with the Federals. The tide was turned by the arrival of a very substantial Confederate reinforcement of 8,000 men from the Shenandoah Valley, under Gen. Joseph E. Johnston. This so increased the pressure upon the Union troops that about the middle of the afternoon they gave way in disorder, which soon became hopeless panic and rout. A few regiments and brigades maintained their organization, but most of them crumbled away and the men sought safety in flight, flinging away their arms and accoutrements as they ran. Many civilians, including several members of Congress and government officials, had accom-

panied the army as spectators of the battle, and these joined the demoralized mass that streamed back on the road to Washington. Thousands of men did not stop until they were on the safe side of the Potomac. A few unbroken regiments, kept well in hand by cool and skilful officers, formed the rear-guard and retreated in an orderly fashion. An exaggerated fear prevailed that the Confederates would follow up their decided victory and, perhaps, take Washington, but they were too much exhausted and broken to pursue the flying enemy and contented themselves with holding the field that they had won. The loss of the Federals was 2,700, of whom 1,200 were prisoners; that of the Confederates was 1,900. The result of the battle caused a paroxysm of rejoicing throughout the South, and a corresponding depression in the North. Both sides at once proceeded to very largely augment their armies and to gird themselves for the mighty struggle that was before them—in short, to prepare for *War*.

Bulwer-Clayton Treaty.—A treaty between Great Britain and the U. S., concluded at Washington, Apr. 19, and ratified July 4, 1850, by which both parties pledged themselves to respect the neutrality of the proposed ship-canal across Central America. Sir Henry Bulwer represented Great Britain and John M. Clayton the U. S.

Bulwer-Lytton, Edward George Earle Lytton (1805-1873), was distinguished as a writer and politician.

Bulwer-Lytton, Edward Robert Lytton.—(1831-1891.) A son of the novelist, was a writer of poems and prose under the name of "Owen Meredith." Governor-general of India (1878-80.)

Bulwer, Sir Henry, Lytton Earle, G.C.B.—English diplomatist and author. In 1849 he concluded the Clayton-Bulwer Treaty.

Bumble Bee, The.—See BEES, 2768.

Bunch-Berry, The.—2924.

Buncombe.—Spoken language designed to impress people at a distance without reference to the immediate audience. The phrase "to talk Buncombe" dates from the debate on the Missouri Compromise in the 16th Congress. Felix Walker, a member from N. C., part of whose district included Buncombe Co., persisted in speaking while the House called "Question." When expostulated with, he replied that "the people of his district expected that he would be heard from and that he was bound to make a speech for Buncombe."

Bunker Hill, or Breed's Hill (Mass.), Battle of.—This engagement, commonly known as the battle of Bunker Hill, is more correctly described as the battle of Breed's Hill, as through a misunderstanding of orders, the Americans seized and fortified Breed's Hill, which is nearer Boston, on the night of June 16, 1775. They numbered 1,000, under Col. Prescott. The following morning the British, estimated at from 3,000 to 3,500, thrice charged the hill, which then had about half as many defenders, all raw militiamen. The third assault was successful, but it resulted in a barren victory, for the British loss was 1,050, as against the American loss of 450. Among

- the slain on the side of the patriots was Gen. Joseph Warren, whose death was deeply lamented. The moral effect produced by the spectacle of farmers and tradesmen stubbornly resisting and mowing down British regulars, was of incalculable value to the patriot cause. The battle was one of the bloodiest in history, in proportion to the number engaged, as 30 per cent. of the combatants were killed or disabled in less than two hours, whereas at Gettysburg, after three days of fighting, the casualties in the Union army amounted to but 25 per cent.
- Bunker Hill Monument.**—A monument at Charlestown, Mass., dedicated June 17, 1843, the sixty-eighth anniversary of the famous Revolutionary battle. It is 221 feet high, and in the form of an obelisk with an obtusely pyramidal apex. The dedicatory oration was delivered by Daniel Webster and is considered one of his ablest addresses.
- Bunner, Henry Cuyler.**—Born at Oswego, N. Y., 1855; died at Nutley, N. J., 1896. An American writer and editor of "Puck." He wrote "Airs from Arcady," "Zadoc Pine and Other Stories," "The Midge," "Short Sixes."
- Bunsen, Robert Wilhelm.**—(1811—.) A famous German chemist, who invented the magnesium light, photometer, and gas-burner and made the discovery of spectrum analysis.
- Bunting, The.**—See NONPAREIL, 2578.
- Bunyan, John.**—(1628-1688.) An English clergyman and writer, much persecuted for his religious belief. His greatest work is "The Pilgrim's Progress," a part of which was written during imprisonment.
- Burbage, James.**—Died 1597. An English actor, and builder of the first theatre in London (1576-77).
- Burbage, Richard.**—(1567-1619.) A noted English actor, son of James Burbage. He was especially distinguished as a tragedian, and in all probability was the original Hamlet, Lear, and Othello. His fame was gained in the old Blackfriars and Globe theatres.
- Burchard, Samuel Dickinson.**—Born at Steuben, N. Y., 1812; died at Saratoga, N. Y., 1891. An American Presbyterian clergyman who gained notoriety in the presidential canvas of 1884 by the alliterative expressions, "rum, Romanism, and rebellion," used in a speech on Oct. 29, when with a large company of clergyman, he made a call on James G. Blaine, the Republican candidate for the presidency, at the Fifth Avenue Hotel, New York City. It was made the most of in Roman Catholic circles by the Democratic managers.
- Burden, Henry.**—Born at Dunblane, Scotland, 1791; died at Troy, N. Y., 1871. A Scotch-American inventor. His inventions include a cultivator, the hook-headed railway spike, and a machine for making horseshoes.
- Burdette, Robert Jones.**—Born at Greensborough, Pa., 1844. An American journalist and humorist. He was for many years editor of the Burlington (Iowa) "Hawkeye," and he became widely known as the "Hawkeye Man." As a lecturer he was a favorite of the American people.
- Burgess, Edward.**—Born at West Sandwich, Mass., 1848; died at Boston, Mass., 1891. A noted American designer of yachts. He was the designer of the sloop "Puritan," which beat the English cutter "Genesta" in 1885; of the "Mayflower," which beat the "Galatea" in 1886, and of the "Volunteer," which beat the English "Thistle" in 1887.
- Burgesses, House of.**—The official name by which was long known the state legislative body of Virginia. The name was adopted from England in colonial days.
- Burgoyne, John.**—(1730-1792.) An English general who served in the American Revolution. He was captured at Ticonderoga and was obliged to surrender to Gen. Gates at Saratoga.
- Burgundy.**—The name of a once independent kingdom, now divided between the departments of Yonne, Saône-et-Loire, and Côte-d'Or. The Burgundy wines are the produce of the vineyards of Côte-d'Or, and rank as the finest in the world.
- Burke, Adams.**—Born in Galway, Ireland, 1743; died at Charleston, S. C., 1802. An American jurist and politician; was a judge of the state supreme court in 1778, and wrote "Considerations upon the Order of Cincinnati," a pamphlet denouncing that organization.
- Burke, Edmund.**—(1729-1797.) A noted English statesman and essayist. His attitude toward the American colonies was one of conciliation and justice. His connection with the trial of Warren Hastings amply sustained his reputation as an orator and jurist.
- Burke, John Daly.**—Died near Campbell's Bridge, Va., 1808. An Irish American historian. He was killed by Felix Coquebert in a duel growing out of a political dispute. He wrote "History of Virginia from Its First Settlement to 1804."
- Burleigh, William Henry.**—Born at Woodstock, Conn., 1812; died at Brooklyn, N. Y., 1871. An American poet, journalist, and abolitionist.
- Burlingame, Anson.**—Born at New Berlin, N. Y., 1820; died at St. Petersburg, Russia, 1870. An American diplomatist and politician. Was representative to Congress from Mass. (1855-61), ambassador to China (1861-67), and negotiated, as special ambassador from China, several treaties with the U. S., England, Denmark, Sweden, Holland, and Prussia.
- Burlington.**—(1) The capital of Des Moines County, Iowa; an important railway center, and has large and varied manufactures; pop. (1900), 23,201. (2) A city and port of entry in Vt., situated on Lake Champlain; has a large trade in lumber and is the seat of the University of Vermont; pop. (1900), 18,640. (3) A city and port of entry in N. J., situated on the Delaware River; it was bombarded by the British in 1776; pop. (1900), 7,392.
- Burma.**—A division of British India occupying a part of the Indo-Chinese Peninsula. It is divided into Upper and Lower Burma. The principal river is the Irrawaddy. The capital is Mandalay, and is situated 3 miles from the Irrawaddy. Pop. 9,250,000.

- Burnaby, Col. Frederick.**—(1848-1885.) A gallant English soldier noted for his physical superiority. His "Ride to Khiva" is an account of his journey through hostile Russia. He was killed in the Sudan.
- Burne-Jones, Sir Edward.**—(1833-1898.) An English painter, an associate of the Royal Academy, was made a baronet in 1894. He assisted in painting the Arthurian legends at Oxford.
- Burnett, Frances Hodgson.**—Born at Manchester, Eng., 1849. An English-American novelist, author of "That Lass o' Lowrie's," "Haworth's," "Louisiana," "A Fair Barbarian," "Little Lord Fauntleroy," "The One I Knew Best of All," etc.
- Burney, Frances (MADAME D'ARBLAY).**—(1752-1840.) A noted English novelist.
- Burns, Robert.**—(1759-1796.) Scotland's great lyric poet, was the son of humble parents. His poetical works brought him social distinction, which subjected him to temptations to which he unfortunately yielded. He is preëminently the poet of the peasantry and humbler classes.
- Burns and Scalds.**—Soak lint, cotton wool, or waste in oil or oil and lime water and apply to the surface. Run a knife or scissors along the seams of the clothing if it is necessary to remove it.
- Burnside, Ambrose Everett.**—Born at Liberty, Ind., 1824; died at Bristol, R. I., 1881. A U. S. soldier and politician. At the beginning of the Civil War he entered the Union army as a colonel of R. I. Volunteers; promoted to brigadier-general early in 1862, and soon afterward to major-general. In Feb., 1862, he commanded a successful expedition, composed of both land and naval forces, the latter under Commodore Goldsborough, to the N. C. coast, which resulted in the capture of Roanoke Island and Newbern, by which a foothold was gained, which became an important base of future operations. Burnside commanded a corps in McClellan's army at Antietam, in Sept., 1862, and his conduct inspired such confidence in his ability that he was selected to succeed McClellan as commander of the Army of the Potomac, which he did, Nov. 7, of that year. The country was impatient for results, and he conducted a midwinter campaign, under great difficulties. Dec. 13, he assailed the Confederate army under Lee, which occupied a very strong position at Fredericksburg, on the Rappahannock River. Repeated assaults were made by the Union troops with the greatest gallantry, but they were repulsed at all points, with a mournful loss of life. The Union loss was 1,300 killed and 9,000 wounded; the Confederate loss was about 4,500. In January Burnside was relieved of the command, his successor being Gen. Joseph Hooker. Without complaint Burnside returned to a subordinate command, that of the 9th corps, with which he was sent to the West. His headquarters were for a time at Cincinnati and part of his troops were detached to aid Grant in the siege of Vicksburg. After the latter fell, Burnside's troops rejoined him and he entered on a campaign across Ky. and into east Tenn. He occupied Knoxville, where, near the end of 1863, he was besieged by Longstreet, with two divisions of Lee's Virginia army, which had been sent to reinforce Bragg at Chattanooga, and by the latter, after the battle of Chickamauga, detached to operate against Burnside. After the defeat of Bragg at Missionary Ridge, Grant sent Sherman with a strong force to the relief of Burnside. The approach of this body spurred Longstreet to a determined assault upon Fort Sanders. The Confederates were repulsed with heavy loss and Longstreet returned to Va. In the campaign of 1864-65 Burnside held an important command under Grant in Va. After the war he was governor of R. I. (1867-69), and U. S. senator from that state (1875-81).
- Burnt Corn Creek (Ala.), Battle of.**—Col. James Callier, with 180 men, July 27, 1813, overtook Peter McQueen, a half-breed Florida Indian, who had been persuaded by Tecumseh to ally himself with the British. McQueen, through the connivance of the Spanish governor, had received supplies from the British agent at Pensacola and had a considerable following of braves pledged to a war of extermination against the Americans. Callier undertook to disperse these Indians, who at first fled to the woods, but presently returned and attacked his men, two of whom were killed and 15 wounded. Callier was then obliged to retreat.
- Burr, Aaron.**—Born at Newark, N. J., 1756; died at Port Richmond, Staten Island, N. Y., 1836. A noted American politician. He served with distinction in the Canada expedition in 1775, and at Monmouth in 1778; began the practice of law in New York in 1783, was U. S. senator from N. Y. (791-97) and Vice-president of the U. S. (1801-05). His political prospects were ruined by a duel with Alexander Hamilton July 7, 1804, in which the latter was killed. Subsequently he conceived the plan of conquering Texas, and establishing a republic in the South, with New Orleans as the capital, of which he should be the president. This is generally believed to have been his scheme, and he entered actively upon the work of carrying it out and was arrested while conducting an expedition down the Ohio and Mississippi rivers. He was indicted for treason at Richmond, Va., May 22, tried and acquitted Sept. 1, 1807.
- Burritt, Elihu.**—Surnamed "The Learned Blacksmith." Born at New Britain, Conn., 1811; died there, 1879. A social reformer and linguist, a blacksmith by trade. He advocated the abolition of war, and was the author of "Sparks from the Anvil," "Olive Leaves," "Thoughts and Things at Home and Abroad."
- Burroughs, George.**—Died at Salem, Mass., 1692. An American clergyman, pastor at Falmouth, Me. He was accused of witchcraft, condemned and executed on the evidence of confessed witches, who affirmed that he had attended witch-meetings with them.
- Burroughs, John.**—Born at Roxbury, N. Y., 1837. An American essayist of nature. He wrote "Wake Robin," "Winter Sunshine," "Birds and Poets,"

"Fresh Fields," "Signs and Seasons," "Locusts and Wild Honey," etc.

Burroughs, William.—Born near Philadelphia, 1785; died, 1813. An American naval officer who, when in command of the "Enterprise," captured the British brig, "Boxer," near Portland, Me., Sept. 5, 1813. Both commanders were killed in the action.

Bursar.—Treasurer or cashier of a college or other institution.

Bushel.—A dry measure used for fruit, grains, and vegetables. It contains 8 gallons of 267.27 cubic inches, and holding 10 lbs. of distilled water. Thus the bushel contains 80 lbs. of water, and measures 2,218.2 cubic inches. The U. S. Government standard for dry measure is the "Winchester bushel," being a cylindrical vessel having an inside diameter of 18½ inches, and 8 inches deep and containing 2,150.42 cubic inches.

A box 16 in. x 12 in. x 11.2 in will hold a bushel.

A box 12 in. x 11.2 in. x 8 in. will hold half a bushel.

Bushmen.—An African race of degenerated negroes. Their language consists of a number of dialects all marked by a peculiar clicking sound.

Bushnell, Horace.—Born at Litchfield, Conn., 1802; died at Hartford, Conn., 1876. A distinguished Congregational clergyman and theologian. His chief works are "God in Christ," "Christ in Theology," "Nature and the Supernatural," "Vicarious Sacrifice," etc.

Business, Training Young Men for.—5236.

Bussey, Benjamin.—Born at Canton, Mass., 1757; died at Roxbury, near Boston, 1842. An American merchant, founder of the "Bussey Institution," a college of agriculture and horticulture, opened in 1869, in connection with Harvard College.

Butcher-Blrd, The.—2534.

Butler.—The capital of Butler Co., Pa., 30 miles north of Pittsburg. Pop. (1900), 10,853.

Butler, Benjamin Franklin.—Born at Deerfield, N. H., 1818; died at Washington, D. C., 1893. An American lawyer, soldier, and politician. He volunteered in the Union army under President Lincoln's first call, in Apr., 1861, and soon rose to the rank of major-general. His first command was at Fortress Monroe, and a force sent by him against the Confederates at Big Bethel was defeated, in the first field engagement of the war. In Aug., 1861, Butler, with a combined land and naval force, the latter under Commodore Stringham, conducted an expedition against Cape Hatteras Inlet, N. C., where he achieved a brilliant victory. Early in 1862 he was placed in command of a large military detachment and sent with it to the lower Mississippi, to co-operate with Commodore Farragut in the capture of New Orleans. The work was done by Farragut and his ships, who "ran" the Confederate forts, Jackson and St. Philip, and took the city. The forts then surrendered and Butler had but to occupy New Orleans with his troops. He was appointed military governor of that city, which position he occupied till the

end of that year, when he was succeeded by Gen. Nathaniel P. Banks. Butler had no mercy for "rebels" and he ruled with an iron hand. Some of his acts and orders were extremely severe and drastic—especially his "woman order," which directed that all females who should, by word or deed, cast reproach upon the Union soldiers or their flag, should be considered and treated as "women of the town, plying their vocation." A man named Mumford had hauled down the U. S. flag from one of the public buildings. He was arrested, tried by a drumhead court-martial and condemned to be hanged. Butler approved the sentence, and although prodigious efforts were made by the friends of the condemned man to secure a mitigation of the sentence, Butler declined to exercise clemency and Mumford was executed. These acts caused the name of Butler to be bitterly execrated by the people of the South. So intense was the feeling against him that the Confederate president issued an official proclamation denouncing him as a malefactor and putting a price upon his head. Butler enforced the most strict sanitary measures, and never before, at that season of the year, had New Orleans been so free from epidemic diseases. During the campaign of 1864, Butler commanded the Army of the James, which operated under Grant in Va. At Bermuda Hundred, near Petersburg, Butler was penned in a *cul de sac* by the Confederates, which fact gave rise to the famous words "bottled up," applied by Gen. Barnard, chief of engineers. After the war Butler was active and conspicuous in politics. He was a member of Congress from Mass. (1867-75 and 1877-79); governor of that state (1883); unsuccessful candidate of the combined Greenback, Labor, and People's parties for President, in 1884. Butler was somewhat irascible and in Congress he was picturesque and independent to an unusual degree. He had a sharp tongue and quick wit, and made free use of both. Once, while making a speech, he was interrupted by Samuel S. Cox of N. Y. "Shoo fly, don't bodder me!" exclaimed Butler, with a lofty wave of the hand, and for the moment Mr. Cox was completely overwhelmed. Gen. Butler, early in 1861, was the first to declare the negro slaves to be "contraband of war."

Butler, James.—Born in Prince William Co., Va.; died, 1781. An American patriot in the Revolutionary War. He distinguished himself in the partisan warfare with the British and was killed in the massacre at Cloud's Creek, S. C.

Butler, John.—Born in Conn.; died at Niagara, 1794. An American Tory commander in the Revolutionary War. He led a force composed of Indians and loyalists, in the so-called "Wyoming Massacre," which desolated the infant settlement of Wyoming in 1778. After the war, he fled to Canada and his estates were confiscated. He was, however, rewarded by the British government with the office of Indian agent, 5,000 acres of land, and a salary and pension of \$3,500 a year.

- Butler, Joseph.**—(1692-1752.) Called by Chalmers "the Bacon of theology," was one of the most eminent English divines. His great work is the "Analogy," in which he traces the likeness between the natural and the spiritual worlds.
- Butler, Samuel.**—(1612-1680.) An English poet. Wrote "Hudibras," a mock-heroic poem. He died in great poverty.
- Butler, William Allen.**—Born at Albany, N. Y., 1825. An American lawyer and poet, son of Benjamin Franklin Butler. He wrote "Nothing to Wear, an Episode in City Life," "Two Millions," "General Average," and other poems.
- Butler, William Orlando.**—Born in Jessamine Co., Ky., 1791; died at Carrollton, Ky., 1880. An American general and politician. He served in the War of 1812, and in the war with Mexico; was a member of Congress and Democratic candidate for Vice-president in 1848.
- Butte or Butte City.**—A city in Silver Bow Co., Mont., situated in the heart of the Rocky Mountains. It contains the Anaconda and many other mines, and produces large quantities of gold, silver, and copper. Pop., (1900), 30,470.
- Butterfield, Daniel.**—Born at Utica, N. Y., 1831; died there, 1901. An officer of distinction in the U. S. army. When the Civil War broke out he was colonel of the 12th Reg't, N. Y. National Guard, volunteered with it and went to the field; continued in active service through the war as brig.-gen. and maj.-gen.; commanded the fifth corps at Fredericksburg, and was chief of staff of the Army of the Potomac at Chancellorsville and Gettysburg; went west with Hooker in the autumn of 1863 and commanded a division of the 20th corps at Chattanooga and during the Atlanta campaign; was twice wounded and was awarded a medal of honor; was appointed sub-treasurer of the U. S. at New York, in 1869; was active in raising troops for the Spanish-American War in 1898.
- Butterfly, The.**—2774.
- Butternut, The.**—See WALNUT, 2857.
- Buzzard, The.**—See VULTURE, 2524.
- Buzzard's Bay.**—An arm of the Atlantic in the south-east of Mass.
- Byles, Mather.**—Born at Boston, 1706; died there, 1788. An American clergyman and poet. He was imprisoned as a Tory in 1777.
- Byrd, William.**—Born at Westover, Va., 1674; died there, 1744. An American lawyer. Was for 37 years a member and finally president of the council of Va. In 1728 he was one of the commissioners appointed to fix the boundary between Va. and N. C., an account of which is contained in the "Westover Manuscripts" written by him.
- Byron, Lord George Gordon.**—(1788-1824.) An eminent English poet. He spent the greater part of his life abroad. Among his most famous works are "Childe Harold," "Don Juan," and "The Prisoner of Chillon." He gave his entire support to the efforts of the Greeks to free themselves from the Turkish yoke. He died at Missolonghi. His body was conveyed to England. It was refused a resting place in Westminster Abbey.
- Byzantine Empire, or Eastern, or Greek Empire,** was founded in 395 A. D. through the division of the Roman Empire into two parts by the Emperor Theodosius the Great. The empire was finally destroyed by the Turks in 1461.

C

- Cab.**—A term applied usually to a public vehicle, known in England as a "two-wheeler," or "Hansom" (from the name of the inventor), and drawn by one horse. In the hansom, the passenger or hirer of the vehicle sits immediately in rear of the dashboard, the driver sitting on an elevated perch behind, the reins being passed over the top. The term cab is sometimes also applied to a four-seated, closed or open carriage, drawn by one or two horses, the driver sitting in front. The term is also applied to the covered part of a locomotive, in which the engineer and fireman have their stations. The word cab is derived from the *cabriolet*, a light one-horse carriage, with two seats and a calash top. In London, England, the cab or hansom was called the "gondola" of the British metropolis by Disraeli. The number of these licensed vehicles in London is about 24,000, including two and four "wheelers" and hackney coaches.
- Cabal.**—A term in use to-day, chiefly among politicians, to designate a small, intriguing, factious party, united for personal or political ends, and sometimes effecting its purpose by unscrupulous, underhand means. The term is, therefore, one of reproach. In this sense, it was applied to the unpopular ministry of Charles II. of England, comprising five members, the initials of whose names—Clifford, Ashley (Shaftesbury), Buckingham, Arlington, and Landerdale—form the word *Cabal*, and has since been used to stigmatize an odious, intriguing faction.
- Cabet, Étienne.**—Born at Dijon, France, 1788; died at St. Louis, Mo., 1856. A French communist who founded a communistic colony in Texas in 1848, which was removed in 1850 to Nauvoo, Ill.
- Cabinet.**—In the U. S. the term refers to the heads of the eight executive departments of the government, who confer with and advise the President on subjects of administrative policy. The Constitution does not provide for a Cabinet, but it empowers the President to "require the opinion in writing of the principal officer in each of the executive departments upon any subject relating to the duties of their administrative offices." Collectively, these heads of depart-

ments have long been known as the Cabinet, and all Presidents have sought their counsel. For many administrations, Presidents and their advisers have held regular and frequent meetings, and the Cabinet ranks as an essential part of the government. A law passed in 1886 designates the members of the Cabinet to fill the executive office in the order named in the act, in case of the death of the President and the Vice-president. In all English-speaking countries the word cabinet has now substantially the same meaning as in the U. S. (See PRESIDENTIAL SUCCESSION.)

Cabinet Council.—A meeting for private counsel and deliberation on public affairs, by a select body of Cabinet ministers and confidential counsellors. In the United States, the President's Cabinet consists of the Secretary of State, the five other secretaries or chiefs of departments of the Federal Government, together with the Attorney-general and the Postmaster-general, each of whom receives a salary of \$8,000 a year. It includes, as a matter of course also, the President and Vice-president. In England, the Cabinet consists of 20, or so, of the King's chief ministers, including the Prime Minister, who calls the council together.

Cable, Atlantic The. 190.

Cabot, George.—Born at Salem, Mass., 1751; died at Boston, 1823. He was U. S. senator from Mass. (1791-96), and was elected in 1814 president of the Hartford Convention.

Cabot, John.—An Italian navigator who left Italy and entered the service of England. He sailed from Bristol in 1496 in search of a northwest passage to India; returned within a few months, having discovered Cape Breton Island, and Nova Scotia. In 1498, he made another voyage and reached the coast of Labrador.

Cabot, Sebastian.—(1474-1557.) A celebrated explorer, son of John Cabot. He made various voyages in the service of both Spain and England, but finally identified himself with English interests.

Cache (*kash*).—A hiding-place, often a hole in the ground screened by shrubs, for concealing and preserving surplus provisions and other articles cumbersome to carry. The term is used by lumbermen, prospectors, miners, surveyors, hunters, and other travelers in French and western Canada, and in the western portions of the United States. It is derived from the French verb *cachev*, to conceal or hide.

Cactus, The.—2931.

Caddo.—A confederacy of North American Indians, formerly inhabiting northwestern La. and Tex. but now removed to the Quapaw reservation, Ind. Ter.

Cade, John (JACK CADE).—Leader of a rebellion, principally of Kentishmen, in the summer of 1450. The rebels were put down within a few days. Cade was killed near Heathfield, Sussex, England.

Cadet.—Strictly speaking, the younger or youngest son; but as ordinarily used in the U. S., an appointee to the Military Academy at West Point

or the Naval Academy at Annapolis. Each of the Congressional districts, the Territories and the District of Columbia is entitled to one cadet yearly at each of the academies, and there are ten appointments at large to each of the institutions. These ten appointments, and those from the District of Columbia, are made by the President. The others are made nominally by the Secretary of War and the Secretary of the Navy, respectively, but really by the representatives in Congress and the Territorial delegates, except when candidates for the cadetships are not nominated by July 1, in which case the heads of departments named actually make the appointments. The persons chosen must be residents of the districts or Territories from which the appointments are made, and must pledge themselves to serve the government for eight years after graduation, unless previously discharged.

Cadillac, Antoine de la Mothe.—Died about 1720. Was the founder of Detroit in 1701 and governor of La. (1711-17).

Cadiz.—A seaport and capital of the province of Cadiz, Spain. It has extensive commercial interests, including the exportation of sherry. It is also a city of much historical interest. Pop. (1897), 70,177.

Cadmela.—The acropolis of Thebes, Bœotia; so-called in honor of its mythical founder, Cadmus.

Cadmium.—A white metal, discovered in 1817, closely allied to zinc. It somewhat resembles tin, but is denser, its specific gravity, after fusion, being 8.6. It is soft, but harder than tin, and less so than zinc, and is malleable and ductile, crackling like tin when a rod of it is bent. It takes a luster when polished; its electric conductivity is 22.10, or somewhat lower than that of zinc. It melts at a temperature below redness (315° to 320° C.), and boils at the temperature of 860° C., giving off a vapor of an orange-yellow tint. The best test for cadmium, the production of which is restricted to few localities, is afforded by the color of the deposit formed on charcoal when it is volatilized and oxidized before the blowpipe flame. This is of a reddish-brown color, and usually shows the colors of thin plates from the tenuity of the film; whereas zinc under the same conditions gives a deposit which is bright yellow while hot, but becomes white on cooling. There are alloys of cadmium with various other metals. The only compound of real importance is the sulphide (CdS), which produces several brilliant yellow-orange colors. This is known as cadmium yellow, and is of much value to the artist. For photographic purposes, the iodide of cadmium (CdI) is much used, and is obtained by the action of iodine upon the metal in the presence of water.

Cadmus.—According to Greek legend, son of Agenor, king of Phœnicia; said to be the founder of Thebes, and to have introduced the Greek alphabet.

Caen (*koñ*).—The capital of an arrondissement in the department of Calvados, in France. It is

situated on the Orne River, at the influx of the Odon, 9 miles from the English Channel and 120 west of Paris. It has considerable manufactures and a large export trade in Caen stone. It has excellent schools, libraries, museums, and a college with faculties in law and science. Its chief buildings, besides the Hotel de Ville, and the Palais de Justice, embrace the cathedral church of St. Pierre, with the finest spire in Normandy, and the interesting old church, the *Abbaye aux Hommes*, built by William the Conqueror, and in which his remains were interred. Caen was founded by the dukes of Normandy and was strongly fortified by them. It was once the capital of Lower Normandy. It has withstood several sieges, among them that undertaken in 1346 by Edward III. of England. In 1417, it was captured by the English and held by them until 1459, when it was capitulated to the French, in whose possession it has since continued. Population, about 47,000.

Caerleon.—A town in Monmouthshire, England, on the river Usk, 3½ miles north of Newport. Historically, the place is of interest, having been a site of Roman occupation, the *Isca Silurum* of Roman dominion, and famous at a later age (the 12th century) as a seat of learning. The British ecclesiastic-historian, Giraldus Cambrensis, gave a lively picture in his day, though somewhat overcolored, of the town's wealth and magnificence. It has also claims to notice in connection with the romance of King Arthur and the Round Table. It was hither the "blameless king" came at Pentecost to be crowned and to hold high festival with the chieftains of his court.

Cæsar, Julius.—(100-44 B. C.) Cæsar was born a century before Christ. He was the most famous member of an illustrious and noble family. He was a diligent student, formed good habits, and at an early age gave promise of future greatness. When he was sixteen years old, he lost his father, who was prætor. Later, he married Cornelia, daughter of Lucius Cinna, the famous Marian leader.

One of the earliest incidents in his life was his capture by pirates. He paid the ransom of twenty talents which they demanded, but immediately manned some vessels, attacked the corsairs, captured them, and crucified them.

When Sulla became ruler of Rome, Cæsar felt that his life was in danger, for he was cousin of Marius who led the opposing party. For a while he left Rome; but when Sulla's power grew weaker, he returned. He soon became very popular with his countrymen, and was elected to the office of high-priest. Soon, he was appointed governor of certain provinces in Spain. When his creditors refused to let him go until he had settled his debts, he was befriended by Crassus, one of the wealthiest men in Rome, who pledged himself to pay all of the debts. He had an ambition to govern men, and he was well fitted for the positions which he sought. He is reported to have said: "I would rather be the first in a village than the

second in Rome." In Spain he conquered several tribes and made them subject to Rome. He also settled many quarrels, and made the people of the province happy by good laws.

On returning to Rome, he paid his debts, secured peace between Pompey and Crassus, the two leaders of the opposing parties, and was soon elected consul. To seal an alliance with Pompey, he gave him his daughter Julia in marriage. He proposed many laws which gained for him the favor of the people. Through the influence of Pompey, he was sent with an army of four legions to govern Gaul and Illyria. In less than ten years he took by storm eight hundred cities, and conquered many of his soldiers by setting examples of courage and endurance. Though small and delicate, he exposed himself to danger and hardship. He was quick to act, and knew how to save time.

His expedition to Britain was one of the most remarkable of all, and showed a great spirit of daring. After imposing a tribute on the island, and receiving hostages from the king, he returned to Gaul. Later, when all Gaul rose against Roman rule, he convinced the inhabitants that his troops could neither be conquered nor resisted.

By this time, the elections at Rome were accompanied by much open corruption and bloodshed. Many declared that a monarchy would be better than a republic managed in such a manner. Under such conditions Pompey was declared sole consul, and also continued to govern Spain and Africa, where he had his armies.

Cæsar became jealous of the favor shown Pompey and took steps to increase his own popularity. He thus aroused the opposition of Pompey, who, becoming alarmed, undertook to reduce his power. When he received the command of the senate to disband his army and return to Rome, he refused. Feeling that he had been treated badly he resolved to lead his army to the province of Rome—though such an act was unlawful except when coming in great triumph. With his soldiers, he crossed the Rubicon which formed the boundary between Gaul and the Roman province. He terrified the leaders at Rome by his approach. He pursued Pompey to the sea, and made himself master of the country. He was soon made dictator, but resigned, declared himself first consul, and started in search of new conquests.

He kept his army busy marching through Greece. He led his men on without rest to fight Pompey in a barren country. On the plain of Pharsalia he won a decisive victory. After the battle, he followed his usual policy of generosity to the vanquished. He set his prisoners free and burned all of Pompey's papers without prying into them. As soon as he landed in Egypt he was offered Pompey's head. Instead of rejoicing at the sight, he wept.

Being requested to interfere in the affairs of Egypt, he gave the throne to Cleopatra in a

struggle between her and Ptolemy. He was victorious as usual. He then went to Pontus to win in new fields. He soon sent the following short dispatch to Rome: "*Veni Vidi, Vici*" ("I came, I saw, I conquered").

After defeating the armies raised by Pompey's sons in Spain, he was made dictator for life and was called the "Father of his country." He pardoned those who had fought against him in battle, and on some of them—including Brutus and Cassius—he bestowed honors. When his friends proposed that he should have a bodyguard, he refused, saying that he would try to win the affection of his people so that a bodyguard would not be necessary.

Though Cæsar did many things for the good of his people, various causes hurried him on to his end. He had offended the senate by receiving certain honors from them without rising from his seat, as had been the custom. He was also accused of showing favor to people who were not worthy, and of being anxious to become king. He finally met his death at the hands of conspirators. On the ides of March he went to the senate-house and the senate as usual rose to do him honor. The conspirators gathered around his chair and, at a signal from Cimber, stabbed him. At first he fought to defend himself, but when he saw that his enemies included Brutus, whom he had loved and trusted, he drew his cloak about him, covered his face, and fell without a struggle.

Cæsar was great as a general, a statesman, and an orator. He was one of the greatest men in Rome. He was clever, and cool, and believed in gentle measures where severity could be avoided. From his boyhood it was observed of him that he avoided quarrels and was not easy to take offense. He did not like bloodshed. His policy was to offer peace before he plunged into war.

In military campaigns, his decisions and movements were made with great energy and rapidity. He was skillful in seeing the designs of his enemies. He was quick in meeting disasters with a remedy, or with relief. When it was necessary he could face calamity with fortitude, or danger with defiance. His greatest successes were due to his rapid movements, by which he surprised his enemies. He traveled over countries without roads. He crossed rivers without bridges. No obstacles could stop him when he had a definite aim in view. He knew how to divide the work among his men, so that all understood their business. He bridged the Rhine in a week. He built a fleet in a month. He inspired his men with courage and enthusiasm. By his own efforts he sometimes recovered a day that was half lost. He once seized a panic-stricken standard-bearer, turned him around, and told him that he had mistaken the direction of the enemy.

He shared the vices and passions of the age, but he was the worthiest ruler of the Romans. He was energetic, active, large-hearted, gentle, resolute, and brave. He was a great statesman,

and a friend of men of all races, countries, and ideas. He best understood the needs of Rome, which, with internal convulsions, and virtues eclipsed, for nearly a century had been tending toward union in a single center. He was worthy of the great power which was bestowed upon him as a ruler.

With him the empire entered on a new course. He first showed how the many peoples must be ruled, not as the subjects of a single conquering city, but as a real great single state, with equal rights and common laws for all. He broke from the spirit of narrow nationality, and was willing to trust the new men of all ranks and nations, under the leadership of Rome. He extended the privileges of citizenship, and sought to wipe out all trace of party fury and hatred. Though he was struck down by the old Roman aristocracy, his work did not perish with him. At last, and for two centuries, while the nations of Europe were rising into civilized life, the Roman empire rose to the level of his plans and maintained an era of progress, peace, and civilization.

Cæsarea.—In ancient geography, a seaport of Palestine, built by Herod I.

Cæsars, The.—The name Cæsar is that of an ancient Roman family of the Julia gens, a patrician clan which claimed as its founder Julius, son of Æneas. The first to have borne the name, so far as is known, was Sextus Julius Cæsar, prætor in 208 B.C. The family rose to power in the State on the appearance of Caius Julius Cæsar, son of the prætor of the same name, who was born in 100 B.C., and became the famous Roman general, statesman, orator, and writer. Cæsar comes upon the scene first as prætor in 62 and as pro-prætor in Spain, and brought thence not only honorable laurels from a war with the Lusitani but also large wealth. Returning to Rome he was made consul in 59, and becomes one of a Triumvirate, composed of himself, Crassus, and Pompey, who agree for the time to divide power among themselves. Cæsar now becomes governor of Gaul (France) and there proceeds against the Helvetii and at length overpowers the Keltic hosts, after which he turned upon the German intruders in Alsace and compels them to take flight across the Rhine. He then repels an invasion by the Germanic hordes on the Lower Rhine, followed by his two expeditions into Britain; and returning to Rome set on foot the civil war of 49 and became dictator, defeating his rival Pompey in 48 at Pharsalia. A brilliant victory in 47 at Zela, in the Kingdom of Pontus, followed, which placed the destinies of Asia in Cæsar's hands. He now appears in northern Africa, where he won a bloody battle before Thapsus (46 B.C.), while one of his generals crushed the power of Juba, a Numidian prince. After subduing Numidia, making it into a province of Rome, and pacifying Africa, Cæsar returned to Italy, most of his enemies having fallen meanwhile in battle or escaping into Spain. In the latter, in the year 45, he wins a decisive affair at

Munda (between Cordova and Malaga), where 33,000 Pompeians are said to have fallen; after which the Roman monarchy is established, with Cæsar as king or imperator. After his successful and strenuous career, and being about to set out on an expedition against the Parthians, who had defeated Crassus and captured the Roman standards, Cæsar's end came by assassination at the senate house in the theater of Pompeius in the year 44 B.C. His murderers were Cassius, Brutus, and other conspirators and personal enemies. He died at the age of 56—a great and clement, though ambitious, man, who had extended the Roman power far over the then known world, and was as remarkable for his statesmanship as he was remarkable for his military genius.

On the death of Cæsar, a scramble ensued for his position and inheritance. The chief contestants were Gaius Octavius, grandson of Cæsar's sister Julia (born in 63 B.C.), and designed by his great uncle as his successor, and Antonius (Antony). Though there was a serious breach between these two, they afterward became reconciled, and with Lepidus formed what is known as the second Roman Triumvirate. In 31 B.C., Octavius, after extended relations with Antony, at length broke with him, and in the struggle for supremacy he defeated him and Cleopatra in the sea-fight at Actium, after which the two latter fled to Alexandria, whither in the following year Octavius followed them. The army and navy now deserted Antony and adhered to his opponent, and unnerved by a false report of Cleopatra's death Antony took his own life and left the succession to Octavius. The latter assumed the monarchy after fifteen years of civil war, and in 27 B.C. had the title of Augustus conferred on him. Under him Roman literature rose to eminence; and it will be remembered that the birth of Jesus Christ occurred in his reign. Augustus died in 14 A.D. To him succeeded Tiberius Claudius Nero without opposition, and reigned until 37 A.D., as Emperor Tiberius Cæsar Augustus. The latter was succeeded by Caius Cæsar (nicknamed Caligula, "army-boot"), a madman who was murdered in 41 A.D., and was followed by Claudius, a man of ability, who reigned until 54. He in turn was followed by the cruel despot and tyrant, Nero, the persecutor of the Christians. Nero was emperor until 68 A.D., when he died by his own hand, and with him the Julian House and the era of the Cæsars came to a close.

Caffeine, or Theine ($C_8H_{10}N_4O_2$).—The alkaloid or active principle of coffee and tea. It is a white, bitter substance, and when isolated it forms beautiful crystals, which are soluble in water, alcohol, and ether. Medically, it is used as a powerful stimulant of the heart's action, but care should be exercised in its use, as 6 or 8 grains are sufficient to produce delirium. It has strong diuretic properties, and is also used in cases of deficient circulation and uneasy respiration. In single grain doses it gives relief in

sick headache. Caffeine forms a series of salts, of which the citrate has come largely into use.

Cahensly Agitation, The.—So called from a memorial drawn up in 1891 by Herr Cahensly and other Europeans and addressed to the Vatican, soliciting the Pope to appoint bishops and priests of their own nationality to minister to Roman Catholic immigrants in the U. S.

Caine, Thomas Henry Hall.—Born 1853; a leading novelist of England.

Ça ira (*sã ê-rã'*) (Fr., "It will go").—A popular song, set to the music of a country dance,—the tune of *Le Carillon national*,—first sung by the insurgents during the French Revolution of 1789. Marie Antoinette is said to have constantly strummed it on her harpsichord. "Ça ira" was also popular with Lafayette and Franklin during the American Revolution, and it became a rallying cry by the Federalist party, who meant by the phrase that the revolution will speed.

Cairo (*kî'rô*).—Capital of Egypt, situate on the right bank of the Nile, and about a mile to the east of that ancient river. The city dates from about 970 A.D., when it was founded by the Fatimite califs and made the capital. It has a considerable transit trade, and is largely visited by tourists and others who come to see the neighboring pyramids. It is a walled town, built on the site of four other cities, and to-day is divided into quarters occupied severally by Jews, Moslems, and Christians. Its chief attractions are its many picturesque mosques, with their beautiful minarets, together with the bazaars, and its interesting medieval art treasures, etc. The older parts of the town and gateways are narrow and are usually thronged with asses, camels, and other beasts of burden, and their drivers. The modern sections are more spacious and have fine boulevards and broad avenues, lined with trees, and flanked by showy villas, especially toward the western suburb of Ismailia. It possesses about 400 mosques, many of them interesting for their beautiful Arabic architecture and rich interior decorations. The more notable of these are the mosques of Amra, of El-Gouri, of El-Azhar, of Akbar, and the mosque of Sultan Hazzan, with its distinctive Mohammedan architecture. There is also the Tomb-Mosque of Kait Bey, which dates from 1470, and the most distinguished bit of architecture in Cairo; besides this there are the Tombs of the Mamelukes, and the Tombs of the Califs. In addition to the Pyramids, the city has another attraction in the Nilometer, a domed monument for measuring the rise of the Nile, constructed about 860 A.D. There is also a university, which dates from 970, and to which about 2,000 students are drawn annually from all parts of the Mohammedan world. Cairo was captured by the Turks in 1517, was held by the French in 1798–1801, and occupied by the British in 1882. Since then it has become the center of British influence in Egypt. The city is under a governat, representing the Khedive, whose State is nominally dependent on Turkey.

It has a population of 570,062, of whom about 36,000 are foreigners, the remainder being sedentary Egyptians, with a sprinkling of nomads.

Calais (*kä-la'*).—A fortified seaport town of France, in the department of Pas-de-Calais, situated on the Straits of Dover, on the most direct route between London and Paris. It has a good harbor, and much steamer traffic with the English port of Dover. The town's share of the chief French ports in the trade of 1898 (exports and imports) was estimated at 63 million dollars. Its population is close upon 60,000. It lies 180 miles N. N. E. of Paris. Calais, in 1347, was besieged and taken by the English under Edward III., but was lost in the time of Queen Mary (1558). The Spaniards held it for two years (1596-98).

Calcium (sym., Ca; atomic weight, 40).—The metal present in chalk, stucco, and other compounds of lime. It is of a pale yellow color, tenacious, and malleable, and is widely disseminated, as in its compounds *calcium carbonate*, chalk, limestone, etc.; *C. sulphate*, plaster of Paris and gypsum; *C. fluoride*, or fluor spar; *C. phosphate*, apatite and the earthy part of bones. Calcium compounds are used to make water hard.

Calcutta.—The capital of Bengal and British India, situated on the Hugli River, a branch of the Ganges, and the chief commercial city in Hindostan. It was founded by the East India Company in 1686, and called by that famous trading corporation (whose governing functions were in 1858 transferred to the British crown) Fort William. Here was the scene of the massacre of the "Black Hole," in June, 1756, an atrocity related by Macaulay in his essay on Lord Clive.

Of the 146 English prisoners confined in a close gaol-room over a hot Indian summer night, all but 23 were found dead in the morning, having been suffocated or trampled to death. The city and fort were afterward recaptured by the British, and in 1772 it became the seat of the central government of India. The city has a striking appearance from the river, with its arsenal and dockyards, jetties for ocean-going steamers, its esplanade and embankments with their fine array of buildings, and inland a network of streets, with many stately houses, palaces, and government buildings. Calcutta is the seat of a university, a Sans-

krit College, an attractive botanical garden, and the homes of many learned institutions and societies. It has a large inland as well as sea-borne trade, its chief exports being tea, rice, wheat, cotton, seeds, jute, and indigo, besides leather, untanned hides, wool, coffee, teak wood, and opium. Population, with suburbs, about 900,000.

Caldwell.—A town in eastern N. Y., noted as a summer resort and as the former site of Fort George and Fort William Henry, in the 18th century.

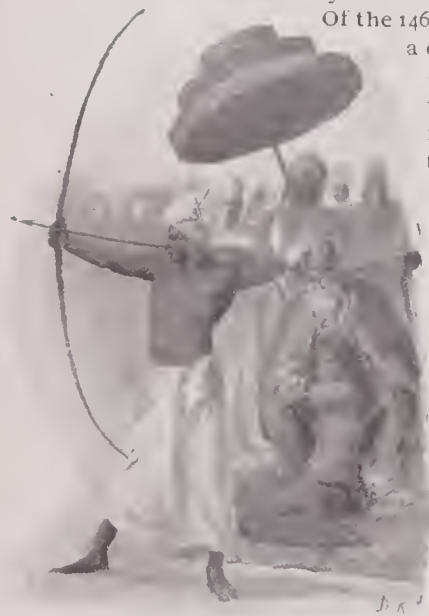
Caldwell, Joseph.—Born at Lexington, N. J., 1773; and died at Chapel Hill, N. C., 1835. An American divine and educator who became president of the University of North Carolina in 1804.

Calebee Creek (Ala.), Battle of.—Fought Jan. 26, 1814, between the Creek Indians and 1,300 Ga. volunteers, assisted by 400 friendly Indians, under command of Gen. Floyd. The Creeks attacked the camp before dawn, but a prompt reception with grapeshot, followed by a bayonet charge, dismayed them and they fled, leaving 37 dead and many wounded. The loss of Floyd's force, killed and wounded, was about 170.

Caledonia.—A name applied by the early Roman writers to that part of Britain which lies to the north of the Clyde and the Forth rivers, *i. e.*, to the Highlands of Scotland. Both Pliny and Tacitus refer to the Caledonians, as having sandy hair, living in tents without cities, addicted to predatory warfare, and fighting in chariots. The Roman general Agricola (father-in-law of Tacitus) is said to have first penetrated into Caledonia and in 84 A.D. defeated the Gaelic tribes in the Grampian Hills, under their leader Galgacus. After this, and when Agricola had been recalled to Rome, the Caledonian chieftains repeatedly harassed the Roman colonies in Britain, which caused the Romans to build, in 139 A.D., what is known as Antonine's Wall, extending for over 30 miles from the Firth of Forth to the mouth of the Clyde. Later on (A.D. 208), the Emperor Severus invaded Caledonia in force, but was compelled to retreat southward after an ineffectual and disastrous campaign. Still later (A.D. 367), another Roman general was sent into northern Britain to defend the southern colonies of the island from the troublesome Caledonians and Picts. This enterprise was more favorable to Roman rule. The term Caledonia is in our day only used as a poetical designation of Scotland, as in Sir Walter Scott's lines in "The Lay of the Last Minstrel":—

"Caledonia, stern and wild,
Meet nurse for a poetic child."

Calendar (Old English *Calend*, a month).—An orderly arrangement of the divisions of time, adapted to the purposes of civil life, as years, months, weeks, and days; also a register of the year, with its divisions; an almanac. In reckoning time, the month seems to have been suggested by the period of the moon's revolution, in 29½ days, and this method of computation was adopted in the Jewish and Greek calendars. This was, however, only a rough approximation to the true year, as we now understand it, and to adjust matters both Jews and Greeks, as well as the Romans after them (the Romans originally had a year of only ten months) intercalated a month from time to time to adapt the lunar to the solar year. In



the year 46 B.C. Cæsar, with the assistance of an Alexandrian astronomer, made a reform in the Roman calendar. He effected this by making the year 46 B.C. ("the year of confusion," as it was called) consist of 445 days, and the succeeding year 365 days, with the exception of every fourth year, which was to consist of 366 days. This change is known as the Julian Calendar, but as it was not strictly accurate, even with Cæsar's reconstruction of the months and their altered number of days, and his transferring of the beginning of the year from Mar. 1 back to Jan. 1, a later change took place in the era of Pope Gregory XIII., known as the new style, or Gregorian Calendar, when ten days were dropped and the calendar was made more in harmony with the seasons and the true year. A change in the calendar was made in France during the Revolution, but this was discontinued in 1805, and the Gregorian Calendar method was resumed.

Calhoun, John Caldwell.—Statesman; sketch of, 96.

Calico.—A fabric of cotton cloth, the name being derived from the city of Calicut, in Madras, where it was first manufactured, and in 1631 brought to England by the East India Company. Calico-printing, an ancient Indian and Chinese art, has become a great industry in this country and in Britain, as well as in Holland.

Calico-Bush, The.—2890.

Calicut.—A seaport on the Malabar coast, Madras Presidency, British India, six miles north of Beypur, and 100 miles S. W. of Seringpatam. It was the first port on the Indian Ocean visited by Vasco da Gama, in 1498, and was then a considerable place and had an important trade. This trade however declined greatly, but of late has somewhat revived, as it possesses an excellent roadstead and harbor. In 1509, it repulsed the Portuguese, and defeated and expelled Albuquerque, the Portuguese discoverer and founder of the Portuguese dominions in the East. In 1789 it was destroyed by Tippu Saib, and three years afterward the place was ceded to the British. The city gave its name to calico, through the Portuguese. Pop., 70,000.

California.—One of the Pacific States of the U. S. of America. Bounded on the north by Ore., east by Nev., and Ariz., south by lower Cal., west by the Pacific Ocean. The surface and climate are greatly diversified; it is traversed by the Sierra Nevada and Coast mountain ranges and is famous for its picturesque scenery; contains the Yosemite National Park and the wonderful groves of the gigantic redwood trees. The discovery of gold in the mountains of Cal. caused a great rush of fortune-seekers from the East, in 1849-50; besides the precious metals it produces grain, wool, honey, wine, and enormous quantities of fine fruit. Settled by Spanish missionaries in the 17th century, and became a part of Mex.; at the close of the Mexican War in 1848, it was ceded to the U. S.; admitted to the Union in 1850. Its capital is Sacramento and its chief city, San Francisco; other important cities are Los Angeles, Oakland, Alameda,

Berkeley, Eureka, Fresno, San José, and Stockton. Length of the state from north to south, 775 miles; has 57 counties; area, 158,360 sq. miles; pop. (1900), 1,485,053; called the Golden State.

California, University of.—Founded in 1868 at Berkeley, Cal. It is undenominational, and has no students' fees, its maintenance being derived from private bequests and from invested funds, amounting to close upon \$3,000,000. The value of its grounds and buildings is \$1,775,000. It is doing good work for higher education, and has drawn to it a large number of women students, who especially take advantage of the extension courses and the summer session. Its president is Dr. Benjamin Ide Wheeler, and it has a faculty numbering 325 professors and instructors, with a student body, in all departments, of 2,660. Attached to the institution and under the regents is Lick Observatory, on the summit of Mt. Hamilton, in Santa Clara Co., Cal., which has one of the most powerful refracting telescopes in the world. The income for educational purposes of the University is over \$320,000 per annum. It possesses a library of close upon 80,000 volumes. It is understood that Mrs. Phœbe A. Hearst, who has already given the university many gifts and considerable financial aid, is about to erect new buildings for it, at a reputed cost of \$8,000,000.

Calligula.—See WOMEN WHO HAVE INFLUENCED HISTORY.

Callao.—A fortified town and seaport, with a fine sheltered roadstead, in Peru, on the Pacific Ocean, six miles west of Lima, with which it is connected by rail. The modern town dates only from 1746, for in that year it was destroyed by an earthquake and an invasion of the sea. Much life was lost on the occasion, the number sacrificed being not short of 4,500, while a frigate and a score of other vessels were stranded. The fort, San Felipe Castle, constructed about 1755, was taken from the Spaniards in 1826, and has figured in the later Peruvian wars. The town was bombarded by a Spanish fleet in May, 1866, and was contested by the Chileans in the war with Peru in 1880. Its chief exports are guano, bark, hides, wool, and copper. Population, including the department of Callao, 14 sq. miles in extent, was in 1896, 48,118. At the port of Callao, about 500 vessels of 50 tons and over enter and clear annually, besides about 900 vessels of smaller tonnage.

Calligraphy.—A term derived from the Greek, signifying beautiful writing, and which to-day we apply to fine and elegant penmanship. Calligraphists was the appellation given to the monks and learned scribes who before the invention of printing copied rare manuscripts and elaborately embellished them. This work was done largely by monks and schoolmen during the Middle Ages, and many specimens of their art in manuscripts have come down to us. In these MSS. the color work is of a rich order, especially in the initial letters, which are done in vermilion and gold, as well as in the border

- decorations and other illuminated parts. In modern penmanship, the attraction is rather in the fine scroll work and other ornamental devices that embellish the page.
- Call Loans.**—Money loaned subject to the call of the lender.
- Calomel.**—A compound of mercury or quicksilver with chlorine, termed by chemists sub-chloride of mercury or mercurous chloride. It is a dull, heavy, white, nearly tasteless powder, rendered yellowish by trituration in a mortar or when heated. It is one of the mildest and most frequently employed of all mercurial preparations, producing its effects with little local irritation. It is entirely insoluble in water, alcohol, or ether, and volatilizes, below a red heat, without fusion. It exercises a great influence upon the secreting organs, stimulating the liver and intestinal glands to increased activity.
- Calumet.**—A town in Houghton Co., Mich., noted for its great copper mines.
- Calvé, Madame (EMMA DE ROQUER).**—Born 1866. A distinguished operatic singer. French and Spanish parentage.
- Calvert, George, Lord Baltimore.**—Born at Kipling, Yorkshire, Eng., about 1580; died 1632. He was the founder of Maryland, the charter for which, owing to his death before it had passed the great seal, was issued in the name of his son Cecil, in 1632.
- Calvert, George Henry.**—Born at Baltimore, Md., 1803; died at Newport, R. I., 1889. An American miscellaneous writer and journalist.
- Calvert, Leonard.**—Born about 1582; died in 1647. Was the first governor of Maryland, and commanded the colonists who set sail from Cowes Nov. 22, 1633, and founded St. Mary's in 1634.
- Calvin, John.**—(1509-1564.) A famous Protestant reformer and theologian, whose doctrines are held by many Protestant sects. Predestination, particular redemption, and irresistible grace are included in these doctrines.
- Cambray.**—Town and fortress in the north of France. It has long been noted for its manufacture of cambrics. Pop. (1891), about 24,000.
- Cambric.**—A general term applied to the finest and thinnest of linen fabrics, made of linen or flax. Imitations are common of linen cambric, manufactured of fine hardspun cotton, often with figures of various colors, and known as cambric muslin, or cotton cambric. Scotch cambric is a muslin, made of cotton with the fiber twisted very hard, to imitate the real or linen cambric. Some of the finest cambric comes now from Switzerland, though it used to be made largely at Cambray or Cambria, in France, whence cambric derived its name.
- Cambridge.**—A city in Mass., considered a suburb of Boston and the seat of Harvard University. It was founded by English colonists in 1630 and called at first Newtown, which name on the founding of Harvard College, was changed to Cambridge. Incorporated as a city in 1846. Pop. (1900), 91,886.
- Cambridge Platform.**—So called from the adoption of certain principles of church government and doctrine by a synod of Congregational churches of New England, held at Cambridge, Mass., 1648.
- Cambyses (kam-bī'sēs) II.**—Son of Cyrus I. According to Xenophon was a king of Persia, though this is doubted by Herodotus.
- Cambyses III.**—529-522 B.C., was king of Persia. He was the son of Cyrus the Great.
- Camden.**—(1) A town in S. C., near the Wateree River, the scene of two victories by the British over the American forces in 1780 and 1781, the first of which is known as the battle of Sander's Creek. Pop. (1900), 2,441. (2) A city and port of entry in N. J., on the Delaware River opposite Philadelphia. Its ship building and manufactures are extensive. It is also a great railway center. Pop. (1900), 75,935.
- Camden, Battle of.**—See SANDER'S CREEK, BATTLE OF.
- Camel, The.**—2477.
- Camelopard, The.**—See GIRAFFE, 2481.
- Cam'elot.**—A location in England, the legendary seat of King Arthur's Court and his knights of the Round Table. Antiquaries differ as to its site, some holding that it was in Somersetshire, near Winchester, on the moors of which great quantities of geese were bred, to which Shakespeare refers in "King Lear;" other authorities assign the site to the region about Camelford, Cornwall, in Wales, where the Duke of Cornwall resided in his castle of Tintagel. Tennyson alludes to Camelot not only in the "Idylls of the King," but in "The Lady of Shalott."
- Cameron, James Donald.**—Born at Middletown, Pa., 1833. A politician. Was president of the Northern Central R. R. Co., of Pa. (1863-74); was Secretary of War in President Grant's Cabinet (1876-77); United States senator (1877-89).
- Cameron, Simon.**—Born in Lancaster Co., Pa., 1799; died there, 1889. He was Secretary of State under President Polk, but becoming identified with the People's Party, about 1855, he was returned to the Senate as a Republican. He served as Secretary of War under President Lincoln during the first year of the Civil War, and in 1862 was appointed U. S. minister to Russia.
- Cameroons, or Kameruns.**—A territory on the coast of West Africa, north of French Congo, on the Bight of Biafra, annexed by Germany in 1884. It has a coast line of 200 miles and an area estimated at 191,130 square miles. The native population (about 3,500,000 in all) consists of Bantu negroes near the coast and Sudan negroes inland. The white population does not exceed 450, most of whom are Germans, over whom and the country is placed an imperial governor, assisted by a chancellor, two secretaries, and a local council of three representative merchants, with a German and native military force of about 600. At work in the region are four missionary societies with schools attended by about 5,000 pupils. The colony has a fertile soil, though volcanic in nature, the chief exports being cacao, coffee, cloves and other spices, ivory, palm, caoutchouc, vanilla, and tobacco. The chief

town is Kamerun, other trading stations being Buëa, Victoria, Bibundi, Batanga, and Campo. Gold and iron have been found within the territory, whose area was recently adjusted by an agreement at Berlin, which set up the boundary between the Kameruns and the Niger coast protectorate, and gave Germany the command of Benue and access to Lake Chad.

Camoens, Luiz de.—(1524-1580.) A celebrated Portuguese poet; author of "The Lusiad," the national epic of Portugal.

Campagna di Roma.—A plain in Italy, barren and unhealthy, surrounding Rome. It included the chief part of ancient Latium (the land of the Latins), about 90 miles in length and a breadth of 40 miles. It is a volcanic region, the beds of the lakes being the craters of extinct volcanoes. The river Tiber flows across the plain, between banks of tufa (scoria, or friable volcanic rock), of which the famous seven hills of Rome are composed.

Campanile of Giotto.—In Florence, Italy, a famous tower, begun in 1334 by Giotto, a celebrated Italian painter, architect, and sculptor, and completed by Andrea Pisano.

Campanini, Italo.—(1846-1896.) A famous Italian tenor singer.

Campbell, Alexander.—Born in Ireland in 1788; died at Bethany, W. Va., 1866. A Presbyterian clergyman and founder of the sect "Disciples of Christ" or "Campbellites." In 1809 he came to America, and originated the "Christian Baptist," which was eventually changed into "The Millennium Harbinger" (1830).

Campbell, Thomas.—(1777-1844.) A British poet and miscellaneous writer.

Campbell's Station.—A small hamlet in eastern Tenn., where the Confederates under Longstreet were defeated by the Federals commanded by Gen. Burnside, Nov. 16, 1863.

Camperdown.—A village in the Netherlands, a few miles from Amsterdam. Off Camperdown, the Dutch fleet under De Winter was defeated by the English fleet under Duncan, 1797.

Camping.—2111.

- Inland Camp and Camp by the Sea, 2112.
- Camp Stationary or Camp Itinerant, 2113.
- Chup-lah-quah-gan, 2116.
- Camps and Their Kinds, 2118.
- Bedding and Clothing, 2124.
- Food and Cooking, 2127.
- The Plague of Flies, 2128.
- Recreations in Camp, 2129.

Canaan, Land of.—A lowland country or maritime plain, noted in biblical history as the "promised land," and forming part of Palestine. The name is now applied to the whole region lying west of the Jordan, though formerly it comprised the strip of land, from 10 to 15 miles in breadth and 150 miles in length, inclosed between the Jordan and the Mediterranean, and inhabited by the descendants of Canaan, the son of Ham. (See PALESTINE or SYRIA.)

Canada, Dominion of.—A confederation of British provinces, with a parliamentary government, in which the English monarch is represented

by a governor-general. It includes the provinces of Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island, Manitoba, British Columbia, and the Northwest Territories. Since the establishment of Confederation, in 1867, and the later absorption of all the continental territory of Great Britain north of the U. S., all branches of industry in the Dominion have greatly advanced, and Manitoba has become world-famous for its wheat. The beef and cattle trade, especially with England, has assumed large proportions. Lumber is of great variety, valuable and abundant. Railroads extend from the principal eastern cities to the Pacific coast, and others with wide ramifications have been built, or are in the course of construction. Much attention is paid to education, especially in Ontario, which has over 5,000 schools and colleges, and most of the nearly 600 newspapers published in Canada, are issued in the same Province. The natural water facilities for transportation, assisted by canals, are unsurpassed by those of any other country, and the merchant shipping of Canada is greater than that of Germany or France. The Dominion is also extremely rich in fisheries and minerals. The organized militia includes all Canadians who are British subjects and are between the ages of 18 and 60. The active militia exceeds 30,000. England usually maintains 12 ships on the North America and West India stations and eight on the Pacific. Canada is separated from the United States by the chain of lakes, the St. Lawrence River, and the 49th parallel of N. Latitude. Its products are those derived from agriculture, forests, mines, and the sea. Lumber, coal, and wheat are the chief exports. The capital of the Dominion is Ottawa, and the largest cities are Montreal, Toronto, and Quebec. Area of Canada, 3,315,647 sq. miles; pop. (1901), 5,338,883.

Canada Conference.—A conference held in Canada during the Civil War, attended by semi-official representatives of the U. S. and Confederate governments for an interchange of views, in the hope that a basis might be reached for a restoration of the Union and an end of the war. But the views of the northern and southern men were diverse and irreconcilable and the convention came to naught. (See GREELEY, HORACE, 243.)

Canals are artificial water courses used for the purposes of navigation, for drainage and irrigation, and for the supplying of cities and towns with water. Canals for inland navigation have been in use in foreign countries for many centuries. The Grand Canal of China, over 600 miles in length, was built in the 8th century; while they are extensively used in most of the countries of Europe, on level plains, even in competition with railroads. In this country, canals date from the close of the 18th century, the first to be constructed being that around the falls of the Connecticut River at South Hadley, Mass. The Erie Canal, which traverses New York State from Albany to Buffalo, a distance of 350 miles,

was built by the state and opened in 1825. Since then it has been both deepened and widened. Other early constructed native canals are the Chesapeake and Delaware, and the Delaware and Raritan, which connect the cities of New York, Philadelphia, and Baltimore. The Welland and the St. Lawrence canals, in the neighboring Canadian dominion, are examples of the utility of these inland boat and barge routes for the purposes of commerce, and to overcome natural obstacles such as waterfalls and rapids. To overcome the change of level in canalways, the boats are generally raised by means of locks and sometimes by lifts and cars. Other American canals of note are the St. Mary's, Mich., which unites Lake Superior with the other Great Lakes; the Illinois and Mississippi Canal, 77 miles in length, from Hennepin to Rock Island, Ill.; the Illinois and Michigan; and the Dismal Swamp Canal (22 miles long) which connects Chesapeake Bay with Albemarle Sound, and affords access to about 2,500 miles of river and bayou navigation in the Carolinas.

Another important canal enterprise in the New World is known as the Chicago Drainage Canal, connecting the Chicago River with the Illinois River by way of the Desplaines River. In this undertaking the current in the Chicago River is turned backward and made to discharge its waters into the Mississippi, instead of by way of Lake Michigan into the St. Lawrence. The object of this was to get rid of the sewage of Chicago without contaminating the clear, pure water from Lake Michigan, which is now obtained for city and sanitary purposes at the rate of 300,000 cubic feet per minute. The cost, so far, of the work has been over \$33,000,000. Other canal enterprises in this country, in the way either of new construction, or of deepening, widening, and otherwise improving existing artificial waterways, are projected.

The important project is anew broached to construct a ship canal to shorten the route between the Atlantic and the Pacific oceans by a waterway across Central America. French capitalists began some years ago to construct an Isthmian sea-level canal at Panama; but the work performed was a mere fraction of the whole, and out of all proportion to the expenditure, and the project collapsed. The consensus of American opinion has favored, however, the Nicaragua route, utilizing Lake Nicaragua as a summit-level, and the more practicable means of constructing an Isthmian canal. The report of a commission on the subject has recently been submitted to Congress, and the enterprise is likely, ere long, to be undertaken. Its dimensions are to be a depth of 35 feet at mean low water, a bottom width of 150 feet, with a double system of locks throughout (save in Lake Nicaragua) 740 feet by 84 in length and breadth, and 35 feet in depth. The canal will be about 170 miles in length (less 56 miles through Lake Nicaragua). The route designed to be followed is from Greytown (San Juan del

Norte), *via*, in part, San Juan River to Fort San Carlos, and after traversing Lake Nicaragua, will proceed from La Virgen by the Rio Lajas to Brito on the Pacific. It is estimated that the enterprise will take ten years and an expenditure of 200 million dollars to construct. More recently, the United States has been offered by the French proprietors their rights in the abandoned Panama Canal at a cost of \$40,000,000. This proposal, as we write, is now under consideration by Congress, as well as the alternative proposal of the Nicaragua canal scheme.

In the Old World the most useful ship canal, as well as profitable, is the Suez Canal, in Egypt, which connects the waters of the Red Sea, or rather those of the Gulf of Suez with the Mediterranean at Port Said. The project is chiefly due to the great French engineer, M. Ferdinand de Lesseps, and the Khedive of Egypt; as it is now the main highway of English commerce and traffic from the United Kingdom to India, a large amount of the shares of the canal is owned by the British government. The number of steamers passing through it in 1898 was 3,464, with an aggregate tonnage of over nine million tons. Its annual revenue to-day is close upon \$20,000,000. The other chief European canals are the Baltic or North Sea (Kaiser Wilhelm) Canal, with a yearly traffic numbering about 14,000 vessels; the Elbe and Trave Canal, opened in June, 1900 (41 miles in length), forming an additional waterway between the North Sea and the Baltic; the Dortmund-Ems Canal; the Corinth Canal; and the Manchester Ship Canal (35½ miles in length) connecting the Mersey with the Manchester docks. Many other canals in Europe are under consideration, such as the Sheffield Ship Canal, the Bruges Canal, the Black Sea and Baltic Ship Canal, the Forth and Clyde Ship Canal, the Marseilles and Rhone Canal, etc.

The oldest canals in the U. S. are the Hadley and Montague, built in Mass. in 1792. The Middlesex, which joins Boston Harbor to the Merrimac River, dates from 1808. The Erie, by far the largest in the country, was for its day a considerable enterprise. It connects the Hudson at Albany, N. Y., with Lake Erie at Buffalo, is 352 miles long, and cost \$50,000,000. Washington projected the Chesapeake and Ohio Canal to improve the navigation of the Potomac River and connect that stream with the Ohio River. Its construction was begun in 1828, but by 1850 it had only been completed from Georgetown, D. C., to Cumberland, Md., 184 miles, and from that point westward the enterprise was abandoned. It reaches, by means of 74 locks, an elevation of 609 feet. The Schuylkill Coal and Navigation Canal, from Mill Creek to Philadelphia, Pa., was completed in 1825. The Lehigh Coal and Navigation Company's canal from Easton to Coalport, Pa., is another important local waterway. In the early days of public improvements, two great canals were built in Ohio, extending from Lake Erie, at Cleveland and Toledo respectively, to the Ohio River.

These canals have always been owned and operated by the state. Of late years the receipts for tolls have shown a constantly increasing deficit. Portions of them have been abandoned; and it is more than probable that in the near future they will be entirely displaced by the railroads.

Canandaigua Lake.—A lake in western N. Y.; length 15 miles.

Canary, The.—2556.

Canary, The.—See KEEPING OF PETS, 2308.

Canary Islands, or Canaries.—A group of islands in the Atlantic lying off the N. W. African coast, belonging to Spain, and ruled as an integral of the kingdom. They were acquired by Spain in the 15th century, the original inhabitants, the Guanches, being now extinct. The chief islands are Teneriffe, Hierro (Ferro), Lanzarote, Fuerta Ventura, Gran Canaria, Gomera, and Palma, covering an area of about 2,800 square miles. The coasts, as a rule, are steep and rocky, and the islands are of volcanic origin, though eruptions are seldom, and confined only to one of them. The famous peak of Teneriffe is over 12,000 feet in height. Their natural products besides the sweet potato, banana, and many wild flowering plants, are sugar, wine, and cochineal. The inhabitants, whose language is Spanish, are 334,500 in number; the capital is Santa Cruz de Santiago, on the island of Teneriffe.

Canby, Edward Richard Sprigg.—Born in Ky., 1819; killed by Indians at the "Lava Beds," in northern Cal., April 11, 1873. A general in the U. S. army. He served through the Mexican War and the Civil War, reaching the rank of major-gen.; commanded in N. Mex. (1861-62); commanded the U. S. troops in the suppression of the draft riots in New York City (July, 1863); succeeded Banks (1864) in the command in La.; captured Mobile, Ala., after a severe action, April, 9, 1865. After the war he was engaged in campaigns against the Indians and was treacherously murdered by members of the Modoc tribe, while a conference was being held.

Cancer (The Crab).—See CONSTELLATIONS, 3002.

Candia.—The seaport and former capital of Crete, a Turkish island in the Mediterranean, southeast of Greece, long under Venetian rule. Candia was founded by the Saracens, and in 1669 was taken from Venice by the Turks. The island of Crete has been subject to many insurrections, and in consequence of that the Great European Powers intervened and practically made it an autonomous State, subject to the suzerainty of the Porte. Its High Commissioner is Prince George of Greece, second son of the king of the Hellenes. The island is about 160 miles in length and from 6 to 35 miles in breadth, its area being 3,326 square miles. Its products include wine, oranges, chestnuts, and silk. Candia has a population of 22,500, about that of the capital, Canea.

Candlemas-day (Feb. 2).—To commemorate the purification of the Virgin.

Candles.—Slender, cylindrical bodies of tallow, wax, paraffin, or other similar fatty matter, inclosing a wick, composed of loosely twisted linen or cotton threads, and used to furnish light. Candles were usually made by repeatedly dipping the wicks in melted tallow, or by casting or running in a mold. Spermaceti is used nowadays for the more expensive kinds of candles, and tallow, palm oil, and paraffin for those in commoner use. Molding is the chief modern method of making candles, though dipping is still the common process when tallow is used.

Cannæ (kan'ê).—In ancient geography, a town of Apulia, Italy, on the river Aufidus (now Ofanto). Here, in 216 B. C., Hannibal, with 50,000 men, defeated a Roman army (86,000 strong) under Æmilius Paulus and Tarentius Varro. The latter Roman consuls precipitated the fighting, but the wary Hannibal so manoeuvred his troops that he forced the Romans to front the sun and a fierce wind, which blew the dust in their faces, and in this plight he quickly threw them into confusion and won the battle.

Cannon were first used in the 14th and 15th centuries, when they were cast in bronze at Nuremberg, Augsburg, and other towns in Bavaria and west Prussia. Compared with modern artillery for field purposes, they were then large, cumbersome, and heavy pieces of ordnance, wide-mouthed, and made, as we have said, either of bronze, or of iron bars, hooped together with iron rings. The projectiles were at that early period usually stones, afterward substituted by iron balls. For these early weapons of destruction there were various names, such as bombard, culverin, serpentine, etc., such as were made use of by Edward III. at Crécy and at Calais and by Louis XI. during his campaign in Flanders. At a later era came howitzers and mortars, with large bores, used for throwing bombs and shells into the air that they might fall into forts, besieged cities, or into an enemy's camp. Then came after the smoothbore rifled cannon, with spiral grooves cut into the surface of the bore to give the ball, as it leaves the muzzle of the gun, a twist to aid in the direction of its flight and increase its range, steadiness, and accuracy. The material of which cannon were made then changed, cast and wrought iron, brass and bronze, giving place in course of time to steel. With these improvements in material came improvements in design, form, size, and shape, such as the ordnance known as the Rodman gun, the Gatling machine (constructed with ten barrels, which revolved around an axis by a handle), and the formidable weapons familiar to-day as the Armstrong and the Krupp guns. The latter guns and other modern cannon weigh as much as 120,000 pounds, and will throw a destructive shot, with precision, a distance from 3,000 to nearly 9,000 yards, and penetrate (at a distance of 1,000 yards) a target of iron over two feet in thickness. Changes have also of late come over the form of the projectile, which, instead of

being round, is now elongated, with a conical cast-iron point; while the charge of powder has increased greatly, especially in the case of shell charged with nitro-gelatine or dynamite, and fired at long sea-range with annihilating effect. In the Boer war, the field weapons on both sides have been very destructive, being quick-firers, such as the Boer gun, of Schneider-Canet make. The British naval guns, mounted on field-carriages, have also been formidable weapons, such as Capt. Scott's 4.7 in. gun, which fires a shrapnel shell weighing 45 lb, with a velocity of 2,000 feet per second and has an effective range of 12,000 yards or more. Another naval weapon which has been employed by the British army in the field is Scott's long 12-pounder, which differs considerable from the ordinary horse artillery 12-pounder, being about 5 feet longer and having a greater range.

Cannon Ball, Largest Size Ever Fired.—The largest projectile ever fired from a cannon was 2,600 lb, from the largest gun yet manufactured. This gun was made at the works of Krupp, at Essen, for the Russian government, and has been placed in the fortifications of Cronstadt. Its caliber is $16\frac{1}{4}$ in., length of barrel 44 ft., is made of the finest cast steel, and weighs 135 tons, or about 270,000 lb. It has a range of twelve miles, and can be discharged twice in a minute. The cost of each shot has been estimated at £300. The heaviest English gun weighs 111 tons, and its shot 1,800 lb. The shot discharged by the second Woolwich Infant weighed 1,650 lb, the gun itself 80 tons, and for each discharge 300 lb of gunpowder was required. The Italians fire shot of 2,000 lb, and the French of 1,984 lb. There are some ancient guns of very large dimensions in existence, but they do not carry heavy charges. Numbers were made in India, the largest being known by the name of "Malick è Meidan," or Lord of the Plain, which was 14 ft. long, had a 28 in. bore, and fired a ball 1,600 lb in weight. "Mons Meg," at Edinburgh Castle, Scotland, is 13 ft. long, with a caliber of 20 in.

Cano, Alonso.—3449, 3581.

Canoes and Canoeing.—2139, 2140.

Canongate.—The principal street in the Old Town of Edinburgh; so called from the little bugh of Canongate that formerly surrounded the abbey of Holyrood, founded in the 12th century.

Canova.—3588.

Canterbury.—A city in Kent, England, on the river Stour, historically interesting from Roman and early Saxon times. It lies 56 miles east-southeast of London, and ecclesiastically is the metropolitan See of England. It is noted for its fine cathedral, which dates from 1070 A.D., though as early as the year 600, as a Roman town, it was the See of Augustine, the Benedictine monk, surnamed "the Apostle of the Anglo-Saxons," sent by Pope Gregory I. as missionary to Kent. Augustine was the first archbishop of Canterbury. Besides the cathedral, there are other interesting old churches, such as St. Mar-

tin's and St. Dunstan's, and the monastery of St. Augustine. The cathedral is in plan long and narrow, with double transepts, and it contains some fine altar-tombs of early archbishops, besides the tombs of Henry IV. and the Black Prince. The crypt is large and in the early Norman style, and the cloisters are elaborate and picturesque. At the east end of the cathedral is a beautiful circular chapel, called the Corona. The dimensions of the cathedral are 514 feet by 71, the height of the nave-vault being 80 feet, and the central tower 235 feet. The population of the city is about 25,000.

Canterbury Tales, The.—A series of twenty-two tales in verse and two in prose by Chaucer. They are told by twenty-three pilgrims to beguile the time during a tedious journey to the shrine of Thomas à Becket at Canterbury.

Cantharides.—The Greek term for "little flies," and the plural form of the word *cantharis*, a genus of vesicant coleoptera, or blistering beetles, represented by the Spanish fly of southern Europe (*Lytta vesicatoria*). This fly is of a bright green color, is about an inch in length, has a large head and long antennæ, and soft wing-covers conceal the abdomen. The body is covered with whitish hairs, and the insect emits a nauseating odor, besides being a vicious biter and blisterer. Cantharides are collected for medicinal purposes, and when killed by exposing them to the vapor of vinegar, hot water, or turpentine, are afterward dried in the sun. A few drops of strong acid is perhaps the best means of preserving them. Blistering flies have long been used in medicine. When applied to the skin, they speedily produce redness and in ten hours or so a blister. When swallowed they are an irritant poison. They form the active ingredient of the well-known "fly blister," composed of cantharides mixed with yellow wax, suet, lard, and resin; they are also the chief ingredient of all blistering fluids, and a principal constituent of most stimulant hair-washes.

Cantilever.—A term applied in engineering to the part of a beam which projects out from a wall or parapet or beyond a support. In a bridge in which the principle of a cantilever is applied is usually a trussed bridge of two portions, reaching out from opposite banks and supported near the middle of their own length on piers which they overhang, thus forming cantilevers which meet over the space to be spanned or sustain a third portion, to complete the connection. A beam supported in the middle is said to have two equal cantilever arms. Another principle of the cantilever is seen in a balcony in front of the windows of a house which is supported by brackets or projecting cantilever beams. In architecture, the brackets to support this balcony, a cornice or the like, is called a cantilever, as is also a supporter of the roof timber of a house.

Canton.—A seaport, and one of the chief commercial cities of China, the capital of Kwangtung, situated on the Shu-Kiang or Pearl River, and having a population of about 800,000. A wall, running east and west, separates the old city

from the new, while for six miles in circumference it is encircled by a wall 20 feet thick and from 25 to 40 feet in height. Its gates are closed and guarded at night. There are over 600 streets, most of them narrow and crooked, with ancient barricades at either end, and occasional watch-towers from which watchmen at night proclaim the hours and on occasion sound fire-alarms. Many of the natives live on boats and rafts on the river and gain subsistence chiefly by fishing. There are two great and ancient pagodas and about 150 temples and joss-houses, attended by many Buddhist priests and nuns. Over 3,000 ships enter and clear from the port annually, many of them being those of foreign merchants who handle the exports, which are chiefly tea, sugar, silk, and cassia. The chief imports are cotton, wool, and metal goods, food stuffs, opium, kerosene, etc. Canton is one of the leading commercial cities of the country. Founded about 200 B.C., and until 1842, the only Chinese city open to European trade. The early traders to Canton were Dutch and Portuguese, who were followed by those of the East India Co.; and later the trade of the region has been largely in British hands.

Canute, or Cnut, or Knut, "The Great."—(994-1035.) A famous king of England, Denmark, and Norway; barbarous and despotic in the earlier years of his reign, but, later, one of the wisest and greatest of rulers.

Canvas-back Duck, The.—See DUCK, 2498.

Caoutchouc (*kū'chūk*), better known as India-rubber or gum elastic, is an exudation obtained from the stems of many trees grown in tropical regions. As it flows from the trees it is a milky juice or sap, with the color and consistency of thin cream, but it hardens on exposure and becomes the tenacious, elastic substance familiar as India-rubber. It melts at a temperature of 248° Fahr., and if not submitted to a higher heat it resumes its original properties on cooling; when heated it burns with a bright but smoky flame and emits a rather acrid odor. The varieties of caoutchouc are numerous, according to the country from which it comes. It is used largely in commerce and for many varied purposes, as in water-proof cloth, mackintoshes for use in wet weather, overshoes to keep out snow and rain, while its elastic properties make it useful in the manufacture of gusset boots or gaiters. When vulcanized it is turned to an infinite variety of purposes, such as rubber tubing, damp-proofing, fire hose, machine belting, bags, cushions, dolls, door mats, balls, water-proof sheeting, besides buttons, combs, speaking tubes, stethoscopes, portable drinking vessels, etc. It is a pure hydro-carbon, with two qualities, one of which is solid, tenacious, and elastic, and little affected by solvents, heat, or cold; the other is viscid, ductile, and soluble in essential oil and other solvents.

Cape Breton, Canada.—An island situate at the entrance to the Gulf of St. Lawrence, separated from Newfoundland, to the northeast of it, by Cabot Strait, and from the N. E. end of the pro-

vince of Nova Scotia by the Gut of Canso. It is triangular in shape, its length being about 100 miles, its width 85 miles, and its entire area 3,120 square miles. Its coasts are indented by numerous bays, and by a deep inlet on the east, which extends to the Bras d'Or Lake, and to a ship canal connecting with St. Peter's Bay, on the south coast, practically dividing the island into two parts. The climate is healthy and bracing and the soil, especially along the interior lakes and waterways, fertile. The chief industries are agriculture, coal-mining, and fishing. There is also some export of timber, but the chief out-put is coal, of excellent quality for steam and other purposes, and of which about a million tons are mined a year. The island is interesting historically, having been occupied early by the French, captured in 1745 by the English, then restored to France again, and once more taken by England in 1758, and finally ceded to that power in 1763, and annexed to the province of Nova Scotia in 1820. The fortress of Louisburg, built by the French in 1713, figured in the Seven Years' War between France and England and her colonies; it is now a ruin. Sydney is the capital, and the other chief towns are Arichat, and Port Hood. Incorporated with Nova Scotia 1819. Area, 3,120 square miles. Pop. (1901), 49,166.

Cape Buffalo, The.—See BUFFALO, 2428.

Cape Cod.—A peninsula in Mass., forming Barnstable Co. It was discovered in 1602 by Gosnold. The inhabitants of the peninsula are largely engaged in fisheries.

Cape Horn.—A black, steep, frowning rock, the headland of an island (much dreaded at one time by sailors) at the southern extremity of the Fulgian archipelago. It is said to have been discovered by Sir Francis Drake and to have been doubled in 1616 by two Dutch navigators. Steamers in their passing from the Atlantic to the Pacific now go through the Straits of Magellan, in preference to the route round Cape Horn.

Cape May.—(1) The southernmost point of N. J., at the entrance of Delaware Bay. (2) A city on the above point, a noted seaside summer resort; pop. (1900), 2,257.

Cape of Good Hope (Cape Colony).—The southern promontory of Africa, discovered in 1486 by the Portuguese navigator Diaz, occupied by the Dutch in 1651, abandoned in 1795, and after a brief period of restoration, finally occupied by Britain in 1806, and ceded by the Netherlands in 1814, with other Dutch possessions in South Africa, for the sum of \$30,000,000. In 1853, the government of the colony was established, with Cape Town as the capital; to its area (191,416 sq. miles), have been added east Griqualand, Griqualand west, and other regions; while in 1894 Pondoland, and in 1895 the Crown colony of British Bechuanaland were incorporated with Cape Colony, making a total area of about 277,000 square miles. The population (1891, 1,527,224) is chiefly of mixed race, Kaffirs, Bechuanas, Hottentots, Malays, Fingoes, and whites. Besides the capital the chief towns are Kimberley,

the seat of valuable diamond mines, Port Elizabeth, Graham's Town, East London, Beaconsfield, Pearl, and King William's Town. The principal harbor is Table Bay, adjoining Cape Town, where there is a university and the Colonial house of Parliament. The climate and soil are both excellent, the latter yielding wheat, oats, mealies and Kaffir corn, rye, barley, as well as a variety of fruit and wine-making vines. Its pastoral resources furnish abundant grazing for cattle, horses, sheep, mules, and asses, goats, ostriches, etc.; while its mines furnish valuable yields of gold and copper ores. The colony has 2,500 miles of railway and 8,000 miles of telegraph lines. Capital, Capetown. Pop., with suburbs (1891), 83,898.

Capernaum.—On the Sea of Galilee, not far from the mouth of the Jordan, a village much identified with the life of Christ.

Cape St. Vincent.—A cape projecting into the Atlantic, at the southwestern extremity of Portugal, at which a naval victory was won (Feb. 14, 1797) by a British fleet of 15 vessels under Admiral Jervis (afterward Earl of Vincent) over the Spanish fleet of 27 vessels, 4 of which were captured. The ancient name of the cape was *Promontorium Sacrum*.

Cape Town.—The capital of Cape Colony (Cape of Good Hope), South Africa, and a port on the southwest shore of Table Bay, between the latter and Table Mountain, and beside which rise the tall granite walls of that elevation. Cape Town was founded by the Dutch in 1652 and ceded to Britain early in the past (19th) century. Its port is the chief place of call for steamers and other vessels on the way from Europe to India. It is the see of a bishop of the Church of England. Its chief buildings are the houses of Parliament, composed of a legislative council of 23 members (elected for 7 years) and a house of assembly of 95 members (elected for 5 years). Population (1891), 51,251, or with suburbs, 83,718.

Cape Verde Islands.—A group of islands belonging to Portugal (14 in number) lying in the Atlantic, west of Cape Verde. The chief islands, which are mountainous and volcanic, are Santiago, Fogo, Brava, São Antão, and São Nicolão, the capital being Porto Praya, or Praia. The islands are administered by a governor, and the population is of mixed race, descended from early Portuguese settlers and negroes of various tribes introduced from Guinea. Its chief products are millet, coffee, and medicinal produce. Over 3,000 vessels visit its port annually. Area, 1,480 square miles; population (1896), chiefly negroes, about 114,130.

Capillaries (derived from *capillus*, Latin for hair) are the minute blood-vessels intermediate between arteries and veins, which assist in the circulation of the blood, and are used also as the smallest lymphatic and biliary vessels. Their use is to subdivide and distribute the blood among all the organs and tissues of the body, and hence aid in its nutrition. They are so fine and minute that they can be examined

only by the microscope. The capillary movement of the blood in live animals may be witnessed in the wing of a bat, in the tail of the tadpole, or in the web of the frog.

Capillarity is a principle which exercises an important influence upon the circulation of nutritive fluids in both plants and animals. In physics, what is called capillary action or attraction is the peculiar action by which the surface of a liquid, where it is in contact with a solid (as in a capillary tube) is elevated or depressed. Capillarity, in other words, is the result of the relative attraction of the molecules of the liquid for each other and for those of the solid, and may be seen in action, as we have said, in capillary tubes, where the attraction determines the ascent or the descent of the liquid above or below the level of the liquid in which the tube is dipped. The temperature of the tubes and the liquid exercises an important influence upon capillarity.

Capital, Credit as a.—5258.

Capital of the United States.—Until the adoption of the Constitution, Congress had no fixed abode, but deliberated, as changing conditions dictated, at York, Lancaster, Philadelphia, Baltimore, Princeton, Annapolis, Trenton, or New York. From 1790 to 1800 it met at Philadelphia, and in the latter year removed to Washington, which in 1790 had been selected as the permanent capital of the country. There was a sharp rivalry among several cities to secure the prize of the national capital. Washington was chosen as the result of a combination between the southern members of Congress, who wished it located there, and Alexander Hamilton, who was endeavoring to secure the passage of an act by which the general government should assume the various state debts, incurred for the prosecution of the Revolutionary War, and also for the redemption of the continental script at its face value. The combination was successful in both enterprises; Hamilton's debt bill was passed and the capital was fixed at Washington.

Capitals, Rules for the Use of.—The improper use of capitals or their omission, in a business or social letter, is a common fault in composition, and should be guarded against. Sometimes more capitals are used than is necessary. The great number of words begin with small letters. Where capitals are to be used will be seen from a perusal of the following rules:—

All proper names (names of persons, places, and the principal words in the titles of books) should begin with a capital letter.

Every word that denotes the Deity should begin with a capital, and all words denoting religious denominations, should begin with capitals.

The first word of every sentence and the first word of every line of poetry should begin with a capital letter.

The months of the year and the days of the week all begin with capitals.

The words East, West, North, and South, and their compounds and abbreviations, such as

So., No., Southeast, usually begin with capitals, especially where they specifically denote a section of the country, as So. or South Dakota, No. or North Carolina.

The pronoun I and the interjection O are always capitals.

Letters standing for words (in abbreviated form) are generally written as capitals, as A. D. (*Anno Domini*), the Year of Our Lord, U. S. (United States), W. T. (Washington Ter.).

All adjectives formed from proper names should be in capitals, as American, English, Germanic, Dutch, Spanish, Russian; also all adjectives denoting a sect (religious body), or a religion—as Puritan, Catholic, Methodist, Mahomedan, Buddhist, Congregationalist, etc.

All proper nouns, and titles of office, honor, and respect, should begin with capitals, as His Excellency, The Honorable, His Honor the Mayor, The President of France, The Emperor of Germany, John, Robert, Harriet Beecher Stowe, United States Army, Navy, Supreme Court, Governor, Sir, Sire, Your Grace, Most Worshipful, Madame, Your Royal Highness, His Eminence, the Cardinal, etc.

Words that denote the leading subjects of chapters, articles, and paragraphs, also words denoting great events, eras of history, noted written documents and instruments, and extraordinary physical phenomena, should begin with capitals.

Common nouns where personified, as War, Peace, Faith, are usually capitalized; also all emphatic and prominent words in the titles of books and headings of chapters.

Capitol.—The capitol, as the term is generally used in the U. S., unless the building meant is otherwise described, refers to the splendid structure in which Congress holds its sessions at Washington, D. C. The houses in which state and territorial legislatures meet are also designated as capitols. The corner-stone of the original capitol at Washington was laid by Washington, the first President, Sept. 18, 1793, but the wings were not completed until 1811. The interiors of both were despoiled and burned by the British, Aug. 24, 1814. The main building was ready for occupancy in 1827 and the entire structure had, up to that time, cost nearly \$2,500,000. President Fillmore laid the corner-stone of the extension July 4, Daniel Webster delivering the oration. This part of the Capitol was completed in 1867. The building faces east, as it was at first supposed that the city would grow mainly in that direction, and the portions first constructed are of sandstone, quarried in Va. The northern and southern extensions are of white marble from Mass.; the columns, also of marble, are from Md. The extreme length from north to south is 751 ft. 4 inches; maximum width, 350 ft; area, 153,112 sq. ft. The great dome, originally of wood, is of cast iron and weighs 8,909,200 pounds. At its apex is Crawford's statue of Freedom, 19 ft. 6 inches in height. The dome towers above the base line of the east front, 287 ft. 5 inches; the

diameter of the rotunda is 95 ft. 6 inches; height from floor to top of canopy, 180 ft. 3 inches. The Senate Chamber is 113 x 80 ft., and the Hall of Representatives 139 x 93. The Supreme Court sits in the old Senate Chamber, and Statuary Hall was once occupied by the House of Representatives. Corinthian columns support the porticos. Among the objects of national and artistic interest in the Capitol are busts of the Vice-presidents, portraits of the Speakers, historical paintings and frescoes and the mirrors in the Marble Room. Outside, near the center of the plaza, is a statue of Washington and nearby, at the base of the steps over the terrace, is Story's bronze figure of Chief-justice Marshall.

Capitoline Hill, The.—One of the seven hills upon which Rome was built. After the construction of the Servian wall, the first wall that included the entire city, the Capitoline became the citadel of Rome.

Capitoline Museum.—One of the principal Roman museums of antiquities. Founded, 1471.

Capri.—A famous island of Italy, situated off the coast of Campania, not far from Naples. It was the favorite residence of Augustus, and is especially noted as the scene of the debaucheries of Tiberius. It is now a popular resort for tourists and artists. Pop., about 5,000.

Capricornus (The Goat).—See CONSTELLATIONS, 3005.

Capitve Lion Tells a Monkey how he Killed his Keeper, A.—See ANIMAL STORIES, 2734.

Capua.—A town of Italy, situated near the site of the ancient Capua, and containing a cathedral and a museum of antiquities. Pop., about 12,000.

Capuchins.—An order of mendicant monks, of the Franciscan Society. So called from the capouch or cowl that distinguishes their garb.

Caracas.—The capital of Venezuela; founded, 1567, and destroyed by an earthquake, 1812. It is an important trade center. Pop. (1891), 72,429.

Carafa, Michele.—(1785–1872.) An Italian composer; author of "Masaniello," etc.

Carbolic Acid, or Phenol (C₆H₆OH).—One of the important substances derived from coal-tar. Though termed an acid, and forming salts, it is neutral to test-paper, and has more in common with the alcohols than with the acids. It possesses a peculiar, penetrating, and characteristic odor, and is soluble in twenty times its weight of cold water, and in all proportions in alcohol, ether, and glacial acetic acid. It blanches and corrodes the skin and other tissues, without causing the sensation of pain, and hence is employed in dentistry to destroy an exposed nerve. Known as phenols, the chemical compound is employed largely as a disinfectant and antiseptic, as well as a source of various coloring matters.

Carbon (Lat., *carbo*, coal) is one of the elementary forms of matter, the chief constituent of animal and vegetable tissues, and also largely entering into the composition of certain minerals, such as chalk, limestone, marble, etc. Coal consists largely of carbon, especially hard coal, while,

crystallized, it occurs in the diamond, and in graphite or plumbago. In its impure forms it is met with also in lampblack, coke, and charcoal. In the diamond the carbon is the purest; in graphite, plumbago, or black lead, it is soft, opaque, of grayish-black color, and possesses metallic luster. The compounds of carbon are many: in medicine, it is used in the form of wood charcoal and animal charcoal. Wood charcoal is a remedy for flatulency and for correcting other unpleasantness; it is useful also in cases of dyspepsia, and is generally a good disinfectant and destroyer of bad smells. It is moreover an excellent dentifrice. Animal charcoal is chiefly used in pharmacy for decolorizing purposes in preparing vegetable alkaloids: for such uses it is known as bone black. Carbon unites well with certain metals, and with iron it forms cast-iron and steel. The denser forms conduct electricity well, and are so used in batteries and electric lamps. United with oxygen, it is familiar as a constituent of the atmosphere, as carbon dioxide or carbonic acid.

Carbondale.—A city in northeastern Pa., the center of rich coal fields; pop. (1900), 13,536.

Carbonic Acid or **Carbonic Anhydride**, formerly called *fixed air*, is a gaseous compound of carbon and oxygen. It is procured by the processes of combustion and respiration, and hence is always present in the air, though in minute quantity. Plants live upon it and absorb it into their tissues, there abstract and assimilate its carbon, and return its oxygen to the atmosphere in a pure condition. It is also present in spring water and often in quantities so that it sparkles and effervesces; it is also produced during the processes of putrefaction, fermentation, and slow decay of animal and vegetable substances in presence of air. It is largely employed by the manufacturers of aerated bread and aerated waters. Under a pressure of about 600 pounds it liquifies, and when allowed to escape through a small jet it rapidly evaporates and causes intense cold, so much so as to become frozen. It does not support burning. The gas derived from it, carbon dioxide, is invisible, and is heavier than air by one half, and has a pungent odor and slightly acid taste. In a pure state the gas cannot be respired, as it supports neither respiration nor combustion. When the portion in the atmosphere is increased to a considerable extent, as happens sometimes, it endangers life. The familiar "rising" of bread is brought about by carbonic acid gas escaping through and permeating the dough, making it light and porous. In this form it is known as yeast or as baking powder. We see its uses also in the chemical fire engine.

Cardenas.—A seaport in northern Cuba, 25 miles east of Mantanzas. May 11, 1898, an engagement occurred here between the Spanish shore batteries and gunboats and several U. S. vessels.

Cardiff Giant.—A famous hoax. A colossal figure found on the farm of W. C. Newell, near Cardiff, Onondaga Co., New York.

Cardinal, The.—2575.

Cardinals.—The highest dignitaries of the Church of Rome, next to the Pope, of whom they are the electors and counselors. They are appointed by the Pope, and each given the style and title of His Eminence; their distinctive garb is the cassock, cape, and scarlet birretta (or square cap). The body of cardinals is called the Sacred College; their total number is limited to seventy, of whom six are bishops of suburban sees in the vicinity of Rome; fifty, styled cardinal-priests, hold their titles from parishes in Rome, some of them being at the same time bishops of foreign dioceses; while the remaining fourteen are cardinal-deacons. When a Pope dies, the cardinals are summoned to elect a successor, which they do in secluded and private conference, generally selecting one of their own members known to have been previously nominated by the Pope. The first American cardinal was the late Archbishop John McCloskey of New York. Archbishop Gibbons of Baltimore has been a cardinal since 1886.

Cards and Card-Playing.—The origin of card-playing is not definitely known. Some affirm that games with cards were brought to Europe from the East; others say that they were a device of the Spanish Moors, originating about the beginning of the 15th century. At that era, it is said, that they represented the seasons: two colors representing the two equinoxes, and the four suits the four seasons. Spring was designated by a rose (now a diamond), summer by a trefoil (a club), autumn by an acorn (a spade), and winter by a cub (now a heart.) The twelve court cards represented the twelve months and the 52 cards represented the 52 weeks in the year. After the expulsion of the Moors, the Spanish changed the symbols of the cards and made the four suits represent the four castes or grades of society. In France, at different periods, the kings, queens, and knaves stood for different kingdoms or personages; while in England hearts stood for England, spades for France, clubs for the Pope, and diamonds for Spain. As years passed since cards came into use as a game, there have been modifications and varieties in the numbers of the pack, their form, and device, and their representative character. The pack has for some centuries, however, remained much the same as to number, as well as to the extent of their use. The manufacture of playing cards in this country and abroad is now an extensive and remunerative trade: in Russia their manufacture is a profitable government monopoly.

Careers, Wives who have Helped to Shape their Husband's.—4902.

Carey, Henry Charles.—Born at Philadelphia, 1793; died there 1879. A noted American political economist. His chief works are "An Essay on the Rate of Wages," "Credit System in France, Great Britain and the United States," "Unity of Law," etc.

Caribbean Sea.—An arm of the Atlantic Ocean, lying between South America, on the south; the

Greater Antilles on the north; Central America and Yucatan on the west, and the Caribbean Islands on the east. The Yucatan Channel connects it with the Gulf of Mexico.

Caribbees.—A chain of islands forming a part of the West Indies and lying east of the Caribbean Sea.

Caribou, The.—See DEER, 2417.

Carlisle.—The capital of Cumberland County, Pa., bombarded by the Confederates in 1863 during the invasion of Pa. It is the seat of Dickinson College, and of a government training and industrial school for Indians.

Carlisle, John Griffin.—Born in Ky., 1835. A statesman. He became U. S. senator in 1890 as successor to Senator Beck upon the death of the latter, previous to which he had been speaker of the House (1883-1889). He served as Secretary of the Treasury under President Cleveland (1893-97). He then retired from official and political life, and having removed to New York, devoted himself to the practice of law there.

Carlists, The.—In Spanish history, the supporters of the pretender Don Carlos, brother of Ferdinand VII., and the later claimants to the throne of Spain. Up to 1830, the Salic law prevailed in Spain, but Ferdinand VII. having no child except a daughter, announced that the succession would in future pass to both male and female. He thus set aside the succession of his brother Carlos for Isabel, an infant girl then not more than three years old. Carlos resisted, and a civil war ensued from 1833 to 1839. In 1845, Don Carlos withdrew his claim and died in 1855 at Trieste. Don Carlos the younger, after an unsuccessful struggle, was arrested in France in 1860, but renounced his claim and died in the following year. In 1871, the nephew of the preceding renewed the struggle, but after five years' desultory fighting, he fled to France, and the contest ended.

Carlos, Don, was the title of several aspirants to the Spanish crown. The present aspirant is Carlos Maria de los Dolores Juan Isidoro José Francisco, Duke of Madrid, born 1848. He carried on active warfare (1872-76).

Carlsbad, or Karlsbad (*i. e.*, Charles's bath).—A town in Bohemia, on the Tepel near its junction with the Eger, 70 miles to W. N. W. of Prague. It is famous for its hot springs, which are the resort of thousands annually, drawn chiefly from the aristocratic and well-to-do peoples of Europe. In this respect, it is the most fashionable watering-place on the continent, and the city appears like a vast hotel. There are 17 different springs, the constituents of the waters being chiefly sulphate and carbonate of soda, carbonate of lime, chloride of sodium, and sulphate of potash, with traces of other salts, and a large amount of free carbonic acid gas. The native population is under 10,000, but the visitors in summer sometimes number 20,000.

Carlyle, Jane Baillie Welsh.—(1801-1866.) The wife of the historian, Thomas Carlyle.

Carlyle, Thomas.—(1795-1881.) A famous Scottish historian, philosopher and essayist, was born at

Ecclefechan, Dumfriesshire, and died at Chelsea, London. He married Jane Baillie Welsh in 1826. His complete works were published in thirty-seven volumes. His life has been written by Froude.

Carmel.—A mountain ridge in Palestine; noted as the scene of many of the deeds of Elijah and Elisha. Caves gave protection to Christian hermits in the early days of Christianity, and from this source arose the order of the Carmelites, whose monastery is built upon the mountain, at a height of 480 feet above the sea.

Carmelites, or White Friars.—An order of the Mendicant monks, established by Berthold, about 1156. They had a number of monasteries in England, and "white friars"; a certain locality in London is named after an establishment of the order founded there in 1245.

Carmen.—An opera founded upon the story by Prosper Mérimée; the music by Bizet. First produced 1875.

Carmen Sylva.—The pseudonym of Queen Elizabeth of Rumania.

Carnegie, Andrew.—(Skibo Castle, Sutherland), age 64; a hard-headed philanthropic Scotch-American; began life at 13 as a stoker; went to America, where he made a fortune in the Pittsburg iron trade; reputed to be worth £40,000,000, and has an income of £2,000,000 a year; he says, "a man who dies rich, dies disgraced," and is distributing his wealth during his lifetime. Among his gifts in 1901 were 5 million dollars for free libraries in New York, 5 million dollars for free libraries in Pittsburg, Pa., and 10 million dollars to Scottish universities, with a like sum in aid of university extension and scientific research in the U. S., through the Carnegie Institution, Washington, D. C. See sketch of, 104.

Carnifex Ferry (W. Va.), **Battle of.**—One of the early engagements of the Civil War, fought Sept. 10, 1861. Gen. Rosecrans had succeeded Gen. McClellan as commander in W. Va., McClellan having been called to the Army of the Potomac. Gen. Floyd, with 2,000 Confederates, had taken a position at Carnifex Ferry, on the Gauley River. He was attacked by Rosecrans, with a largely superior force, consisting of six Ohio regiments. Floyd retreated in confusion, after a sharp engagement. Among the slain was Col. Lowe, of the 12th Ohio. The Federal loss was 120; that of the Confederates, including prisoners, about 300.

Carnival.—A season of revelry, masquerading, and buffoonery in Italy, which in modern times is restricted to the eight days before Ash Wednesday. Originally it began on the feast of epiphany or Twelfth Day—January 6—and ended on Shrove or Pancake Tuesday (Lent). During the middle ages, banquets of rich meats and drinking bouts were the chief attractions. Carnivals are widely held in Germany, in the cities of the Rhine provinces; in the south of France, and throughout Italy. In these sections and also in Venice the Carnival is still a popular festival. At Rome, on the occasion of a carnival,

the streets are *en fête*, and much fun and entertaining frolic mark the celebration.

Carnot, Marie François Sadi.—(1837-1894.) A French statesman, who after filling a number of high offices under the government, was elected president of the Republic in 1887. He was assassinated by an anarchist.

Caroline, The.—In 1837 revolutionists in lower Canada seized the Canadian navy yard in the Niagara River, inaugurated a provisional government and got possession of the steamer "Caroline." Dec. 26 the Canadian loyalists crossed the river, after they had killed several rebels in an action, and burned the vessel, which was then within the jurisdiction of the U. S. The incident caused much temporary excitement. President Van Buren demanded the strict observance of the neutrality laws and Gen. Scott took command of the N. Y. militia. The matter was finally adjusted, after much parleying, without a rupture of the friendly relations between the two governments.

Caroline Islands.—They lie north of New Guinea, and between the Philippines on the east and Kingsmills on the west. The main islands are Yap, Ponape, Strong, Babel-thouap, and Rouk. The Pelew Islands are usually included in the group. Spain and Germany claimed Yap until 1885, when it was awarded to Spain.

Carp, The.—2695.

Carpaccio.—3417.

Carpathian Mountains.—An extensive mountain system of Central Europe, separating Hungary and Transylvania from Moravia, Silesia, Galicia, Bukowina, and Rumania.

Carpenter and the Country Carpenter, The City.—5165.

Carpenter, William Benjamin.—(1813-1885.) A noted English naturalist.

Carpetbaggers.—Northerners who hastened to the Southern States at the close of the Civil War. The epithet was first applied to political adventurers, who had no other personal effects than those they were able to carry in carpet-bags, and who aspired to office and political power wholly for gain. Hence the term "carpetbaggers," which was gradually extended to include all strangers who went South and remained there. Many such strangers, however, proved excellent citizens. The epithet has lost much of its original opprobrium and is now used all over the country to designate any stranger in a community, especially if he participates actively in politics.

Carrier-Pigeons, Speed of.—The speed of carrier-pigeons appears to depend as much on the clearness of their sight as on the strength of their wings. In an experiment recently made with some Berlin pigeons, on a clear day, a distance of over three hundred miles, from Cologne to Berlin, was accomplished in five hours and a half, or at the rate of nearly sixty miles an hour; while the most expeditious of a group let loose the next day—a day not of the same kind—took twelve hours to reach Berlin. Hence it would appear that in the latter case a good deal of the pigeons' time was taken up in

exploring the country for landmarks. It is not by instinct, but by sight, that the carrier-pigeon guides its course.

Carrion Crow, The.—See VULTURE, 2526.

Carroll, Charles ("of Carrollton").—Born at Annapolis, 1737; died at Baltimore, 1832. He was one of the signers of the Declaration of Independence and was U. S. senator, from Md. (1789-91).

Carson, Christopher ("KIT" CARSON).—(1809-1868.) An American soldier, guide, trapper, and Indian agent in New Mexico.

Carson City.—The capital of Nev., noted for the gold and silver mines in its vicinity. Pop. (1900), 2,100.

Carthage.—An ancient and famous commercial city of Africa, founded as a Phœnician colony by emigrants from Tyre in 850 B.C., and subsequently a republic and one of the great empires of the ancient world. It stood on the peninsula overlooking the Mediterranean, about 20 miles south of Utica and near the site of the present town of Tunis. The early records of the State have not been preserved. Before the Punic War, we know that it became one of the chief commercial emporiums of the world, and during the period of her greatest prosperity was a notable maritime power. In 150 B.C. the population of the city numbered 700,000. Her authority and sway extended over the northern coast of Africa for about 2,000 miles from the Pillars of Hercules (the entrance to the Strait of Gibraltar). It was in the Punic War (264 B.C.) that led the two great powers of the then world, Rome and Carthage, to compete for the possession of Sicily, which Rome at length won. Under Hamilcar, Carthage conquered Spain, but suffered greatly in the second Punic or Carthaginian War, in the contest with Rome, which ended by the defeat of Hannibal, son of Hamilcar, at the battle of Zama, in 202 B.C. The Third Punic War, begun in 149 B.C., ended Carthage's rivalry with Rome. Besieged by land and sea by the younger Scipio Africanus, Carthage was taken and destroyed, and her territory divided between Rome and Numidia.

Carthage (Mo.), Battle of.—When Gov. Jackson, of Mo. and his militia had been driven from Boonville (which see), June 17, 1861, they fled to Carthage, where they were joined by a Confederate force under Gen. Sterling Price, bringing the force up to 3,600. Gen. Franz Sigel, with a Union force of only 1,500 gave battle, July 5, and was defeated. The losses were not large on either side. At this time none of the troops were seasoned to war, or tempered in the fire of battle, and the early encounters showed little of the desperate valor that marked the Union and Confederate soldiers alike in the later conflicts of the war.

Carthusians.—A religious order, of austere rules, founded by Bruno, of Cologne, about 1084. The Carthusians appeared in England in the 12th century and established a monastery on the site of the present Charter House in London.

Carver, John.—Born in England about 1575; died at Plymouth, Mass., 1621. One of the "Pilgrim

Fathers" and first governor of Plymouth Colony (1620-21).

Carver, Jonathan.—Born at Stillwater, Conn., 1732; died at London, Eng., 1780. An American trans-Mississippi explorer (1766). He wrote "Travels to the Interior Parts of North America" and several accounts of Indian customs, manners, and languages, etc., (1778); also, "A Treatise on the Cultivation of the Tobacco Plant."

Cary, Alice.—(1820-1871.) An American author; sister of Phœbe Cary.

Cary, Phœbe.—(1824-1871.) An American author; sister of Alice Cary.

Cary's Rebellion.—The Quakers, in 1705, had Thomas Cary deposed from the deputy-governorship of N. C., because, under the requirements of the test act, he had disfranchised them. He made many attempts to usurp the government and one to kidnap Gov. Hyde, his successor in office, who, with the aid of militia sent by Gov. Spotswood of Va., overcame Cary.

Casabianca, Louis.—(1755-1798.) A French naval officer. He and his son were lost with their ship at the battle of the Nile. Mrs. Hemans's well-known poem is based upon this event.

Cascade Mountains.—A chain of mountains running through Ore., Wash., and British Columbia and almost parallel to the Pacific coast. It contains many extinct volcanoes and high peaks, the chief of which is Tacoma, 14,444 feet.

Casco Bay.—A bay on the southern coast of Me., about 20 miles in extent and abounding in islands.

Cashmere.—See KASHMIR.

Cass, Lewis.—(1782-1866.) An American statesman. He served in the War of 1812, and successively filled the offices of governor of Michigan territory, Secretary of War, minister to France, United States senator, and Secretary of State. He was a presidential candidate (Democratic) in 1848.

Cassius, Longinus.—Died 42 B.C. A Roman general and politician; one of the conspirators against Julius Cæsar, in 44. He killed himself after being defeated by Antony at Philippi.

Castelar.—(1832-1899.) Emilio Castelar, Spanish statesman, was born at Cadiz in 1832. At the age of seven, when his father died, he went to the village of Elda, with his mother. For a while he attended school at Alicante where he showed a great taste for reading and a love for the classics. He became known as a prodigy of knowledge.

At the age of sixteen he entered the university at Madrid, and soon became known as an active interested student. He was very fond of history and politics. Even from his boyhood, he stood for republican principles in government. At the age of sixteen, he spoke to a Madrid mob with such surprising power that royalists looked upon him as an object of dread. He was, at a very early age, a member of conclaves held to promote liberal government, and wrote fiery notices which were posted at night along the streets of Madrid.

He emerged from obscurity in 1854, in the midst of the hurly-burly of Spanish politics and intrigues, by making a speech at a public meeting. After sitting silent while his elders had the floor, he sprang to his feet, near the close of the meeting and began to speak. He held the complete attention of the audience, which had begun to disperse before he arose. When he sat down he had won a reputation as the ablest orator of the day. On the next morning, he awoke to find himself famous. He was no longer a poorly-paid journalist.

He was soon called to the chair of history in the University of Madrid, but he did not suppress his opinions. He taught his liberal ideas in the class-room. He set before his young men the story of the rise and progress of the United States. He filled their minds with the ideas and principles of political liberty, and urged that Spain should adopt the American form of government as a model.

In 1865, when the queen needing money, offered to resign the property of the Crown in case she should receive one-fourth of the sales, Castelar asserted that the so-called sacrifice was little better than a swindle. He held that, in constitutional countries, the sovereign is the paid servant of the nation to which the Crown lands really belong. When he was punished by forcible removal from his chair in the university,—for applying himself to political agitation,—he at once became a hero. Through the press, he continued to denounce despotism. He was an active and a leading spirit among those who favored revolution. When the streets of Madrid became the scene of revolt in June, 1866, he spoke to the mob with fervid eloquence and led in the revolutionary attacks. He was captured, thrown into prison, and condemned to death, but by the aid of friendly rebels, he escaped, and fled from the country. From Paris, he watched the course of events in Spain, and kept his pen busy writing for the press.

At the beginning of the revolution of 1868, against the rule of Isabella, he returned to Madrid and became one of the leaders of the republican movement. When Prim became dictator, Castelar sought election to the new Cortes. Though defeated in his own town by priestly influence, he was chosen as a delegate from the capital.

In the Cortes, he showed his ability as a statesman in the discussion of great questions of government. Though he had only a small minority to sustain his own ideas of reform, he was recognized as the leading orator. He was ready to meet every question that arose. He strongly opposed the views of those who said monarchy was the best form of government for Spain. His eloquence reached its climax of dramatic effect when he spoke for religious freedom and toleration, making his speech the more impressive by holding in his hand a fragment of a human skull gathered from the moldering heaps of dust of the victims who had been burned by the order of the Inquisition in the

reign of Philip II. He held his auditors spell-bound when he pictured the evil religious oppression. His speech doubtless increased the majority by which toleration was decreed as an article of the new constitution.

Early in 1873 Castelar found the way open to try the experiment of a republic. Amadeo, who had been elected king, became weary of the office, and suddenly left it. The Cortes by a large majority voted in favor of a republic. Castelar became minister of foreign affairs under Figueras who was chosen president. He was the central and controlling figure of the government, but he aimed to change Spanish opinions and customs too rapidly.

In September, when Figueras resigned, Castelar became president with dictatorial powers. He began his short term of office with great energy. He resolved to act with great vigor to establish his Liberal reforms. He threw overboard his theories in order to reestablish order and save Spain from destruction. His first act was to dissolve the Cortes and make himself dictator. He then tried, by strong measures, to subdue the Carlist rebellion and the Cuban revolt. Failing in this, he was forced to call a new Cortes. When the Cortes expressed a lack of confidence, he resigned, and let the republic vanish; but he never despaired of the cause in which he had taken such an active part.

He might have been more successful if he had been less zealous. Though honest, energetic, and patriotic, he had not been tried in the mill of experience. He was eager to go too fast, and he had not the girth and tact of Gambetta. He was better suited to stand at the helm and guide. He knew how to break away from monarchy better than he knew how to establish a republic.

General Sickles in a recent letter said: "Castelar was a brilliant orator and writer, but failed as an executive. He . . . was a man of fine sentiments but . . . easily baffled by opposition. He was amiable to a fault, influenced by flattery, easily persuaded by personal friends—whom he found in all parties—and lacking in firmness to overcome adversaries."

As an orator, he was the most fluent man of a most fluent race, held his audience bound as with a spell—by the inexhaustible resources of learning which fed the flame of his tongue. He appeared to have at his command the central thought and meaning of every age. As he spoke, "the winds of the centuries seemed to be blowing across his fervid spirit," furnishing arguments, symbols, and figures for his amazing flights of oratory. He always confronted his audience with hesitation, trembling and pallid as a man condemned to death; but when once he began to speak, his courage returned, and felt nothing but the irresistible flame which burned within him, and the mysterious force that sustained him. He was the master of the assembly, carrying his admiring, wondering, and enthusiastic auditors with him by

the storms and fireworks—the thunders and lightnings—of his eloquence.

Here is a sample of his "youthful eloquence": "As a new leaf comes forth upon the naked branch, as new stars shine forth in the immensity of the heavens, so do new generations awake to life, and change the scene of the world, and raise altars to the ideas for which their fathers raised scaffolds, and convert the victims of yesterday into priests, and open the fancy to the breath of new allusions, the sentiment to the love of new hopes, the spirit to the faith of new ideas; and each age says to the previous age, 'Get thee gone, for that thou pre-ventest me seeing the truth.'"

Here is a further specimen of his oratory, where he gives the reins to his rushing steed:—

"From each of the centuries through which humanity has lived, there rises an everlasting hymn, which like the echoes of the organ beneath the vaults of the Gothic cathedral, inspires a strong religious sentiment. Bless with me, gentlemen, bless with me all the ages. Just as in the great laboratory out of all the substances of the earth, so in the great laboratory of history our intellect is formed out of all the centuries. Bless them then with me, gentlemen—bless all the centuries; bless the prehistoric ages, for they are your cradle; bless the tribes, for they were your mothers; bless theocracy, in that it made secure the first religious sentiment in the human heart; bless the heroic peoples, and the laboring peoples, in that the first made you lords of society and the second lords of nature; bless the philosophers, in that they opened your reason to the infinite, and made you hear in your spirit the voice of conscience; bless the conquerors, in that they with their swords blotted out frontiers, and united races. . . ."

His rhetorical manner may be further shown by the following, which he wrote in an album:—

"Faith may change its aim, but ever remains in the depths of human nature as the supremest virtue, impelling to supreme acts. Life is, and will ever be, a stormy ocean. To cross this ocean, in Faith, and in Faith alone, must we embark. In this bark the prophet Columbus set sail, and at his journey's end found a New World. If that world had not existed, God would have created it in the solitude of the waves, if only to reward the faith and constancy of that man. We shall yet behold throughout the world that liberty and equality whose dawns already shine upon the pure brow of America the virgin, because we are resolute in our search thereof and possess assured faith that we shall find it."

In January, 1875, when Don Alfonso XII. was put on the throne, Castelar retired for a time into exile, but he soon returned to resume his professorship. He remained a Republican in his principles, but experience made him more conciliatory to the monarchy. He was willing temporarily to aid any party that would work for Liberal reforms. Though he would not

take office under the monarchy, he coöperated with Sagasta in securing a revision of the conservative Constitution of Canovas. In 1893, after the Constitution was modified so as to restore the right of universal suffrage, he declared the monarchy to be the only stable form of government possible in Spain. He also announced his retirement from public life. He died in 1899.

Castes.—In India, the different classes of society. See 1524.

Castile.—An old kingdom of Spain occupying the central and northern part of the country. It was governed by Moorish counts. Isabella of Castile married Ferdinand of Aragon in 1469. She became queen of Castile in 1474. Ferdinand became king of Aragon in 1479. In this way Castile and Aragon were united.

Castle Garden.—A large circular building in Battery Park, New York City; originally a fort, built in 1805 and for some years used as an opera house and public hall. Jenny Lind made her first appearance here, 1850. From 1855 until 1891, the city's immigrant station; now an aquarium.

Caswell, Richard.—Born in Md., 1729; died in N. C., 1789. He was actively engaged in the Revolutionary War and was governor of N. C. (1777-79 and 1784-87).

Cat, The.—2412.

Cat, The.—See KEEPING OF PETS, 2314.

Catacombs.—Caves, grottoes, or subterranean places, sometimes of considerable extent, used for the burial of the dead. The more notable catacombs are those near Rome, on the Appian Way, the place of interment of early Christians, their hiding-place from persecution, and chapels of worship. This site now abounds in archæological interest, from the mystic symbols, figures, and other specimens of early Christian art which adorn the sarcophagi, chambers, and chapels. Its length extends underground for hundreds of miles, and is computed to contain the bones and other relics of many million persons. Catacombs of similar character are found in Paris, and in Egypt, Malta, Sicily, and at Syracuse in Sicily.

Catalonia.—A former province of Spain, situated in the northwestern part. Its surface was mountainous. The language is Catalan. It was deprived of its constitution in 1714, when it was conquered by Philip V.

Catalpa, The.—See INDIAN BEAN, 2824.

Catawbas.—See INDIANS.

Catbird, The.—2539.

Catfish, The.—2700.

Catherine of Aragon.—See WOMEN WHO HAVE INFLUENCED HISTORY.

Catherine II. of Russia.—See WOMEN WHO HAVE INFLUENCED HISTORY.

Cathlamat or Katlamat.—A tribe of Indians whose habitat was on both sides of the Columbia River, near its mouth.

Catholic Priesthood and Its Requirements, The.—4948.

Catiline's Conspiracy.—Lucius Sergius Catiline (108-62 B.C.) organized a wide-spread conspiracy

against the Roman republic, which was defeated by the vigilance of Cicero, the consul. In 65 B.C. Cicero delivered his fourth oration in the senate on Dec. 5. Catiline assumed command of his forces but was overtaken by the army of the Senate, as he was attempting to escape into Gaul, and in the battle which ensued Catiline was defeated and slain.

Catlin, George.—Born at Wilkesbarre, Pa., 1796; died at Jersey City, N. J., 1872. A noted American artist and dweller among the North American Indians. He is chiefly known for his "Illustrations of the Manners, Customs, and Conditions of the North American Indians" (1841). His unique and valuable collection of 500 portraits of Indians from life, now forms part of the National Museum at Washington.

Cato, Marcus Porcius.—(234-149 B.C.) An eminent Roman senator, noted for his hatred of the Carthaginians. He concluded all his addresses—upon every subject—with the words "Carthage must be destroyed." He was known as Cato Major, or Cato, the Censor.

Cato, Marcus Porcius.—(95-46 B.C.) Known as Cato the Younger. Roman patriot and philosopher.

Cat's Christmas Gift, The.—See ANIMAL STORIES.

Cat's-eye.—A beautiful species of quartz much prized for jewelry on account of play of light which has given it its name, and which results from the parallel arrangement of minute fibers of its own substance or of a foreign substance. Found in Malabar and Ceylon.

Catskill.—Cap. of Greene Co., N. Y. on the Hudson River, 109 m. from New York and 34 from Albany. Pop. (1900), 5,484.

Catskill Mountains, The.—A part of the great Appalachian range. They are on the west bank of the Hudson River. The highest peaks are:—

- Slide Mt., 4,220 ft.
- Hunter Mt., 4,052 ft.
- Peakamoos Mt., 4,000 ft.
- High Peak, 3,809 ft.
- Round Top, 3,804 ft.
- Panther Mt., 3,800 ft.
- Big Indian, 3,800 ft.

Cattermoie, George.—(1800-1868.) A noted English painter and illustrator. One of the first artists to use water colors.

Cattle.—Quadrupeds of the bovine family (the ox and the cow), which form an important part of the wealth of a country. Sometimes the term is used to include all domestic animals (quadrupeds), such as sheep, goats, horses, mules, asses, and swine, in addition to those of the ox family. Cattle in the United States are raised largely, especially on the fertile plains of the West, and not only for local uses as meat food, and for their hides, and in the case of sheep for their wool, but for export to foreign markets as dead meat, made practicable now by modern methods, freezing and cold storage. Of farm animals in this country, statistics show that, on Jan. 1, 1899, the U. S. possessed of oxen and other cattle 27,994,225, value \$639,931,135; of milch cows 15,990,115, value \$474,223,925; of sheep 39,114,453, value \$107,697,554; of swine 38,651,631,

value \$170,109,743; and of horses 13,665,307, value \$511,074,813. Great Britain, Australasia, and France, are the leading cattle-breeding countries abroad, with numbers almost similar, — *viz.*, about 12,000,000 head each. In the U. S., the hog is a valuable export, as bacon, ham, and pork, the number packed and marketed in 1899 being close upon 30 million. The distribution (export trade) by countries of American hogs was chiefly to Great Britain, Germany, Belgium, Netherlands, France, Cuba, and the British West Indies, Brazil, Haiti, etc.

Caucasians.—The highest type of the human race. Under this name are included most of the European peoples, the Circassians, Armenians, Persians, Jews, etc.

Caucasus.—A lofty mountain range in Russia, between the Black and Caspian seas, and the conventional boundary between Europe and Asia. The length of the range is about 800 miles, with a breadth of about 120 miles. On both sides of the central chain are connecting branches or transverse ridges. The highest point of the main system is Mt. Elburz, which has an altitude of 18,520 feet. The chief pass is the chain in Dariel Pass, along which the scenery at its high elevations is magnificent. The snow line (perpetual) is at a limit of 11,000 feet above the sea. Among the tribes inhabiting the region are the Circassians, Georgians, and Mingrelians, who speak different languages but are all subject to Russia. The chief rivers that rise in the Caucasus are the Kur, Kuban, and Terek. The region about, lying north of Persia and Asiatic Turkey, forms a province and government of Russia, with an area of 180,843 square miles, and a population of 9,250,000. A governor-general, representing the emperor, has supreme direction and control of all its affairs, both civil and military.

Caucus.—An assemblage of political partisans to name candidates or agree upon plans of campaign or legislation. Though they originated in this country, caucuses are now held in England and elsewhere. The first caucus of which we have any record was held in Boston, early in the 18th century, and is said to have derived its name from the gatherings of the ship calkers. From this small beginning, the custom grew until in the early days of the Federal Government the Congressional meetings that nominated candidates for the presidency and vice-presidency were known as caucuses. In 1828 the nominees for these offices were chosen by state legislatures and in 1831 the existing system of nominating by conventions was adopted. Caucuses of members of Congress representing the different parties in that body are now often held, to deliberate upon proposed measures and determine upon courses of action.

Cavalleria Rusticana.—An opera by Mascagni; first produced in 1890.

Cavendish, Lord Frederick Charles.—(1836-1882.) Chief secretary to the lord-lieutenant of Ireland. He was assassinated in Phoenix Park, Dublin, for political reasons.

Cave of the Winds.—A recess behind the Falls of Niagara, much frequented by tourists.

Cavité (*kā-vê-tā'*).—A town on the Bay of Manila in the island of Luzon in the Philippines. Admiral Dewey (then Commodore), on May 1, 1898, defeated a Spanish fleet near here.

Cavour, Count.—(1810-1861.) To Count Cavour, the prime minister of Sardinia under Victor Emanuel, king of Sardinia, more than to any other man is due the everlasting gratitude of the Italian people for the unification of Italy and the freedom of her people from the rule of Austria. To him belongs the honor of realizing that of which Mazzini was the prophet and Garibaldi the knight-errant. He was the great, far-sighted genius who contrived plans and used diplomacy that finally secured Italian unity. He looked to the welfare of all Italy as well as to that of Sardinia. He was one of the most distinguished statesmen of modern times.

Cavour was born at Turin, Italy, on Aug. 1, 1810, of a noble and wealthy family. Until the age of ten, he lived in his father's house at Turin, where he enjoyed many advantages and much family affection. He was an active, energetic, good-natured boy, and full of animal spirits. At first, he had no love for his lessons; but later, he became a voracious reader. At the age of ten, he left home and entered the military academy, where he devoted himself to hard study—especially in mathematics. He was made a page in the royal household; but he did not like the restraints and etiquette of the position, and was relieved.

At the age of sixteen having been a successful student, he was appointed to a commission in the engineers. For much of the time he was stationed at Genoa, where there was a liberal independent life that he enjoyed.

When Italy began to feel the shock of the French Revolution in 1830, he gave offense by his freedom of speech and was sent away to superintend some mason-work, as a punishment for his imprudence. Growing weary and lonesome, he resigned (1831).

Being unable to tolerate the policy of the clerical and aristocratic party, and disapproving the methods of the Carbonari and "Young Italy," he chose a policy of watchful inactivity in political affairs, and retired to private life for sixteen years. During this period, he received a training which fitted him to guide Italy through the troubles of a critical struggle. For a great part of the period he devoted his attention to farming, in which he introduced some reforms. He was instrumental in forming a national agricultural society. He resided for a while in England and intimately acquainted himself with the political organization of the country, and also with her industrial institutions. The knowledge which he acquired, he turned to some use when he returned to Italy in 1842.

In 1847, the signs of the times clearly indicated the coming of the political storm. The wrath of centuries announced itself in deep-

toned mutterings, soon to burst forth with volcanic violence. Pius IX. startled Europe with the spectacle of a Liberal pope. Everywhere was felt the Liberal impulse.

Toward the close of 1847, seeing that his time for action had come, Cavour started a newspaper at Turin as the organ of the opinions of himself and friends. He advocated the interests of the middle classes, the independence of Italy, union between princes and people, and progressive reform. It was he who suggested a petition to the king for a constitution. Soon he held a seat in the Chamber as one of the members for the capital. In the stormy period which followed the declaration of war against Austria, he opposed the extreme Democrats and counseled alliance with England as the surest guaranty of success for Italian arms. Between the heat of parties he took a firm position as a moderate Liberal. As a practical man, he supported the party which seemed at the time most likely to carry out the measures which he thought would have the best results for the country. For a while he was very unpopular, hated by both parties, but gradually he arose above the contending elements and appeared in the true greatness of his character.

In 1850-52, he was an active member of the administration; and from 1852 until his death, save for a brief interval, he was the prime minister and virtual ruler of the country. He was the originator and the director of the Sardinian policy. He sent the Piedmontese army to the Crimea, to raise once more the military glory of Italy. It was by his diplomacy that one hundred and fifty thousand Frenchmen descended from the Alps to chase the Austrians from Lombardy.

In 1859, at an important international crisis, he became a kind of dictator, directing the entire government in all of its departments. In the war which followed, he did not secure what he hoped, but he rejoiced that thenceforward Italy had her destiny in her own hands. He saw a new Italy spring from the ashes of the old.

By his luminous mind, his invincible perseverance, and his more than human industry, he gave a powerful impulse toward Italian unity. He passed terrible crises in his cabinet, when his work might have been destroyed at any moment like a fragile edifice at the tremor of an earthquake. Besides the duties of the premiership, he took upon himself, at different times, the duties of minister of finance, commerce, and agriculture, and of home and foreign affairs. He improved the financial condition of the country, introduced free trade, strengthened the constitution, weakened the influence of the clergy, and made Sardinia an important factor in European affairs, by allying her with England and France against Russia. He was one of the greatest diplomats of Europe, as shown by his dispatches in reply to those of Austria prior to the outbreak of the Italian war.

Though, filled with grief and chagrin, he resigned after the peace of Villafranca, he was again called upon, in January 1860, to preside over the Sardinian government. He again took the helm, performing also the duties of foreign minister, and for a time those of the minister of the interior. One of his first acts was to begin his policy of annexing Italian provinces by means of popular suffrage, and in spite of foreign opposition. When he was strongly censured by Garibaldi and others for being driven into the cession of Nice and Savoy to France, he replied with deep emotion that he believed he was performing a painful duty — the most painful of his entire life. He had formed an alliance against the Czar of Russia, partly because he hated despotism but principally to gain the good-will of the allies, so that the Italians might not have to fight their battles alone in their future struggles with Austria. In order to continue on good terms with France, he found it necessary to give her what she asked for the aid which she had given in the war.

While the illustrious Garibaldi was winning success upon the field of battle, and making himself dictator of the Sicilies, Cavour was rendering equally effective service in the field of diplomacy, by preventing foreign interference in Italy. When the signs of reaction appeared in Sicily, and affairs reached a crisis, he was ready for the opportunity that came. He gave the counsel, by which Victor Emanuel formed a junction with Garibaldi at Capua and consolidated the results of the revolution in favor of Italian unity.

On July 2, 1861, a few months after the liberation of Naples and Sicily, and in the midst of the cares and anxieties of his constant and laborious work for the welfare of Italy, he was taken seriously ill. To his physician he said: "Cure me promptly; I have Italy on my shoulders, and time is precious."

In his paroxysms of delirium, he talked of policies of state, and the interests of Italy. "Educate the children," he exclaimed between gasps for breath, "educate the children and the young people—govern with liberty." He had, while premier, pleaded with the despots of the different states, to give a more liberal government to their people. As death hovered over him, with burning words he invoked General Garibaldi, with whom he had had disagreements, and spoke of Venice and Rome which were not yet free; he had vast visions of the future of Europe; he dreamed of a foreign invasion; he inquired where the corps of the army were, and the generals; he still trembled for his people. His great sorrow was not that he felt that his life was going, but to think of leaving his country, which still had need of him, and for which he had in a few years worn out the forces of his wonderful organism. On the day before his death, when Victor Emanuel left his bedside with the remark, "I will return to-morrow," he replied: "I shall not be here to-morrow."

On July 7, he died. The news was received with great sorrow, not only in Italy, but throughout Europe. Even his political enemies recognized his death as a national loss, and followed silently and respectfully in the wake of his funeral car. The youth of Italy are still taught to honor his name and think of him with grateful memory as they pass his marble image.

Though he died early, he lived long enough to see the assured success of the policy to which he had dedicated his life. What he failed to accomplish himself, he foreshadowed. He deserves to be remembered as a true patriot, a distinguished diplomat, and an upright, genial, kind, forgiving man, who achieved a great work for his people and for mankind. Few statesmen have left a more stainless name behind.

Though he did not live to realize all of his splendid dream, he started the noble work that bravely went on. On November 7, 1866, Victor Emanuel, to whom had been presented the iron crown that had once pressed the brows of Charlemagne, Barbarossa, and Napoleon, made his triumphal entry into Venice — and finally, after twelve hundred years of papal dominion, Rome became the capital of a regenerated Italy.

Cawnpore.—A city and district in the Northwest provinces of British India. The district has an area of 2,363 square miles, with an estimated population of 1,250,000. The city is an important military station, situated on the Ganges, about 100 miles southwest of Lucknow. Here, during the Sepoy mutiny, in June and July, 1857, the mutineers under Nana Sahib rose against the British and other Europeans and massacred them, with about 125 women and children. Their bodies he threw into a well, over which now stands a handsome monument to their memory. To rescue, if possible, the British during the Sepoy rising, Sir Henry Havelock made a forced march with British troops from Allahabad and routed the forces of the chief rebel, Nana Sahib, after which, reinforced by Sir James Outram, he fought his way to Lucknow. Here, however, the relieving forces were themselves besieged by masses of the insurgents, until the opportune arrival of Sir Colin Campbell, afterward Lord Clyde, when the mutineers were suppressed and punished, and the country was restored to order. Pop. of city of Cawnpore, about 200,000.

Caxton, William.—(1422-1491.) The first English printer. The first printed English book, "The Recueil des Histoires de Troye," appeared about 1474.

Cayenne.—The capital of French Guiana; an important seaport. Pop., about 12,300.

Cayuga.—See INDIANS.

Cayuga Indians.—A tribe of the Iroquois confederacy of Indians, also called the Six Nations. They originally inhabited the neighborhood of Cayuga Lake, N. Y. During the Revolution they joined the British against the Colonists. After the war, they ceded most of their lands to the

state of N. Y., and the tribe scattered and almost disappeared. Remnants of the tribe exist in the Ind. Ter., Wis. and Ontario, Canada.

Cayuga Lake.—In central New York, a lake with outlet into Lake Ontario. Length, about 38 miles.

Cazenovia.—A town in Madison Co., N. Y., seat of a Methodist seminary. Pop. (1900), 1,819.

Cecilia, Saint.—A Christian martyr, put to death at Rome, 230. The subject of Raphael's great painting, and of one of Chaucer's *Canterbury Tales*.

Cecrops.—According to Athenian tradition, the first ruler of Athens, said to have introduced civilization into Greece.

Cedar Bird, The.—See WAXWING, 2584.

Cedar Creek (Va.) Battle of.—This was one of the notable actions of the Civil War. After the defeat of the Confederates under Early, by Sheridan, at Fisher's Hill (which see), in the Shenandoah Valley, Sept. 22, 1864, Sheridan disposed his army on the north side of Cedar Creek, near Strasburg. He then went to Washington for consultation with the authorities there in regard to further operations. Gen. Lee sent a strong reinforcement to Early and the latter determined to strike a blow during the absence of Sheridan. On the morning of the 19th, he fell upon the Union camp at daylight, with the greatest fury. The attack was a surprise and threw the Federals into confusion. The Confederates captured the camp, 1,500 prisoners, and 24 pieces of artillery. The Federal army fell back toward Winchester, under the direction of Gen. H. G. Wright, who was in command. At the time the attack was delivered Sheridan was at Winchester, some 20 miles distant, on his way to the front from Washington. Tidings of the disaster were borne to him and mounting his horse he galloped to the scene of action. "Face the other way, boys!" he said to the stragglers whom he met, "we're going back to our camp! we're going to lick them out of their boots!" The presence of Sheridan had an immediate and inspiring effect. After a brief halt, to reform the army and make the dispositions for attack, Sheridan ordered an advance. The Confederates, in fancied security, had given over the pursuit and were reveling in the spoil of the "Yankee" camps. They, in turn, were surprised when Sheridan's men assailed them with such impetuosity as to sweep everything before them. They recaptured all the guns and equipage that they had lost in the morning, and took, besides, 25 of the enemy's cannon and 2,000 prisoners. The Federal loss in killed and wounded was about 4,000. This signal victory completely broke the power of the Confederates in the valley and no further effort was made to recover the lost ground. Lee recalled to his own army at Petersburg the troops he had sent to Early, and this enabled Sheridan to return the 6th corps, (Wright) to the army of Grant. There was no further fighting of consequence in the valley. The ride of Sheridan from Winchester to the

front was immortalized by Thomas Buchanan Read, in his poem "Sheridan's Ride."

Cedar Keys.—A seaport in Fla., with a large trade in sponges, fish, turtles, etc. Pop. (1901), 739.

Cedar Mountain (Va.), Battle of.—Near the close of McClellan's Peninsular campaign against Richmond (May-June, 1862), Gen. John Pope, who had shown great enterprise in military operations in the West, was placed in command of the forces of McDowell, Banks, and Fremont, in all, some 50,000 men. McDowell was at Washington, having been left by McClellan to protect the National capital. Banks and Fremont had been in the valley operating against "Stonewall" Jackson. The latter had been called, with the greater part of his troops, to the assistance of Lee on the peninsula, but McClellan had been beaten back and Jackson was again free to move westward. Aug. 9, he attacked Banks, who had 8,000 men, at Cedar Mountain, near Culpeper. Jackson's force outnumbered that of Banks, and after a day of severe fighting the latter was driven from the field. The Federal losses were large, amounting to nearly one-third of the number engaged; that of the Confederates was 1,300 in killed and wounded.

Cedar Rapids.—A city in eastern Iowa. It is a railway center, noted for its trading and manufacturing industries. Pop. (1900), 25,656.

Celebes.—One of the East India Islands, the third in size. It belongs to the Dutch and has a population of about 1,500,000. Chief export, coffee.

Celestial Empire, The.—A name popularly applied to the Chinese empire, the inhabitants of which are termed "Celestials."

Celestial Sphere, The.—2966.

Cellini, Benvenuto.—3571.

Cell Theory, The, is the doctrine, based on the discovery of two scientists about the year 1840, that the tissues of the animal body, as well as vegetable textures, originate from a primary element, termed a cell. The theory is an important one, and marks a great advance in the science of the last fifty or sixty years, for it demonstrates that all living beings, however varied the type, are united by similarity of structure, originating in cells. The theory as first propounded by Messrs. Schleiden and Schwann has, under the microscope, been somewhat modified, and in other respects extended and more amply illustrated and proved. These cells consist of a gelatinous, albuminous compound, having the power of contractility,—minute jelly-like particles of living matter,—the *nuclei* of the future developed animal or plant life. These cells take various forms and shapes, varying in size from the $\frac{1}{100}$ th to the $\frac{1}{8000}$ th part of an inch. The smallest cells are supposed to be the colored blood corpuscles; the largest is the ovum, the parent of all other cells. The egg we now know to be a cell, having within it everything that an animal inherits from its parents; these cellular beginnings of life are termed in their viscid globular form protoplasm or bioplasm. They have the prop-

erty of multiplying, by fission or division, or by budding, as they absorb matter from the fluid or other pabulum in which they exist. In botany, the cell is a rounded bladder-like organ, containing the substance which gives sustenance and character to the plant.

Celtic Element in English, The.—3014.

Celts, or Kelts.—An Aryan or Anglo-Indian people, known to the early Romans as *Galli* or *Celtæ*, and supposed to have crossed to Britain from Belgic Gaul and intermarried with the natives they conquered and merged with. Portions of them have remained more or less distinct, such as the Bretons, Irish, Welsh or Manx Gaels, and the Gaels of the Scottish Highlands—all of them still traceable to-day. The Cornish Celts are supposed to have belonged to these early Aryan people who overspread Europe in early times, but their dialect has now fallen into disuse. In northern Britain, Gaelic, which is still spoken, and in Ireland, where a modification of Gaelic or Erse may also to-day be heard, we have, with Cymric, spoken in Wales and in Brittany, traces of the language spoken by the Celtic nations. These people originally occupied not only the British Islands, but, as we have hinted, parts of France, Spain, northern Italy, and the western parts of Germany. When they left the common cradle of the race, the Far East, we have now no means of knowing. The Celts were a vigorous, warlike people, and for long held their own against the Romans, Teutons, and all those among whom they settled. They ultimately fell before the dominant Roman, though at one era the Cis-Alpine Gauls plundered and burned much of the city of Rome, invaded Greece, overran Thrace, and crossing the Bosphorus made extensive conquests in Asia Minor. They retained their own tongue and distinctive tribal character as late as the 5th century of the Christian era.

Cemeteries, National.—For the burial of those who died in the naval or military service. There are 82 of these cemeteries in the United States, the larger number being in the Southern States. They are controlled by the government.

Cemetery (Greek, a "resting-place" or "sleeping-room").—A burial place for the dead; a necropolis; also used by the primitive Christians for purposes of worship. The cemetery, among the latter, was at first extra-mural, that is, outside the town walls; but later, influenced by the sanctions of the Church, places for the interment of the dead were sought in consecrated grounds, and in the vaults or crypts of sacred edifices. The Romans commemorated their dead by monuments, obelisks, and columns erected on the sides of spacious roadways, such as the Appian Way; the Egyptians interred their dead in catacombs, or under vast pyramids; while the Hebrews generally selected ornamental gardens, valleys, and groves, as their places of sepulture. In Europe, as well as in Mohammedan countries, the cemetery is a striking feature in the neighborhood of the chief cities. Père la Chaise, at Paris, named

after the Confessor of Louis XIV., and first used in 1804, gave the modern impetus to the elaborate arrangement for burying the dead. The Campo Santo (sacred field) of Pisa, and the Campo Santo of Genoa, with their wealth of memorial sculpture, are both noted cemeteries in Italy. The crypt of St. Paul's, London, and Westminster Abbey, are notable shrines of the dead. Kensal Green Cemetery, London, the Necropolis in Glasgow, and Dean Cemetery, Edinburgh, are among the well-known repositories in Britain for the departed. Mt. Auburn, near Boston, Laurel Hill, on the Schuylkill above Philadelphia, and Greenwood, L. I., near Brooklyn, are among the early and notable cemeteries, together with those hallowed by associations connected with the Civil War, are among the chief burial plots in the New World. (See CEMETERIES, NATIONAL.)

Cemetery Ridge.—A long elevation which was the main position of the Union army at Gettysburg, July 1-3, 1863. The historic charge of Pickett's division of Virginians—desperately brave but unsuccessful—was directed against the Federal line on Cemetery Ridge, and was the climax of the battle. (See PICKETT, GEORGE E.)

Cenci, Beatrice.—(1577-1599.) A young Roman noblewoman, who was executed, with other members of her family, for the murder of her cruel father. A favorite subject with artists and poets.

Censors were two magistrates of high rank and authority in ancient Rome, whose duties were to keep the census or register of the citizens and their property, collect the public revenue, and exercise control over the morals of the people. At first they were chosen from the patricians; but later were also drawn from the plebeian class, familiar with the construction of public works and the superintendence of public buildings—duties incumbent also on the Censors, as Cicero relates (in "De Legibus," III., 3). Exercising a function similar to what is now called public opinion, the Censors were at once revered and dreaded, as their own sense of right and of the duties of their high office was their sole guide in exercising their functions. Part of their duty was also to administer the public finances. The office continued till about the year 22 B.C.

Census.—According to the Constitution, the people of the entire country must be counted every 10 years, and representatives in Congress apportioned accordingly. The first census was taken in 1790, and it was a simple matter of enumeration by the U. S. marshals. Since then the work has been so greatly enlarged and elaborated that a permanent census bureau has been established, and the results of one count are hardly made public before preparations are begun for another. Besides the mere numbering of the people a vast number of facts and figures are gathered, from which are compiled and published many interesting statistics relative to the resources and development of the country and to the social, mental, moral, and industrial condition of the people.

Cent.—Vt. was the first state to issue copper cents. In June, 1785, she granted authority to Ruben Harmon, Jr., to make money for the state for two years. In Oct. of the same year, Connecticut granted the right to coin £10,000 in copper cents known as the Connecticut cent of 1785. Mass. in 1786, established a mint and coined \$60,000 in cents and half cents. In the same year, N. J. granted the right to coin 10,000 at 15 coppers to the shilling. In 1781, the Continental Congress directed Robert Morris to investigate the matter of governmental coinage. He proposed a standard based on the Spanish dollar, consisting of 100 units, each unit to be called a cent. His plan was rejected. In 1784, Jefferson proposed to Congress that the smallest coin should be of copper, and that 200 of them should pass for one dollar. The plan was adopted, but in 1786, 100 was substituted. In 1792 the coinage of copper cents, containing 264 grains, and half cents in proportion, was authorized; their weight was subsequently reduced. In 1853 the nickel cent was substituted and the half cent discontinued, and in 1864 the bronze cent was introduced, weighing 48 grains and consisting of 95 per cent. of copper, and the remainder of tin and zinc.

Centaurus.—An ancient southern constellation, the brightest star of which is Centauri, the third brightest star in the heavens.

Centennial Exhibition.—Held at Philadelphia, 1876, in celebration of the hundredth anniversary of American independence. It was international in character, and was continued about six months.

Central Africa, British.—An area of 500,000 square miles north of the Zambesi; native population, about 3,000,000.

Central America.—The five republics of Guatemala, Honduras, Salvador, Nicaragua, and Costa Rica constitute what is known as Central America. These states declared their independence Sept. 21, 1821; seceded from the Mexican Confederation July 21, 1823, and formed the Central American Confederation, which was dissolved in 1839. The history of these states is a record of anarchy and civil war. Their union under one president was proposed at the Pan-American Congress, 1889-90. In 1895, Nicaragua, Honduras, and Salvador united as a Central American Republic. Under a treaty of June 15, 1897, the five states were united into a republic, each preserving its autonomy. Since that date changes have occurred in the relations of these States to each other and to the central government, and at this date (1902) they are in a revolutionary and unsettled condition.

Central India Agency.—Official name for a collection of states in India under the control of Great Britain.

Central Park.—The principal park in New York City. Besides its fine drives, it contains Cleopatra's Needle, the Mall, and the Metropolitan Art Museum, etc. It was designed by Olmsted and Vaux. Area, 840 acres; length, 2½ miles.

Centurion (Latin, *centum*, a hundred), was a Roman infantry officer who had the command of a 100 men, afterward increased to an indefinite number, but for the most part limited to the sixtieth part of a legion (4,500 men). Centurions were of two grades, and were selected by the tribunes. Their duties were to drill the soldiers and appoint their tasks; they had also power to punish minor offenses. Their usual badge was a vine-rod.

Century (Latin, *centuria*).—A term, in our day, mostly used to denote a period of 100 years. In Roman times, the term indicated a civil division of the people formed for the purpose of voting; it also meant a company of 100 men (*centum*, a hundred) in the Roman army, or a division consisting originally of a hundred. As used to denote a period of time (a 100 years), we have come to reckon a century (such, for instance, as the 19th century), as beginning with Jan. 1, 1801, and ending Dec. 31, 1900. In common speech, we also apply the period denoting a century to cover a 100 years of literature, of art, of music, of missionary work, as well as of history, politics, the Christian centuries, in contrast with the earlier era before the birth of Christ. The latter we indicate by the letters *B.C.* (before Christ) or *A.D.* (*Anno Domini*), in the year of our Lord. The term is known also in botany, in the case of the Agave or Century plant, formerly supposed to flower but once in a 100 years.

Cerberus.—In Greek mythology, the watch dog that guards the entrance to the infernal regions; represented usually with three heads.

Ceres.—See GREEK AND ROMAN MYTHOLOGY, 1613.

Cerium.—A rather rare metal, resembling iron in color and luster, but soft, and both malleable and ductile. It occurs in the minerals cerite, monazite, allanite, etc. It takes fire more readily than magnesium, and burns with much brilliancy. It slowly decomposes cold water, and dissolves rapidly in hydrochloric acid. Its symbol is *Ce.*, and its specific gravity is 6.7. Its atomic weight is 141, and its atomic volume 21.0. Cerium was isolated and named by the chemist Berzelius, in 1803, after the asteroid Ceres, then but recently discovered. Combined with oxygen, it forms two oxides, and its oxalate is in certain cases a useful anti-emetic medicine. Being difficult to procure in a separate metallic state, it is not employed in the arts and manufactures.

Cerro Gordo (Mexico), Battle of.—Occurred Apr. 17 and 18, 1847, between Santa Anna, who had 15,000 men, in a strong position on the heights of Cerro Gordo, and 8,000 Americans under Brig.-gen. Twiggs. Vera Cruz had fallen and the vanguard of Scott's army, no longer needed there was on its way to the City of Mexico. Three days after it began its march it faced the enemy, who outnumbered it two to one. Twiggs cut a new road around the mountain and gallantly charged the Mexicans simultaneously in front and rear. Many of the Mexicans

were obliged to surrender, but Santa Anna escaped with about 7,000 of his troops. The American loss was 63 killed and 398 wounded, while 1,200 Mexicans were killed and wounded. Between 3,000 and 4,000 prisoners, with as many stand of arms, 43 cannon and much fixed ammunition, were captured.

Certosa.—In Pavia, Italy, a former Carthusian monastery, famous as one of the largest and most magnificent in existence.

Cervantes Saavedra, Miguel de.—(1547-1616.) A celebrated Spanish writer; best known as the author of "Don Quixote."

Cesari, Giuseppe.—(1570-1640.) An Italian painter of note.

Cesnola (ches-nō'lā), Count Luigi Palma di.—A noted Italian-American archaeologist; director of the Metropolitan Museum, New York, since 1879.

Cessions of Territory.—See ALASKA; CAL.; CUBA; FLA.; GADSDEN PURCHASE; HAWAIIAN ISLANDS; LOUISIANA PURCHASE; N. MEX.; PHILIPPINE ISLANDS; PORTO RICO; ST. JOHN ISLAND; ST. THOMAS ISLAND; SANTO DOMINGO; TEXAS; YUCATAN.

Ceuta (Spanish, *thay-oo'tā*).—A fortified seaport town, on the Morocco coast, opposite Gibraltar. Anciently it was known as Septa, or Septum, or in Moorish Sebta. The town belongs to Spain and its population (about 8,000) is embraced in that of Cadiz. Ceuta, and the other possessions of Spain on the north African coast, are used chiefly as convict stations. The place derives its name from its seven hills, on a peninsula overlooking the Mediterranean and the Strait of Gibraltar. It is situated near Tangier, and is defended by a citadel and forts erected on Mount Hacho, the ancient Abyla, or south Pillar of Hercules.

Ceylon.—An island and British colony in the Indian Ocean, situated to the southeast of Madras presidency, with which it is almost connected naturally by a peninsula and a chain of reefs and sand banks, called Adam's Bridge. The Gulf of Manaar and Palk Strait are the separating waters. Its length is 266 miles, its breadth, 140 miles, and its total area, 25,333 square miles. The population, in 1899, was 3,447,094, the bulk of which are Cingalese, Tamil coolies, with Moors, Malays, and about 7,000 Europeans, besides about 25,000 burglars, or European descendants. More than half of the population are Buddhists, while the other divisions are Mohammedans and Christians. The island, which is very fertile, and on the whole healthy, though subject to thunderstorms and heavy rains, following the monsoons of May and October, produces grain, rice, tea, coffee, cocoa, with cinnamon, and caoutchouc. It has 300 miles of railway open for traffic, while over 200 miles additional have been projected and surveyed. The chief towns are Colombo, the capital (pop., 130,000), situate on the west coast; Galle (pop., 34,000), on the southwest coast; and Kandy (pop., 21,000), in the interior. The administration is under a governor, aided by an executive council of 5 members, supplemented by a leg-

islative council of 17 members. The basis of the local law is Roman Dutch, but the criminal law has been remodeled from the Indian Penal Code. Education is unsectarian and in most schools free.

Chadbourne, Paul Ansel.—Born at North Berwick, Me., 1823; died at New York, 1883. The first president of Massachusetts Agricultural College at Amherst (1867); also president of the University of Wisconsin (1867-70), and of Williams College (1872-81). He was the author of "Natural Theology," etc.

Chæroncia (the birthplace of the Greek biographer and moralist, Plutarch).—A city of Bœotia, in ancient Greece, on the borders of Phocis. The modern Kápurna occupies the site of the ancient city and citadel, which rose from the plain about, and commanded the entrance from Phocis to Bœotia. The place was captured by the Athenians, 447 B.C., and again by Phalæcus during the Phocian war. Here also Philip in 338 B.C. by defeating the allied forces of the Athenians and Bœotians destroyed the separate autonomies of the Greek states. In 86 B.C., the generals of Mithridates were defeated here by Sulla. This battle, and those fought in 447 and 338 B.C., are among the famous engagements in history.

Chaffee, Adna R.—Major-general U. S. Volunteers, serving in 1898 in the Santiago campaign in Cuba, was born at Orwell, Ohio, April 14, 1842. In 1861, he entered the U. S. army as a private and soon became sergeant and later on 2d lieutenant in the Sixth cavalry. In 1865 he became 1st lieutenant and two years afterward rose to be captain. In 1888 he was appointed major of the Ninth cavalry, and in 1897 became lieutenant-colonel of the Third cavalry. In the following year he was appointed brigadier-general of U. S. Volunteers, and in that capacity was in command of the 1st division, 4th corps, with headquarters at Havana, Cuba. In July, 1898, he was made a major-general. His record as a soldier may be gathered from the successive distinctions awarded him for gallantry in the field. For his services at Gettysburg he was brevetted 1st lieutenant; for gallantry at Dinwiddie Court House he was made captain; in 1868 he was promoted major for his heroism while serving against the Comanche Indians in Texas; and in 1898 he received a lieutenant-colonelcy for services in Arizona and Texas. He is at present (1902) in command at Manila of the Division of the U. S. Army in the Philippines.

Chagres (*chã'gres*).—The river in the Isthmus of Panama which furnished a base for the unfinished Panama Canal. It flows into the Caribbean Sea at the town of Chagres.

Chain, Engineer's, is used by railroad and canal engineers. It consists of 100 links, each 1 foot long.

Chain, Gunter's.—Used in land surveying, is a measure of 100 links of 7.92 inches each. It is 4 rods or 66 feet long.

Chain, The Great.—A term used by geographers and surveyors in describing mountains and their

related position and direction in mountain range or mountain chain. The latter denotes a series of contiguous mountain ranges, generally in parallel or consecutive lines or curves. On this continent, the great hill ranges or elevations take a general direction more or less parallel to the meridian, and follow the coast line on the west, with the break at the Isthmus, for about 8,000 miles. Mountain chains do not rise abruptly from the plain. They either form, on its one aspect, an extended gradually sloping surface, or bound an elevated plateau or tableland. Thus, what is termed the Andes of So. America, whose western base is washed by the waves of the Pacific, gradually falls off on the east, forming the watershed of the Orinoco, Amazon, and La Plata. The Himalayas, on the other hand, whose southern slopes feed the tributaries of the Ganges and Indus, look northward over the fertile plain of Tibet toward the great central plateau of Asia. The attempt is hence obviously difficult to estimate the real breadth of mountain chains. The vertical contour of a chain is usually very irregular, rising in parts into peaks, separated by gorges or valleys. What is specifically termed a chain of mountains, is that which consists of several parallel ridges, a configuration which on this continent occurs in the Alleghanies, but especially characterizes the Rockies and the Andes, which is commonly termed **THE GREAT CHAIN**.

Chain-Bridges are suspension bridges supported by chain cables, that is, by separate links of wrought iron or steel pinned together so as to form a chain. They are used only for light traffic; such was the chain bridge at Little Falls, near Washington, D. C., which has given place to an iron truss bridge, erected in 1874. Several are still in use in England, but mainly for passenger traffic. In this era of railways and great engineering exploits, bridge construction has become a most important art. We have departed far from the primitive structures of timber or of stone of early times, and the necessities of commerce and the vast development of railway traffic have called into existence every resource of the skilled engineer in bridge construction. The types are almost numberless of these useful structures, from the mammoth undertakings, such as the New Tay Bridge and the Forth River Bridge in Scotland, with a length severally of 10,780, and 8,295 feet, the Quebec Bridge, over the St. Lawrence, the Ohio and the Missouri river bridges, and the new East River Bridge at New York, to the elementary arched masonry and timber bridges of ancient times. The chief types to-day are the cantilever, truss, suspension, and tubular bridges, of more or less length of span, and immense bearing power. The enterprise of colossal and rapid bridge building has of recent years been almost monopolized by American engineers, in consequence of the abundant supply and great strain-bearing qualities of the steel manufactured in this country and the expertness, we

had almost said the audacity, of American engineers and mechanics.

Chaldea (Babylonia).—A district in South Babylonia, on the Persian Gulf, inhabited by a people called the Chaldees or Chaldeans, probably of Semitic stock, who are known to have disputed with Assyria for the possession of Babylonia. In the era of Sargon and Sennacherib, they were a warlike people, and in the 7th century B.C., when the Assyrian power began to wane, the Chaldeans were masters of the region, under Nabopolassar, and especially under his greater son, Nebuchadnezzar. Chaldea became supreme; and at this time, indeed, Chaldea and Babylonia became synonymous terms. To the Chaldeans Judah submitted, and was by them led, with his people, into exile. Later on in the history, when the government of Babylon had passed from the Semitic peoples, the Chaldeans became noted for their wisdom. It was then, however, that they became a caste rather than a nation. In the Old Testament, "the land of the Chaldees," watered by the Euphrates and the Tigris, bore also the name Babel, and Shinar (South Babylonia). The country (Chaldea or Babylonia) as a whole was bounded on the north by Assyria, on the south by the Syrian Desert and the Persian Gulf, on the east by Elam, and on the west by Syria or Palestine.

Chaleurs (*shā-ler'*), **Bay of**.—An arm of the Gulf of St. Lawrence, between Gaspé and New Brunswick, Canada. The name was given to it by Jacques Cartier, who sailed into it in 1534. (Bay of Heat.)

Chalmers, Thomas.—(1780-1847.) A Scottish author and divine. Wrote on astronomy, political economy, and theology. Lived at Glasgow and St. Andrews, where he was professor of moral philosophy.

Chalmette's Plantation (La.), **Battle of**.—Fought near New Orleans, Dec. 28, 1814, between Gen. Jack-

son with 4,000 men, 20 pieces of artillery, and the war vessel "Louisiana," and the British under Gens. Keane and Gibbs. The fire of the American sharpshooters was so accurate and deadly that Sir Edward Pakenham, commander-in-chief of the invaders, soon ordered a retreat.

Cham (*kām*).—(1819-1879.) A French caricaturist, Comte Amédée de Noé, well-known for his illustrations in "Charivari."

Chamberlain, Joshua Lawrence.—Born at Bangor, Me., 1828, he served in the Army of the Potomac (1862-65), was governor of Me. (1867-70), and later was president of Bowdoin College.

Chamberlain, Rt. Hon. Joseph, Highbury, Birmingham, age 65; as a young man became member of Nettlefolds, the screw manufacturers, which quickly developed into the leading firm in its line in the world; retired from business when 38, threw himself into local politics as an advanced Radical; transformed Birmingham, of which he was 3 times mayor; was returned to Parliament for Birmingham in 1876, and 4 years later became pres. of Board of Trade in the Gladstonian Cabinet; in 1886 the Home Rule split caused him to ally himself with the Conservatives; at first disliked by them has become their real leader in the House of Commons; as Colonial Secretary, he helped on the federation of Australia, led the campaign that gave the S. African Republics to England, and did much to promote colonial enthusiasm and loyalty; his political hobbies are—social reform, closer relations with the Colonies, and cementing our friendship with America; a fierce fighter and hard hitter, he is perhaps the most worshiped, and certainly the best hated, of living statesmen.

Chambers, Robert.—(1802-1871.) A Scottish publisher and author, was joint-editor of "Chambers's Journal."

Chameleon, The.—See LIZARD, 2644.

CHAMINADE—(1861-)

THERE are few names of women in the entire list of musical composers, and it has been said that women could not write music. In the beautiful little town of Vesinet, in the Seine Valley, lives to-day a woman who has disproved this prevailing prejudice, for she has not only become the most famous of woman composers, but has taken a high rank among the male composers of her day.

Cécile Louise Stéphanie Chaminade was born in Paris, in 1861. From an early age, she gave evidence of the possession of rare musical ability, and at the age of eight she wrote some sacred pieces which won the praise of Bizet and drew from him a prophecy of a brilliant future for her. At the age of eighteen she made her début as a pianist, and enjoyed much success as soloist in concerts in the art centers of Europe and in the provinces. She is modest and retiring, but a charming conversationalist; with a fascination all her own. She is idolized by the Parisians, who call her "Sainte Cécile." Her playing combines decision, clearness, and vigor, with eloquence and grace, which give it a feminine charm. But Chaminade's abilities as a composer far exceed her powers as a pianist. Although she has written larger works, she is best known by her

piano pieces and songs. Her compositions are marked by grace and vigor, but their chief characteristic is expressive melody and striking rhythm, in which lies the keynote of her success. She uses tone chromatics extensively, with novel and graceful effect, as in such familiar examples as *La Lisonjera* (The Flatterer). Her piano works are all of a graceful, piquant, capricious style, fanciful, dainty, and exquisite, with an individuality which almost places them in a school by themselves.

It is in her songs that Chaminade attains the highest level in her art. They are rich, melodious, and striking, full of deep, genuine feeling, varying from softest tenderness to fiery passion. They are all thoroughly musical and artistic, and possess to a high degree the quality designated as "singable." They belong to the best class of French vocal compositions of the day, yet they have a certain charm and finish which makes them distinct from all others. Her choice of words is particularly felicitous, and she adopts the lyrics of the greatest French poets to set to music. Mademoiselle Chaminade has already given much to the art world of the present day, but more is to be expected of her ripening powers.

Chamois, The.—See ANTELOPE, 2418.

Chamouni (*shā-mōnē'*).—A valley at the foot of Mont Blanc in Haute-Savoie, France. It is a celebrated resort of tourists setting out for Mont Blanc.

Champ de Mars (*shōn' de mārs'*) (FIELD OF MARS).—A large public square in Paris, on the left bank of the river Seine, now used for military field maneuvers and public gatherings. It has played a prominent part in French history, particularly during the revolutionary era, when it was the scene of a celebration for the capture of the Bastille, the festival of the Supreme Being, and, in modern times, the site of the three chief International Expositions of 1867, 1878, and 1889. In Paris, the Champ de Mars has the significance of, and is somewhat akin to, the Campus Martius of ancient Rome.

Champion's Hill (Miss.), **Battle of.**—This was the principal battle that occurred during the operations of Gen. Grant, in May, 1863, which ended in the Confederate army, under Gen. Pemberton, being driven within the defenses of Vicksburg. After the capture of Jackson, the capital of Miss. (which see), May 14, Sherman was directed to remain there for a brief time to complete the destruction of military stores, manufactories, etc., while Grant pushed to the westward toward Vicksburg. About midway between the two places the Confederate army was found occupying a strong position on a high ridge known as Champion's Hill. Grant attacked at once, in front, flank, and rear. It was necessary for the Federals to advance across open ground that was swept by a deadly fire of artillery, but they pressed gallantly on, carried the hill and drove the Confederates in great disorder, capturing about 2,200 prisoners. The fighting was very severe, Grant's loss in killed and wounded being nearly 2,000. The Confederates lost nearly as many, besides their large loss in prisoners.

Champlain, Lake.—A lake separating the states of Vt. and N. Y.; the scene of several noteworthy events in the Revolutionary War. It was first

discovered by Samuel de Champlain, in 1609. It is about 120 miles long by 10 to 12 miles wide.

Champlain, Samuel de.—(1567-1635.) A French navigator and explorer, who made explorations in Canada and New England in 1603, founded Quebec, 1608, discovered Lake Champlain, 1609. He died at the city of Quebec.

Champlin, James Tift.—Born, 1811; died, 1882. An American divine, president of Colby University (1857-72).

Champs-Élysées (*shōn' zā-lē-zā'*) (ELYSIAN FIELDS).—A place of public resort in Paris, consisting of the avenue and gardens extending from the Place de la Concorde to the Place de l'Étoile, a distance of 1¼ miles.

Chancellorsville (Va.), **Battle of.**—One of the great battles of the Civil War, fought May 1-3, 1863, between the Army of the Potomac, Gen. Joseph Hooker, and the Confederate Army of Northern Virginia, Gen. Robert E. Lee. In Jan., 1863, after the disastrous Union defeat at Fredericksburg, Hooker was assigned to the command of the army, superseding Gen. Ambrose E. Burnside. The next few months were devoted to a thorough reorganization and equipment of the army, preparatory to a spring campaign. It reached a fighting strength of about 120,000 men, of which 20,000 were cavalry and artillery, with 400 field guns. At no previous time had the Army of the Potomac been so strong, and high hopes were entertained that the next forward movement would be marked by success to the Union arms. Great confidence was reposed in Hooker, who had won fame as a brave fighter and a capable corps commander. Lee was at Fredericksburg, with an army of about 57,000 men. Near the end of April Hooker began operations. To mask his real design, he stationed 30,000 men under Gen. Sedgwick, to confront Lee at Fredericksburg, at the same time sending Gen. Stoneman, with most of the cavalry, on an expedition to the rear of Lee, to threaten his communications with Richmond. With about 70,000 men, Hooker crossed the Rappahannock on April 30 and established his headquarters at

- Chancellorsville, 10 miles west of Fredericksburg, his purpose being to attack Lee by the latter's left flank. May 1, there was severe but inconclusive fighting, between portions of the hostile armies. On the following day Lee sent "Stonewall" Jackson, with 25,000 men, to assail the Federal right. The march was by a wide detour, through a dense wilderness of chaparral, which concealed the movement across the entire front of the Federal army. It occupied nearly the whole day, Lee, meantime, keeping his enemy busy by constant activity. Late in the afternoon Jackson reached his chosen point of attack, formed his charging columns, and hurled them with the greatest impetuosity upon the 11th corps (Howard) which occupied the extreme right of Hooker's line. The sudden irruption was unexpected and created the wildest confusion. Almost the entire corps was driven in panic from the field, with large losses of prisoners and guns. "Oh, for another hour of daylight!" exclaimed Jackson, as the shades of night settled upon the field before he could finish his work. That night, while reconnoitering in front of his lines, Gen. Jackson was mortally wounded by a volley from his own men who mistook his party for a detachment of the enemy. (See JACKSON, THOMAS JONATHAN, 319.) Fighting was resumed May 3, resulting in the success of the Confederates. Sedgwick crossed the river at Fredericksburg and threatened Lee, from what was now the latter's rear, but the main body of the Federal army under Hooker having been defeated, Lee turned upon Sedgwick and drove him back across the Rappahannock. During the night of the 4th, Hooker recrossed his whole army, and the battle was over. The losses on both sides were large. The casualties to Hooker were nearly 17,000, including 1,500 killed and nearly 10,000 wounded; that of Lee was about 13,000. Among the slain of the Union army was Gen. Hiram G. Berry, a most gallant officer. The Confederate cause sustained an irreparable loss in the death of "Stonewall" Jackson. He was Lee's ablest lieutenant, and during the remainder of the war no other man rose to his full measure. See JACKSON, T. J. ("Stonewall"), 328.
- Chandler, Zachariah.**—Born at Bedford, N. H., 1813; died at Chicago, 1879. An American politician. He was U. S. senator from Mich. (1857-75), and Secretary of the Interior (1875-77). He was one of the most uncompromising opponents of slavery before the Civil War.
- Channel Islands.**—A group of islands in the English Channel, from 7 to 30 miles from the coast of France. They consist of Jersey, Guernsey, Alderney and Sark, with a number of small islets. The prevailing language is Norman-French. Area, 75 miles. Pop. (1901), 95,841.
- Channing, Edward Tyrrel.**—Born at Newport, R. I., 1790; died at Cambridge, Mass., 1856. A noted American scholar, brother of William Ellery Channing, and one of the founders of the "North American Review" in 1815.
- Channing, William Ellery.**—Born at Newport, R. I., 1780; died at Bennington, Vt., 1842. An American clergyman and one of the chief founders of Unitarianism in America. He was for many years pastor of the Federal Street Church in Boston.
- Chantilly (Va.), Battle of.**—Sept. 1, 1862, immediately after the second battle of Manassas, or Groveton, Lee sent "Stonewall" Jackson northward to harass Pope's retreating army, Pope detached a force to operate against Jackson and the result was a brief but severe engagement at Chantilly, which resulted in the retreat of the Federals. The loss of the latter was 1,300 and that of the Confederates, 800. The action was notable from the fact that two major-generals of the Union army were killed—Philip Kearny and Isaac I. Stevens. The loss of Kearny was especially felt. He was a brilliant officer and had lost an arm in the war with Mexico.
- Chapel Hill.**—A town in N. C. and seat of the University of North Carolina, founded in 1789. Pop. (1900), 1,099.
- Chaplin, Jeremiah.**—Born at Rowley, Mass., 1776; died at Hamilton, N. Y., 1841. An American Baptist minister and first president of Waterville College, Me. (1821-33).
- Chaplin Hills (Ky.), Battle of.**—See PERRYVILLE, BATTLE OF.
- Chapultepec (Mexico), Battle of.**—After the capture of El Molino del Rey and Casa de Mata, Gen. Winfield Scott advanced upon Chapultepec, a formidable citadel fully garrisoned and guarded by mines which still protected the City of Mexico. A strategic assault was made Sept. 13, 1847, and the walls were scaled in the face of a terrible fire. The two causeways or elevated roads between Chapultepec and the City of Mexico proper were crossed under the enemy's fire, and the divisions of Worth and Quitman entered the seat of the Montezumas. The Mexican army of 30,000, strongly fortified in the vicinity of the capital, lost 10,743 men, and Santa Anna, president and commander-in-chief of the army, became a fugitive. The American force consisted of 7,180 men, and its loss was 862.
- Character, Expression as a Means of Developing.**—4917.
- Chares (kă'rêz).**—A sculptor who lived at Rhodes about 285 B. C. He was a sculptor of the Colossus of Rhodes, and the founder of the Rhodian school.
- Chargé d' Affaires.**—An inferior diplomatic agent, accredited not to a court but only to the Minister of Foreign Affairs, and holding his credentials from the same official in his own country. He usually acts while the ambassador is on leave.
- Charge of the Light Brigade.**—A poem by Lord Tennyson to commemorate the heroic charge at Balaclava, during the Crimean War.
- Charling Cross.**—A cross erected in London, on the south side of Trafalgar Square, between the Strand and Whitehall, the chief point of intersection of the omnibus lines and other traffic of the West End of the city. The term is derived

either from the village of Cherringe, which stood here in the 13th century, or from the French term of endearment *chere reine* (dear Queen) applied to Eleanor, of Castile, wife of Edward I., who died near Lincoln in 1290, and was buried at Westminster. In every town through which Eleanor's remains rested, on the way to London, the king caused a cross to be erected in her memory. It is said there were 14 of them in all, but only three remain. The London one was in 1647 demolished by order of the Long Parliament, though a model of it stands now in front of the Southeastern R. R. station in the Strand, in the city.

Chariots, in ancient times, were a kind of car or carriage, used in war or for pleasure. According to the Greeks, it was invented by Minerva; or, as another authority states, by Erichthonius (Erectheus), son of Hephæstus, a hero of Athens, who had a chariot constructed so as to conceal his feet, which were those of a dragon: "Seated in car, by him constructed first,

To hide his hideous feet."—*Orlando Furioso*.

Charivari.—A French term (origin doubtful) used to denote a wild tumult and uproar, including not only a hubbub of noises, as howling, whistling, and shouting, but the clattering of kettles and pans, which in former times was raised on the occasion of an unequal marriage, the marriage of a widow, and which did not cease until money was paid to make peace. It was sometimes accompanied by violence to the unpopular person, and attempts were frequently made to put it down by both the Church and the civil power. In this country, the *charivari* is often directed in rural parts against newly married couples, but from the spirit of boisterous fun and good-will. Occasionally, newly elected representatives, mayors, and public officials, are made the objects of the noisy clamor and rough manifestations of popular acclaim. "Charivari" is the title of a comic paper published at Paris, France, and in England the London "Punch" is commonly alluded to as the English "Charivari."

Charlemagne.—(742-814.) In the dark ages of European history, Charles the Great stands alone, like an island in mid-ocean. Like Alexander, he seemed born for new things. His life was one of restless activity.

There is no record of his early life. His father, Pippin, the able, energetic, and enlightened king of the Franks, died in 768, after dividing his kingdom between his two sons, Charles and Carloman. At the death of the latter, in 771, Charles became ruler of the whole kingdom. He was bold, pushing, sagacious, and eager to rule over a great realm. He sought to be more than the head of a union of tribes. He desired to rule over a wide dominion under a uniform system of law and order. He was a statesman with broad ideas. He saw the dangers and needs of his time. He knew what means to use to avert dangers and cure evils. He did not act from mere motives of ambition—but in the interests of self-defense and good

order. He undertook the conquest of the German tribes on the north, in order to guard his empire against invasion. He desired to strengthen the central government in order to prevent the disorder of earlier times. He had a desire for unity, system, and order, equal to that of Cæsar; but he aimed at unity in an age when the realization of his aim was practically impossible.

The first efforts of his reign were spent in reducing to obedience the Aquitanians, who had revolted. His success was followed by other wars by which he gained much territory and organized the semi-barbarous tribes and taught them to obey one central will. In 773, at the call of Pope Hadrian, he swept down like a whirlwind from the Alps against the restless Lombards who threatened the lands of the Church. He seized King Desiderius in his capital, shut him up in a monastery, assumed the Lombard crown, and made northern Italy a part of the Frankish empire. At Rome, he was received by the Pope with great honor, and welcomed by the people as their leader.

In 777, gathering his warriors for a crusade against the Saracens in Spain, he crossed the Pyrenees and won from the Moslems all the northeastern corner of the peninsula.

For over thirty years (772-804) of his reign, he was occupied in wars against the obstinate and warlike pagan Saxons across the Rhine, whom, after immense slaughter, he finally compelled to accept him as their ruler, and Christianity as their religion. His last campaign against them was a harsh one, in which he ravaged the country with fire and sword. He closed it with a series of conversions by force, offering a choice between baptism and death. Later, to catch the fugitives, he adopted a more humane policy offering a white garment to each half-naked barbarian that would come forward and be baptized. It is said that this policy worked so well that the supply of garments was soon exhausted. After subduing the Saxons, he settled them in new-built towns, with churches and schools, where they gradually became civilized.

In the autumn of 799 he once more descended from the Alps and appeared at Rome. On Christmas, 800, he knelt before his friend, the Pope, who placed a crown of gold upon his head and proclaimed him Emperor.

For fourteen years, Charles ruled with imperial authority over his vast domains. His scepter was obeyed from the shores of the Baltic to the Elbro—from the Atlantic to the river Danube and the mountains of Moravia—from the German Ocean to the Adriatic. His authority was respected and his friendship prized by many independent peoples—the Saracens of Spain, the Saxons of Britain, the Byzantine empire of the East and even by the distant caliphs of Bagdad.

Charles reformed or put new life into almost every branch of the administration as well as in art, literature, and learning. He

improved the army by requiring military service from each freeman. He reformed the courts, and lightened the burdens of the people by decreeing that they should not be compelled to appear to give judgment more than three times in each year. He appointed a fixed number of regular judges, and gave orders that they must be sober when attending to the work of their office. He encouraged agriculture and commerce. He took a zealous interest in farming. He knew how many eggs were laid, how much milk produced, and whether the fields were tilled so as to produce a plentiful harvest. In his capitularies giving directions for the management of royal estates, he went into the most minute details on the most common subjects. He mentioned the proper food to be given to hens, and the kinds of apples and vegetables that must be grown. The gardener was to make his house ornamental by trailing it over with green vines. The wine makers were told that they should discontinue the method of pressing the juice out of the grapes by treading on them with the naked feet. Peacocks were recommended for ornaments. A careful account of each villa was to be kept by the superintendent. He issued laws and edicts in regard to the coinage of silver, the prices of food and clothing, usury, commerce, horse-buying, bridge-tolls, counterfeiting, the care of the poor, and many other subjects. They throw a strong light upon the conditions and customs of the time, and are very valuable in the study of the early part of the Middle Ages. He began to make a country in which it was safe to travel. He placed guards along the rivers and coasts to prevent robbery, and aimed at the formation of a navy. He started a bridge across the Danube and thought of connecting the Rhine and the Danube by a canal. He established great national fairs, where merchants and people gathered from all parts of Europe to buy and sell. Thus he helped to overcome the prejudice and hostilities of different sections and races.

In the midst of his many duties, Charles found time to make his court a center of learning. He rekindled the flickering lamp of learning at a time when it threatened to go out forever. He founded schools and talked with the children, treating the sons of the poor and the rich with the same kindness. Almost everything became better under his reign. There was a noticeable change even in the handwriting. A legible Carolingian style took the place of the earlier Merovingian scrawls. Charles, though he knew how to read, could not write; but late in life he made earnest efforts to learn.

Charles loved the Germans, and encouraged their saving and industrious habits, but he did not approve their carousings. He hated idleness and intemperance. Though lax in morals and intolerant in religion, he excelled in the private virtues of generosity and charity, and had enlarged views of his responsibilities as a ruler. He had high aims and purposes in his exertions

for the welfare and improvement of his subjects, and was steadfast and consistent in his policy. He made useful laws. He gave good advice to his people, and his government was more democratic than that which followed.

Charles died in 814. Within the cathedral at Aachen, in a tomb built by himself, he was placed upon a throne, with his royal robes around him, his sword by his side, and an open Bible on his lap. Poets long sang of him who had given to the Franks the sway of Romulus. Gradually the mists of romance enveloped his name, until by being made a saint he received the highest glory that the world or the Church could give. Though his empire fell to pieces after his death, he exerted an influence which did not die. He created a real union of German and Roman peoples which lessened the tendency to confusion, and gave Europe a more settled character. He created a security which caused later people to look back upon his period as a golden age.

Charles.—The name of a great many kings and emperors in history. For the most notable, see table on following page.

Charles XII.—(1682-1718.) Charles XII., who Voltaire says was "the most extraordinary personage that ever appeared in the world," was born in 1682, ten years after the birth of Peter the Great. From the boldness of his character, he became known as the "Madman of the North."

As a youth he showed quick intelligence and strong power of application; but also great self-will and determination. Though his health was delicate in his early years, he had a passion for physical sports which made him strong and vigorous. At the age of four, he was placed on the back of a pony. At an early age he became a perfect horseman. He also had a love for hunting which developed rapidly. At the age of seven, he shot a fox. Before he was twelve, he killed a bear.

At the death of his father, in 1697, he was invested with the royal authority. At first he was not interested in state affairs so much as he was in hunting bear and reading the exploits of Alexander the Great. He devoted much of his time to military exercises and field sports. The more dangerous the amusement, the greater the attraction. He rode fast and furiously, up and down hill, through forest and stream. Frequently, when his horse fell with him he returned black and blue. Once he nearly froze to death when his horse fell upon him in a deep snow. At another time he rode up the side of a cliff which was so steep that both horse and rider fell backward, but he saved his life. In spite of remonstrances he would venture upon thin ice, plunge into dangerous waters, and recklessly drive sledges down steep hills. Once, in company with two or three companions, he mounted a peasant's sledge laden with wood, and wildly descended a hill which had been made like glass by several coats of ice. Though his companions were severely injured he remained unhurt.

CHARLES: NOTABLE KINGS AND EMPERORS

	LIVED	REIGNED
Charles I. of England.....	1600-1649	1625-1649
Charles II. of England.....	1630-1685	1660-1685
Charles I. The Great. See CHARLEMAGNE.		
Charles II. of France, Emperor of the Romans, surnamed "The Bald".....	823-877	840-877
Charles III. "The Fat." King of France and Emperor of the Romans.....	839-888	876-888
Charles III. "The Simple." King of France.....	879-929	893-929
Charles IV. "The Fair." King of France.....	1294-1328	1322-1328
Charles V. "The Wise." King of France.....	1337-1380	1364-1380
Charles VI. "The Well-Beloved." King of France.....	1368-1422	1380-1422
Charles VII. "The Victorious." King of France.....	1403-1461	1422-1461
Charles VIII. King of France.....	1470-1498	1483-1498
Charles IX. King of France.....	1550-1574	1560-1574
Charles X. King of France.....	1757-1836	1824-1830
Charles IV. Emperor of the Holy Roman Empire.....	1316-1378	1347-1378
Charles V. Emperor of the Holy Roman Empire.....	1500-1558	1520-1556
Charles VI. Emperor of the Holy Roman Empire.....	1685-1740	1711-1740
Charles VII. Emperor of the Holy Roman Empire.....	1697-1745	1726-1745
Charles I. King of Rumania.....	1839 —	1881 —
Charles I. King of Spain. See CHARLES V., EMPEROR.....		
Charles II. King of Spain.....	1661-1700	1665-1700
Charles III. King of Spain.....	1716-1788	1759-1788
Charles IV. King of Spain.....	1748-1819	1788-1808
Charles I. or VII. King of Sweden. Died 1168.....		1155-1168
Charles VIII. King of Sweden.....	1409-1470	1448-1470
Charles IX. King of Sweden.....	1550-1611	1604-1611
Charles X. King of Sweden.....	1622-1660	1654-1660
Charles XI. King of Sweden.....	1655-1697	1660-1697
Charles XII. King of Sweden.....	1682-1718	1697-1718
Charles XIII. King of Sweden and Norway.....	1748-1818	1809-1818
Charles XIV. King of Sweden and Norway.....	1764-1844	1818-1844
Charles XV. King of Sweden and Norway.....	1826-1872	1859-1872
Charles I. King of Württemberg.....	1823-1891	1864-1891
Charles I. King of Naples and Sicily.....	1220-1285	1266-1282
Charles III. King of Naples.....	1345-1386	1382-1386
Charles II. "The Bad." King of Navarre.....	1332-1387	1349-1387
Charles, Archduke of Austria.....	1771-1847	
Charles, Prince of Bavaria.....	1795-1875	
Charles, "The Bold." Duke of Burgundy.....	1433-1477	
Charles V. Austrian general, Duke of Lorraine.....	1643-1690	
Charles Martel, Mayor of the Palace, France.....	690-741	

Though interested in boyish exploits, he also asserted his authority as king, from the time he was made absolute ruler; and when the Danish king, Frederick IV. sought to seize his crown, he began prompt operations against Denmark. Leaving his capital he crossed to Zealand with a Swedish army, waded through water up to his chin in order to reach the shore, and after six weeks drove the Danes before him and secured a treaty of peace, which left him free to turn his arms against Russia and Poland.

He led a life that was Spartan in its simplicity. His cloak spread upon the floor, or the ground, was his bed. His dress was a plain suit of blue cloth with copper buttons. He lived on a plain, simple diet. He had a power of endurance which defied fatigue, and the extremes of heat and cold. He inspired his followers by his bravery.

After tasting the pleasures of military success, he never again returned to his capital, but was allured onward to a career of conquest. At Narva, in 1700, he completely routed an army of 50,000 Russians. Then turning southward, he defeated the Saxons and Poles. With ambition aroused, he occupied Poland (1703) and secured the crown for his friend, Stanislaus Leszcynski. Then he carried the war into Saxony, and executed the Russian ambassador whom he believed was the author of the league against Sweden.

In January, 1708, in the midst of the ice and snow, he suddenly marched against the Russians, almost captured the Czar, and won several victories. Expecting to be joined by the Cossacks, he turned southward to Ukraine, where he was overtaken by the severe winter of 1708-09, in the midst of the enemy's country.

Still hopeful of reaching Moscow, in the spring of 1709, he besieged Pultowa, but was finally defeated and forced to fly to the territories of the Turks, who received him with hospitality and paid the expenses of his numerous household. There, while his dominions were being invaded, he planned to involve Russia and Turkey in war. Without funds, and afraid to leave the country, he continued his intrigues until the patient Porte decided to get rid of him.

When the Khan of Tartary and the Pasha of Bender endeavored to force him to leave the Porte, with forty domestics he defended himself desperately against the whole army, but he was taken and treated as a prisoner.

He finally departed to return to his own dominions. Sending his adieux to the Porte he started with two attendants and traveled constantly, riding by day and sleeping in a carriage or cart at night, until he reached his own town of Stralsund, in Swedish Pomerania (1714). Here he was soon besieged by a combined army of Saxons, Danes, Prussians, and Russians, and was finally forced to abandon the defense (1715). Reaching Sweden, he prepared to protect the coasts. He also invaded Norway (1716), but was forced to retire for want of supplies.

Deciding to make peace with Russia, and to cede the Baltic provinces to the Czar, in return for replacing Stanislaus on the throne of Po-

land—he prepared to conquer Norway, and assist in restoring the Stuarts in England. In 1718 he burst suddenly into Norway and besieged Frederikshald which was regarded as the key to the country. While directing operations in the trenches, where he was exposed to the guns of the fortress, he received a musket-ball shot which killed him and ended his plans of invasion.

Charles was a strange mixture of good and evil. He is to be praised for his temperate and simple habits. He had great ability. He was only a youth at the time of his greatest achievements. He had abundant courage and determination. In fact he sometimes became too rash and obstinate. He had a personality fitted to kindle the ardor of his soldiers and to lead them to victory. Noble, just, and brave as a lion, he gained the confidence of his men with each victory, and caused his enemies to lose faith in their lucky stars. He was the hero of many daring exploits which are still engraven on the heart of every Swedish soldier. He forced his way through strong gates, scaled uninjured walls, swam the swiftest rivers, and ventured into the midst of the enemy's outposts, paying as little heed to the hailstorm of bullets as to the cold of winter or the heat of summer.

He was more than a mere warrior or a hero. Like his father, he was fond of hard work and had a remarkable degree of perseverance. He was quick to see a point, and had a marvelous memory. He was also a mathematical genius.

He was not naturally hard, stern, or cruel. He was rather gay than grave—even in the most anxious and troublous times. He was capable of warm friendships, and fond of animals. He had a particular care for his soldiers, though he exacted the most absolute obedience from them. He was generous to the vanquished, though he had no regard for the sufferings of a foe that threatened to be stubborn.

Though he was great as a soldier, he failed as a statesman. He found Sweden a first-class power. He left her fallen to a secondary place, from which she has never recovered. What he acquired with his right hand he gave away with his left. He knew how to organize armies, but left no great commanders to fill his place. He led a life that was like the light of a brilliant meteor, illuminating the heavens, dazzling the eyes, but followed by the heaviest darkness.

Charleston.—Capital of Charleston Co., S. C. Its harbor is defended by Forts Sumter, Moultrie, and Castle Pinckney. It is one of the most important commercial cities in the South. It was evacuated by the Confederates in 1865. It suffered severely from an earthquake in Aug. 31, 1886. Pop. (1900), 55,807.

Charlestown.—Once a city, now a district, of Boston, separated from it by the Charles River. The points of interest are Bunker Hill Monument, a U. S. Navy Yard, and the state prison. It was burned by the British, June 17, 1775.

Charles Town.—Capital of Jefferson Co., W. Va., is 8 miles from Harper's Ferry and 53 miles from Washington. On Dec. 2, 1859, John Brown was executed here; pop. (1900), 2,392.

Charlottesville.—In Albemarle Co., Virginia, 65 miles from Richmond; is the seat of the University of Virginia; pop. district (1900), 5,241.

Charon.—The ferryman who carried the souls of the dead over the rivers of the lower world. It was to pay the fee for this service that the Romans placed an obolus (a coin) in the mouth of the dead on burial.

Charter.—The name applied to a grant of land or of special privileges, made by a government or ruler to a company—a body of men, or an individual, for a term of years. In American law, a charter is a written grant from the sovereign power conferring rights or privileges upon a municipality or other corporation. The term is generally applied to the letters patent or articles of association sanctioned by statute creating a corporation, as a city, college, stock company, benevolent society, or social club. In the early history of America, European rulers, claiming sovereignty by right of discovery, issued charters granting land for colonization, such as the charters of the Virginia Company, Plymouth, Massachusetts Bay, etc.

Charter Oak.—In the early days of the New England colonies, when James II. was on the English throne, the king, who was a bigot and opposed to the liberties his American subjects sought to enjoy, had the N. E. charters revoked. To this there was much demurrer, particularly in Rhode Island and Connecticut. In the case of the latter, Governor Andros proceeded to Hartford in 1687 to seize the charter of the colony, and though the local governor pleaded to retain it and maintain the rights of the people, Andros would not consent. Suddenly, while the parley was going on, after nightfall, the candles on the table where the charter lay were blown out, and when, after some confusion, they were re-lighted, the charter was nowhere to be found. A captain Wadsworth, of Hartford, had made off with it and hidden it in the hollow trunk of a tree near by, which came afterward to be spoken of as "the Charter Oak." The oak was overthrown in a storm so recently as Aug. 20, 1856.

Charter Party.—A written agreement between the owner, master or agent of a vessel and the person who hires or freights it.

Chartists.—Political reformers in England in 1838 who advocated universal suffrage, abolition of the property qualification for a seat in Parliament, equal representation, annual Parliament, that members of Parliament be paid for their services, and vote by ballot. These demands formed "the people's Charter," and occasioned riots in several cities. After 1849 the Chartists disappeared as a party.

Charybdis (*ka-rib'-dis*).—A sea-monster in the Straits of Messina which three times a day sucked in the water and by discharging it again formed a dangerous whirlpool. She is represented as a

- beautiful maiden above and a fish-like monster below. Opposite her was Scylla, another monster. The passage between the two was attended with danger and difficulty. The expression "between Scylla and Charybdis" is a figurative one describing a dilemma or a perilous position.
- Chase, Philander.**—Born at Cornish, N. H., 1775; died at Robin's Nest, Ill., 1852. A missionary bishop of the American Episcopal Church. He was one of the founders of Kenyon College, O., and of Jubilee College, Ill.
- Chase, Salmon Portland.**—Statesman and jurist; sketch of, 107.
- Chase, Samuel.**—Born in Md., 1741; died in 1811. A noted American jurist and one of the signers of the Declaration of Independence. He was associate justice of the Supreme Court and was impeached for misdemeanor in 1804, but was acquitted in 1805.
- Chase, William Merritt.**—An American painter of landscapes, portraits, and still life. He studied in New York, St. Louis, Germany, and returned to New York in 1878. He has been the recipient of marked honors at home and abroad. He was born at Franklin, Ind., in 1849.
- Château briand** (*shā-tō-brē-on'*), **François René Auguste, Vicomte de.**—(1768-1848.) A celebrated French statesman and author. He traveled extensively in America in 1791-92, and the information gathered during that time furnished him with the themes for much of his writing.
- Chatham, Earl of.**—See **PRIT.**
- Chattahoochee** (*chat-a-hō'chē*).—A river in Georgia, unites with the Flint and together they form the Appalachicola. It is 500 miles long, and is navigable 200 miles to Columbus.
- Chattanooga.**—A city in eastern Tenn., noted as a railway and commercial center, for its trade in lumber and grain, and for its manufactures of iron, steel, machinery, etc. It was a strategic point in the Civil War, and there was much hard fighting in its neighborhood. (See **CHICKAMAUGA, MISSIONARY RIDGE, LOOKOUT MOUNTAIN.**) Pop. (1900), 30,154.
- Chattanooga, Evacuation of.**—Few points in the west were more identified with military operations during the Civil War than was Chattanooga, Tenn. It is about midway between Nashville and Atlanta. It was held by the Confederates until Sept., 1863, when it passed under Federal control. From the beginning of hostilities its importance as a strategic point was recognized, and as early as the spring of 1862, Federal operations for its seizure were begun. The plans of that year were, however, unsuccessful. In June, 1863, the Confederate army under Bragg evacuated its position at Tullahoma, Tenn., before the pressure of Rosecrans, and fell back across the Tennessee River to Chattanooga, where his army numbered 45,000. Near the end of Aug., Rosecrans again advanced and his army crossed the river simultaneously at three points. Early in Sept. Bragg evacuated Chattanooga and it was occupied by Federal troops. The mighty struggle for its permanent possession took place ten days later at Chickamauga (which see). Defeated in this action, the Union army retired to Chattanooga, which it held with unyielding tenacity. Bragg established a siege, but was signally defeated, Nov. 24-25, in the battles of Lookout Mountain and Missionary Ridge (which see). In 1864 Chattanooga was the base of operations and supplies for Gen. Sherman's army during the Atlanta campaign. A national cemetery there contains the remains of 13,000 Union soldiers.
- Chatterton, Thomas.**—(1752-1770.) An English poet celebrated for his precocious learning and his literary impostures. Committed suicide.
- Chaucer, Geoffrey.**—(1340-1400.) An English poet, regarded as the father of English poetry. He had an early career as a soldier, visited Europe, and formed a friendship with Petrarch. The foreign influence upon his work is quite noticeable. The language in which he wrote is quite different from that of the present day, so much so that his works cannot be read without a glossary. His best-known work is "Canterbury Tales."
- Chaudet, Antoine Denis.**—French sculptor, 3592.
- Chaudière Falls.**—(1) On the Ottawa River in Canada. They are about 40 feet high.
(2) A cataract at the mouth of the Chaudière River, about 100 feet high.
- Chauncy, Charles.**—Born in Hertfordshire, Eng., 1592; died 1672. The second president of Harvard College. Before his emigration to America, in 1638, he had been vicar of Ware and professor of Hebrew and Greek in the University of Cambridge. He became pastor in Scituate, Mass., about 1641, and president of Harvard in 1654.
- Chauncey, Isaac.**—Born at Black Rock, Conn., 1772; died at Washington, D. C., 1840. An American naval officer who was actively engaged in the war with Tripoli and in the War of 1812; in the latter he was in command of the naval forces on the northern lakes; defeated an English fleet of seven vessels, capturing five of them, on Lake Ontario, Oct., 1813.
- Chautauqua.**—A summer resort on Chautauqua Lake, in western New York.
- Chautauqua Literary and Scientific Circle.**—An association originated and promoted in 1878 by Bishop John H. Vincent of the Methodist Episcopal Church, for home reading and study by its members. Its literary medium of communication is "The Chautauquan."
- Cheapside.**—The central thoroughfare of London, runs east and west. It was formerly an open common where markets were held.
- Cheatham, Benjamin Franklin.**—Born in Nashville, Tenn., 1820; died there, 1886. A Confederate general during the Civil War. He entered the southern army at the outbreak of hostilities and served till the end, in the Army of Tennessee, under Sidney Johnston, Bragg, "Joe" Johnston, and Hood; he was esteemed a valiant fighter, but was severely censured by Hood for the feebleness of his attack on Schofield's column at Spring Hill, Nov. 29, 1864. He failed to execute

Hood's order to throw his corps across the pike and thus cut off the retreat of Schofield to Nashville.

Checkerberry.—2893.

Checkers.—1886.

Cheetah, The.— See LEOPARD, 2463.

Chelsea.—A city in Mass., noted for its manufactures of tiles, pottery, etc. It was incorporated as a city in 1857. Pop. (1900), 34,072.

Chemistry.—The science that treats of the nature and composition of bodies and substances, and is grouped technically into two classes, inorganic chemistry, which relates to physical compounds, and, organic, which relates to animal and vegetable compounds. The science enters largely into many branches of art and industry, especially into medicine, metallurgy, agricultural, and other practical departments. In everything around us we see physical change, but we do not so readily see what chemical change produces under varying conditions and when subject to treatment by chemists. Many substances change, as we would say, naturally, when they decay, rust, burn, or ferment. There is a law, however, that governs matter, called "the law of conservation," which prevents matter from being destroyed, though, through chemical change, it may become quite different from the thing or substance it once was. An example of this is seen in gunpowder when it is made to explode and the product of the explosion is gas; a burning candle is another instance of change, when the wax, fat, or other material of which it is composed combines with the oxygen in the air to form water-vapor and carbon dioxide. As illustrations of the conservation of matter, the familiar instance of water changed to steam by heating or to ice by freezing, and the change in salt when dissolved in water, may be cited as instances of physical change, but not of chemical, for they can be returned again, by other processes, to their original condition or elements. In our day, 76 elements are recognized by chemists, many of which are rare. They are usually classed as metal and non-

metallic, some of the latter being gaseous. The substances that are not elements are either mixtures or chemical compounds, containing two or more elements. Most substances commonly met with to-day are mixtures of chemical compounds, such as articles of food, materials of clothing, rocks, soils, paper, wood, glass, bricks, etc. The knowledge how to prepare and utilize these substances in physiological, technical, and industrial departments, is the work chiefly of modern chemistry. This knowledge on the part of our chemists, in organic and inorganic fields alike, is being wonderfully extended in our day by experiment test and research. The practical uses of this knowledge is seen especially in products for commercial use, and in experiments, such as those for the liquefaction of gases, the production of liquid carbonic acid, etc., and in inorganic fields in researches into the toxic effect of solutions of certain acids and salts on plants, and the dyes derived from them.

Chemistry, as an Occupation.—4143.

Chemistry Applied to the Useful Arts.—5160.

Chemistry of Photography, The.—2962.

Cherokee Indians.—They are of Iroquois stock and are civilized and industrious. There are 17,000 in the Ind. Ter., and 2,000 in N. C. Cherokee Indians were valuable allies of Jackson's army in the War of 1812.

Cherry, The.—2874.

Cherry Bird, The.— See WAXWING, 2584.

Cherry Valley (N. Y.), Massacre.—Committed by 800 Indians and Tories, Nov. 11, 1778. During a heavy storm, they descended upon Colonial troops commanded by Col. Ichabod Alden, killed 43 persons, many of whom were women and children, captured 40 soldiers, fired all the buildings and practically effaced the settlement.

Chersonesus (*kêr-sô-nê'-sus*).—The Greek name for any peninsula and has been applied to several peninsulas, but in its especial significance the peninsula of Gallipoli between the Hellespont and the Gulf of Melas is understood.

— CHERUBINI—(1760–1842)

CHERUBINI was born at Florence, Italy, in 1760. He was one of the earliest of the modern Italian composers. So great was the boy's natural ability, and so quick was he to acquire a knowledge of the principles of music, that at the age of thirteen he wrote a mass and some small pieces for the stage. These compositions attracted favorable notice from Leopold II., grand duke of Tuscany, afterward emperor of Austria, who conferred on the youthful composer a pension, to enable him to study under Sarti at Milan. From this great teacher, Cherubini received a thorough schooling in the classical style.

At the age of twenty, Cherubini wrote his first opera, and during the next five years, six other operas were written and performed with success in various towns of Italy. In 1784, he was engaged as music-director of the King's Theatre, London. In two years he returned to Italy. In 1788, he went to Paris and decided to make

that city his home. In 1795, the *Conservatoire* of Paris was established, and Cherubini was appointed inspector and professor of composition. These offices brought him an income, but one that barely sufficed for the needs of his family.

In 1805, Cherubini removed with his family to Vienna. War now broke out between France and Austria; Francis II. and his court were driven from Vienna, and Cherubini, in order to preserve his French citizenship and his position in the *Conservatoire*, was obliged to return to France. In 1813, he produced *Abancesages*, one of his best operatic works. Its success was cut short by the public grief at the disaster to the French army at Moscow. In response to an invitation from the Philharmonic Society of London to write for its concerts, Cherubini went to the English capital in 1815. His style of composition, however, was not suited to concert or chamber music, and his overture and symphony performed in London under the composer's *baton*, were failures.

The restoration of the monarchy in France, and the accession of Louis XVIII., brought a change in the composer's fortune. He was appointed superintendent of music to the king, and master of the royal chapel. In 1822, he was made director of the Paris *Conservatoire*. Although sixty-two years of age at this time, he filled the position for twenty years thereafter, and taught many French composers who afterward won reputations. The masters of both France and Germany respected and admired Cherubini, and composers of all nations sought his advice. Mendelssohn went to him for an opinion on his works. Cherubini, as a rule, appreciated merit in other musicians, yet, strange to say, he rejected Liszt and Rubinstein from the *Conservatoire*, and he sneered at Berlioz, with his bold, new orchestral effects. He discharged his duties in this institution faithfully and well, however; and to him it is deeply indebted for its prosperity. At the age of seventy-three, he wrote the fine opera *Ali Baba*, which, like the rest of his works, was undervalued by the Parisian public, but received a warm appreciation in Germany.

With genuine sorrow, the musical world heard the news of the master's death in 1842, at the age of eighty-two. His funeral was public, and was attended by many of the distinguished men of Paris. In addition to his other honors, Cherubini was a member of the Institute of France, and was the first musician to receive the distinction of the Cross of the Legion of Honor, which was conferred upon him by Louis Philippe. Cherubini's severe classical style doubtless exercised a most beneficial influence upon the music of France, and prevented its descent into triviality, toward which it seemed to be tending at the beginning of the century.

"Chesapeake" The.—The action of the British ship "Leopard," which in June, 1807, fired on the U. S. frigate "Chesapeake" at Hampton Roads, Va., was one of the causes of the War of 1812. On the 22d of that month a lieutenant of the British vessel boarded the "Chesapeake" and demanded the release of three negroes who had deserted from the English man-of-war "Mclampus" and enlisted on the American ship. The government had already declined to surrender these men, and Commodore Barron refused to return them. Then the "Leopard" opened fire and the "Chesapeake," wholly unprepared for action, yielded without firing a shot. President Jefferson, in a proclamation, demanded an immediate disavowal of the act, the release of the captured sailors, and the withdrawal of Admiral Berkeley from command in American waters. The British made reparations, but so slowly as to aggravate rather than

mitigate the original offense. The "Chesapeake," under the command of Capt. James Lawrence, sailed out of Boston Harbor, June 1, 1813, to meet the English frigate "Shannon," commanded by Capt. Broke. The engagement resulted in the death of Capt. Lawrence and the capture of the "Chesapeake," June 1, 1813. When Lawrence fell, he muttered those words, that will never be forgotten, "Don't give up the ship!"

Chester.—An ancient, historic city in England, capital of West Cheshire, situated on the river Dee, 16 miles southeast of Liverpool, 180 miles northwest of London, and twenty miles from the sea. It is the Roman *Castra* and *Deva* and the Welsh (Celtic) *Caerleon*. Chester was an important Roman military station, was destroyed by Æthelfrith of Northumbria in 607 and afterward rebuilt. It fell before William the Conqueror in 1070, and besieged by the Parliamen-

- tarians and taken by them in 1646. It has a fine cathedral, which dates back to medieval times, and has of recent years been restored. It is most interesting alike to architects and antiquarians.
- Chester.**—A city in Pa., especially noted for its shipyards, and also for its manufactures of cottons and woollens. The first settlement was made by Swedes in 1643. Pop. (1900), 33,988.
- Chesterfield, Lord.**—See STANHOPE.
- Chestnut, The.**—2854.
- Cheves, Langdon.**—Born at Rocky River, S. C., 1776; died at Columbia, S. C., 1857. Was elected to Congress in 1811; was speaker of the House (1814-15); president of the National Bank (1819-22).
- Chey Chase.**—A famous old English ballad, contained in "Percy's Reliques," which sets forth the battle of Otterburn.
- Cheyenne.**—The capital of Wyo., 6,000 feet above the level of the sea. It is a railway center and the headquarters of large cattle companies. Pop. (1900), 14,087.
- Cheyenne Indians.**—They are of Algonquin stock, and at the beginning of the last century dwelt in the Black Hills and on the banks of the Platte and Cheyenne rivers. In 1825 they made a treaty of peace with the U. S., some going to the Tongue River Reservation, Mont., where they gave no trouble, and some going south, where they fought soldiers and settlers and finally became involved in war with the U. S. in 1861. Hostilities lasted three years and in 1864, while peace negotiations were pending, Col. Chevington, who was not aware of this fact, descended on the Sandy Creek village and slew one hundred Cheyennes. A campaign of slaughter followed, and continued until 1865, when the savages, with the exception of a comparatively small number who did not yield until 1867, went to a reservation. The Cheyennes number about 3,000, most of whom are at the Pine River Agency, S. D.
- Chicago.**—The chief city of Ill., situated on Lake Michigan, and the second largest city in the U. S. It is a large railway center and its exports of grain are larger than those of any other city in the world. Its chief and largest industries are beef and pork packing, while its extensive manufactures include lumber, iron, steel, clothing, tobacco, leather, agricultural implements, etc. It contains a university, several theological and other educational institutions and also important libraries and art collections. The most important event in its history, was the World's Columbian Exposition in 1893, which lasted from May 1 to Oct. 30. In 1871, it was visited by a great fire, resulting in a loss of property amounting to \$190,000,000; 20,000 buildings were burned. It was incorporated as a city in 1837. Pop. (1900), 1,698,575.
- Chicago Indian Massacre.**—While on their way from Fort Dearborn, which stood on the present site of Chicago, to Detroit, where they expected to join Gen. Hull, Capt. Nathan Heald and 50 men were waylaid on the lake shore by Indians Aug. 15, 1812, and nearly all the soldiers, with 12 children under their protection, were slain and scalped. The scalps were bought by Col. Proctor, of the British army, who had put a price on them.
- Chicago Railway Strike Riots.**—See CLEVELAND, GROVER, 127.
- Chicago Riots.**—See CLEVELAND, GROVER.
- Chicago University.**—A noted institution of learning in Chicago, enriched by an endowment of \$7,000,000 by J. D. Rockefeller and others. Its students number about 3,500, with 300 instructors. Its library contains 350,000 volumes.
- Chickahominy.**—A Virginian river which flows into the James about 40 miles from Richmond. Near it was fought the battles of Frayser's Farm, Savage's Station, Gaines's Mill, Mechanicsville, and Fair Oaks in 1862, and of Cold Harbor in 1864.
- Chickamauga.**—The name of one of the great battles of the Civil War. It was fought in Georgia, about fifteen miles from Chattanooga, Tennessee, September 19 and 20, 1863. General William S. Rosecrans commanded the Union army, which numbered about 55,000, and General Braxton Bragg the Confederate army, with a strength of about 65,000. The latter had been reinforced by two divisions from Lee's Virginia army, under General James Longstreet. The fighting on both sides was furious and obstinate. The first day gave no decisive result to either. On the second day the Confederates burst through a gap in the Union line and five of Rosecrans's brigades were driven in rout, with a loss of several thousand prisoners and many pieces of artillery. Rosecrans in person retired to Chattanooga, but General Thomas, with the center and left of the Union army, made such stout resistance that the Confederate assaults were repelled and at night Thomas drew the army safely back to Chattanooga. The victory on the field was fairly won by the Confederates, but Chattanooga, the prize of the campaign, remained in the grasp of the Federals. Rosecrans lost in killed, wounded, and prisoners, about 15,000 men; the Confederate loss was somewhat larger. See WILLIAM S. ROSECRANS, 496; GEORGE H. THOMAS, 559; JAMES LONGSTREET, 389; JOHN B. HOOD, 295. See also GARFIELD, JAMES ABRAM, 218.
- Chickamauga, Rock of.**—A sobriquet applied to Gen. George H. Thomas for his stubborn defense of his position at the battle of Chickamauga.
- Chickasaw Bluffs, Battle of** (Dec. 29, 1862), was fought near Vicksburg, and the Federals under Sherman were repulsed by the Confederate forces with great loss.
- Chickasaw Indians.**—In the 18th century they dwelt almost wholly in the territory now embraced in the states of Miss. and Tenn. In 1800 many of them settled in Ark. In the Colonial wars they sided with the English against the French, and in 1739 established amicable relations with the people of Ga. In 1765 they formally began trade intercourse with the settlers and with the Choctaws at Mobile. During the early Indian

- difficulties with the government they were either neutral or aided the latter. By the end of 1818 they had ceded all their lands east of the Mississippi, and in 1832 and 1834 they parted with the remainder and made their homes with the Choctaws, from whom they were separated in 1855. In the Civil War they aided the Confederacy for a brief period. The Chickasaws number about 3,500.
- Chicken Snake, The.**— See SERPENTS, 2639.
- Chicopee.**— A town in Mass., near Springfield. Its chief manufactures are cotton goods, arms, cutlery, etc. Pop. (1900), 19,167.
- Chignecto Bay.**— A bay at the head waters of the Bay of Fundy, between New Brunswick and Nova Scotia, Canada. The tide rises here to a height of between 50 and 60 feet perpendicularly.
- Chihuahua** (*chē-wā'wā*).—The name of both a state and a town of northern Mexico. The state has a population of nearly 250,000, and the town numbers about 25,000.
- Chilcat.**— A tribe of Indians who inhabit the country around Chilcat Bay and River and Chilcoot River in Alaska. They number less than 1,000.
- Child, Francis James.**— Born at Boston, Mass., 1825; died, 1896. Professor of English literature, rhetoric, and oratory at Harvard College (1851-1876). He published a collection of "English and Scottish Ballads," in 8 vols. (1857-59).
- Child, Lydia Maria Francis.**— Born at Medford, Mass., 1802; died at Wayland, Mass., 1880. An ardent supporter of the Abolitionist movement. She edited the "National Anti-slavery Standard" and wrote "The Rebels," "The American Frugal Wife," "Flowers for Children"; also "Appeal for That Class of Americans Called Africans" which excited much notice and comment.
- Childs, George William.**— Born at Baltimore, Md., 1829; died at Philadelphia, 1894. He was noted for his enterprise as a publisher and his benevolence as a philanthropist. He published the "Public Ledger," newspaper in Philadelphia from 1864 to 1894.
- Chili.**— A South American republic between the Andes and the Pacific, extending from the south of Bolivia to Cape Horn. Nitrate and mining and agricultural products are the chief articles of export. Area 290,829 sq. miles; pop. 3,100,000. Capital, Santiago, pop. (1900), 320,000.
- Chillon** (*shē-yon'*).— A castle on the eastern end of Lake Geneva, in Vaud, Switzerland. It is celebrated in story and song as the prison of Bonnivard (1530-1536), the defender of liberty against the Duke of Savoy. Bonnivard was Byron's "Prisoner of Chillon."
- Chiltern Hundreds.**— Under English law no member of Parliament may resign his seat unless he has accepted some place of honor and profit in the gift of the crown or for other cause. When other cause is wanting, he may be appointed to the stewardship of the Chiltern Hundreds, which qualifies him for resignation. The office originally charged the holder with the suppression of robbers in the Chiltern Hills. The chancellor of the exchequer appoints the member. Chiltern is in Buckinghamshire. Hundred is an old Teutonic division of land or people.
- Chimæra** (*kī-mē'-rā*).— 1629.
- Chimborazo.**— A lofty mountain peak in Ecuador, in the Andes, just south of the equator and near Quito, 20,498 feet high.
- Chimney Swallow, The.**— See CHIMNEY SWIFT, 2581.
- Chimney Swift, The.**— 2581.
- Chimpanzee, The.**— See MONKEY, 2452.
- China.**— An empire in eastern Asia noted for its high mountain ranges, elevated plateaus and long rivers. The country is mainly agricultural, and produces wheat, Indian corn, cereals, rice, sugar, opium, and tea. Area, 4,218,401 sq. miles, pop., 402,680,000. Capital, Peking, pop., 1,000,000.
- China, Dowager Empress of, Tzu-Hszü,** was the daughter of poor parents, sold into slavery in childhood, and was made secondary wife to the emperor; became Regent of the Empire on the death of her son, the Emperor Hien-Feng, and administered the national affairs for 15 years during the minority of Kuang-Hsu, which ended in 1889. In 1898 she virtually dethroned Kuang-Hsu because of his reforming proclivities, and reigned with absolute power until the disturbances of 1900.
- China, Emperor of, Kuang-Hsu,** age 30; is the nephew of Hien-Feng, whom he succeeded in 1875; after attaining his majority was much influenced by Kang-Yu-Wei, a reformer whose pace was much too fast for the general Chinese opinion. His reforming edicts led to the usurpation of the supreme power, Sept. 21, 1898, by the Dowager Empress, who has kept him, in a great measure since that time, in merely nominal power.
- China Painting.**— See HOME STUDY OF ART, 2382.
- Chincha Islands.**— Three small islands long noted for guano deposits, which are now exhausted. These are off the coast of Peru, a short distance south of Callao, in the department of Lima.
- Chinese Immigration.**— By a treaty negotiated by Caleb Cushing in 1844, five Chinese ports were opened to American trade, and protection of life and property was guaranteed to American citizens. The Burlingame treaty of 1868 allowed Chinese the right of emigration to the U. S. and promised them the same privileges, exemptions, and immunities respecting travel and residence that were enjoyed by Americans. The habits of life of the Chinese rendered them obnoxious to most Americans, and their rapidly increasing numbers began to cause considerable alarm. In 1879 a bill restricting their immigration passed Congress, but was vetoed by President Hayes. Several restrictive laws were made later, however. The Geary Act, passed in 1892, provided that any Chinaman not lawfully entitled to remain in the U. S. should be removed to China, and that all Chinese laborers should, within a year, procure certificates of residence, under penalty of deportation. A law passed the next year modified this act. Under present laws (1902) the immigration of Chinese is prohibited.

Chinese Mythology.—1552.

Ancestor Worship, 1553.

Taoism, 1559.

Buddhism, 1562.

Chinese Wall.—One of the great national works, the feature of the Chinese empire, built over 200 years before the Christian era as a barrier against the inroad of nomadic Tartar tribes. The wall, with towers and forts at intervals, extends eastward along the northern frontier of China, separating the latter from Mongolia, for a distance of over 1,500 miles. The great wall is from 20 to 30 feet in height, and about 25 feet in breadth, and in its winding course traverses hills and valleys; it is now useless as a defense, and much of it owing to neglect has fallen into ruin. The towers are about 40 feet square at the base, and taper toward the top; they are nearly 40 feet in height.

Chinkapin, The.—See CHESTNUT, 2855.

Chios (*κίῳς*), or **Scio.**—An island in the Ægean Sea, off the west coast of Asia Minor. It played an important part in ancient Greek history.

Chippmunk, The.—See SQUIRREL, 2446.

Chippewa Falls.—A city on the Chippewa River, in Chippewa Co., in western Wisconsin. Lumber is the chief commodity. Pop. (1900), 8,094.

Chippewa Indians.—Of the Algonquin stock, they are sometimes called Ojibwas. They had lodges between Lakes Huron and Superior and N. D. They were allies of the British during the Revolution, but made peace with the U. S. in 1785 and 1789. When combined with the Ottawas and Pottawottomies, the confederation was known as the Three Fires. They participated in the Miami rising against the whites and made another treaty of peace in 1795. This they broke in 1812, but submitted to the government again in 1816, when they ceded all their lands in Ohio. Other cessions were made, and now the 30,000 Chippewas who remain dwell west of the Mississippi and in Canada.

Chisel, The.—3874.

Chisholm vs. Georgia.—This case resulted in the adoption of the eleventh amendment to the Constitution. In 1792 Alexander Chisholm brought suit in the U. S. Supreme Court against the state of Ga., to compel payment of a private claim, his counsel holding that the court had power and jurisdiction under Section 2, Article III., of the fundamental law. The court took this view, gave judgment for Chisholm and issued a writ of inquiry, which was never enforced, as Ga. at once passed an act making death the penalty for executing such an instrument.

Chitty, Joseph.—(1776-1841.) A noted English barrister and writer. His works are considered standards in the study of law.

Chloe (*κλόῆ*).—A country maiden in love with Daphnis, in old Greek romauce. A type of the simple rustic lover.

Chloral Hydrate.—A preparation of chloral used in medicine as a means of producing sleep. Chloral is united with water to form a crystalline hydrate, which has great narcotic properties.

It is administered either internally or by subcutaneous injection in doses of about 30 grains. Treated with alkalis, chloral splits into formic acid and chloroform, used so beneficently to produce anæsthesia in surgical operations or to alleviate pain. Chloral hydrate is a white crystalline substance; chloral itself is a colorless oily liquid, with a pungent odor and harsh taste. Its symbol is CCl_3CHO . The drug should only be used in the hands of a skilled physician, as its excessive use produces paralysis and insanity.

Chlorine (Greek, *chloros*, signifying pale green).—One of the non-metallic, and under ordinary conditions gaseous, elements occurring in nature in combination with metals. Chloride of sodium (common salt) is its most abundant compound; it is soluble in water, and forms with that liquid, at a temperature of 0°C ., a crystalline compound; it condenses to a yellow liquid, under a pressure of four atmospheres, but the liquid is never frozen. Chlorine has an affinity for hydrogen, and forms with it an important compound, called hydrochloric acid. It is used largely for bleaching purposes, and is an ingredient in bleaching powder. Diffused in small quantities in the air, it is a good disinfectant. Its atomic weight is 35.5.

Chloroform.—A valuable anæsthetic, obtained by distilling a mixture of water, lime, chloride of lime (bleaching powder), and alcohol, when it passes over, along with water, and is caught in the receiver. It is next washed with water to remove the alcohol, and later with a solution of carbonate of potash; it is then dried with chloride of calcium and rectified. When rectified, it is a colorless, volatile liquid, with an agreeable, ethereal odor, a sweet but slightly acrid taste. It is a good solvent of resin, gutta-percha, iodine, bromine, and the alkaloids. By its effect upon the nervous system, when used as an anæsthetic, chloroform causes a suspension of voluntary motion and of sensation, while respiration and the action of the heart are continued. Care should be taken, however, in administering it.

Choate, Hon. J. H.—Carlton House Terrace, S. W., London, age 69; United States ambassador to Great Britain; an eminent New York barrister; a fine speaker, and a man of great social and literary gifts.

Choate, Rufus.—Born at Essex, Mass., 1799; died at Halifax, Nova Scotia, 1859. A distinguished American lawyer, orator, and statesman. He was elected representative to Congress from Mass. in 1830 and became the successor in the Senate of Daniel Webster, who had become Secretary of State under President Harrison. Mr. Choate set out on a voyage to Europe for his health. He was taken violently ill on board ship soon after leaving New York, and died as stated above.

Chocolate.—The ground seeds of *Theobroma Cacao* (see COCOA) made into a paste and mixed with sugar and various spices, and then formed into molds and allowed to harden. It is eaten

either solid, or dissolved in hot water, and then taken like tea, coffee, or cocoa. When pure (for it is often adulterated and perniciously so) it is a nourishing as well as an agreeable beverage. As a sweetmeat it is used extensively, and forms a wholesome and palatable confection.

Choctaw Indians.— They are of Musklogean stock, and in their prosperous days dwelt on lands bordering on the Gulf of Mexico. They declared allegiance to the U. S. in 1786 and rendered effective service in the Wars of 1812 and with the Creeks. In 1820 they accepted territory west of Ark. for part of their lands, and in 1830 they ceded the remainder and migrated west. They number 18,000, of whom 10,000 are of pure blood, and nearly all reside in Ind. Ter.

Choke-Cherry, The.— 2876.

Cholera.— A specific, infectious disease of two types, simple and malignant, occurring at periods in an epidemic form, and caused, as is now inferred, by what is known as the comma bacillus, discovered by Dr. Koch. The disease, however it arises, is chiefly propagated by the contamination of water used for drinking, cooking, and washing, by the contamination of articles of food, and possibly by the superficial inhalation and subsequent swallowing of particles of dust containing the comma bacillus.

The chief symptoms, in well-marked cases of the disease, are vomiting and purging, occurring either together or alternately. The seizure is usually sudden and violent, and, in unfavorable cases, especially where the disorder is epidemic, death may result within forty-eight hours. Malignant cholera is of frequent occurrence in Asiatic countries, particularly in India, where it often becomes epidemic, even in spite of the strictest sanitary precautions. It is no stranger in Europe, especially at the chief seaports of the continent, such as Hamburg, Havre, etc., showing the need of strict quarantine regulations and their rigid enforcement at our own ports of entry. It may occur at any season of the year, though more prevalent in the hot season, and in low-lying districts, with a shallow, porous soil where the infecting matter seems to breed cholera germs. As a preservative, inoculation may be considered to have passed the experimental stage, and to have become a reasonably safe guarantee against the prevalence of cholera in epidemic form. This has been proved abundantly on the tea plantations in India, where the dire disease periodically appears.

Chonos Archipelago (*chō'-nos*).— A group of small islands, about 120 in number, off the coast of Chili.

CHOPIN— (1809–1849)

FRÉDÉRIC FRANÇOIS CHOPIN was born at Zelazowa-Wola, near Warsaw, Poland. Authorities conflict as to the exact date, but it was probably March 1, 1809.

From his French father, he derived Parisian elegance and polish; and from his Polish mother, passionate love of country and intensity of feeling. He was a delicate, gentle child, who in early years showed no special aptitude for music, and who even disliked the piano. At an early age, however, he commenced to study that instrument, and made such rapid progress that, when nine years old, he appeared in public. Poland was proud of her young pianist from the first, and he was hailed in Warsaw as a "new Mozart."

Through the influence of a Polish patron, Chopin entered the Warsaw Conservatorium, where his talents developed so rapidly that at sixteen he was the favorite pupil of the director of the institution. We are told that even as a student Chopin possessed a peculiar charm of person and manner, which won for him many friends among the aristocracy, and soon raised him to that high social position which was ever afterward accorded to him.

In 1827, Chopin left the conservatory and entered upon a musical career. His second published work was a fantasia or set of variations on the duet *La Ci Darem*, in Mozart's *Don Giovanni*. Schumann, at Leipsic, saw the signs of promise through the crudities of the work, and spread the young composer's fame beyond the borders of his native Poland by a review of the work, beginning with the words, "Hats off, gentlemen! A genius!" In 1829, the composer went by stages to Paris, stopping at different places, and adding to his list of aristocratic friends. He was received at once into the highest musical and intellectual circles of Parisian society, and soon became the lion of the most aristocratic salons. While in Paris, Chopin met Liszt, Berlioz, Heine, Balzac, Meyerbeer, Ernst, and, later, Mendelssohn and Hiller. He published many

compositions and his reputation, both as a pianist and a composer, soon spread throughout Europe. In 1835, a trip to Karlsbad, Dresden, and Leipsic, enabled the composer to meet Mendelssohn and Schumann.

Before leaving Paris, Chopin had been affianced to a Polish lady of noble birth, but when he returned he found her married to a Polish nobleman. Then began an intimacy with the novelist, George Sand (Madame Dudevant), which left a morbid impression upon his music, and finally blasted his life. With her strong personality, and her genius, Madame Dudevant attracted and held the composer with a powerful fascination. That dread disease consumption was now ravishing Chopin's constitution, which had always been delicate and sensitive, at best. Madame Dudevant accompanied him to Majorca, and under her care, in the southern sunshine of this island, the composer's health improved. Finally, however, in 1847, a quarrel and rupture occurred between the two, which doubtless hastened the culmination of his fatal malady. Chopin declared that all the cords that bound him to life were broken.

After rallying from another attack of illness, Chopin went to London, partly to get away from Paris, which he said could never be anything to him again, and partly to escape the political convulsions of Continental Europe in 1848. In the English metropolis, he was enthusiastically received in the most exclusive circles. The excitement of the London season, into which he rushed without regard to his health, and the exposure of a colder climate during a journey into Scotland, hastened the final onslaught of his disease.

Chopin returned to London, and, weak as he was, played at the ball given in aid of his banished countrymen; this proved to be his last public appearance. He went back to France, and during the term of life left to him was lovingly attended by his pupil, Gutman, his sister Louise, and the Countess Potocka, one of his distinguished friends. He died October 17, 1849. All Paris took part in his funeral. The services were held in the Madelaine, and the music which accompanied them was his own *Funeral March*, and Mozart's *Requiem*. The body was borne to the tomb by six distinguished men, including Meyerbeer, and the painter Delacroix. Chopin was buried between the graves of Bellini and Cherubini.

Chopin's compositions are unequaled in their adaptation to the character of the pianoforte. He was not skilful in applying classical forms like the sonata, and he cared little for the learned development of fugues. His larger works, therefore, such as his concertos, and sonatas, contain passages of great beauty, but do not show him at his best. His mastery appears in his smaller works; his polonaises, mazurkas, nocturnes, and waltzes. The waltz had been raised from the level of a mere dance tune, by Schubert in his *Valses Sentimentales* and his *Valses Nobles*, and by Weber in his *Invitation à la Danse*, but Chopin was the first to invest dance music with an art form. His compositions of this class are not intended to serve as dance music, but they are complete poems, portraying the various sentiments and emotions produced in the mind of the dancer.

Chopin is the first among emotional composers. His music is in the highest degree poetical, and he is unsurpassed in the expression of the delicate, the dreamy, the wistful, the passionately tender, and the pathetic.

Chouteau, Auguste.—Born at New Orleans, 1739; died at St. Louis, Mo., 1829. In 1764, he and his brother Pierre, with some others, opened a trading post which grew into the present city of St. Louis.

Christian.—The name of nine kings of Denmark, or of Denmark and Norway.

Christian I. (1426-1481) reigned 1450-1481.

Christian II. (1481-1559) reigned 1513-1523.

Christian III. (1502-1559) reigned 1534-1559.

Christian IV. (1577-1648) reigned 1588-1648.

Christian V. (1646-1699) reigned 1670-1699.

Christian VI. (1699-1746) reigned 1730-1746.

Christian VII. (1749-1808) reigned 1766-1808.

Christian VIII. (1786-1848) reigned 1839-1848.

Christian IX. (1818-) reigned 1863-.

- Christiana Case.**—Takes its name from Christiana, Pa., where in 1851 Edward Gorsuch and others tried to retake a fugitive slave. A riot, in which Gorsuch was killed, resulted. Castner Hanway, a Quaker, was arrested charged with treason, riot, and bloodshed, because he had refused to aid a marshal in restoring peace, but no indictment was found. The tragedy produced much temporary excitement, but had no other consequence.
- Christiania.**—The capital of Norway; is the chief city and seaport. It is situated on Christiania Fjord. Founded in 1624 by Christian IV., after whom it was named; pop. (1900), 225,686.
- Christmas (Dec. 25th).**—The day on which the nativity of Jesus Christ is observed. The real date of our Lord's birth is not known; by the Eastern Church, Jan. 6, was held in commemoration as that both of the birth and the baptism of Christ; but later on (in the 4th century), the date adopted was that which we now commemorate, the observance being ascribed first to Julius, bishop of Rome. The festival of Christmas was celebrated with great feasts alike by Romans, Celts, and Germans, Yule-tide being a season of rejoicing. The heathen elements of the festival were gradually dropped, as the Church sought to introduce, in lieu of them, its liturgy and the ritual adopted by both the Roman and Anglican (Protestant) Episcopal churches. To add to the church ritual devised for the season came the Christmas carols and "mauger songs," and such customs as are now connected with the day socially, with its family reunions, feasts, and gifts. The Christmas tree, with its lights, hanging toys, and Santa Claus visits, as a festival of St. Nicholas dear to childhoods' days, are additional features of the season which almost all the world now commemorates, to which has to be added "the Christmas-box"—the money-gifts distributed among children, servants, employees, and the poor and needy on the glad return of the day.
- Chromium** (Greek, *chroma*, color).—A metal, known to mineralogists as red-lead, a compound of chromium with lead and oxygen. Its most abundant ore is chrome iron, a compound of its oxide with oxide of iron. For commercial purposes it is manufactured by subjecting chrome iron (previously reduced to a fine powder) to a strong heat, with a mixture of carbonate of potash and nitrate, in a reverberatory furnace. After a lengthy process of fusion, the resulting mass is broken up and treated with boiling water, when chromate of potash is dissolved out. By a further process, the chromate is converted into bichromate of potash ($K_2O_2CrO_3$).
- Chrystler's Field (Canada), Battle of.**—An indecisive action that lasted five hours, Nov. 11, 1813, when Gen. Wilkinson, commanding the Americans, fought a larger force of British. The latter held the field. American loss, 339; British, 187.
- Chub, The.**—See **CARP**, 2696.
- Church, Benjamin.**—Born at Duxbury, Mass., 1639; died at Little Compton, R. I., 1718. He took an active part in King Philip's war (1676); from his notes and papers his son compiled "Entertaining Passages Relating to Philip's War" (1716).
- Church, Frederick Edwin.**—Born at Hartford, Conn., 1826. A well-known American landscape painter. His best works are "Niagara Falls from the Canadian Shore" in the Corcoran Gallery at Washington, "Cotopaxi," "The Heart of the Andes," etc.
- Church, Sanford Elias.**—Born at Milford, N. Y., 1815; died at Albion, N. Y., 1880. An American jurist and politician. He was lieutenant-governor of N. Y. (1851-54), and chief-justice of the state court of appeals (1871-80).
- Church and State.**—The Constitution stipulates that Congress shall make no law respecting the establishment of any religion or prohibiting the free exercise thereof. There is no connection between State and Church here, as there is in Europe. Many of the Colonies early established as the official denomination the Episcopal Church, or Church of England, as it was more generally called, while Mass. and Conn. recognized and provided for the Congregational. R. I., Md., and Pa., almost from their establishment, guaranteed religious freedom, and the principle is affirmed in the Constitution of the U. S., which says, "no religious test shall ever be required as a qualification to any office or public trust under the U. S."
- Churchill, John.**—(1650-1722.) The first Duke of Marlborough. A famous general and statesman. He participated in the military victories of Blenheim (1704), Ramillies (1706), Oudenarde (1708), and Malplaquet (1709). By a change of government he lost his command in 1711.
- Churchill, Lady Randolph** (MRS. GEORGE CORNWALLIS WEST).—35a, Great Cumberland Place, W. London; as Miss Jennie Jerome of New York, married Lord Randolph Churchill in 1874; her second marriage was one of the events of the 1900 London season; owns and edits the "Anglo-Saxon Review," a guinea quarterly. Vice-pres. Ladies Grand Council Primrose League, Pres. of American Hospital Ship "Maine" Committee.
- Churchill, Randolph Henry Spencer** (LORD RANDOLPH CHURCHILL).—(1849-1895.) An English statesman who occupied several cabinet positions during his career. Under Lord Salisbury's administration he was chancellor of the exchequer and leader of the House of Commons (1886). He married Miss Jerome of New York in 1874.
- Churchill, Winston Spencer, M. P.**—105, Mount St., W. London; a soldier at 19, he is to-day world famous at 27 years; saw Spanish campaign in Cuba, and served as officer through Indian frontier wars; in Sudan campaign, 1898, took part in the Lancers' charge at Omdurman, and has put his experiences into literature, his best book, "The River War." Won great laurels in the Boer War, especially by his brave defense of an armored train and his escape from Pretoria.
- Churchill, Winston.**—American novelist, author of "The Celebrity," "Richard Carvel," and "The

Crisis," was born at St. Louis, Mo., Nov. 10, 1871. He was for a time managing editor of "The Cosmopolitan Magazine," New York.

Churchill River.—A river in Canada flowing through several lakes in its course, empties into Hudson Bay after a course of about 700 miles.

Churubusco (Mexico), Battle of.—A sharp engagement Aug. 20, 1847, in which the Mexicans lost 3,300 and the Americans 1,015. A few hours after the battle at Contreras, Churubusco, a strongly fortified position near the City of Mexico, was charged by the Americans under Generals Worth and Twiggs. There were only 8,000 Americans to overcome 25,000 Mexicans; but the former gained an early advantage by routing the garrison of San Antonio. The fighting was fiercest on the Rio Churubusco and at one time the Americans were in danger of defeat. The conflict resulted favorably to the Americans through the almost simultaneous fall of several strategic points.

Cibber, Colley.—(1671-1757.) A noted English actor and dramatist. Appointed poet-laureate in 1730.

Cibber, Mrs. Susannah Maria Arne.—(1714-1766.) A famous English actress and singer; daughter-in-law of Colley Cibber.

Cibber, Theophilus.—(1703-1758.) An English actor and dramatist, son of Colley Cibber.

Cicada, The.—2780.

Cicero, (sis'-e-rō) Marcus Tullius.—(106-43 B.C.) A great Roman orator and writer; was of honorable descent, and received a good education which fitted him for the law. He became well known at a very early age, for he was so quick and bright at school that the other boys mentioned him often at home, and their parents visited the school to hear him recite. From Scævola, a celebrated lawyer, he learned about the laws and politics of Rome. Under Strabo he obtained a practical knowledge of military affairs. He took great interest in the study of philosophy and rhetoric.

Cicero began public life by defending one of Sulla's emancipated slaves, and winning the suit. Concluding that it would be prudent to get out of the way of Sulla, who was then at the height of his power, he decided to travel. He visited Greece where he studied under the most learned men of the day. He went to Asia and mingled with the great philosophers and rhetoricians. He continued his practice of oratory with such effect that when he was leaving Athens a great scholar said to him: "You have my praise, Cicero, and Greece, my pity, since those arts and that eloquence which are the only glories that remain to her will now be transferred by you to Rome."

He was thirty years of age when he returned to Rome, where he soon became the most popular of the orators. He was appointed quæstor, or public treasurer, at a time when it was necessary to send to Sicily for grain to supply the needs of the city. Though the people complained of him at first, he proved himself just and reasonable.

He owned a modest country-seat near Naples, and another at Pompeii, but he lived most of the time on the Palatine Hill, in Rome, so that the people who desired to visit him could do so without inconvenience. Though his wife had brought him a fortune, and he had plenty of money of his own, he had the good taste to live a simple life. His companions were literary men, both Greek and Roman.

For over thirty years Cicero had great influence in the affairs of the Roman republic. It was a time of personal rivalries, and of much discord and turbulence. Though he was not suited for the duties of a statesman in such evil times, he was learned, genial, just, faithful, honest, and free from envy and jealousy.

Though he was not fond of war, Cicero served a short time in the Social War. He won his greatest distinction as an orator. While prætor (66 B.C.), he made a great speech which secured for Pompey the command in the Mithridatic war, and practically the dictatorship of the East. In 64, aided by Cæsar and Pompey, he defeated Catiline in the race for the consulship, which was the object of his highest ambition. He saved the republic by the discovery and defeat of the plot of Catiline. For the great energy which he showed in this crisis, he became known as the "father of his country."

Soon, he began to lose his influence among the people. Perhaps he showed vanity in boasting of what he had done. Clodius, his worst enemy, in order to ruin him, secured the renewal of an old law which declared that any person who had put a citizen to death without trial was guilty of treason. He then brought a charge against Cicero, who had executed those engaged in the Catiline Conspiracy.

Cicero put on mourning and humbly begged for grace. Over twenty thousand young men of the best families of Rome followed his example, but they were pelted with dirt and stones by the lawless partisans of Clodius. Cicero finally saw that he must either fight or leave the country. In order to get assistance he applied to Pompey, whom he had often befriended; but Pompey, who preferred not to give aid to one with whom his father-in-law, Cæsar, was not then friendly, slipped out of the back-door in order to avoid an interview. He applied to the consuls; but all invited him to go into exile.

Deserted by friends in whom he had trusted, and threatened with banishment, he left Rome. The following year he returned in triumph, and received liberal pay for his property which had been destroyed. For a while he avoided political affairs, but entered official life again in 53 B.C. In 49, he joined Pompey, who was at war with Cæsar, and who was defeated the next year at Pharsalia.

Cicero returned to Rome in 47 B.C., by permission of Cæsar, and devoted himself to his books and to writing. In a short time he met domestic sorrows and financial troubles. Study

became his greatest refuge. He now seemed to be a friend of Cæsar, but after Cæsar's death he supported the party of Brutus and Cassius. He opposed Antony with great vigor and energy, speaking fourteen orations against him. Learning that Antony was seeking his life, he tried to escape to the sea, but was overtaken by pursuers who cut his head and hands from his body.

When the head and hands were publicly exposed at Rome, men wept as they looked upon them and thought of the pure amiable character that had met such a cruel and unjust death. Antony said: "Now, let there be an end of all executions."

"In Cicero," says Froude, "nature half-made a great man and left him uncompleted. Our characters are written in our forms, and the bust of Cicero is the key to his history. The brow is broad and strong, the nose large, the lips tightly compressed, the features lean and keen from restless, intellectual energy. The loose, bending figure, the neck too weak for the weight of the head, explain the infirmity of the will, the passion, the cunning, the vanity, the absence of manliness and veracity. He was born in an age of violence with which he was too feeble to contend. The gratitude of mankind for his literary excellence will forever preserve his memory from too harsh a judgment."

Cid, The.—(1026–1099.) Romance has colored with glowing tints the scanty historical materials of a favorite hero of Spain, and the most prominent figure in her literature—Rodrigo Diaz, the Cid. Though the narratives of his life and exploits are largely exaggerated and poetic, historic truth may often be found under the veil of legend and myth. He may have been a hero so brave that he has been credited with the deeds of other heroes. He was probably born about the year 1026, at the Castle of Bivar, in Old Castile. He belonged to a noble but not wealthy family. He joined the army of Castile and in 1065 rose to the highest place in it. He was obedient to the king, and did not hesitate to lead at his command, even when the cause was an unjust one.

The most famous legend connected with the youth of this adventurous hero is that of his fight with the Haughty Count. The chronicle merely says that "as he went about in Castile he had a quarrel with the Count and they fought and Rodrigo slew the Count." The ballads say that before he reached the age of ten years he assumed the duties of a man and the privilege of doing justice which belonged to the great nobles, and that he killed the Count because the latter had grievously insulted and struck his old defenseless father. According to the ballad, he challenged the Count, and when the latter laughed at him as an upstart boy, he advanced fearlessly and struck him with his sword, and afterward married the Count's proud daughter who sought to avenge the death of her father. Thus he settled the

lady's claim for redress. Leaving her at Burgos with his mother, he vowed that he would not see her again until he should make himself worthy of her by some great exploit. He soon fulfilled his vow by defeating a party of foraging Moors.

He was hated by King Alfonso. After he had won a brilliant victory over the Arabs of Grauada, who were at war with two other Moslem states and Castile, and had shown human feeling by releasing all of his prisoners, he was disgraced and banished by Alfonso. He then joined the Arabs and led them in several battles against the Christians of Aragon. He was recalled by Alfonso after the defeat of the Castilian army by the Moors at Zalaca in 1087. He consented to return and for two years he led the Christians against the Moors. Being banished again by the king, who also seized his estates, he began a life of adventure. Gathering a band of warriors like himself, he took a strong Moorish fortress on the borders of Aragon. He built a castle in Teruel, his chief stronghold, and invaded and devastated the lands of the Moors.

In 1094, he took Valencia, which had been held by the Moors for some time. Though he violated the conditions of the surrender, killing many citizens and dividing the possessions among his companions, he seems to have used his victory mildly in other respects. He ruled Valencia and Murcia for four years with vigor and justice.

At last, he received a crushing defeat at Cuença, and died of grief and anger in 1099. The toilworn body of the mighty warrior and true Spanish hero, who had all of the national virtues and most of the national vices, was laid to rest at San Pedro de Cardena, near the scene of his earliest exploits.

The simple people who lived in later ages refused to believe that his career could end in defeat and disappointment, and there are beautiful myths and traditions of his victories even after death.

The Cid of romance—of a thousand battles, legends, and dramas—is given every knightly virtue; generosity, patriotism, courage, truthfulness, honor, and loyalty. In popular Spanish literature he holds a place as the perfect man born in a happy hour—the flower of all Christian grace.

The real Cid falls far short of the poetical ideal which the patriotism of his countrymen have cherished for 700 years, but he is the foremost man of the heroic period produced by the long struggle between the Christian and the Moslem, and a good type of the Spanish Goth of the 12th century. He was a great fighter, but had not the material to make a Christian saint.

Cilley, Jonathan.—Born at Nottingham, N. H., July 2, 1802. He was a lawyer of ability, and was elected to Congress in 1837. His opposition to slavery made for him many enemies. He was challenged to a duel by Congressman Graves of

- Ky., Feb. 23, 1838. They fought the following day near Washington with rifles, and Cilley was killed on the spot.
- Cimabue, Giovanni.**—(1240—1302). A famous Italian painter, in decorative lines. He is called "The father of modern painting."
- Cinchona.**—A genus of trees or evergreen shrubs, native to the valleys of the Andes, yielding the valuable medicine known to commerce as cinchona, Peruvian, or Jesuits' bark. As a tonic and remedy for fever, owing to the presence of alkaloids, such as quinia, etc., the cinchona is of great importance. The drug is administered in grains in the sulphate or bisulphate of quinine, or in the form of its alkaloid quinine. It is found valuable also as an antiseptic and typical astringent, in addition to its antiperiodic febrifugal and tonic properties.
- Cincinnati.**—The capital of Hamilton Co. and the largest city in Ohio; known as "The Queen City." It was founded in 1788 and incorporated as a city in 1814. Its river and railway traffic is very large. Its extensive manufactures embrace iron, furniture, malt, and distilled liquors, etc. Pop. (1900), 325,902.
- Cincinnati, Society of the.**—The charter members were officers of the Revolutionary army. It was founded in 1783, and in 1787 Washington was elected president-general and retained the office until his death. The membership was limited to the officers—including several Frenchmen who had held commissions in the army—and their eldest sons, to whom the membership descended. The hereditary principle provoked adverse criticism and was denounced by the governor of S. C. and the legislatures of Mass., R. I., and Pa. In 1784, at Washington's suggestion, the objectionable requirement was eliminated and the immediate objects of the society—to raise a fund for the aid of the widows and orphans of soldiers of the Revolution and to strengthen the political union of the states—were made prominent. The idea, however, that it was essentially an aristocratic body had lodged in many minds, and advantage was taken of this circumstance to found the Democratic Tammany Society, as opposed to the alleged aristocratic Cincinnati. The society took its name from the famous Roman general, Cincinnatus, who left the plow to serve his country, and who, at the conclusion of his dictatorship, betook himself again to agricultural pursuits.
- Cincinnatus, Lucius Quinctius.**—(519—430? B.C.) A hero of Rome whose life is surrounded by legend. In 458 B.C., in a crisis, when the Roman army was hemmed in a defile by an opposing army of Æquians, he was appointed dictator by the senate. When the messengers went to inform him of his appointment he was found digging in his field. He held office for 16 days. During which time he completely defeated the Æquians. He then retired to his farm, and a simple life. He was again appointed dictator at the age of eighty.
- Cinderella.**—1265.
- Cineraria, The.**—2910.
- Cinnamon.**→ The inner bark of a small evergreen tree, with a delicate aromatic odor, found in Ceylon and at Colombo. It is chiefly used in cooking as a condiment and flavoring material, and also in the preparation of some kinds of chocolate and liquors. In medicine it is used for counteracting the griping action of purgatives. Cassia, the product of a much inferior bark than cinnamon, is sometimes substituted for the latter, and with unsatisfactory results. The Ceylon cinnamon is most highly praised, being of a fragrant odor, and having a sweet, pleasant, aromatic taste.
- Cinquefoil, The.**—2902.
- Cinque Ports (French, Five Ports).**—A collective name for the five chief ports in the English Channel—Dover, Hastings, Sandwich, Hythe, and Romney. To these were added later the ports of Rye and Winchester, all being governed by a lord-warden, who furnished the English naval contingents up to the time of Henry VII. Their special privileges have been abolished, though they were once considerable, in consideration of the several ports furnishing a certain quota of ships of war, for the king's use, when demanded.
- Cipher.**—In arithmetic, the character 0, which standing by itself expresses nothing, but when placed to the right of a number, say 25, increases its value tenfold. It is now loosely applied, also, to any of the nine figures. Metaphorically, its primary meaning (a cipher) denotes a nonentity, or nobody. The cipher is used also to designate the interweaving of the initials of a name, as a monogram, or private mark; and the term has, moreover, come to be a name for secret writing, in the transmission of dispatches, the reading of which is known only to the initiated.
- Cipher Code.**—A secret or disguised manner of writing. Its most frequent use is to cheapen cost of cables and telegrams, as one word stands for several, or for a whole phrase.
- Cipher Dispatches.**—The telegraphic messages in cipher sent from and received by Democratic party workers in S. C., Ore., and Fla. while the result of the presidential election of 1876 was in doubt. Fraud was freely charged and the messages were ordered submitted to the Senate Committee on Privileges and Elections. The "New York Tribune" published transcripts of many. Samuel J. Tilden, the Democratic candidate for the presidency, disavowed all knowledge of and responsibility for them.
- Circassia.**—A region in the Caucasus, incorporated with Russia in 1829.
- Circe.**—In Greek mythology, an enchantress, who dwelt in the Island of Ææa.
- Circle.**—In geometry, a plane figure bounded by an inclosed or curved line, which is everywhere equidistant from a point within it called the center. Any line drawn through the center, and terminated by the circumference, is a diameter. The distance from the center to the circumference is called the radius, and any two

radii which together form a straight line constitute the diameter. In astronomy, the term "great circle" denotes those circles which divide the celestial sphere into two equal parts, as the equator and the meridian. A circle of latitude is one perpendicular to the plane of the ecliptic; in spherical projection, it is a small circle

of the sphere whose plane is perpendicular to the axis. In logic, to argue *in a circle* is to reason inconclusively.

Circumlocution Office.—In Dickens's "Little Dorrit," a bit of satire directed against the red tape methods of the public-office system in England.

Citizen and the Public Man, The.—5055.

CITIZEN AND VOTER

THE RECENT EXTENSIONS OF SUFFRAGE TO WOMEN—THE REGISTRATION OF VOTERS—REQUIREMENTS OF THE NATURALIZATION LAWS—REVISING THE VOTING LISTS—MANNER OF VOTING AND OF MEETING CHALLENGES—THE OLD METHOD OF PARTY TICKETS—THE AUSTRALIAN BALLOT SYSTEM AND ITS ADVANTAGES—LEGAL CONTROL OF CAUCUSES—RECEIVING AND COUNTING THE VOTES CAST—DATES OF THE ELECTIONS IN VARIOUS STATES.

THE DUTIES OF THE CITIZEN

ONE of the functions of life that touches every American citizen when he has reached majority, is the exercise of the suffrage. The term "citizen" applies to women as well as to men. Women in Colorado, Utah, and Wyoming, are now allowed to vote on the same terms as are men, and in many other states they have a limited suffrage for members of school boards, and other officers. But even where voting by women is not allowed, an intelligent general knowledge of the great problems before the country and of the manner in which they are solved, will be useful in many ways to women. They will be better able to teach their children, will be better comrades for their husbands, and will be more agreeable members of society, if they know something of their country and its government.

An intelligent woman, therefore, should give the same attention to the public affairs of her country, and to the education of her children in these affairs, that she gives to the other relations of life. There is something incongruous in the intimate knowledge that is displayed by some school girls, and even by more mature women, of the history of England, under the Stuarts, or of France under Louis XIV., while they are ignorant of the names of the political leaders, and of the vital events in the history and present development of their own country. Some of the popular prejudices regarding the knowledge of women about the government of their own country were hit off in an amusing way by Judge Robert Grant in his entertaining book, "The Opinions of a Philosopher," when describing his announcement to his wife that he had been asked to run for Congress:—

"Really, Fred! Who has asked you? The governor?"

"The governor does not usually go round on his bended knees asking candidates to run for Congress!" I answered, with mild sarcasm.

"Well, the mayor then?"

"I have labored for years to make plain to Josephine the ramifications of our national, state, and municipal, government; but just as I am beginning to think that she understands the matter tolerably well, she is sure to break out in some hopeless.



fashion as this, which shows that her conceptions are still crookeder than a ram's horn. And the strangest part is that she can tell you all about the English Parliament and Home Rule, and whether any given statesman is a Liberal or a Liberal Unionist, and about M. Clemenceau and the relative strength of the Bonapartists and Orleans factions. But when it comes to distinguishing clearly between an alderman and a state senator, or a member of Congress and a member of the Legislature, she is apt to get exasperatingly muddled."

Nearly every male citizen of the United States is a voter under existing laws. This was not the case during the Revolutionary period, and for many years after. The sweeping language of the Declaration of Independence was not understood at that time as going beyond equal justice before the law, for all men. The suffrage was limited, in nearly every state, to those having real estate or to those in receipt of a certain income. In Rhode Island, the requirement of property to the amount of \$134 prevailed down to a recent time. Several states have also required until recently, the payment of certain taxes as a qualification for voting. The original Constitution did not undertake to prescribe who should vote in elections. It was simply provided, in regard to the election of members of the House of Representatives, that they should be "chosen every second year by the people of the several states, and the electors in each state shall have the qualifications requisite for electors of the most numerous branch of the state legislature." This provision distinctly left to the states the decision as to who should be allowed to vote within the states. It simply provided that whoever could vote for members of the more popular house of the legislature should be allowed to vote for members of the lower house of Congress.

The progress of popular education, and the growing belief that civilized peoples can be trusted to govern themselves, have led to the gradual abolition of nearly all restrictions upon suffrage which go beyond manhood and citizenship. Illinois, Michigan, and Wisconsin, have even allowed persons to vote who have come within the law in regard to the length of residence, even when they have not renounced their allegiance to foreign powers and become citizens of the United States. A few states provide that only those shall be allowed to vote who can read and write. The laws of Massachusetts require the voter to be able to read the Constitution of the state in the English language, and to write his name. Even more elaborate restrictions have recently been adopted in some of the Southern States.

Full suffrage for women prevailed in Utah before it entered the Union as a state. In Wyoming, it was provided by the Constitution of 1889:—

"Sec. 3. Since equality in the enjoyment of natural and civil rights is made sure only through political equality, the laws of this state affecting the political rights and privileges of its citizens shall be without distinction of race, color, sex, or any circumstance or condition whatsoever other than individual incompetency, or unworthiness duly ascertained by a court of competent jurisdiction."

This provision was carried out in the statutes by the simple declaration that, "When they possess the other qualifications of an elector, the rights of women to the elective franchise, and to hold office, shall be the same as those of men." In Colorado, it was not until 1893 that the question whether women should vote was submitted to the male voters, and then a favorable answer was given by 35,798 votes for, and 29,451 votes against. Governor Waite thereupon issued his proclamation, under date of December 2, 1893, "that every female person, a resident of Colorado, shall be entitled to vote at all elections, in the same manner in all respects as male persons, and subject to the same qualifications."

The greater part of the restrictions now imposed upon the right to vote are intended simply to guard against fraud, and not to take away the right from the adult

male who complies with the formalities of the law. These formalities, however, have grown more numerous and complicated with the growing importance of the interests involved in elections, the concentration of people in cities, and the opportunities for fraud which these conditions involve. An elaborate system of rules regarding assessment, registration, voting, and counting the votes cast, has grown up in all the states, and has been extended to some of the older states to the primary elections. These rules differ greatly from state to state, but a general idea of their scope and purpose can be given which will aid the young voter, and the mother who desires to teach her children the manner in which the country is governed.

The requirement that the names of voters shall be entered on a written or printed register has been established in most of the states, as a safeguard against abuse of the privilege by those who are not entitled to it. There are a great many such persons in every community, in spite of the wide extension of the right to vote. These include, in the first place, all young men who have not reached the age of twenty-one years. They include, also, all foreigners who have not become naturalized citizens of the United States, except in the few states where foreigners are permitted to vote. This class of foreign non-voters is numerous in many towns and cities, and it includes some who have taken the preliminary step to become citizens, but who have not yet complied with all the conditions.

The naturalization laws of the United States require that any man, in order to become a citizen, shall have been a resident of the United States for at least five years. If he has been in the country three years before the age of twenty-one, and five years in all, he may become a citizen at any time by making application for naturalization, by filling out the necessary documents, and by supporting his statements by two witnesses. If, however, he has come to the country in later life, he must make a preliminary declaration of his desire to become a citizen two years before receiving his final naturalization papers. It is this provision that has afforded temptation to fraud to many young men desiring to become voters, in the heat of an exciting political contest. They have sometimes dated back their arrival in this country, in order to show that they arrived under eighteen years of age, and were therefore entitled to become citizens immediately upon application. The advantage of this fraud is that they may become voters at once, instead of having to wait two years after filing their application before becoming citizens.

The process of naturalization is carried on chiefly by the courts of the United States, which are located in the leading cities. The laws of the United States authorize naturalization, however, by state courts having a record and a seal, and these are availed of where the United States courts are not convenient. The nationality of women usually follows that of their husbands, when married, and that of their fathers, when unmarried. Where property is involved, however, there are exceptions to this rule, which should be the subject of careful consultation with attorneys familiar with both local and international law.

The list of those who are qualified to vote is usually called the registration list. It is the duty of the election officers to see that no one is entered on the list as a voter who does not possess the necessary qualifications. These qualifications include not only citizenship in the United States, in most cases, but they usually involve under state laws a certain length of residence within the state or election district. A few months' residence in a state is all that is required in some cases, but one year is a more common requirement, and in some cases two years, in the older states. Residence in the county or election district is usually required for a much shorter time,—thirty or sixty days, for instance. In some states, a voter who is qualified in other respects, is permitted to vote in the precinct or election district where he is registered, even though he may have removed within a few weeks or months to some other election district. This

privilege is usually limited to those who remain inhabitants of the state, and it is intended chiefly to secure to them the right of voting for state officers while they retain their citizenship in the state.

The conditions which have thus far been set forth regarding voting relate to the right to register as a voter. Most states require that this right shall be supplemented by the voluntary act of the citizen in order to entitle him to a vote. That is, he must appear personally before the officers who make up the lists, within the time set by the law, and answer any proper questions which may be asked to prove his identity and his qualifications. If he is found qualified, his name will then be entered on the list. The laws of Massachusetts require notice to be given to a voter whose registration is canceled after his name has been entered. In most states, a citizen forfeits the right to vote by failure to comply with the laws governing registration. Thousands of voters, especially in the less important elections, lose their right to vote by failure to secure registration. The registration laws are not restrictive in arbitrarily limiting the right of suffrage, but they impose what are called police regulations, to protect the suffrage from fraud. The laws on this subject are much looser in some states than in others, and in some they are very exacting in their requirements. Many states, including Massachusetts, do not require a citizen to register every year, if he remains a resident of the same election district. Other states, like New York and Illinois, require the citizen to go through the formality of registration every year. The purpose of this is to keep fraud within the narrowest limits, by compelling each citizen to prove his title as a voter, at each annual election.

It is the duty of the election officers in states where names are kept on the voting lists from year to year, to strike off the names of all persons who die, and of all who are known to have left the election district. It is contended by the critics of this system that names are carried from year to year of persons who continue to vote without right, or whose names are used for the voting of "repeaters." This name is given to criminals who vote more than once, whether they happen themselves to be voters, and entitled to one vote, or whether they are not voters at all in the district where they commit their crimes. Some remarkable cases of wholesale repeating have been brought to light in the great cities, where it is not possible for the election officers, or even for the politicians, to maintain a personal acquaintance with all the voters.

There is always a certain number of registered voters who are prevented from voting or who are indifferent to the privilege. The number who are indifferent is usually larger in state elections than in the election for President. It becomes possible, therefore, in a closely contested election, where many reputable citizens have failed to vote, for a few repeaters to vote up the lists just before the polls close, by appearing and giving the names of those who have not voted. These names can easily be obtained from the election officers, or by trained men who have duplicates of the voting lists and who take the names as they are voted upon. The New York system of requiring registration every year sifts out from the lists those who do not actually intend to vote in that year, and to this extent tends to diminish the opportunity for repeating and similar frauds.

Registration usually ends several weeks before an election. It is not possible in most states for the citizen to get his name upon the lists after registration has closed, however strong his proofs that he possesses the other qualifications of the voter. It is of vital importance, therefore, for the young man or woman who desires to exercise the privilege of voting, to learn just what are the requirements regarding residence in the state, and election district, and the time for getting their names upon the voting lists.

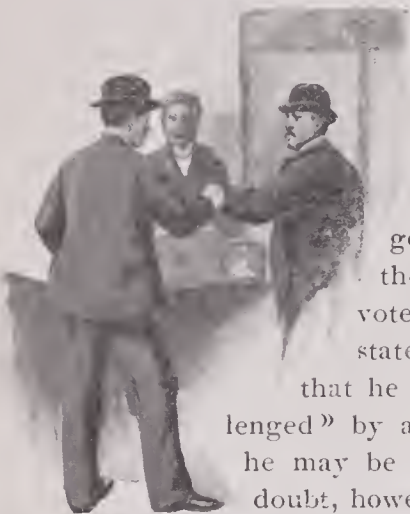


Political managers do more or less to bring these facts to the attention of citizens, and to persuade them to register, but the degree of system and success of their methods varies much according to the ability of the managers and the character of the elections. The greatest effort is made in states and districts where the parties are closely balanced and where hard work in adding to the voting list, and in getting citizens to vote, may turn the scale in favor of one candidate or the other.

When election day arrives, the citizen who is registered should go to the proper voting place for his district and present himself before the election officers. In many states, a registered voter whose right to vote is disputed, upon the ground that he is no longer a citizen of the state, that he made fraudulent representations in becoming naturalized, that he is disqualified by betting, or for some other reason may be "challenged" by any citizen. In such cases, if the evidence is clearly against him, he may be refused the right to vote by the election officers. When there is doubt, however, he is usually allowed to vote, but his name is written on the back of his ballot, so that the latter may be identified. This will enable the election officers, or the courts, to discuss his claims with greater deliberation and to count, or refuse to count, his vote in the final returns.

It is not often that a reputable citizen is challenged, but in such an emergency, if he feels that his title to vote is sound, he should insist upon exercising the right in spite of any suggestion of his liability to arrest and punishment. If he is in doubt as to his rights, he should consult the workers and attorneys of his own party, but should not be governed by their judgment if it is too obviously partisan, and does not appeal to his judgment of the correct interpretation of the law. He should listen courteously to the reasons given against his voting, and if he knows them to be founded upon fact, he should give them the weight to which they are entitled. Such cases become of importance only when the election is very close. If, for instance, a candidate was elected by a majority of one vote, and it was claimed that this vote had been given without authority, by a man who was challenged, the courts might be called upon to decide whether the man was entitled to vote, and would accept or reject the vote, and decide the result of the election accordingly.

The system of voting which prevailed in most of the states down to about ten years ago, required the printing of what were called "tickets" by each party. These tickets were often decorated with elaborate party emblems,—flags, eagles, and other devices. In some states, the tickets for the presidential electors, state officers, and county and local officers, were printed on separate sheets. The voter who desired to vote for all the candidates of one party had only to take one of these tickets from a trustworthy party-man and to put it in the voting box. Such a voter, voting for all the candidates of his party without discrimination, was said to vote a "straight" ticket. The man who desired to vote a "split" ticket, by voting for some of the candidates of one party and some of another, was put to more trouble. He would be compelled to take one of the tickets as a basis, to erase the names of the men for whom he did not desire to vote and to write in the names of those he desired to substitute. In some cases where a good many voters were likely to exercise this privilege, "stickers," with gummed backs, would be circulated, bearing the names of the popular candidate who was likely to get votes from the other party, so that they could be pasted over the name of the less popular candidate on the regular party ticket.



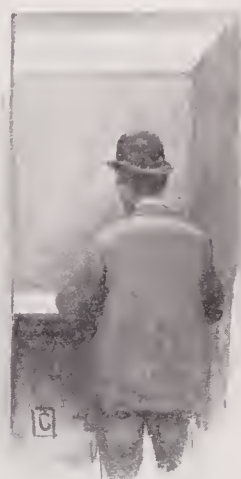
The system of party tickets, printed privately by the various party committees, made it comparatively easy in most cases for watchers at the voting places to determine how any man voted. Tickets of unusual shapes, sizes, or colors were sometimes made, on purpose to aid in this classification of voters. This system was detrimental to the exercise of independent judgment by the voters, especially where they were laboring men and might wish to vote against the party of their employer, or were public officials and might wish to vote against the party in power. It was among the legends of one of the Government navy yards that the party in control used to carry voters by boat-loads from the yard to the voting place, where a party leader, usually one of the overseers of the navy yard men, would hand out the ballots and see that they were voted. On one occasion, when the usual size of tickets was perhaps ten or twelve inches by five inches, a short card, about one inch by five, with the names closely printed in small type, was distributed among the employees, in order that any one voting the opposition ticket of standard size might be more easily detected.

THE AUSTRALIAN BALLOT SYSTEM

ONE of the disagreeable features attaching to the system of these private party tickets was the solicitation to which a voter was subjected at the voting places.

Frauds were sometimes perpetrated upon careless and ignorant voters, by giving them tickets purporting to give all the names of the candidates of their party, but having the names of one or more opposition candidates substituted. These evils have been largely done away with by the adoption of the Australian ballot. Separate party tickets are no longer printed, where this system has been adopted. The lists of candidates of all parties are printed by the election authorities upon a uniform ballot. It is impossible, therefore, where the Australian system has been adopted in its best form, for any outsider to form an idea how a voter proposes to vote or to force any particular ticket upon him. Under the best form of the Australian system, there is one ticket bearing the names of all the candidates of the regular parties. The voter has to choose among them, and to check off with a pencil those for whom he wishes to vote. He presents himself at the voting place without any tickets, and is handed a single copy of the official ballot by an election officer. He then passes into a small compartment or booth, where outsiders are not allowed to enter except under special circumstances, and there checks off the names of his favorite candidates. He then folds his ballot and puts it in the official box and passes out from behind the rail which usually shuts off the booths from the outside crowd of workers and politicians.

The Australian ballot has been adopted in various modified forms in a large number of states. These forms differ chiefly in the manner of presenting the lists of candidates. Many of them, like the New York law, put all the candidates of one party under a single head, and make it possible for the voter by a single check in a designated position to vote for all of the candidates under this head. In other states, the candidates of the different parties are put together under the designation of the office for which they are candidates. This is the Massachusetts system, which is one of the best, in some respects, in the United States. The Massachusetts law does not allow voting for an entire party ticket by a single mark. It is necessary to pick out the party designation against each candidate and to mark separately. It is just as easy under this system to vote for one or more of the opposition candidates as to vote for all the candidates of one party. This system, while more troublesome when one wishes to vote for all the candidates of one party than if he could do so by a general mark, has the advantage



that it compels the voter to weigh carefully the merits of the candidates for each office. If there is a candidate of his party who is a little below the proper standard of character and ability, he cannot salve his conscience by voting for him in block with all the other candidates. He must either give him a separate mark, give the mark to a candidate of better character and capacity of one of the other parties, or refrain from marking for either candidate. The latter policy would have the effect of not voting for that office.

The adoption of the Australian ballot, and the printing of the ballots by the election authorities, has compelled a recognition by law of political organizations. This was not the case in the United States until recently. Political parties were outside of the law, and were left to regulate their machinery as they saw fit. The courts would rarely interfere to overrule the action of the authorities of a party, even though palpable fraud in counting votes or managing primary meetings was shown. They took the ground that parties were voluntary associations and that they must be governed by their own constituted authorities. The adoption of the Australian ballot compelled the election authorities to decide who was to go upon the ballot as candidates of the different parties. No such decision was called for when tickets were printed and circulated by party organizations without official recognition. Any party that saw fit could print and distribute tickets, and any citizen could vote such tickets. The necessity of deciding who should go upon the official ballot as the regular Republican candidate, for instance, in the 13th ward of Chicago, brings the question of party management before the legal authorities. They are now compelled to decide, in disputed cases, who are the candidates entitled to certain party designations and who are not entitled to such designations. In several states, this has led to elaborate laws governing the calling of primary meetings,—where they shall be held, what notice of them shall be given, how their officers shall be chosen, how they shall nominate candidates, and how disputes shall be settled. This movement to give legal recognition to party organizations is comparatively in its infancy in the United States, but promises to gain ground, and to secure greater fairness in party management. There was no appeal from the decision of party managers when their committees and primaries had no legal standing, no matter what frauds they might perpetrate, or how completely they might exclude qualified voters from taking part in party management. The regulation of these matters by law promises to be an important step in American political development.



The laws in most states where the Australian ballot has been adopted make provision for independent nominations upon written petition of a given number of citizens. It is a nomination of this sort that appears on the Massachusetts ballot under the title, "Democratic Social Nomination Papers." The candidates thus designated were not nominated by a convention, but by the signed endorsement of a certain required number of legal voters. Even where these regulations are oppressive in requiring a large number of signatures, or other difficult formalities, independent candidates can be voted for by "stickers," and by writing their names in blank spaces provided by the law.

RECEIVING AND COUNTING THE VOTES

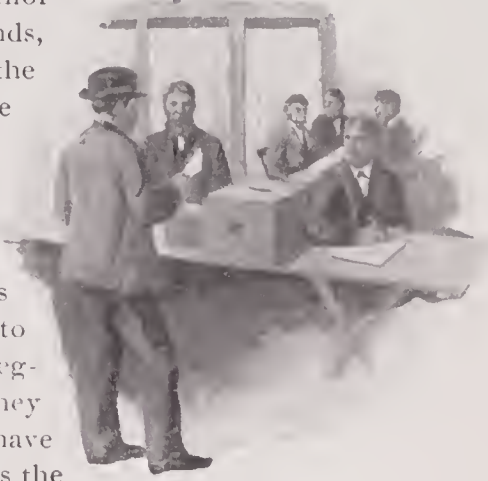
THE time allowed for voting in the cities is usually from sunrise to sunset, but in small towns the voting places sometimes open or close at a later hour. The counting of the votes is one of the most important features of the election, and much legislation has been enacted in different states to insure accuracy and fairness. The systems of counting, and the names of the officers employed, differ in the different

states. A list of all the candidates voted for, and the number of votes for each, is usually made out and sworn to within a few hours after the voting is completed. Such lists then go from the officers of the election district to the county officers, or to some state officer, usually the secretary of state. A recount of the votes is authorized in some states upon petitions from candidates or their friends, and the recount is either accepted as final, or is made a part of the evidence in any proceedings which may take place before the state boards, or in the courts, in regard to the actual result of the election.

The state legislature is the body in most states which has the final determination as to who have been elected officers of the state, and who have been elected members of the legislature. Their duty is only nominal in many states, where the counting has been done by executive officers, and where there is no dispute as to the result. In some states, however, as in Kentucky in 1899, the legislature has the power to revise the returns, reject those which they consider irregular or improper, and to determine for itself who have been elected state officers. In nearly every state the legislature is the judge of the election and of the qualifications of its own members, because of the fundamental principle of popular right for which the English people contended in choosing the early parliaments. The king was originally able to make up the Parliament about as he chose, by issuing writs of election to certain towns and boroughs, omitting others, and by deciding who had been legally chosen members. This caused resentment as the Parliament became conscious of its rights and powers, and in the time of Elizabeth, it was insisted that the Parliament should determine for itself who should sit as its members. This principle was brought into the Constitution of the United States and into most of the state constitutions, as a protection to popular rights, and to insure the complete independence of the lawmaking part from the executive department of the government.

The legislature, therefore, in nearly every state, determines who shall sit as its members, and the Constitution of the United States prescribes that "each House shall be the judge of the elections, returns, and qualifications, of its own members." This provision has sometimes led to unfair decisions by a party having a majority in Congress, or in a state legislature, against a member fairly elected from the opposition party, and efforts have sometimes been made to secure a different method of deciding election contests. These efforts have succeeded to the extent that elaborate provisions have been made in most states for counting and ascertaining the votes cast, but the principle of the right of the legislative body to decide finally upon the title of those seeking admission to it has not been abandoned.

The voter in the United States has, from time to time, a great variety of officers to vote for. The laws of the different states determine when elections shall be held for state officers. The majority of the states now hold their elections on the Tuesday after the first Monday in November, which is the date fixed by Congress for the choice of presidential electors, and in most states for members of Congress. A number of Southern States, in order to escape interference by Federal officers, have fixed their elections for state officers at a different time from that for presidential electors. This interference was very odious to the Southern people during the so-called "carpet-bag" régime, and they feared that the presence of federal officials and troops at the elections would result in turning the state governments over to irresponsible persons. They decided that even if the electoral votes of the states for President should be thus controlled, they would be better able to reserve control of the state governments by having the elections on a separate day. Alabama holds her state election each year on the first Monday of August; Arkansas on the first Monday of September; Georgia on



the first Wednesday of October; Louisiana on the third Tuesday of April. Several of the New England States and some of the Western States held their elections for a long time in September and October. Vermont still elects state officers on the first Tuesday of September, and Maine on the second Monday of September. Rhode Island adheres to the election of state officers on the first Wednesday of April, and Oregon on the first Monday of June. The two leading Middle States which formerly held elections in October, Ohio and Indiana, have recently changed to the date of the presidential election.

City of a Hundred Towers.—A name given to Pavia, Italy.

City of Brotherly Love.—A name applied to the city of Philadelphia.

City of Churches.—Brooklyn, New York, is so called because of its many churches.

City of Elms.—New Haven, Conn., so called from the large number of elms which shades its streets.

City of Magnificent Distances.—A designation of Washington, D. C., owing to its wide avenues and fine vistas, and its widely separated public buildings.

City of Oaks.—Raleigh, N. C., because of the numerous oak trees which shade its streets and avenues.

City of the Straits.—Applied to Detroit, Mich., because of its geographical position on the water course between Lake Huron and Lake Erie.

City Point.—A small town in Va., on the James River. In the Civil War it was used as a base of supplies, especially by Gen. Grant during the operations of 1864-65 against Richmond and Petersburg.

Civil Rights Act.—A law enacted in 1866, the purpose of which was to secure civil rights and privileges, equal to those of the whites, to negroes

in the U. S. It provided that all persons born in the United States, except subjects of foreign powers and Indians not taxed, should be recognized as citizens, with all the civil rights thereof. The consideration of cases growing out of the violation of this law was reserved wholly for the Federal courts. The law was substantially embodied in the fourteenth amendment to the Constitution, and other legislation was subsequently adopted to facilitate its enforcement. Among the better known cases tried under the law were those of the U. S. *vs.* Stanley, U. S. *vs.* Ryan, U. S. *vs.* Nichols, U. S. *vs.* Singleton, and Robinson and wife *vs.* Memphis and Charleston Railroad Co. Nichols and Stanley were indicted for refusing to receive negroes as guests at hotels, and Singleton and Ryan for declining to admit them to a theater. Robinson sued because his wife had been excluded from a ladies' railway coach. In the Ryan and Robinson cases, judgment was for the plaintiff, on the ground that first and second sections of the fourteenth amendment to the Constitution had been violated. In the other cases the court held certain provisions of the civil rights act of 1875 to be null and void, and found in favor of the defendants.

CIVIL SERVICE

ADVANTAGES AND DISADVANTAGES OF GOVERNMENT EMPLOYMENT—TENURE OF OFFICE MORE SECURE THAN FORMERLY—EFFICIENT STENOGRAPHERS AND TYPEWRITERS ALWAYS IN DEMAND—THE POWERS OF THE CIVIL SERVICE COMMISSION—SCOPE OF EXAMINATIONS FOR CLERICAL APPOINTMENTS—REASONS WHY MEN ARE PREFERRED TO WOMEN—ADMISSIONS TO WEST POINT AND ANNAPOLIS—CANDIDATES APPOINTED BY PRESIDENT ON RECOMMENDATION OF REPRESENTATIVE OR SENATOR—PHYSICAL EXAMINATIONS VERY SEVERE—ACADEMIC EXAMINATIONS EMBRACE WIDE RANGE OF SUBJECTS—PAY OF MILITARY AND NAVAL CADETS.

THERE is a popular belief that the young man who enters the civil service has made a mistake. It is argued that promotions are slow, the tenure of office uncertain, and the salaries small. The objections that the experience gained is of little value in ordinary business, and that a clerk dismissed from the service in middle life is at a disadvantage with other men trained to commercial pursuits, are perhaps the most forcible. These general views are mainly correct, yet it is significant that government appointments are eagerly sought by men, both young and old. It may be a mistake

for a clever young man to bury himself for years in a government office, to reach an average salary of sixteen hundred dollars a year; for a clever man might, in the same time, greatly advance his fortunes, and attain a much larger income.

But all men are not clever in the money-making sense, nor are all clever men fortunate, and to such sixteen hundred dollars a year is a desirable income, larger than ordinary ability could earn outside, and free from the mischances of private business.

The tenure of office is more secure now than in former years, when appointments were made as rewards for political services, and not upon the ascertained fitness of the candidate. Of the ten thousand clerks employed in the Executive Departments at Washington probably one-fourth have been in continuous service for a score of years, or longer, and quite as many, for half of that time. Under the civil service system, a government clerk has practically a life tenure, if his record be unassailable.

The careless or shiftless clerk—he who does not report promptly for duty, and who seeks every opportunity to obtain “a day off”—stands on an insecure footing and is liable to dismissal at any time. Such clerks seldom survive a change of administration, for with the incoming of new officials, the record of all employees is carefully inspected, and the least desirable, unless fortified by strong political influence, are marked for dismissal. And in this connection it should be said that the standard of efficiency is constantly rising in every branch of the government service. This is because the applicants for government clerkships are now largely young men and young women, graduates of public schools, academies, and even universities, who have enjoyed the advantages of a higher education than did those who came in under the former system. It is disputed by disciples of the “practical” school of politics, that the highly educated clerk renders better service than one who has had only a grammar school training. But it has been proved that these discharge more readily a wider range of duties; they are more amenable to discipline, and the quality of their work is distinctly higher.



Although the intellectual capacity of the candidate is of prime consideration, another important factor is his actual experience. These are days of specialization in business, and the government is following, so far as it can, a similar course. It is undeniable that a candidate who has been practically engaged as a stenographer, typewriter, bookkeeper, or accountant, is better fitted for general departmental work than one whose knowledge is merely theoretical. Such clerks are useful from the beginning, while the others require months of careful training. A practical knowledge of stenography and typewriting, other things being equal, is the surest recommendation to a clerkship at Washington, and in the government service generally. One-fourth of the demand upon the Civil Service Commission is for stenographers and typewriters. Only a small percentage are used as such, but their technical skill gives them a superiority over their fellow-clerks. Next to stenographers, experienced bookkeepers and accountants are most esteemed.

The demand for woman clerks, except in certain lines of work for which they are especially adapted, is limited. This is not due to mental inferiority, for women pass better examinations than do men. The records of the Civil Service Commission show a marking for women of five per cent. above men. But usually they are lacking in actual business knowledge, and this places them at a disadvantage.

A young man who enters the government service at Washington when twenty-one years of age, would be paid nine hundred dollars a year. In some cases, the initial pay

does not exceed seven hundred and twenty, or eight hundred and forty, dollars, but the average is nine hundred. At twenty-five, he would, in all probability, have been promoted to twelve hundred dollars, and at thirty, he ought to be drawing sixteen hundred dollars. The maximum salary for clerical work is eighteen hundred dollars, and this is gained, in the majority of cases, only after a long term of service, the promotions from sixteen hundred to eighteen hundred dollars being less frequent than those from twelve hundred to sixteen hundred dollars. In the matter of vacations, the government clerk is exceptionally favored. He is entitled to an annual leave of thirty days, with pay, and by a little skilful manœuvering, the time is frequently extended to five weeks. He may, in addition, be absent another thirty days on "sick leave," with his pay continued, if he furnishes a physician's certificate of inability to perform his duties. It must be remembered, also, that the departments are closed on Sundays, and on legal holidays.

It follows, therefore, that the man of modest tastes, who is content to drift quietly along the smooth currents of life, with no inclination for a business career, for the excitement of "the street," or the uncertain rewards of politics, would be fortunate to receive a government appointment at Washington. Such a man could well take issue with him who called his vocation a mistake, and from his sure position could argue eloquently that his career, while lacking brilliancy, and great pecuniary gain, offered a refreshing contrast to the strenuous life, or to the feverish pursuit of fame or wealth, that too often ends in failure. He could show, additionally, that his easy office hours, from nine to four, afforded him abundant opportunity for mental profit. In Washington, for example, lectures are nightly delivered at the Columbian and the Georgetown Universities, where the departments of law, medicine, political economy, engineering, and chemistry, have their courses and hours for instruction so arranged as to accommodate students employed during the day in the Executive Departments. From these institutions, several hundred young men annually graduate. Some retain their clerkships after graduation, from a reluctance to leave the fascinations of Washington life to practise their acquired professions in less attractive localities; but these are the exceptions.

Upon his office record, depends the clerk's advancement, for political influence is becoming, year after year, less effective in securing promotions. If the clerk be attentive to business and show a desire to master the details of his work, he has taken a long stride toward an increase of salary. Much depends upon his good fortune in attracting the attention of his superiors. Sometimes men of exceptional ability are assigned to duties that hide them from the official eye for years, so that it is long before their services are recognized and rewarded. But these instances are rare. Speaking generally, the busy, wide-awake, up-to-date clerk, who is not afraid of work, but who is, rather, always looking for it, reaches the top of the departmental ladder in a short term of years. Sometimes it comes sooner, as the following example will show:

One morning, before the regular office hours, the assistant secretary of a department at Washington called for a stenographer. Half a dozen messengers went scurrying through the corridors, and their united search resulted in finding one clerk, a young man recently appointed, who was already at his desk, arranging the details of the day's work. The assistant secretary was so impressed by that circumstance, as well as by the skill and intelligence of the stranger, that a few weeks later, when a new office, carrying a salary of two thousand dollars a year, was created, it was given to the young stenographer.

It will now be timely to explain how appointments in the civil service at Washington are made. From the foundation of the government until 1883, the clerkships in the

Executive Departments were controlled by politicians. "What are we here for, except for the offices," exclaimed a delegate at a presidential convention, less than a score of years ago, and the storm of applause that followed his query showed that he had struck a responsive chord in the breasts of those present. In those days, men were appointed to clerkships, and to minor official positions, as a reward for their political activity, while efficient clerks, without political influence, were ruthlessly dismissed, to be too often succeeded by inexperienced, and even incompetent party workers. One result only was possible — the public service was greatly demoralized, the clerks were terror-stricken at each quadrennial election, and the standard of work was very far below that of a well-regulated business house. Whence it followed, after a long agitation, that Congress in 1883 passed what is known as the civil service law. The act created a United States Civil Service Commission, composed of three members, not more than two of whom may be adherents of the same political party. The purpose of the law is to establish, under rules prepared by the Commission, a system of appointments to the governmental service based upon the intelligence and fitness of candidates, without regard to political considerations. Properly to carry out this purpose, a plan of competitive examinations was prescribed.

The term "classified service" indicates the appointments which come within those provisions of the civil service law that require appointments to be made upon examination and certification by the Commission. The term "unclassified service" applies to those appointments that are not affected by the law, and these, therefore, are made without competitive examination, and usually on the old plan. The classified service has been gradually extended until now it includes about 90,000 positions, leaving about 110,000 positions unclassified. The unclassified list is mainly composed of those who perform unskilled manual labor. Under the terms of the law, positions outside of the executive branch of the government, or to which appointment is made by the President, and confirmed by the Senate, and positions of mere unskilled manual labor, are not required to be classified. Within these limitations the President is authorized, in his discretion, to extend the classified service. During the fiscal year ending June 30, 1900, no less than 10,000 classified appointments were made, showing the hold the new system has already gained.

The Civil Service Commission has no power of appointment or removal; that power is left where it was before, in the President or in the heads of Departments. Upon requisition of an appointing officer, the Commission certifies eligibles secured as the result of a competitive examination. From the eligibles thus provided, the appointing officer makes his selection and appointment. When the Commission certifies three eligibles for any particular position, the appointing officer has absolute discretion in making the selection, except that the rules require that it shall be made without regard to political considerations. No person is eligible to an examination: —

Who is not a citizen of the United States;

Who is physically disqualified for the service he seeks;

Who is addicted to the habitual use of intoxicating beverages, to excess;

Who is enlisted in the United States Army or Navy, and has not secured permission for his examination from the Secretary of War or the Secretary of the Navy;

Who has been dismissed from the public service for delinquency or misconduct within one year preceding the date of his application;

Who has failed, after probation, to receive an absolute appointment to the position for which he again applied within one year from the expiration of his probationary service;

Who within one year has taken the same kind of examination for which he wishes to again apply: provided, that persons who pass or fail in an examination may, upon filing a new application, be re-examined at the next annual examination, though a full year has not quite elapsed since the former examination;

Who has made a false statement in his application, or has been guilty of fraud or deceit in any manner connected with his application or examination, or who has been guilty of crime, or of infamous or notoriously disgraceful conduct.

The age limitations for entrance to positions in the different branches of the service are as follows:—

	MINIMUM	MAXIMUM
DEPARTMENTAL BRANCH:—		
Page, messenger boy, apprentice, or student.....	14	20
Printer's assistant and messenger.....	18	No limit
Positions in the Railway Mail Service.....	18	25
Hospital stewards in the Marine Hospital Service.....	21	30
Cadet in the Revenue Cutter Service, and aid in the Coast and Geodetic Survey.....	18	25
Surfinan in the Life Saving Service.....	18	45
Superintendent, physician, supervisor, day school inspector, and assistant inspector, of hulls, and inspector, and assistant inspector, of boilers in the Steamboat Inspection Service.....	25	55
All other positions.....	20	No limit
<i>(The age limitation does not apply in the case of the wife of the superintendent of an Indian school who applies for examination for the position of teacher or matron.)</i>		
CUSTOM-HOUSE BRANCH:—		
All positions.....	20	No limit
POST-OFFICE BRANCH:—		
Letter carrier.....	21	40
All other positions.....	18	No limit
GOVERNMENT PRINTING BRANCH:—		
All positions (male).....	21	No limit
All positions (female).....	18	No limit
INTERNAL REVENUE BRANCH:—		
All positions.....	21	No limit

The regular examinations for the Departmental, and Government Printing, branches of the service are held in the spring and autumn. The spring examinations occur usually in the months of March and April, and the autumn examinations in September and October. The Internal Revenue examinations are held only in the autumn. Information as to appointments in custom-houses and post-offices may be gained by inquiry at those places.

The application blank and Manual for the Departmental, Government Printing, and Internal Revenue, branches of the classified service may be obtained by writing directly to the United States Civil Service Commission, Washington, D. C. Every applicant must, however, write for his own application blank, as it is contrary to the practice of the Commission to forward blanks to one person for the use of another.

It is not necessary to seek the aid of prominent, or presumably influential, persons to secure an application blank or an examination; and no recommendations

other than those provided for by the Commission should be forwarded, as the rules forbid the filing or any such letters with the application.

No person will be admitted to a scheduled examination who has not previously filed, on the form furnished by the Commission upon request of the applicant, the proper application for the particular examination that he seeks. For some examinations, a supplementary blank will be required in addition to the regular application blank, and both blanks must be executed, and forwarded to the Commission.

Full instructions for the execution of the application will be found on the blank itself, and applicants are cautioned to answer all questions, and to conform in all respects to the printed instructions. A failure to do this causes unnecessary delays, and great annoyance to the applicant, as well as to the Commission. Very many applications have to be returned for correction, on account of carelessness in the execution of the application or its appended vouchers.

Applicants for the Departmental and Government Printing branches of the classified service may be examined at places, selected from the schedule, outside of their own state, if more convenient, provided the date and place selected for examination be indicated in the application; but applicants for the Custom-house, Internal Revenue, or Post-office branches of the classified service must be examined in the custom-house or internal revenue districts, or at the post-office, in which they desire employment.

Persons who are examined, whether they pass or fail, are not eligible to re-examination for the same position, or for any position covered by the same examination, until approximately one year after the date of the former examination. Unless the needs of the service require otherwise, special re-examinations within a year will be granted only in cases in which injustice has been suffered by act of the Commission or one of its agents. Where an applicant has been unable to do himself justice on account of illness occurring after the commencement, and during the progress, of the examination, such applicant may, upon filing a new application, be re-examined at the next regular examination, provided he has submitted a sworn statement of the alleged facts which will justify the Commission in granting the re-examination. An applicant who is recovering from illness must abide by the result of his examination, whether or not he states in his declaration sheet that he is physically unable to do himself justice.

No application for the Railway Mail Service will be approved when the applicant is shown to be less than 5 feet 4 inches in height or less than 125 pounds in weight, or to have any disqualifying physical defects.

No application for any one of the mechanical trades in the Government Printing Office will be approved unless the applicant is shown to have served at least five years at the trade for which he applies, three of which years he must have served as an apprentice, and at least one year as a journeyman.

The general scholastic subjects of any examinations, such as spelling, arithmetic, letter-writing, and copying from plain copy, are of three grades or degrees of difficulty, known as first, second, and third grades—the first grade being the most difficult and the third grade the least difficult. More importance is attached to the examination in arithmetic than to that in any other subject. The following questions and tests indicate the general character of this examination:—

Arithmetic.—This question comprises a test in adding numbers crosswise and lengthwise. There are usually three columns of about twelve numbers each to be added. Divide $47\frac{3}{5}$ by $7\frac{3}{5}$, multiply the quotient by $3\frac{4}{5}$, and to the product add 0.0907 of 214.6. A grocer sold goods to a customer, amounting to \$352, by weights averaging $15\frac{1}{4}$ ounces to the pound. He afterward sold to the same customer goods amounting to \$320, by weights averaging $16\frac{1}{2}$ ounces to the pound. How much did the grocer make or lose by the false weights? The appropriation for the Civil Service Commission for

the fiscal year, ended June 30, 1897, was \$98,340. During that year 50,000 persons were examined. If 34 per cent. of this number failed to pass, and $17\frac{1}{2}$ per cent. of those who passed were appointed, what was the average cost to the government of each appointment? A sum of money placed at simple interest amounted in 1 year and 6 months to \$2,687.50. If it had remained at the same rate of interest for six months longer, it would have amounted to \$2,750. What was the rate of interest per annum?

Spelling Is Dictated by the Examiner.—The words are written by the competitor in the blank spaces indicated on the first sheet of the examination paper. The examiner pronounces each word and gives its definition.

Letter Writing.—The competitor is permitted to write on either of two subjects given. The following subject has been used: Write a letter of not less than 150 words, giving your views as to the advantages and disadvantages of employment in the departmental service in Washington.

Penmanship.—The mark on penmanship is determined by legibility, rapidity, neatness, and general appearance, and by correctness and uniformity in the formation of words, letters, and punctuation marks, in the exercise of copying from plain copy. No particular style of penmanship is preferred.

Copying from Plain Copy.—Paragraph, spell, capitalize, and punctuate precisely as in the copy. All omissions and mistakes will be considered in marking the subject.

Geography.—This examination is designed to show the candidate's general knowledge of the subject.

The examination in second-grade subjects is simpler than the foregoing, while the examination in third-grade subjects is one that should readily be mastered by any intelligent boy or girl who has passed through the grammar school.

The age limit for candidates for stenographic appointments is not less than twenty years. The time allowed for the examination is five and a half hours, of which one and a half hours are allowed to transcribe the stenographic notes. The commencing salary is from \$600 to \$1,000 a year.

The practical test in stenography consists of two exercises, a letter and a speech, each containing 260 words. The dictations are given to all the competitors together. In order to familiarize the competitors with the examiner's manner of dictation, a preliminary test is given at the rate of 80 words a minute. This preliminary test is not to be considered a part of the examination, and should not be transcribed. The regular exercises (a letter and a speech are considered as one exercise) will then be dictated at different rates of speed, as follows: 80 words, 100 words, 120 words, and 140 words a minute. A rating of 70 per cent. in speed will be given when the dictation is at the rate of 80 words per minute, 80 per cent. for 100 words, 90 per cent. for 120 words, and 100 per cent. for 140 or more words per minute. The speed competitors will be permitted to enter the regular tests at as many different rates of speed as they may desire, but they will be required at the conclusion of the tests to select the exercise which they wish to transcribe, and to have considered in the rating. The notes may be transcribed either in longhand or with the typewriter. An applicant for this examination who desires to have his name entered also on the departmental clerk register of eligibles, should apply for the clerk-stenographer examination. In this case, he is required to take the first-grade spelling and first-grade copying from plain copy, in addition to the stenographic subjects. For these subjects, forty-five minutes additional time will be allowed. Only one application is required for the combined examination.



It is not possible to estimate the prospects of an eligible for appointment, and an attempt to predict when names will be reached for certification is certain to result in disappointment. The law requires examinations to be held, but the passing of an examination does not insure either certification or appointment. The conditions of appointment in the various branches of the service are such that nothing can help, and nothing can hinder, the certification of a name in the order of its standing on a register. As the highest possible mark is 100, and the lowest that gives eligibility is 70, it follows that the nearer a mark is to 100, the more likely it is that the person may be reached for certification within the period of eligibility, one year. There are usually on the registers more eligibles having ordinary qualifications than are required for appointment. Under the civil service rules, the appointing officers are the final judges of the qualifications of the persons selected for appointment, and with their proper exercise of this lawful discretion, the Commission cannot interfere. No eligible can be certified for appointment to the same department or office more than three times from one examination.

Entrance to the departmental service is usually in the lowest grades, the higher grades being filled generally by promotion. The prospect of promotion varies so much in the different departments that no special information on the subject can be given. The usual entrance grade commands a salary of \$900 a year, yet the applicant may be appointed at \$840, \$720, or even \$600 only.

There are very few particular appropriations for stenographers, typewriters, bookkeepers, draftsmen, and other specialized employments, and persons who pass these examinations are usually appointed with the designation of clerks or copyists. The supply of male eligibles in stenography and typewriting is seldom equal to the demand; and male applicants, proficient as stenographers and typewriters, have much better prospect of appointment than have other applicants.

During the year ending June 30, 1900, no woman was appointed from the clerk register to any of the departments at Washington. In typewriting, only those women who pass at a rating above 88 per cent. have any prospect of appointment.

As the number of persons examined for the Railway Mail Service is far in excess of the number appointed, only those who stand high on the registers have any prospect of certification. Eligibles who are rated below 88 per cent., except from the states and territories of small population, have little prospect of appointment.

APPOINTMENTS TO WEST POINT AND ANNAPOLIS

THE civil service law does not apply to admission to the military and the naval academies. Appointments to these institutions are made as formerly, upon the nomination of the representative in Congress in whose district the applicant lives, and each of the two senators from each state is now entitled to a nomination, as is also each territorial delegate. There are, in addition, a number of appointments from the country at large, which are directly made by the President. To West Point, the annual number of such presidential appointments is thirty; to Annapolis the number is ten.

No candidate will be admitted to West Point who is under seventeen, or above twenty-two, years of age, or who is deformed, or afflicted with any disease or infirmity which would render him unfit for military service, or who has at the time of presenting himself, any disorder of an infectious or immoral character. Accepted candidates, if between seventeen and eighteen years of age, should not fall below five feet three inches in height and one hundred pounds in weight; if between eighteen and nineteen years,



five feet three and one-half inches in height and one hundred and five pounds in weight; if more than nineteen, five feet four inches in height and one hundred and ten pounds in weight. Candidates must be unmarried. They must be proficient in reading, in writing, including orthography, and in arithmetic, and must have a knowledge of the elements of English grammar, of descriptive geography (particularly of our own country), and of the history of the United States.

Every candidate is subjected to a rigid physical examination, and if there is found to exist in him any of the following causes of disqualification, to such a degree as would immediately, or at no very distant period, impair his efficiency, he is rejected:—

Feeble constitution; unsound health from whatever cause; indications of former disease; glandular swellings, or other symptoms of scrofula.

Chronic cutaneous affections, especially of the scalp.

Severe injuries of the bones of the head; convulsions.

Impaired vision, from whatever cause; inflammatory affections of the eyelids; immobility or irregularity of iris; fistula lachrymalis, etc.

Deafness; copious discharge from the ears.

Loss of many teeth, or the teeth generally unsound.

Impediment of speech.

Want of due capacity of the chest, and any other indication of a liability to a pulmonary disease.

Impaired or inadequate efficiency of one or both of the superior extremities owing to fractures, especially of the clavicle; contraction or incurvature of the spine.

Hernia.

A varicose state of the veins of the scrotum or spermatic cord (when large), hydrocele, hemorrhoids, fistulas.

Impaired or inadequate efficiency of one or both of the inferior extremities owing to varicose veins, fractures, malformation (flat feet, etc.), lameness, contraction, unequal length, bunions, overlying or supernumerary toes, etc.

Ulcers, or unsound cicatrices of ulcers, likely to break out afresh.



In reading, candidates must be able to read understandingly, with proper accent and emphasis.

In writing and orthography, they must be able, from dictation, to write sentences from standard pieces of English literature, both prose and poetry, sufficient in number to test their qualifications both in handwriting and orthography. They must also be able to write and to spell correctly, from dictation, a certain number of standard test words.

In arithmetic, they must be able:—

To explain, accurately and clearly, its objects, and the manner of writing and reading numbers—entire, fractional, compound, or denominate.

To perform with facility and accuracy the various operations of addition, subtraction, multiplication, and division of whole numbers, abstract and compound or denominate; giving the rule for each operation, with its reasons, and also for the different methods of proving the accuracy of the work.

To explain the meaning of reduction; its different kinds; its application to denominate numbers in reducing them from a higher to a lower denomination, and the reverse, and the equivalent decimals; to give the rule for each case, with its reasons, and to apply readily these rules to practical examples of each kind.

To explain the nature of prime numbers, and factors of a number; of a common divisor of two or more numbers, particularly of their greatest common divisor, with its use, and to give the rule, with its reasons, for obtaining it; also the meaning of a common multiple of several numbers, particularly of their least common multiple, and its use, and to give the rule, with its reason, for obtaining it, and to apply each of these rules to examples.

To explain the nature of fractions, common or vulgar, and decimal; to define the various kinds of fractions, with the distinguishing properties of each; to give all the rules for their reduction, particularly from mixed to improper fractions and the reverse; from compound or complex to simple fractions; to their lowest terms, to a common denominator; from common to decimal, and the reversal, for their addition, subtraction, multiplication, and division, with the reason for each change of rule, and to apply each rule to examples.

To define the terms ratio and proportion; to give the properties of proportion, and the rules, and their reasons, for stating and solving questions in both simple and compound proportion, or single and double rule of three, and to apply these rules to examples.

The candidates must not only know the principles and rules referred to above, but they are required to possess a thorough understanding of all the fundamental operations of arithmetic that will enable them to combine the various principles in the solution of any complex problem which can be solved by the methods of arithmetic. In other words, they must possess such a complete knowledge of arithmetic as will enable them to take up at once the higher branches of mathematics, without further study of arithmetic.

The examination may be either written or oral, or partly written and partly oral; the definitions and rules must be given fully and accurately, and the work of all examples, whether upon the blackboard, slate, or paper, must be written plainly and in full, and in such a manner as to show clearly the mode of solution.

In English grammar, candidates must be able:—

To define the parts of speech, and to give their classes and properties; to give inflections, including declension, conjugation, and comparison; to give the corresponding masculine and feminine gender nouns; to give and apply the ordinary rules of syntax.

To parse fully and correctly any ordinary sentence, omitting rules, declensions, comparisons, and principal parts, but giving the subject of each verb, the governing word of each objective case, the word for which each pronoun stands, or to which it refers, the words between which each preposition shows the relation, precisely what each conjunction connects, what each adjective and adverb qualifies or limits.

To correct, in sentences or extracts, any ordinary grammatical errors, such as are mentioned and explained in ordinary grammars.

It is not required that any particular grammar or text-book shall be followed; but rules, definitions, parsing, and corrections must be in accordance with good usage and common sense. The examination may be written or oral, or both.

In geography, particularly of our own country, candidates are required to pass a satisfactory examination, written or oral, or both. Questions are likely to be asked involving knowledge of:—

Definitions of the geographical circles; of latitude and longitude; of zones; and of all the natural divisions of the earth's surface, as islands, seas, capes, etc.

The continental areas and the grand divisions of the water of the earth's surface.

The grand divisions of the land; the large bodies of water which partly or wholly surround them; their principal mountains, location, direction, and extent; the capes, from what parts they project and into what waters; their principal peninsulas, location, and by what waters are they embraced; the parts connected by an isthmus; their principal islands, with location, and surrounding waters; the seas, gulfs, and bays, the coasts they indent, and the waters to which they are subordinate; the straits, the lands they separate, and the waters they connect; their principal rivers, their sources, directions of flow, and the waters into which they empty; their principal lakes, location and extent.

The political divisions of the grand divisions. Their names, locations, boundaries, and capitals; general questions of the same character as already indicated, made applicable to each of the countries of each of the grand divisions.

The United States; its general features, configuration, location, and boundaries, both with respect to neighboring countries and to latitude and longitude; its adjacent oceans, seas, bays, gulfs, sounds, straits, and islands; its mountain ranges, their location and extent; the sources, directions, and terminations of the important rivers and their principal tributaries; the lakes, and in short, every geographical feature of the country as indicated above. The location and termination of important railway lines,

and other means of communication from one part of the country to another, should not be omitted. In short, the knowledge should be so complete that a clear mental picture of the whole, or of any part of the United States, is impressed upon the mind of the candidate.

History.—The candidate should make himself familiar with so much of the history of the United States as is contained in the ordinary school histories. The examination may be written or oral, or partly written and partly oral, and will usually consist of a series of questions similar to the following:—

Name the earliest European settlements within the present limits of the United States—when, where, and by whom made? When did the settlements founded by other nations than the English, come under the dominion of Great Britain and of the United States?

What was the difference between the Royal, the Chartered, and the Proprietary Colonies? How many colonies were there originally in Massachusetts and Connecticut? When were they united? How many in Pennsylvania? When were they separated?

In what wars were the colonies engaged before the Revolution? What were the principal events and results of those of King William, Queen Anne, King George, and the French, and Indian?

What were the remote and immediate causes of the American Revolution? Explain the Navigation Act, the Stamp Act, Writs of Assistance. When did the War of the Revolution properly begin? When, where, and how did it end? Give the particulars of Arnold's treason. Who were the most prominent generals in this war? Name the most important battles and their results.

The Constitution of the United States—why and when was it formed? When was it adopted?

The pay of a cadet is \$540 per year, to commence with his admission to the academy. No cadet is permitted to receive money, or any other supplies, from his parents, or from any person whomsoever, without the sanction of the superintendent.

A most rigid observance of this regulation is urged upon all parents and guardians, as its violation would make distinctions among the cadets which it is an especial desire to avoid, and the pay of a cadet is sufficient, with proper economy, for his support.

NAVAL ACADEMY

THE course of naval cadets is six years, four years at the academy and two years at sea, at the expiration of which time the cadet returns to the academy for final graduation. All candidates must, at the time of examination for admission, be between the ages of fifteen and twenty years, physically sound, well formed, and of robust constitution.

Attention will also be paid to the stature of the candidate, and no one manifestly under size for his age will be received at the academy. In case of doubt about the physical condition of the candidate, any marked deviation from the usual standard of height or weight will add materially to the considerations for rejection. Five feet is the minimum height for the candidate. The physical and academic examinations do not differ materially from those at West Point.

Candidates will be examined mentally, by the academic board, in reading, writing, spelling, arithmetic, geography, English grammar, United States history, world's history, algebra, through quadratic equations, and plane geometry (five books of Chauvenet's Geometry, or an equivalent). Deficiency in any of these subjects may be sufficient to insure the candidate's rejection.

Candidates who pass the physical and mental examinations will receive appointments as naval cadets and become students of the academy. Each cadet will be required to sign articles binding himself to serve in the United States Navy for eight years (including his time of probation at the naval academy), unless sooner discharged.

The pay of a naval cadet is \$500 a year, beginning at the date of his admission.

The Secretaries of War and of the Navy will, upon application, furnish any additional information not embraced in the foregoing pages.

Civil Service.—The act establishing the U. S. civil service commission, commonly known as the civil service law, was passed in 1883. By its terms the commission is composed of three members, not more than two of whom shall belong to the same political party. The act provides for rules to be promulgated by the President, these rules to have, with the commission and the heads of the departments and offices, all the force of the law itself. The primary and fundamental purpose of both law and rules is to establish in the public service within their scope, a merit system, by which selections for appointments shall be made with reference solely to demonstrated qualifications, and without regard to the political affiliations of the aspirants or their friends. To give effect to this purpose, competitive examinations are required and held. Under the term "classified service" are included those parts of the service which are within the provisions of the civil service laws and rules, and the "unclassified service" embraces all the appointments that may be made without examination and certification by the commission. Positions outside the executive branch of the Government, positions to which appointment is made by the President and confirmed by the Senate, and positions of mere unskilled manual labor, need not be classified. Such excluded, the President has authority to direct, in his discretion, the heads of offices and departments to extend the classified service, and it has been so extended until now it includes fully 78,000 positions. President McKinley, in May, 1899, directed that about 5,000 positions be excepted and removed from the classified service and this was done. The commission is not empowered to classify any positions except those in its own force. In the executive department, still unclassified, are these: consular service, non-free delivery post offices, government of the District of Columbia and of the Territories, the congressional library, census bureau and some less important branches of the service. A few positions once classified have, as has been shown, been excepted from examination. There are a few others, to which appointments may be made on non-competitive examinations. The commission has no power of appointment or removal; that power resides in the President and heads of departments, as it did prior to the passage of the Civil Service Law. The commission, on the requisition of an appointing officer, names eligibles as determined by a competitive examination, and from these this officer makes his selections and the appointments follow. As soon as the commission has certified three eligibles for any particular position, the appointing officer has full discretion in choosing from such eligibles, provided always that he is uninfluenced by political considerations. With the certification, the commission's duty ends, except that it has power to investigate and report on any irregularity in appointment or removal. There are three ways of filling a

vacancy: by original appointment following an examination and certification by the commission; by transfer or promotion from certain other positions in the classified service, or by reinstatement of some person within a year of his retirement, if retired without official misconduct. In the cases of honorably discharged soldiers and sailors of the Civil War and their widows, and army nurses of the Rebellion, this limitation is waived. The commission, for the convenience of the public and that it may act with due celerity on the greater number of positions in the classified service, holds examinations on schedule dates throughout the U. S. The only advance notices of the dates are those given in the newspapers, and no information of the scope or character of the proposed examination is furnished, except such as is given in the Civil Service Manual which is obtainable by any one on application.

Civil Service, Opportunities in the.—5074.

Civil War in the United States.—The great Civil War, or War of the Rebellion, was one of the most fierce, protracted, and bloody conflicts of arms in the history of the world. No such mighty armies have been sent to the field, since Xerxes led a million men against Persia. No greater courage, steadfastness, and endurance were ever shown by men in war than those that marked the soldiers of both North and South. No more desperate struggles are recorded than those of Shiloh, Gettysburg, Stone River, Antietam, Chickamauga, Vicksburg, Mission Ridge, Chancellorsville, Atlanta, Wilderness, Spottsylvania, Franklin, Nashville, Petersburg, and other battles of the Civil War. In many of these the percentage of casualties was greater than that in any of the bloody battles of the first Napoleon. The primary cause of the war was the "irrepressible conflict" between the two sections of the country over the question of the extension—the existence, even—of negro slavery. In colonial times, and in the early days of the Republic, there was no limitation as to slavery, and it existed in New York, Pennsylvania, and other states of the North. Gradually, however, owing to climatic, industrial, and economic conditions, and to the sentiment of the people, slavery was abolished and prohibited, by constitutions and laws, in the states of that section popularly designated as the North. The boundary between Pennsylvania and Maryland, known as "Mason and Dixon's line" was fixed as the dividing line between free and slave territory, and this was extended westward along the course of the Ohio River. With the development of the country, there grew up in the South an ever-increasing desire to break down the barrier, and to extend slavery, west and north. This was strenuously opposed at the North, and in Congress the representatives of the two sections were almost constantly engaged in controversy over the question that became paramount to all others. The hostility between the upholders of slavery in the South and the Abolitionists of the North

grew more bitter from year to year. It culminated in actual conflict and bloodshed, in Kansas, the "raid" of John Brown at Harper's Ferry, and then—secession and war. Most of the southern politicians had long advocated the doctrine of state sovereignty, and the right of secession from the Federal Union. In Nov. 1860, Abraham Lincoln was elected President, by the votes of the anti-slavery people of the North. Believing that he would be a sectional President, hostile to their political and material interests, the southern leaders determined to carry out the principle which they had so long upheld,—withdraw from the Union, and set up a separate government. The state of S. C. took the initiative, and in Dec. 1860 passed an ordinance of secession. This was soon followed by similar action on the part of six other states—Miss., Ala., La., Tex., Ga., and Fla. These seven states organized a provisional government, the temporary capital of the new Confederacy being Montgomery, Ala. All this had been done before the inauguration of Mr. Lincoln, which took place Mar. 4, 1861. Weeks before this, also, hostile preparations had begun at Charleston, S. C., the direct purpose of which was to gain possession of Fort Sumter. The climax was reached when, on April 11, Gen. Beauregard, commanding the Confederate forces at Charleston, sent to the fort a formal demand for its surrender. This was refused by its commander, Maj. Robert Anderson, and on the following morning the Confederate batteries opened fire—the Civil War was begun. President Lincoln at once called for 75,000 volunteers for three months' service; a similar call was issued by Jefferson Davis, President of the Confederate States; and the beat of war-drums was heard in every town and hamlet. The call to arms kindled the martial ardor of the people in every part of the North and of the South. The gage of battle was promptly accepted and the response was instant and abounding. Each state was called upon for its quota, and in many cases twice, thrice, the number apportioned was offered. By a common impulse, the volunteers sprang into ranks, from every class and condition in life. From the farm, the factory, the counting-room, the college, the professions, men rallied to the colors by tens of thousands—faster than they could be armed and equipped. The Southern Confederacy, as has been stated, was at first formed of seven states; there were eight others in which slavery existed. These were therefore considered as belonging to "The South," and every effort was made to induce them to attach themselves to the new government. Before the outbreak of hostilities they had hesitated, but the roar of the guns at Sumter brought a quick decision. Four of them,—Va., N. C., Tenn., and Ark.,—cast their lot with the "Cotton States," while the "Border States,"—Del., Md., Ky., and Mo.,—decided to adhere to the Union. The people of the latter states were divided in sentiment. Many thousands of them

entered the Confederate service, but a much larger number—notably from Ky. and Mo.,—formed themselves into regiments and batteries for the Union army. The duration of the war was four years. The surrender of Lee to Grant at Appomattox occurred Apr. 9, 1865,—three days less than four years from the date of the opening gun at Ft. Sumter. The aggregate of enlistments in the Union army, under the successive calls of the President, for terms of service varying from three years to 100 days, was about 2,800,000. The term of service was usually three years, though there were some enlistments for two years, one year, and, to meet emergency calls, for six months and for 100 days. In most cases the loyal states furnished a sufficient number of volunteers to fill their quotas, from time to time, although in 1863 and 1864 drafting, or conscription, was found necessary in a few states. Through the offer, by the general government, of a large individual bounty and a 30-day furlough, a large part of the men who went to the field in 1861 reënlisted in the latter part of 1863 and the early months of 1864, for three years more. This gave to the government the continued services of a large number of excellent soldiers—inured to fatigue and hardship, tempered in the fire of battle, and skilled in the art of war. These were designated as "veteran volunteers." Included in the total heretofore given are 186,000 colored troops. The wreckage of the Confederate government contained no records showing the number of enlistments on that side. From the best obtainable data it may be fairly estimated that the aggregate was about 950,000—one-third the number shown on the rolls of the Union army. The latter comprised 1,896 regiments of infantry, 272 regiments of cavalry, and the equivalent of 78 regiments of artillery, or 942 batteries, generally of six guns each. A field battery contained about 150 men. A company of infantry or cavalry, when full to the maximum, consisted of 100 men. A regiment of infantry consisted of 10 companies, or 1,000 men. A regiment of cavalry, of 12 companies of 1,200 men. A brigade consisted of from three to five regiments—generally four; after the regiments became much reduced in strength by the casualties of the service, the number constituting a brigade was often increased to eight or more. Three brigades—rarely four—formed a division, and three divisions, a corps. An army was composed of a number of corps—usually two or three. In 1863 the Army of the Potomac had seven. Thus on the basis of maximum strength, a regiment numbered 1,000; a brigade, 4,000; a division, 12,000; a corps, 36,000. But the regiments were very rapidly decimated by battle and disease, and generally the fighting strength of the various organizations was but half these numbers—and much less, even, during the last year of the war. In regard to the loss of life during the war, it cannot be exactly stated, but according to the best obtainable data in the Union army it was as follows:

Killed in battle	44,238
Died of wounds	49,205
Died of disease.	186,216
Died from unknown causes.	24,184
Died while prisoners.	26,168

339,011

To this number may properly be added at least 100,000 who died within ten years immediately following the war, directly from the effects of exposure and fatigue, and from wounds which never healed. The number wounded in action was nearly 300,000; the number captured was 184,791. There are no official reports from which to compile the Confederate losses. The armies on that side were generally smaller, and the losses were in proportion. The aggregate may safely be approximated as about three-fifths of that on the Union side. At the close of the war the strength of the Federal army for duty was nearly a million men, while that of the Confederate army, the resources of which had become exhausted, was scarcely a quarter of that number. To show the spirit that animated the people of the loyal states, it is worth while to quote the following from a report made by the Secretary of War, Nov. 22, 1865: "On several occasions, when troops were promptly needed to avert impending disaster, vigorous exertion brought them into the field from remote states, with incredible speed. After the disasters on the Peninsula, in 1862, over 80,000 troops were enlisted, organized, armed, equipped, and sent to the field in less than a month; 60,000 troops have repeatedly gone to the field within four weeks; 90,000 infantry were sent to the armies from the five states of Ohio, Indiana, Illinois, Iowa, and Wisconsin, within 20 days. When Lee's army surrendered, thousands of recruits were pouring in, and men were discharged from recruiting stations and rendezvous in every state." It may fairly be said that the people of the South were not one whit behind in their spirit of sacrifice and of devotion to the cause in which they believed, but four years of conflict had exhausted the men and material, with which to carry on war, and the end was inevitable. The money cost of the war is an interesting phase of the subject, but it can be only briefly touched upon here. To the U. S. government the cost of carrying on the war, during the four years of its actual continuance, was about 2,500 millions of dollars, or an average of nearly two million dollars a day. The vast sums paid since that time for pensions and for interest on the public debt were directly part of the cost of the war. Up to this time (1901) about 3,000 millions, or \$3,000,000,000 has been paid for pensions, and fully as much for interest on the war debt. This makes the direct cost to the government up to this time, eight billion five hundred million dollars. To this should be added a very large but unknown sum for the expense of the war to states, counties, municipalities, and individuals. This can be only vaguely estimated,

but those who have studied the question place the amount at not less than \$200,000,000—it may have been twice that sum. The loss, damage, and waste of war to the South was incalculable. Three million slaves represented \$1,500,000,000 in value, and this was a total loss. All parts of the South were desolated and laid waste by the ravage of war. Property of all kinds, to the amount of hundreds of millions of dollars, was confiscated or destroyed. It is within bounds to say that the direct cost, and loss, and damage resulting from the Civil War was not less than twelve billions of dollars. If one attempts to compute the loss to the country, by the diversion of the energy of three million men from industrial pursuits to the unprofitable avocation of war—from production to destruction; and if it were possible to estimate in dollars the suffering, the grief, the woe that were piled mountain high, with the passing months and years of fire, and blood, and death, he would be lost in the vastness of the appalling aggregate. Such is war! The war virtually ended with the surrender of Lee's army, April 9, 1865. The various bodies of troops elsewhere, one by one, laid down their arms and furled their flags; but it was not till May 26 that the last army surrendered—that of Kirby Smith in the trans-Mississippi department. The muster-out of the great body of volunteers in the U. S. army soon followed. There was serious apprehension in the minds of many that the release, at once, of so great a number of soldiers would be disastrous to the good order and well-being of society. There was an impression that the volunteers had thrown aside all restraint, and during their life in the army had become vicious and lawless, and that an era of crime and indulgence of appetite and passion would follow. But the result proved that these fears were wholly groundless. In no other army that the world ever saw was there so high a mental and moral standard of life and conduct. On both sides the volunteers had been actuated by patriotism and devotion to principle, and when the end came the great armies quietly melted away. The soldiers "beat their swords into plowshares and their spears into pruning hooks" and entered at once upon the pursuits of peace, while the whole world looked on and wondered. The various battles and events of the war and the generals on both sides appear under their respective names in this volume. For much additional information relative to the cause and the conduct of the war, see the following in Volume I.: Banks, 36; Beauregard, 44; Brown, John, 69; Buchanan, 87; Buell, 91; Calhoun, 96; Chase, 107; Clay, 113; Davis, Jefferson, 139; Farragut, 179; Fremont, 204; Garrison, 221; Grant, 228; Greeley, 238; Hood, 295; Jackson Andrew, 314; Jackson, "Stonewall," 319; Johnston, Albert Sidney, 343; Johnston, Joseph E., 348; Lee, Robert E., 358; Lincoln, 368; Longstreet, 389; McClellan, 405; Meade, 423; Phillips, Wendell, 457; Porter, 472; Rosecrans, 496;

- Semmes, 508; Seward, 513; Sheridan, 520; Sherman, John, 526; Sherman, William T., 530; Stanton, 537; Stuart, 543; Sumner, 545; Thomas, 559; Webster, 598; Winslow, 623. See also in this volume: ABOLITIONISTS, CONFEDERATE STATES, CRITTENDEN COMPROMISE, MISSOURI COMPROMISE, SLAVERY, KANSAS-NEBRASKA BILL.
- Clam, The.**—See MOLLUSK, 2718.
- Clare.**—A county of Ireland, lying between Galway, Tipperary, Limerick, and the Atlantic Ocean. Area, 1,294 sq. miles.
- Clarendon, Constitutions of.**—The ordinances adopted at the Council of Clarendon, which see.
- Clarendon, Council of.**—A council called forth in 1164 through the opposition of Thomas Becket to Henry II. in ecclesiastical matters. The council included the King, the archbishops of Canterbury and York, eleven bishops, and numerous members of the nobility; its object was the establishment of rules for the punishment of the "criminal clergy" and for the settlement of quarrels arising between the clergy and laity.
- Clarissa Harlowe.**—The title of a famous novel by Samuel Richardson, published 1748.
- Clark, Abraham.**—Born at Elizabethtown, N. J., 1726; died at Rahway, N. J., 1794. He was one of the signers of the Declaration of Independence and a celebrated Revolutionary patriot.
- Clark, Alvan.**—Born at Ashfield, Mass., 1808; died at Cambridge, Mass., 1887. An American optician, famed for his great skill as a manufacturer of telescopes which are now used in most of the great observatories in the world.
- Clark, William.**—Born in Va., 1770; died at St. Louis, Mo., 1838. An American explorer, brother of G. R. Clark. With Meriwether Lewis, he led the Lewis and Clark exploring expedition from St. Louis to the mouth of the Columbia River (1804-06); was governor of Missouri Territory (1813-21) and superintendent of Indian affairs at St. Louis till his death.
- Clarke, Charles Cowden.**—(1787-1877.) A noted English writer, publisher, and lecturer.
- Clarke, Mrs. Charles Cowden.**—(1809-1898.) Wife of Charles Cowden Clarke, the noted writer and lecturer. An English Shakesperian scholar, compiler of "The Complete Concordance of Shakespeare" published in 1846.
- Classics, How to Read.**—3179.
- Claude Lorrain.**—(1600-1682.) A celebrated French landscape painter; his real name was Claude Gellée.
- Clay, Cassius Marcellus.**—Born in Ky., 1810. Was the son of Gen. Green Clay and noted as an anti-slavery advocate. He was U. S. minister to Russia (1861-69).
- Clay, Green.**—Born in Va., 1757; died in 1826. An American general, noted for his defence of Fort Meigs against the British in 1813.
- Clay, Henry.**—Statesman and politician; sketch of, 113.
- Clearance.**—A certificate from a custom-house giving permission to a vessel to sail.
- Clearchus** (*klē-ār'kus*).—(Died 401 B.C.) A Spartan general.
- Clearing House.**—An institution organized by banking houses, railroad companies, persons or corporations that have credit transactions with one another, to facilitate periodical settlements. Before the advent of the clearing house, accounts incidental to and resulting from such transactions were adjusted, in the case of banks every morning; in other cases at least once a week. This obliged each bank to employ a messenger, who had to visit every other bank with which it dealt and pay or receive the difference between the credit and debit sides of the accounts. This system involved labor and risk, now almost wholly eliminated by the clearing house, where all the differences of the institutions that are members of it are every day, quickly, accurately, and conveniently adjusted. The London clearing house is about 100 years old, and the New York clearing house, which does the largest business of any in the world, opened its doors Oct. 11, 1853. About 70 banks clear through the latter and the accounts of each are settled daily between 10 and 11 A. M. The debtor banks must pay to the clearing house the amounts they owe in coin or legal-tender notes each day by 1-30 P. M. and the creditor banks at once receive the amounts due them from other banks or certificates of credit for like amounts. The banks that are in the clearing house may avert financial crises by pooling their reserves and accepting certificates instead of cash. This was done early in the Civil War, to enable the Government to carry on its operations, and the same device was employed to check the panics of 1873, 1884, 1890, and 1891. Clearing houses are now to be found in all the large cities of the U. S., and are used quite as freely by commercial concerns in general lines of business as by strictly financial institutions.
- Cleburne, Patrick R.**—A Confederate general in the Civil War. He entered the army from Arkansas, at the beginning of the war and served with distinction under Albert Sidney Johnston, Bragg, Joseph E. Johnston, and Hood. At the battle of Franklin, Tenn., Nov. 30, 1864, while on horseback, leading his division in the charge upon the Federal line, man and horse fell pierced with bullets, as the latter leaped the ditch at the works.
- Cleburne, Samuel Langhorne** (*pseudonym*, MARK TWAIN).—A humorous writer; sketch of, 122.
- Cleomenes I.**—King of Sparta, 519-491 B.C.
- Cleomenes III.**—King of Sparta, 236-220 B.C. Defeated in war with the Achæan League and Macedonia, 221 B.C.
- Cleon.**—An Athenian demagogue who became leader of the democratic party after the death of Pericles. Killed at Amphipolis, 422 B.C.
- Cleopatra.**—See WOMEN WHO HAVE INFLUENCED HISTORY.
- Cleopatra's Needles.**—Egyptian obelisks, of pink granite of about equal height (67 and 68½ feet respectively), which were transported from Heliopolis (Baalbec) on the Nile in Lower Egypt, to Alexandria, in the 18th year of Au-

gustus, and set up in front of the temple of Cæsar. They are covered with hieroglyphics, referring to the reigns of kings as remote as the 14th and 16th centuries B.C. One of the obelisks, weighing 186 tons, was in 1878 brought from Alexandria to London and erected on the Thames Embankment; the other, two years later, was brought to New York and now stands in Central Park.

"**Clermont,**" **The.**—The first steamboat put into practical operation by Robert Fulton, in American waters, in 1807. (See FULTON, ROBERT, 215.)

Cleveland.—Capital of Cuyahoga Co., Ohio. It exports large quantities of coal and has extensive iron and steel manufactures and several oil refineries. It is the first city in the State and the seat of Adelbert College, Case School of Applied Science, and medical colleges. It is also a great railroad and steamboat center. It was settled in 1796 and incorporated as a city in 1836. Pop. (1900), 381,768.

Cleveland, Frances Folsom.—Wife of President Cleveland; sketch of, 132.

Cleveland, Grover.—Twenty-second President; sketch of, 125.

Clinton.—1. A city in Iowa, with an extensive lumber trade. Pop. (1900), 22,698. 2. A town in Worcester Co., Mass., noted for its manufactures. Pop. (1900), 13,667. 3. A village in Oneida Co., N. Y., the seat of Hamilton College. Pop. (1900), 1,340.

Clinton, De Witt.—Born at Little Britain, N. Y., 1769; died at Albany, N. Y., in 1828; U. S. senator from N. Y., 1802; thrice mayor of New York; candidate for President, 1812; and chief promoter of the Erie Canal.

Clinton, James.—Born in Ulster Co., N. Y., 1736; died at Little Britain, N. Y., 1812. An American general who defended Fort Clinton unsuccessfully (1777) against the British, and was actively engaged in the Indian Wars (1779).

Clive, Catherine.—(1711-1785.) A noted comic actress; for some years in Garrick's company.

Clive, Robert, Baron Clive of Plassey.—(1725-1774.) An English statesman and general. Went out to India on the outbreak of wars between the French and the British in India as a clerk in the East India Company. He is really the man who won for the British their great possessions in India. His conduct of affairs in India was made the subject of parliamentary enquiry, in which he was exonerated.

Clock.—A machine for measuring and marking the flight of time. In early times, the sun-dial was the apparatus in common use for registering the progress of the sun through the sky by a shadow cast upon a graduated plate. This, however, was useless at night and on cloudy days. The hour-glass was another early contrivance. With the invention of the escapement and the regulation of its action by means of a pendulum, the construction of clocks may be said to begin. We owe the idea of a pendulum clock to Huyghens, a Dutch physicist, who set the escapement or crown wheel horizontal, which had hitherto been set vertical, and at-

tached the pallets to the horizontal rod from which the pendulum hung. In large-sized clocks, the moving power is a raised weight; in chronometers, watches, and small clocks, the power is derived from a coiled, elastic, highly tempered spring. In the former, the weight in descending, and in the latter the spring in uncoiling, sets a cylinder in rotation, and this rotary motion is transmitted through wheels and pinions to the hands on the dial-plate, which by their motion indicate the hours, minutes, and seconds. In both cases, the motive-power must be properly regulated so as to indicate accurate time. When the moving power is a mainspring (contained in a cylindrical box) the motion is regulated by the escapement and balance-wheel, and for greater accuracy by a contrivance known as the fusee. The varieties of clocks, chronometers, and watches are now many and varied; the striking clock is familiar to everyone, and is fitted with a bell struck by a hammer at certain equal intervals, generally an hour. Driving clocks, electric clocks, and musical clocks are other types and fashions of time-pieces familiar to us to-day.

Clothing.—See HEALTH, 1815.

Clothing, Success in Selling.—5285.

Clotilda.—(475-545.) Queen of the Franks. Wife of Clovis I.

Clotilda.—See WOMEN WHO HAVE INFLUENCED HISTORY.

Cloud, St. (*san-klö'*).—A town of France, in the department of Seine-et-Oise, situated on the slope of a hill on the left bank of the river Seine, a couple of miles outside the fortifications of Paris. Its chief attraction was once the splendid chateau or palace-castle, built by Cardinal Mazarin, long the residence of the Dukes of Orleans, rebuilt by Louis XIV., bought by Louis XVI. for Marie Antoinette, and the favorite summer residence of the two Napoleons. It was burned by French artillery fire, in the war with Germany, in 1870, while it was the headquarters of the German staff, and has since been demolished. In St. Cloud, Napoleon I. was here named first consul, and in it Charles X. signed the ordinances of July, 1830. It was the headquarters of the allies in 1814, and also of Blucher in 1815, during the siege of Paris; in it, moreover, the treaty for the capitulation of the capital was signed (1815).

Clouds are masses, more or less dense, of fog, consisting of minute particles of water or watery vapor, floating in the atmosphere, and often in a frozen state, when they descend to the earth as snow or hail. When the air is saturated with vapor, and has its temperature lowered, either by ascending and becoming rarer, or by meeting a colder current, a portion of the vapor loses its gaseous form, and becomes condensed into water, when it is precipitated as rain. Clouds are, according to their external appearance, classified as cirrus, cumulus, stratus, and nimbus or rain clouds. The *cirrus* cloud, familiar as cat's or mare's tail, are usually observed at great heights, possibly frozen, and have the

appearance of slender filaments or of long, white, silver horizontal bands. They seem stationary in the sky from their slow movement at a great elevation. The *aurora borealis* is supposed to be connected with cirrus clouds. The *cumulus* is the dense, white, cottony mountainous clouds of the daytime, which at sunset often mass themselves and deepen in color. They are formed from the ascending air which has been heated on the earth's surface. The *stratus* clouds, which form at a lower elevation, are the horizontal bands that form at sunset and disappear in the morning. It includes the white and gray mists formed in valleys and over marshes. The *nimbus* cloud has a uniform gray tint, and is the rain and thunder cloud, which, on the lowering of temperature in the air below the dew point, precipitates rain.

Clough, Arthur Hugh.—(1819-1861.) A noted English author and poet.

Clovis I.—(465-511.) Son of Childeric, the Frankish King; himself founder of the Merovingian line of these Kings. Husband of Clotilda.

Club, The Debating.—3112.

Cluny.—A town of France, noted for its laces, and also for its Benedictine Abbey, founded in the 10th century.

Clyde.—A noted river of Scotland. Length 95 miles.

Clymer, George.—Born at Philadelphia, 1739; died at Morrisville, Pa., 1813. An American politician, one of the signers of the Declaration of Independence, and member of the Constitutional Convention (1787).

Clytemnestra.—In Greek mythology, the wife of Agamemnon; said to have slain her husband, through jealousy and fear, and was put to death with her paramour.

Clytie.—In mythology, a nymph who was beloved by Apollo, and changed to a heliotrope, 2371.

Coahuila (*kô-â-w'îlâ*).—A state in Mexico south of Texas. Area 63,569 sq. miles; pop. (1895), 237,815.

Coal.—One of the most important of minerals, is of vegetable origin, and in large use as fuel in furnaces, in stoves, and in grates for the heating of rooms, etc. Its consumption in these manufacturing days is enormous, the world's output of coal for the year 1899 being estimated at close upon 650 million tons. In this country, the supply is adequate for an indefinite period, though in Britain, at the present rate of consumption, the coal fields of the United Kingdom will, it is estimated, become exhausted in 200 years, while the bulk of the readily available supply is likely to give out in 50 years. The coal consumption of the United States equals that of Great Britain, viz., about 220 million tons per annum. The other chief coal producing countries, besides the United Kingdom and the United States, are Germany, France, and Belgium. Austria-Hungary and Russia come next in the order of national coal consumption. The chief varieties of coal are anthracite (hard), bituminous (soft), and lignite or brown coal. British coal is nearly all soft; while in this

country we possess both, and are especially rich in the vast anthracite coal regions of Eastern Pennsylvania. The origin of coal, it is now well determined, is vegetable matter, which has undergone great changes from the length of time it has been stored within the earth, and the various influences to which it has been subjected. The mass of European coal belongs to the deposits of what is known as the Carboniferous era; the enormous coal fields of India and China, belong, on the other hand, to the later, Permian era, and still other fields to the Miocene age.

Coal, World's Yearly Output of.—The United States now takes the first place, long held by Great Britain, among coal-producing countries. In 1900 the production of bituminous coal in the U. S. amounted to 220,592,239 short tons, valued at \$224,502,483 at the pit's mouth, while the year's yield of anthracite coal in the U. S. (chiefly raised in Pennsylvania) was 54,225,540 short tons, valued at the mine at \$97,229,032 (or \$1.79 per ton). The total of the great product for the year (1900) was in short tons 274,872,779, valued at \$321,792,265 (or per average ton, of hard and soft coal, \$1.17). Appended is the coal yield for the year 1898 in the principal coal-producing countries of the world:—

Country	Tons of Coal Mined, 1898
Australasia.....	6,316,000
Austro-Hungary.....	12,186,000
Belgium.....	21,918,000
Canada.....	4,173,000
Cape Colony.....	192,000
France.....	32,331,000
Germany.....	101,622,000
India.....	4,605,000
Japan (1897).....	5,188,000
Natal.....	388,000
Russia.....	12,185,000
Spain.....	2,434,000
Sweden.....	236,000
Transvaal (1897).....	1,600,000
United Kingdom (1900).....	230,094,781
United States (1900).....	274,872,779

TON PRICE.—The average value per ton of coal at the mine is highest in France (which has to add to her store annually by importation), where it is \$2.25 per ton at the pit's mouth, and lowest in the U. S., where it is only \$1.10 per ton. In the other three chief European coal-producing countries, the mine price per ton is as follows: in Belgium it is \$2.20; in Germany it is \$1.85; and in the United Kingdom it is \$1.60. Owing to the coal famine in some countries of the European continent, the average export price in England has advanced of late from \$2.50 to \$3.75 per ton. In this country the local price per ton at the mine varies with the region and yield of the coal production. The range in price is from 70c to \$2.70 per ton. The States which yield most abundantly of bituminous coal are Pennsylvania (87 million tons annually), Illinois (25 million), Ohio and West Virginia, which each yield 21 million tons

- yearly. Next to these in bulk of production are Alabama, Colorado, Kentucky, Indiana, Tennessee, Wyoming, Iowa, Kansas, and Maryland.
- Coast and Geodetic Survey.**—Established in 1807 by President Jefferson, under an act of Congress, which appropriated \$50,000 for the purpose. It operates all over the U. S., and charts the coasts and inlets for the purpose of lessening the dangers, and suggesting means for promoting the safety and facility of navigation. The scientific and practical work of the bureau was until 1832 conducted irregularly and imperfectly, through lack of necessary financial support, but since that year it has been methodically prosecuted under eminent engineers and has proved of incalculable value.
- Coasting.**—2099.
- Coast Range or Coast Mountains.**—A chain of mountains in western Cal., running almost parallel with the Pacific. Its highest peak is San Bernardino, 11,500 ft. high; a continuation of the range appears also in Ore., near the coast. There is also a Coast Range of mountains in southeastern Brazil.
- Cobalt.**—A steel-gray metal, occurring in its free state in small quantities in Meteoric Iron, in combination with arsenic, as white-tin cobalt, also with sulphur and arsenic, with arsenic and oxygen, and present in many copper ores. It is hard, infusible, and magnetic, and in its chemical properties and compounds resembles iron. Its atomic weight is 59, and the symbol for its atom is *Co*. Cobalt has two oxides, the protoxide and the sesqui-oxide; the latter being used for staining glass and porcelain. Its chief use in the arts is for the preparation of colors; on a large scale it is produced mainly as an accessory in the treatment of nickel ores. It is found in Norway, Sweden, Rhenish Russia, in the Transvaal, Bolivia, and in Missouri, U. S. A.
- Cobbe, Frances Power.**—(1822—.) An English author of essays on various subjects, and a philanthropist.
- Cobbett, William.**—(1762–1835.) A noted English political writer; emigrated to America in 1792 and for two years published the "Porcupine's Gazette" at Philadelphia. After his return to England, published "Cobbett's Weekly Political Register," and the "Parliamentary Debates." Elected to Parliament 1832 and in 1834.
- Cobden, Richard.**—(1804–1865.) A distinguished English statesman and political economist.
- Coblentz** (*kô'blents*).—The capital of the Rhenish Province in Prussia on the Rhine at the junction of the Moselle. Pop. about 33,000.
- Cobra, The.**—See SERPENTS, 2640.
- Coburg.**—(1) A duchy of Germany forming with Gotha the duchy of Saxe-Coburg-Gotha. Pop. (1900), 230,000.
(2) A city in the above duchy, in the valley of the Itz. Pop. (1895), 18,689.
(3) A port on Lake Ontario in Northumberland Co., Ont., 65 miles from Toronto. Pop. of Cobourg, Ont. (1901), 4,239.
- Cocaine.**—A powerful drug, derived from the leaves of a South American shrub (*Erythroxylon coca*), and used to a large extent as a local anæsthetic. When used internally in moderate doses ($\frac{1}{4}$ of a grain is a dose), it acts as a stimulant to the brain and to the spinal cord. It is of value also in minor surgery and in diseases of the eye and ear. Its use in excess is disastrous, in bringing on convulsions, and often is fatal. The properties and effects of cocaine, or coca, therefore resemble opium, though less narcotic, while it possesses the property, unlike opium, of dilating the pupil of the eye, and of lessening, in the user of it, the desire for ordinary food.
- Cochin China.**—Almost a synonym for Annam,—a division of Further India,—but more properly the eastern or sea-coast part of Annam.
- Cochineal.**—A dye-stuff used for the production of carmine, crimson, scarlet, orange, and other tints, introduced first into Europe from Mexico. It is extracted from a dried insect (females only are used), the *Coccus cacti*, an insect of the order Hemiptera, which feeds upon the nopal plant, a native of Peru and Mexico. Cochineal is collected thrice in the seven months of the season when the insects are gathered; they are then immersed in hot water or killed by exposure to the sun, steam, or heat of an oven. The insect owes its tinctorial power to the presence of a substance termed *cochinealin*, or carminic acid, a compound of hydrogen, carbon, and oxygen, which may be prepared from the aqueous decoction of cochineal.
- Cockatoo, The.**—See PARROT, 2597.
- Cockatoo, The.**—See KEEPING OF PETS, 2313.
- Cockburn** (*kô'bërn*), Sir Alexander James Edmond.—(1802–1880.) Was Lord Chief-Justice of England and a noted jurist. He was the representative of England at the Arbitration Conference of the Alabama claims at Geneva.
- Cockran** (*kôk'ran*), Henry.—Wrote the first published dictionary of the English language. Although he lived in the 17th century, nothing is known of his life. The title of his book is "The English Dictionary; or a New Interpreter of Hard English Words."
- Cock Lane Ghost.**—In London, 1762, an imposture by which knockings and other strange noises were heard, and a "luminous" lady was supposed to be seen—the reputed ghost of a Mrs. Kent.
- Cock-of-the-rock, The.**—2600.
- Cockpit, The.**—An old theatre in London, erected about 1615.
- Cockspur Thorn, The.**—2824.
- Cocoa, Cacao, or Coco.**—A valuable dietary substance produced from the seeds of a tropical tree, and used as a breakfast beverage as cocoa and chocolate. The fruit of the tree contains the seeds which constitute the raw cocoa or cocoa bean of commerce. The tree is native to Mexico, to many of the South American countries, and to most of the West India islands. As prepared for a beverage, the seeds or nibs are roasted, whereby the fine aromatic substance is formed, and the starch particles are changed into dextrin. It forms a nutritious drink, owing to the soft, solid oil known as cocoa butter, which forms more than 50 per cent of the

shelled bean. The rest consists of starch, gluten, albumen, and the principle, called *Theobromine*, analogous to caffeine.

Cocoanut Palm.—One of the tallest and most ornamental of the palms, the cylindrical stem rising often to a height of 100 feet, crowned by a cluster of leaves from 10 to 20 feet long. Its fruit consists of a thick external husk or rind, of a fibrous structure, within which is the ordinary cocoanut of commerce. Cocoanut oil is obtained by boiling from the kernels, which are first broken into small pieces and dried in the sun, when they are known as cofra. The oil is also used in the manufacture of marine soap, which forms a lather with sea water. Cocoa stearine, another ingredient, is used in the manufacture of candles.

Cod, The.—2679.

Cody, William Frederick.—Better known by his sobriquet "Buffalo Bill." Born in Iowa, 1845. He was a member of the Neb. legislature in 1872, and organizer of the "Wild West" exhibition of frontier life. In early life he was a famous Western scout.

Cœur de Lion.—A name given to Richard I. of England, and to Louis VIII. of France, because of their great courage and bravery.

Coffee.—A familiar beverage, made from the seeds of the coffee shrub indigenous to Abyssinia and the southern parts of Arabia. The tree, which is not allowed to grow more than six or eight feet in height, thrives well in warm, moist lands, and yields its first crop in the third year. The shrub also grows on well-watered mountain slopes, even at a high elevation, so long as there is no frost. The dietetic value of coffee chiefly depends upon the alkaloid caffeine which it contains in common with cocoa, tea, etc. This is developed by washing the bean, an operation of great nicety; and after grinding it should be excluded from the air, so as to preserve its aroma and refreshing qualities as a drink. The chief varieties are the Java, Rio, Jamaica, and Mocha brands.

Cognac (*kōn-yak'*).—A town on the Charente near Angoulême in France. It is the center of the trade in brandy of that region.

Cogswell, Joseph Green.—Born at Ipswich, Mass., 1786; died at Cambridge, Mass., 1871. He was professor of mineralogy and geology at Harvard (1820-23); became superintendent of Astor Library, New York, in 1848. With George Bancroft he founded the Round Hill School at Northampton, Mass.

Cohoes.—A city in Albany Co., N. Y., with large rolling-mills and manufactures of hosiery and underwear. It derives its water-power from the Cohoes Falls, 70 feet in height. Pop. (1900), 23,910.

Coinage Laws.—The importance of a sound system of coinage early impressed itself upon the founders of the Government, and laws were passed to regulate the proportion of metal in the different coins and the ratio of value of one metal to another. Among the more important of these laws was the act of Apr. 2, 1792, which

provided that any holder of gold or silver could have the same coined at the mint, receiving for it coins of the same metal in equal weight. The standard of fineness of gold was 11 parts pure to one of alloy; for silver, 1,485 pure to 179 of alloy; the ratio of gold to silver was one to 15, and silver and gold coins were legal tender. By the act of Mar. 3, 1795, the treasurer kept 24 cents per ounce for silver below standard and four cents per ounce of gold, as toll for coinage. Under the same law the President reduced the weight of the copper coin one pennyweight, 16 grains, in each cent, and in this proportion in each half-cent. By the law of Apr. 21, 1800, a sum sufficient to pay for refining was retained in the case of deposits of gold and silver below standard, and by that of May 8, 1828, enough to pay for materials and waste was deducted from silver bullion needing the test. The act of June 28, 1834, provided that one-half of one per cent should be deducted from all standard gold and silver, if paid for in coin within five days from deposit. Under the law of Jan. 18, 1837, all gold and silver had to be nine-tenths pure, with one-tenth alloy, and was to be legal tender for all sums. Feb. 21, 1853, the half-dollar was reduced from 206½ grains to 192 grains; the same proportion was applied to the lesser silver coins, and they were made legal tender in sums not exceeding \$5.00. Private deposits were not received for conversion into these coins, and the charge for refining was one-half of one per cent. The "trade dollar" dates from 1873, when the law passed that year ordained that its weight should be 420 grains and of the half-dollar 193 grains; these coins to be legal tender up to \$5.00. The coinage of silver dollars of full legal tender value, was left unprovided for, and silver bullion could be deposited for coinage into trade dollars only, and gold for coinage for the benefit of the depositor. Directors of mints were empowered to buy silver for coins below the dollar, and one-fifth of one per cent was charged for the conversion of standard gold into coin and standard silver into trade-dollars. Silver coins, trade dollars excepted, were made exchangeable at par for gold coins in sums not in excess of \$100. In 1875 gold coinage was released from charges and in 1877 Congress decreed that the trade dollar should cease to be legal tender. By the law of Feb. 28, 1878, the present silver dollar of 412½ grains came into existence, and was made legal tender for all debts. The Secretary of the Treasury was authorized to buy at market value not less than \$2,000,000 nor more than \$4,000,000 worth of silver bullion each month and to coin it into dollars. In 1879 silver coins of less than \$1.00 were made legal tender to the amount of \$10.00. In 1890, when the law of 1878 was repealed, the Secretary of the Treasury was authorized to buy 4,500,000 ounces of silver bullion each month, paying for it with legal tender notes, and making a sufficient monthly coinage to redeem the notes. The silver-purchase clause of the act was repealed in 1893.

Coins, Metric System in.— It may not be generally known that we have in the nickel five-cent piece of our coinage a key to the tables of the linear measures and weights of the metric system. The diameter of this coin is two centimeters, and its weight is five grams. Five of them placed in a row will, of course, give the length of the decimeter; and two of them will weigh a decagram. As the litre is a cubic decimeter, the key to the measure of length is also the key to measures of capacity. Any person, therefore, who is fortunate enough to own a five-cent nickel may be said to carry in his pocket the entire metric system of weights and measures.

Coke.— A useful fuel, almost wholly pure carbon, obtained from what is termed "caking" coal, by heating it in large ovens from which air is excluded and entirely closed, save for an opening to permit the exit of gases. It bears the same relation to coal that wood charcoal bears to wood. It burns freely, without smoke, and without caking upon the fire bars, and was at one time used largely for the smelting of iron. In its conversion into coke, coal loses nearly half its weight, the loss including the most part of its hydrogen, nitrogen, and oxygen.

Coke, Sir Edward.—(1552-1634.) An eminent English legal authority and jurist. He was the author of many legal treatises.

Colchester.— A town in England, in Essex, on the River Colne. It is of Roman antiquity, remains of the Roman foundation and occupation being yet quite plain. The Castle is one of the strongest of the Norman fortifications in England. Population about 35,000.

Cold, Extremes of.— The lowest natural temperature recorded was that related to be taken, in 55° N. lat., by Hansteen, the Norwegian astronomer and physicist, who died at Christiania in 1873. This was 68° 3' c. below zero. Doubtless lower temperatures occur in still more northerly regions were they attainable by man and could be endured by the physical frame. At the temperature observed and noted by Hansteen, mercury freezes, and the spirit-of-wine thermometer is hardly to be trusted. Artificially a still lower temperature has been obtained, though not recorded, when hydrogen was solidified by its own expansion. To measure such a temperature is, however, hopeless. The highest terrestrial temperature known, so far, is that of the electric light, which the French physicist, Becquerel, estimates at 2070° c. Still higher is that of the sun, which probably, however, is lower than that of some of the brighter stars. The U. S. Weather Bureau, at Washington, has done good work for years in recording, as well as forecasting, low temperatures, cold waves, and winter storms, in the northern and western parts of the Continent, where deaths from cold and exposure are not uncommon. In the Mackenzie River and Yukon districts of Canada, and in Alaska, north of Nome City and close to the Arctic Circle, the climate is severe,

the winter lasting for eight months, when the mean temperature during the coldest month would be as low as 40° below zero. In the Yukon Valley, some years ago, it is said, that a degree of cold so low as 77° below zero was recorded.

Cold Harbor (Va.), Battle of.— One of the notable engagements of Grant's campaign against Lee, in 1864. After the great battles of the Wilderness and Spottsylvania, in which Grant had sustained enormous losses, he turned Lee's right flank, crossed the Pamunkey River, and reached Cold Harbor, within 10 miles wouth-easterly from Richmond. Lee had moved rapidly by an interior line, and Grant found him at Cold Harbor, strongly entrenched. June 1 and June 3 Grant assaulted the Confederate position in large force, but in each case met with a bloody repulse. Desultory fighting continued until June 12, when Grant determined to approach Richmond from the South, threw his army across the James River and laid siege to Petersburg. The fighting at Cold Harbor was costly. The loss of the Union army was 1,900 killed, 10,500 wounded and 2,500 prisoners, a total of about 15,000. The Confederates fought entirely behind the shelter of intrenchments, and their loss in all was 1,700.

Coldstream Guards.— A regiment of British footguards, enrolled at Coldstream, a small town in Berwickshire, Scotland, by General Monk in 1660.

Cole, Thomas.— Born in England, 1801; died at Catskill, N. Y., 1848. A celebrated American landscape painter. He came with his father to America and, after residing for a time in Ohio, settled in N. Y. His productions, partly historical and partly allegorical, attained for him a respectable place and great patronage amongst the followers of the old school.

Cole, Timothy.— Born at London, 1852. A leading American wood-engraver.

Colenso, John William.— (1814-1883.) A noted English divine. He was appointed bishop of Natal, 1853. Author of a number of works, mostly educational and religious.

Coleridge, Samuel Taylor.— (1772-1834.) A celebrated English poet and literary critic.

Coifax, Schuyler.— Born at New York, 1823; died at Mankato, Minn., 1885. He was many years a member of congress from Ind., and Speaker of the House of Representatives (1863-69); Vice-president of the U. S. (1869-73).

Coigny, Gaspard de (ko-lên-yê).— (1517-1572.) A Huguenot leader and French general, led the Huguenot forces in the civil wars of 1562. He was the first victim of the massacre of St. Bartholomew.

Collins, Alexander.— (1526-1612.) A noted Flemish sculptor and worker in wood and in ivory.

Collecting and Preserving insects.— 2747.

Collector, The Gifts of a Successful.— 5321.

College, How Poor Boys and Girls Go to.— 4514.

College Cheers, American.— This collection of cheers has been made by THE WORLD ALMANAC, by correspondence with officials of the respective

- institutions, and revised to 1900. It is believed to be the largest collection ever published.
- Add-Ran Christ'n Univ.*—"Boom el lacker, Boom el lacker, Boom el la boo! Varsity, varsity! Add-Ran U!"
- Alabama Polytechnic Institute.*—"Je hah, Je hah, Je hah hah hah, Auburn Auburn, rah rah rah. Auburn, Auburn' is our cry, V-I-C-T-O-R-Y!"
- Albion.*—"A-I'-b-i'-o-n', Bis Boom Bah, Albion, Rah! Rah! Rah!"
- Alfred University.*—"Rah! Rah! Rah! Zip, Rah, Boom! Alfred University, Give Her Room!"
- Allegheny.*—"Alleghe! Alleghe! Rah! Boom! Allegheny!"
- Alma.*—"One, two, three, Hip, hi, hoo, ray, ALMA, Rah Rah Rah! Alma!"
- Amherst.*—"Rah! Rah! Rah! Rah! Rah! Rah! Amherst!"
- Armour Institute Technology.*—"Arc-Mec-Chem-Elec, Armour Tech—Armour Tech!"
- Atlanta University.*—"Rah! Rah! Rah! Ah! See! Atlanta University!"
- Baker University.*—"B. U.! Rah, Rah, Rah! B. U.! Rah, Rah, Rah! Hoorah! Hoorah! Baker! taker! Rah! Rah!"
- Baldwin University.*—"U rah rah; B. Baldwin; U rah rah!" (repeated with tiger.)
- Bates.*—"B-A-T-E-S—Rah Rah Rah! Boom-alaka, Boom-a-lacka, Boom, Bates, Boom!"
- Beloit.*—"B-E-L-O-I-T, Rah! Rah! Rah!"
- Bethany (Kan.).*—"Ki-I-Ki-I-Ki-Hippi-Ki-I-Bethany-she-is Hi-Hi-Hi!"
- Boston University.*—"Boston, Boston, B-B-B-Boston, 'Varsity, 'Varsity, Rah! Rah! Rah!"
- Bowdoin.*—"B-o-w-d-o-i-n, Rah, Rah, Rah!"
- Brigham Young.*—"Ru Ri B Y, Ru Ri B Y, Ru Ry Re, B. Y. C.!"
- Brown University.*—"Rah! Rah!—Rah! Rah!—Rah! Rah!—Brown Brown Brown—Ki Yi Ki Yi Ki Yi—Hicki Hicki Hoorah!" (three times).
- Buchtel.*—"Hoo-Ray-Rah-Roo, Wah-Hoo, Wah-Hoo Hallaballoo, Hallaballoo, 'Rah, 'Rah, 'Rah, Buchtel!"
- Bucknell University.*—"Yah! Yah! Yoo! Bucknell! B. U.! Wah! Hoo! Hoo! Wah! Bang!"
- Carthage.*—"Rat-a-ta-throt! ta-throt! ta-throt! 'Tear-a-ta-lake! ta-lake! ta-lake! Kick-a-ma-bah! kick-a-ma-bah! Carthage College! Rah! Rah! Rah!"
- Case School Applied Sciences.*—"Hoo! Rah! Ki! Rah! S-C-I-E-N-C-E! Hoi! Hoi! Rah! Rah! Case!"
- Central Univ. of Iowa.*—"C. U. I. Rah! Rah! Hurrah! Hurrah! Central, Central, Rah! Rah! Rah!"
- Central Univ. of Ky.*—"Razzle dazzle, razzle dazzle! Sis, boom! Ah! Central University, Rah! Rah! Rah!"
- Central Wesleyan.*—"Zip Zap, Knowledge! Bing, Bang, Clee! Cent'l Wesleyan College! Ree, Rah, Reel!"
- Centre.*—"Rackety-cax! Coax! Coax! (twice) Hooray! Hooray! Centre, Centre, Rah! Rah! Rah!"
- Christian University.*—"Boom-araka, boom-araka, boom-araka-ree; Rip-izipi, rip-izipi, rip-izipi-zee, Who are we? Christian University!"
- Clafin University.*—"Rah! Rah! Rah! Clafin-i-a!"
- Clemson Agri. College.*—"Rah, Rah, Rah; Re Re Re, Rip, Rah; Rip, Rah; C. A. C., Zip Boom!"
- Coe.*—"Zip, Boom, Gee, C-O-E Rah, Rah, Rah-Coe!"
- Colby University.*—"C-O-L-B-Y, Rah! Rah! Rah!" (three times.)
- Colgate University.*—"Hip hoorah, rah-rah, rah-rah; Hip hoorah, rah-rah, rah-rah; Colgate, Colgate, Rah-Rah-Rah; Colgate!"
- College of Emporia.*—"Hoorah, Hoorah U-pi-dee! Hoorah!! Tiger!!! C. of E.!"
- College of the City of New York.*—" 'Rah, 'Rah, 'Rah, C. C. N. Y.!"
- Colorado.*—"Pike's Peak or Bust! Pike's Peak or Bust! Colorado College! Yell we must!"
- Columbia University.*—" 'Rah 'Ray 'Ray C-o-l-u-m-b-i-a!"
- Columbian University.*—"Whang! Bang! Sis! Boom! Ah! Columbian! Columbian! 'Rah! Rah! Rah!"
- Cornell College.*—"Zipp, Siss, Boom, Caw-w, Ca-w-w-nell; C. C. Tiger-la, Zipp Zipp Hurrah!!!"
- Cornell University.*—"Cornell! I Yell Yell Yell! Cornell!"
- Cotner University.*—"Cotner Cotner Cotner the Cotner University—Don't you see!"
- Cumberland University.*—"Allegaro-garo-garan! Hi-yip, Ki-yip! Cumberland, Cumberland!"
- Dartmouth.*—"Wah hoo wah! wah hoo wah! da-da-da, Dartmouth! wah hoo wah! T-i-g-e-r!"
- Davidson.*—"Hey ho, Hi ho! Wah, hoo, wahi, Davidson, Ra, Ra, Ra!"
- Delaware.*—"D-E-L-A-Ware-Siss-Boom-Tiger-Rah! Rah! Rah!"
- Denison University.*—"Heike! Heike! Rah, rah, rah, hoorah, hoorah, Denison! Denison!"
- De Pauw University.*—"Zip, Rah, Who! D-P-U! Rip, Saw! Boom! Bah! Bully for old De Pauw!"
- Des Moines.*—"Three times three, D. M. C.! Rah, rah, rah! Rah, rah, rah! Rah, rah, rah! Des Moines!"
- Dickinson.*—"Hip-rah-bus-bis—Dickinsonien—Sis—Tiger!"
- Doane.*—"Do-Do, Do-Ra-Me, Fa-Fa, Sol-La-See, D-o-a-n-e, DOANE!!!"
- Drake University.*—"White and Blue, White and Blue, What's the matter with old D. U. Blue and White, Blue and White, Drake University—she's all right!"
- Earlham.*—"Rah, rah, rah; ri, ro, rem; E-A-R-L-H-A-M; thee! thou! rah!!!"
- Emory.*—"Oskey-wow-wow! Skinny-wow wow! Wow-wow! Emory!"
- Emory and Henry.*—"Rah! Rah! Rah! Sispoo bah! Emory and Henry, Wah-hoo! Wah!"
- Fisk University.*—"Clickety! Clackety! Sis! Boom! Bah! Fisk University! Rah! Rah! Rah!"

- Franklin* (Ind.).—“F-r-a-n-k-l-i-n! Hurrah! Hurrah! We are her men! Boom-wah-boom! Wah, hoo-wah! Franklin, Franklin, rah, rah, rah!”
- Franklin and Marshall*.—“Hullabaloo, bala! (twice) Way-up, Way-up! F. and M.! Nevada!”
- Georgetown* (D. C.).—“Hoya! Hoya! Saxa! Hoya! Hoya! Georgetown Hoya! Horah Doray Hai I Hickey, Hickey, Kai, Kai, Moky, Moky, Hay I, Toe mei!”
- Georgetown* (Ky.).—“Hullabaloo! Kanuck! Kanuck! Belle of the Blue! Kentuck! Kentuck! Hooray! Hoo! Georgetown, too! Rah!!”
- Grant University*.—“Hoo 'rah' 'rah'; Hoo 'rah' 'rah'; Grant, Grant, rah, rah, rah!”
- Greeneville and Tusculum*.—“Whoop La, Unaka, Nolaclucky, Chum! Whoop, La, Rah, Rah, Greeneville and Tusculum!”
- Greensboro (Female) College*.—“Rah! Rah! Rah! Hip poo pee! We are the Girls of G. F. C.!”
- Guilford*.—“Boom la yo! Boom la yo! Guilford, Guilford, Ho! Ho! Ho!”
- Hamilton*.—“Rah! Rah! Hamilton! Road! Road! Road!”
- Hamline University*.—“Boom get a rat trap! Bigger than a cat trap! Boom get a rat trap! Bigger than a cat trap! Boom! Cannibal! Cannibal! Zip! Boom! Bah! Hamline! Hamline! Rah! Rah! Rah!”
- Hanover*.—“Han-Han-Han-Han-o-ver!”
- Harvard University**.—“Rāh rāh rāh! rāh rāh rāh! rāh rāh rāh—Harvard!”
- Haverford*.—“Yo-Yo-Yo! (three times) Haverford!”
- Heidelberg University*.—“Kili-kilik! Rah, rah! Zit, zit! Ha! Ha! Yai! Hoo! Bam! Zoo! Heidelberg!”
- Hillsdale*.—“Hull-a-baloo, Wah, Whoo! (twice) Whoo, Wah, Wah, Whoo, Hillsdale!”
- Hobart*.—“Hip, Ho-bart! Hip, Ho-bart! Hip, Ho! Hip, Ho! Hip, Ho-bart!”
- Howard University*.—“Rah, rah, rah! Howard, Howard! Rah, Rah, Re!”
- Illinois*.—“Rah! hoo rah, Boom a la ka, kick-arick-a-roi, Old Illinois, Boom zip boom, Tiger-zah!”
- Illinois Wesleyan University*.—“Wes-ley-an! Hoo-rah! Hoo-rah! (twice) Hoo-rah! Hoo-rah! I.-W.-U.-Rah! Bully for Wesley-an!”
- Indiana University*.—“Gloriana, Frangipana, Indiana Kazoo Kazah! Kazoo Kazah Hoop la! Hoop la! State University! Rah! Rah! Rah!”
- Iowa State College*.—“A-M-E-S! Rah! Rah! Rah! Rah! A-M-E-S! Rah! Rah! Rah! Rah! Hoo Rah! Hoo Ray! Ames College! I-O-A!”
- Iowa Wesleyan University*.—“Rah, rah, rah! Hip, hi, hoo! I.-W.-U.!”
- Johns Hopkins University*.—“Hullabaloo, Kanuck, Kanuck! Hullabaloo, Kanuck, Kanuck! Hoorah! Hoorah! J. H. U.!”
- Kansas Wesleyan University*.—“Hoorah, Hoorah, Wesleyan, Wesleyan, Rah, Rah, Rah!”
- Kenyon*.—“Hika, Hika, Hika, K-e-n-y-o-n, Kenyon, Kenyon!”
- King*.—“K. C. Ow! K. C. Ow! K. C. Bristol! Wow-Wow-Wow!”
- Knox*.—“Zip rah! Boom rah! Knoxia! Knoxi! Knox! KNOX! KNOX!”
- Lafayette* (Pa.).—“Rah! Rah! Rah! Lafayette!”
- Lawrence University*.—“L-A-W-R-E-N-C-E! rah, rah, boom, rah, rah!”
- Lehigh University*.—“Hoo-rah-ray! Hoo-rah-ray! Ray, ray, ray, Lehigh, Lehigh, Lehigh!”
- Leland Stanford, Jr., University*.—“Rah-Rah-Rah (twice) Rah! Rah!—Stanford!”
- Lenox*.—“'Tis no lle, 'tis no bluff! Lenox College pretty hot stuff!”
- Lincoln University* (Ill.).—“Ki-yi-Moc-Kohn, Ra-ha—Lincoln!”
- Livingstone*.—“Rah-rah-re, Who are we? Don't you see, Liv-ing-stone-stone-stone!”
- Lombard University*.—“Ra, re, ri, ro! Ring, ching, rang! Lombard! Lombard! Zip, boom, baug!”
- Louisiana State University*.—“Rah! Rah! Rah! Rah! Rah! Ree! Louisiana! Louisiana! State Uv.!”
- Manhattan*.—“Rah! Rah! Rah! (three times) Manhattan!”
- Marietta*.—“Rah! Rah! Rah! Rah! Rah! Rah! Ma-ri-et-ta, Rah! Rah! Rah!”
- Maryville*.—“Howee, how! Chilhowee! Maryville, Maryville, Tennessee!”
- Massachusetts Agricultural*.—“Rah! Rah! Rah-rah-rah! A-G-G-I-E-Rah! Rah, Rah-Rah-Rah!”
- Mass. Inst. Tech.*—“M. I. T. rah, rah, rah! M. I. T. rah, rah, rah! M. I. T. rah, rah, rah! Technology!”
- McKendree*.—“Rah, rah, rah! Hip, hi, he! Zip, boom! Rip, boom! McKen-dree!”
- Mercer University*.—“Rah! Rah! Rah! Uni-vee Siss-Boom-Bah! Ver-si-tee Mercer!”
- Miami University*.—“Rah—Rah—Rah—M-I-A-M-I—Mi-am-I, Miami!”
- Michigan Agricultural*.—“Hip! Hip! Hurrah! Hurrah! Hurrah! Uzz! Uzz! Uzz! M. A. C.!”
- Middlebury*.—“Midd', Midd', Middlebury! rah, rah, rah!”
- Midland*.—“Rah! Rah! Rah! Mid! Land! Ah!; Zip! Kan! Boomerang!; Rah! Rah! Rah! R-a-y!”
- Mills (Woman's)*.—“Mills College, Zip, boom, bah! M. C. M. C., rah, rah, rah!”
- Milton*.—“Hoorah, Hoorah, for old Milton! Hoorah every daughter and son!”
- Mississippi A. & M.*—“Hullabaloo, zip, bah! Hollabaloo, rip, rah! Hollaboom, sollyboom, lee, rah, zis! Lee, rah, ris! Lee, rah, ziss! A. & M. Miss.!”
- Missouri Valley*.—“Wah-hoo-wah! Wah-hoo-wee! Hoo-rah! Hi-rah! M. V. C.!”
- Monmouth*.—“Ho rah Ho roo Depa la Depa loo Rah si ki yi, Hot, Cold, wet or dry, get there Eli, Monmouth!”

- Moore's Hill*.—"Alle-ka-zook! Koax! Koax! Terre-o-rex! O-rex! O-rex! Hulla-ba-loo! Hulla-ba-la! Moore's Hill! Moore's Hill! Rah! Rah! Rah!"
- Mt. Holyoke*.—"H-o-l-y-o-k-e, Hol-yoke, Hol-yoke, are we!" (The cheer is sung by the girls.)
- Mt. St. Mary's*.—"Rah! Rah! Rah! Siss! Boom! Ah! Mt. St. Mary's! Ha! Ha! Ha!"
- Mt. Union*.—"Karo, Kēro, Kiro, Kēē! Rah, Rah, Rah, for M. U. C.! Alikezenion, Alikezunion! Rah, Rah, Rah, for old Mt. Union!"
- Muhlenberg*.—"Rah, Rah, Rah, Rah, Muhlenberg!"
- Nebraska Wesleyan University*.—"Boom rah boom rah an, We We Wesleyan! Ne Ne Nebraskan O—man!"
- Nevada State University*.—"Wah Hoo Wah! Zip Boom Ah! Rah Rah Rah Nevada!"
- New York University*.—"Rah! Rah! Rah! N. Y. U., Siss! Boom! Ah! New York! New York! New York!"
- Niagara University*.—"Rah, Rah, Rah, Ray, Ray, Ray, N-I-A-G-A-R-A!"
- Northwestern College (Ill.)*.—"Rah! Rah! Hoo-Rah! Rah! Rah! Hoo-Rah! Who Rah? You Rah, North-Western, Rah! Rah! Rah!"
- Northwestern University (Ill.)*.—"Rah! Rah! Rah! U. Northwestern (Rah! five times)."
- Notre Dame University*.—"Rah! Rah! Rah! Rah! Rah! Rah! The Gold, The Blue, Hoorah! Hoo! Notre Dame, Notre Dame, N. D. U.!"
- Oberlin*.—"Hi!-O!-Hi, O!-Hi! O! Hi! Hi! O! Hi, O-ber-lin!"
- Ohio State University*.—"Wahoo, Wahoo, Rip, Zip, Bazoo! I yell, I yell, for O. S. U.!"
- Ohio University*.—"Wah-hoo, wah-hoo, Rip, rah, O-U-O-hi-O-U! Tiger!"
- Ohio Wesleyan University*.—"O-we-wi-wow! A-la-ka-zu-zi-zow! Ra-zee-zi-zu! Viva! viva! O. W. U.!"
- Ottawa University*.—"Ottawa, Ottawa! Hoorah, Hoorah, Ottawa 'Versity! Rah, Rah, Rah!"
- Otterbein University*.—"Whoop, Hip, Whoop, Whoop! O. U., O. U.! Hi-O-mine, Ot-ter-bein; Whoop, Hip, Whoop!"
- Oxford*.—"Boom-a-ling, Boom-a-ling Rip-Rah-Ro, Oxford College, O-hi-o!"
- Park*.—"P-A-R-K! Rah, rah, rah! Sis, boom, ah! Booma-lacka, booma-lacka! Boom! Park! Boom!"
- Parsons*.—"Hi, yi! Hi, yi! Hippycanuri! Parsons!"
- Pennsylvania College*.—"Brackey Corax, Corix, Koree, Brackey Corax, Corix, Coree, Heigh Oh! Umpty Ah! Hulla Belloo, Bellee, Bellah, Gettysburg, Gettysburg, Gettysburg! Rah, Rah-Rah!"
- Pennsylvania Military*.—"Hurrah! Hurrah! Hurrah! P. M. C. C., Attention! Halt!"
- Pennsylvania State*.—"Yell, yell, yell, again, we're from the land of William Penn! State! State! State!"
- Polytechnic Institute (Brooklyn)*.—"Rah! Rah! Rah! Poly!" (three times.)
- Portland University*.—"Kang-a-ga-ra, ga-ra, ga-zoom! Portland 'Varsity' zip-ra-boom!"
- Princeton University*.—"Hooray! Hooray! Hooray! Tiger! Sis! Boom! ah! Princeton!"
- Purdue*.—"Purdue! Purdue! Rah-rah! Rah-rah! (twice) Hoo-rah! Hoo-rah! Bully for old Purdue!"
- Randolph-Macon College*.—"Rip, rah, rah! rip, rah, rah! Randolph-Macon Virginia! Callero! Callero! Yah-Yah-Yah!"
- Rensselaer Polytechnic Institute*.—"Rah, rah, rah! Rah, rah, rah! Rensselaer!"
- Roanoke*.—"Rah! Rah! Rah! R—O—A! Rah Rah! Rah! N—O—K! Roanoke!!!"
- Rollins*.—"Rah! Rah! Rah! Rollins!"
- Rose P. I.*.—"R-P! R-P! Rah-Rah! Rah-Rah! (Hoo-rah! three times) Rose Polytechnic! Rah! Rah! Rah!"
- Rutgers*.—"Rah! rah! rah! bow-wow-wow! Rutgers!"
- State University of Iowa*.—"Haw, Haw, Hawk: Hi, Hi, Hi; Hawkeye, Hawkeye; S. U. I.!"
- State University (Ky.)*.—"S. U.—Rah, rah, rah, rah (twice) Hurrah! Hurrah!! State University—Rah, rah, rah!"
- Stevens Institute of Technology*.—"Boom—rah! Boom—rah! Boom-rah-Stevens!"
- St. Francis Xavier*.—"Rah—rah—rah! Rah—rah—rah! X-A-V-I-E-R! Xavier!!"
- St. John's (Md.)*.—"Rah, Rah, Rah! St. John's!"
- St. John's (N. Y.)*.—"Rah! Rah! Rah! F-O-R-D-H-A-M! Fordham! and Rah-Rah-Rah—F-O-R-D-ham-ham-ham, Fordham!"
- St. Lawrence University*.—"Rah, rah, rah, Rah, rah, rah, Rah, rah, rah, Laurentia!"
- St. Mary's (Kan.)*.—"Hoop-la, Hoop-la, Who can guess? S-t. M-A-R-Y-S!"
- Swarthmore*.—"Rah Rah! Rah Rah Rah! Rah Rah! Rah Rah Rah! Swarthmore!"
- Syracuse University*.—"Hip, Hoo, Rah! Hip, Hoo, Rah! Syracuse! Syracuse! Rah-rah-rah!"
- Tabor*.—"Boom-a-lack-a, boom-a-lack-a, Bow-wow-wow, Ching-a-lack-a, ching-a-lack-a, chow-chow-chow, Boom-a-lack-a, Ching-a-lack-a, Who are we, Who's from Tabor, We, we, we!!!"
- Talladega*.—"Ra ra ra, Ra ra ra, Talladegah, Alabama, R-r-r-r-a!"
- Tarkio*.—"Rip, bang! hip ho! get there, rain or snow! Set fire! Tarkio!!!"
- Trinity, Hartford*.—"Trinity! Trinity! boom-rah! boom-rah! Trinity!"
- Tufts*.—"Rah rah rah, rah rah Tufts! T-u-f-t-s—Rah rah rah!" (twice.)
- Tulane University*.—"Rah! Rah! Zip! Boom! Ah! Rah! Rah! Tulane!"
- University of Alabama*.—"Rackety, Yack, de Yack, de Yack! Rackety, Yack, de Yack, de Yack! Hullabaloo, Hullabaloo, How'd'you Do, How'd'you Do, V-a-r-s-i-t-y!"
- University of Arkansas*.—"Boomalacka Boomalacka wah whoo rā, Razzle dazzle gobble, gobble U. of A.!"
- University of California*.—"Ha! Ha! Ha! Cal-iforni-a! U. C. Berkeley! Zip! Boom! ah!"

- University of Chicago*.—"Chicago, Chicago, Chicago, go! Go it Chica-go it Chica-go it Chica-go!"
- University of Cincinnati*.—"Heila, Heila, Heilagan! Heila, Heila, Ha! Cincinnati Varsity, Rah! Rah! Rah!"
- University of Colorado*.—"I yell, all yell, we come pell-mell, Boom-rah, ra-zoo-Colorado State U.!"
- University of Denver*.—"U, U, U, of D, Den-ver, 'Ver-si-ty! Kai Gar Wa-hoo Zip boom—D. U.!"
- University of Georgia*.—"Hoo-rah-rah! Hoo-rah-rah! Rah! Rah! GEORGIA!"
- University of Idaho*.—"Rah! Rah! Rah! (twice) Idaho! Id a ho! Boom! Bay! Bah!"
- University of Illinois*.—"Rah-hoo-rah, Zip boom ah! Hip-zoo! rah-zoo! Jimmy, blow your bazoo! Ipzidyiki, U. of I.! Illinois!!!"
- University of Kansas*.—"Rock-Chalk! Jay-Hawk! K. U.!"
- University of Maine*.—"Rah, rah, rah, Rah, rah, rah, Rah, rah, rah, Maine!"
- University of Michigan*.—"U. of M. Hurrah! Hurrah! Hōo-ráh! Hōo-ráh! Michigan! Michigan! ráh! ráh! ráh!"
- University of Minnesota*.—"Rah, rah, rah, Ski-U-mah—hoo-rah! hoorah! Varsity—Varsity! Minne-so-ta!"
- University of Mississippi*.—"Rah! Rah! Rah! Sis boom bah! Mississippi, Mississippi, Rah, rah, rah!"
- University of Missouri*.—"Tiger! Tiger! M. S. U. (three times) Rah!"
- University of Nashville*.—"Rickety ix, Ski ix, Ski ix, Rah Rah Rah! Rickety ix, Ski ix, Ski ix, Rah Ha Rah, Nashville!"
- University of Nebraska*.—"U, U, Uni-Ver-Ver-Ver-Si-ty-Ne-bras-ki-Oh My!!!"
- University of North Carolina*.—"Yackety yack Hooray hooray! (twice) Carolina Varsity Boom Rah, Boom Rah, Car-o-li-na!"
- University of North Dakota*.—"Odz-dzo-dzi! Ri-ri-ri! Hy-ah! Hy-ah! North Dakota!" and Sioux war cry.
- University of Oklahoma*.—"Hi Rickety Whoop te do, Boomer! Sooner! Okla. U.!"
- University of Omaha*.—"Rah, rah, hah! Zip! Boom! Bah! U-ni-versity O-ma-ha!"
- University of Oregon*.—"Rah Rah Rah! Rah Rah Rah! Rah Rah Oregon!"
- University of Pennsylvania*.—"Hoo-rah! Hoo-rah! Hoo-rah! Penn-syl-va-ni-a!"
- University of Rochester*.—"Hoi, Hoi, Hoi, Rah, Rah, Rah! Rochester!"
- University of South Dakota*.—"Da-ko-tá, Da-ko-tá, Uni-vi of Da-ko-tá!"
- University of Tennessee*.—"U. of T.! Rah! rah! Rah! rah! (twice) Hur-rah! Hur-rah! Tennessee! Tennessee! Rah! rah! rah!"
- University of Texas*.—"Hullabaloo! Hooray, Hooray! (twice) Hooray! Hooray! Varsity! Varsity! U. T. A.!"
- University of the Pacific*.—"Hi! Ho! He!! Oh! U. P. P-a-c-i-f-i-c University!" (three times.)
- University of the South*.—"Rah! Rah! Ree! Vár-Sí-Teé, Hey, hip! Hey, hip! Sé-Wá-Née! Sewánee, Rah! Se-Wá-Nee, Rah! Sewánee, TIGER, S-s-s-s, Boom! Ah-h-h-h-h!"
- University of Utah*.—"Rah, Rah, Rah! (three times) Utah!"
- University of Vermont*.—"Rah, rah, rah! Rah, rah, rah! Vermont, Vermont! Rah, rah!"
- University of Virginia*.—"Wah! hoo! wah! Wah! hoo! wah! U-n-i-v. Virgin-i-a!"
- University of Washington*.—"U. of W.! Hiah, hiah! U. of W.! Siah, siah! Skookum, skookum, Wash-ing-ton!"
- University of Wisconsin*.—"U-Rah-Rah-Wis-con-sin!" (repeated three times with a tiger.)
- University of Wyoming*.—"Rah Rah Rah! Zip boom Zee! Let 'er go, let 'er go Varsity!! y-y-Wy-o-ming!!!"
- U. S. Military Academy*.—"Rah! Rah! Ray! Rah! Rah! Ray! West Point! West Point! Army!"
- Upper Iowa University*.—"Hawkeye! Hawkeye! U! I! U!!"
- Vanderbilt University*.—"Vanderbilt, Rah, Rah! (twice) Hoo Rah Hoo Rah Varsity Varsity Rah, Rah, Rah!"
- Virginia Polytechnic Institution*.—"Polytechs! Vir-gin-i-a! Rae! Ri! V. P. I.!"
- Wabash*.—"Hoorah! Hoorah! Hoorah! Smash! Hurrah for the Scarlet of Old Wabash! Hip Skitty Bow-wow, Wah-hoo-wah! Wabash! Wabash! Rah! Rah! Rah!"
- Wake Forest*.—"Rah! Rah! Rah! Whoop-la Ve 'Or et Noir' and W. F. C.!"
- Washburn*.—"Rah, Rah! Rah, Rah, Rah! Washburn! Washburn! Rah, Rah, Rah!"
- Washington and Jefferson*.—"Wich-i-Koáx, Koáx, Koáx! Wich-i-Koax, Koax, Koax! W. and J. Boom!"
- Wesleyan University*.—"Rah! Rah! Rah! Rah! Wes-ley-an-a! Rah! Rah! Rah! Rah! Rah!"
- Western Maryland*.—"Rah, rah, rah! Rah, rah, ree! Rah, rah, hullabaloo! W-M-C!"
- Western Reserve Union*.—"R-e-s-e-r-v-e, Rah, Rah, Re-serve!" (three times.)
- Western University of Pennsylvania*.—"Alleghenee! Genack! Genack! Hooray! Wup!"
- Westminster (Fulton, Mo.)*.—"Rah! Rah! Rah! Oh! yes, Sir! Vive-la, Vive-la, Westminster!"
- Westminster (Pa.)*.—"Rah, rah, rah, Oh—yes-sir, vive la, veve la West-min-ster!"
- West Virginia University*.—"Rah! Rah! Rhee! W. V. U.! Sis Boo Mah, Tiger!!"
- Wheaton*.—"Rah! Rah! Rah! (twice) Wheaton! Wheaton! Rah! Rah! Rah!"
- Whitman*.—"Breke-Ke-Kex, Koax, Koax (bis), ho-up, ho-up, parabaloo, Whitman!"
- Wilberforce University*.—"Rha! Rha!! Rha!!! Wilberforce! Wilberforce! Rha! Rha!! Rha!!!"
- Willamette University*.—"Rah, Rah, Rah, Zip, boom, bah, Old Willamette, Ha, ha, ha!"
- William Jewell College*.—"Yah Yah, Wow, Wow, Wee; Yaka, Zu Zi Zee; Vivela, Vivela W. J. C.!"

Wofford.—"Hackey! Hackey! Hackey! Sis-boon! Rah! W. C., Rah! Rah! Rah!"

Worcester Polytechnic Institute.—"Rah, Rah, Rah! Worcester Polyteck! Polly, Wolly, Olley, Molly, Worcester Polyteck!"

Yale University. *—"Rah, Rah, Rah! Rah, Rah, Rah! Rah, Rah, Rah! Yale!"

Yankton.—"O! Y! Hah! Hah! Hah! Yankton! Yankton! Rah! Rah! Rah! Hah! Wah! Bish! Boom! Bah! Yankton! Yankton! I-Lank-ton-wah!"

College Girl, The.—2243.

COLLEGES.—

(Lat., *collegium*, a corporation or fraternity.) A term commonly used as synonymous with universities, though in England, especially, there is a notable difference. Broadly interpreted, they are institutions of learning, generally endowed with revenues, and governed by a corporate body of professors under a president or chancellor. The English idea of a college is that of a corporation independent of the university, whose function in relation to the college or colleges is that of an examining and degree-conferring body. In the case of the famous English colleges of Oxford and Cambridge (of which Oxford has 23, and Cambridge has 18), the college, under the university, is an academic institution, having usually its own revenues, with a governing and teaching body of its own, and whose teachers and students live in residence together in particular buildings in a partly monastic way. Elsewhere as we have said, the college is more nearly synonymous with the university, and where they separately exist, as in Scotland, the two are united under the same government to form the university. Colleges, for academic purposes, came first to be founded in Europe about the close of the 12th and the beginning of the 13th centuries. In the United States, where our colleges were at first founded on the English model, the earliest institution was Harvard, opened in 1638 at Cambridge, Mass., followed by William and Mary College, at Williamsburg, Va., in 1693, and by Yale, at New Haven, Conn., in 1701. Washington and Lee Univ., Lexington, Va., dates from 1749, and Hampden-Sidney College, Va., from 1776. Princeton Univ. was founded in 1746, Rutgers College, New Brunswick, N. J., in 1766, Dartmouth College, Hanover, N. H., in 1769, Columbia Univ., New York, in 1754, the Univ. of Pennsylvania, Philadelphia, in 1740, Brown Univ., Providence, R. I., in 1764, and Georgetown (R. C.) Univ., Washington, D. C., in 1791. The other institutions for higher learning in the United States that date from the 18th century are St. John's Coll., Annapolis, Md., which had its foundation in 1789, Washington Coll., Chestertown, Md.

* The difference between the cheers of Harvard and Yale lies in the length of time it takes to give them. Harvard's cheer is long and deep; Yale's quick and sharp.

(1783), Williams Coll., Williamstown, Mass. (1793), Univ. of N. Carolina, Chapel Hill, N. C. (1795), Univ. of Nashville, Nashville, Tenn. (1785), Dickinson Coll., Carlisle, Pa. (1783), Greenville (Presb.) Coll., Tusculum, Tenn. (1794), and Washington (Presb.) College, Tenn. (1795). The other large and successful eastern colleges, and all of the western and southern institutions, are of later date, such as Johns Hopkins Univ., Baltimore, Md. (1876), Amherst Coll. (1821), Cornell Univ., Ithaca, N. Y. (1868), Univ. of Rochester, N. Y. (1850), Coll. of the City of New York (1849), Western Univ. of Penn., Pittsburg, Pa. (1819), Lafayette (Presb.) Coll., Easton, Pa. (1832), Lehigh Univ., So. Bethlehem, Pa. (1866), Univ. of Virginia, Charlottesville, Va. (1825), Bowdoin Coll., Brunswick, Me. (1802), Univ. of Maine, Orono, Me. (1868), Boston Univ. (1872), Columbian Univ., Washington, D. C. (1821), Univ. of California, Berkeley, Cal. (1869), Leland Stanford Jr. Univ., Cal. (1891), Univ. of Colorado, Boulder, Col. (1877), Univ. of Georgia, Athens, Ga. (1801), Indiana State Univ., Bloomington, Ind. (1820), Univ. of Illinois, Urbana, Ill. (1868), Univ. of Chicago (Bapt). Chicago (1892), Northwestern Univ., Evanston, Ill. (1855), Lake Forest (Presb.) Univ., Ill. (1876), State Univ. of Iowa, Iowa City (1855), Univ. of Kansas, Lawrence, Kan. (1866), Berea College, Berea, Ky. (1853), Tulane Univ., New Orleans, La. (1834), Univ. of Mich., Ann Arbor, Mich. (1837), Univ. of Minnesota, Minneapolis, Minn. (1868), Washington Univ., St. Louis, Mo. (1859), Univ. of Nebraska, Lincoln, Neb. (1871), Syracuse Univ., Syracuse, N. Y. (1871), Oberlin Coll., Oberlin, O. (1833), Univ. of Cincinnati, Cincinnati, O. (1874), Univ. of Texas, Austin, Tex. (1883), Univ. of Vermont, Burlington, Vt. (1800), Univ. of Wisconsin, Madison, Wis. (1849), Univ. of Arkansas, Fayetteville, Ark. (1872), State Univ. of Missouri, Columbia, Mo. (1850), New York Univ., N. Y. City (1831), Western Reserve Univ., Cleveland, O. (1826), Ohio Univ., Athens, O. (1809), Ohio State Univ., Columbus, O. (1870), Univ. of Wooster, O. (1870), Pennsylvania State Coll., Pa. (1859), Southwestern Univ., Georgetown, Tex. (1873), Vanderbilt Univ., Nashville, Tenn. (1875), Univ. of Utah, Salt Lake City (1850), and West Va. State Univ., Morgantown, W. Va. (1868). Many of these universities and colleges are well-endowed, having been the recipients of handsome bequests or gifts from wealthy philanthropists, such as Mr. John D. Rockefeller, the founder of the Univ. of Chicago, who has contributed to its establishment and endowment an aggregate of \$10,000,000, besides his princely gifts to other institutions. Other noted benefactors of our universities are Dorman B. Eaton, Wm. E. Dodge, Marshall Field, Leland Stanford, Jr., Johns Hopkins, W. D. Sloane, Ezra Cornell, and Andrew Carnegie, besides many benefactors among women who like Mrs. Phœbe A. Hearst, have substantially aided some universities and many colleges for women in the United States.

Colleges.—Continued

HARVARD UNIVERSITY.—The oldest and now one of the best equipped institutions for higher education in the United States, is located at Cambridge, Mass., where it was founded in 1636. It is non-sectarian and in the summer schools only is co-educational. It includes Harvard College, the Graduate School, Lawrence Scientific School, Schools of Law, Medicine, Dentistry, Divinity, Agriculture, and Veterinary Medicine, together with Harvard annex for the instruction of women, the Summer Schools, and Bussey Institute. Besides the library, which has a collection of nearly 600,000 volumes and over 400,000 pamphlets, there are Museums of Comparative Zoölogy, known as the Agassiz and the Peabody Museums, and a fine Memorial Hall, built in honor of the alumni who fell in the Civil War. The president is Charles Wm. Eliot, I.L.D.; the teaching staff, including instructors, number about 500, while there is a student attendance of 3,912, or including that of the summer schools close upon 5,000. The value of the assets of the corporation is in the neighborhood of \$10,000,000, and the annual estimated revenue is now nearly one and a half million dollars. Since its foundation Harvard has conferred over 21,000 degrees upon graduates.

YALE UNIVERSITY, New Haven, Conn., is the third institution of higher learning, in point of origin, in the United States, and ranking with Harvard among the great universities of the New World. In Oct., 1901, it celebrated with much éclat the two hundredth anniversary of the granting of its charter, procured for it through the instrumentality of its early benefactor, Elihu Yale, after whom, in 1745, the institution received its name of Yale College, subsequently changed (in 1887) to Yale University. Since its foundation, Yale has had 13 presidents, its latest head being Arthur T. Hadley, LL.D., formerly professor of Political Science in Yale, who succeeded President Timothy Dwight in 1899. The university has a total teaching staff of 250 professors and lecturers, and a body of attending students of 2,500. It has over \$4,000,000 of productive funds, and has had lately many large gifts and bequests in aid of its several departments, which include law, theology, medicine, philosophy, and the arts, music and the fine arts, science (taught in the Sheffield Scientific School), etc. It has several special libraries, comprising about 260,000 volumes, the Peabody Museum of Natural History, and an observatory, each separately endowed, as well as many special lectureships and administration and residential buildings. It has also a School of Forestry and art galleries for the instruction of students of both sexes in the Fine Arts.

PRINCETON UNIVERSITY, long known as the College of New Jersey, and founded in 1746, was first opened at Elizabethtown and afterwards removed to Newark, and finally to Princeton, N. J. Here, in 1754-55, was erected

for its use, Nassau Hall, the first of its buildings to be utilized as a college, and subsequently as a university. It was long supported by the Presbyterian body, and under the brilliant presidency of the late Dr. McCosh it made great strides, especially in the departments of philosophy, language and literature, and mathematics and science. In 1896, Princeton celebrated its sesquicentennial, the 150th anniversary of its foundation. The college has a large scientific department, known as the J. C. Green School of Science, founded in 1873, and offers instruction in it in electrical and civil engineering, as well as in general science. The university has an endowment now exceeding \$2,500,000, with a faculty numbering about 100, and a student body close upon 1,300 in number. It has, moreover, endowed scholarships (106 in number) for the benefit of students in the academic department. Among its recent buildings are a number of new dormitories, Blair Hall and the Stafford Little Hall among them, together with an infirmary, a good library, laboratory, museum, and other equipments necessary to the status of a university. Its present president is Francis L. Patton, D.D. LL.D.

COLUMBIA UNIVERSITY, situated in New York City, was founded in 1754 as King's College, and received its charter from George II. The institution has had a long and prosperous career, and is an amply equipped and now a richly endowed university, the value of its new grounds and buildings (now located in a tract of 18 acres between 116th and 120th Street, New York) being close upon \$9,000,000, with productive funds of about a like amount. Besides its regular collegiate course, the university gives instruction in the various departments of law, medicine, philosophy, political science, pure science, including a school of mining. In 1900, Barnard College for Women became affiliated with it. From the organization of Columbia, nearly 16,000 have been graduated from it. Its late head was the Hon. Seth Low, LL.D., who in 1901 resigned to become mayor of New York City. It has a faculty over 350 in number, including lecturers and tutors, with a student attendance of about 4,250. The library comprises 300,000 volumes. Besides the student body above mentioned, 750 receive instruction during the year through the Teachers' College Extension courses. Columbia has of late received many large bequests, including large benefactions, among others from J. D. Rockefeller, Dorman B. Eaton, Mr. and Mrs. W. D. Sloane, and from several anonymous givers.

BROWN UNIVERSITY.—Founded in 1764 as "Rhode Island College," and for a time under the control of the Baptist denomination. It is now undenominational. In 1770, it was removed from Warren, R. I., to Providence, R. I., its present location, and its name was changed to Brown University in honor of Nicholas Brown, a philanthropic merchant-graduate, who gave about \$100,000 to its endowment. Its head is W.

Colleges.—Continued

H. P. Faunce, D.D., and its faculty numbers 77 professors and lecturers, with a student attendance numbering nearly 800, including 150 in the women's college. Its graduates number over 4,500. The value of its grounds and buildings is close upon \$1,180,000, while it has about \$850,000 of productive funds. The library comprises 100,000 volumes. The increase of the endowment fund of the university has of recent years been highly gratifying, Mr. J. D. Rockefeller being a large contributor. Gifts have also of late been received, in the form of a dormitory for the women's college, while Maxcy Hall, destroyed by fire, has been rebuilt, and a new library building is in contemplation. Lyon Hall is now also being repaired after a destructive fire in it. An observatory, equipped with a powerful telescope, is also among the modern equipments of the institution.

JOHNS HOPKINS UNIVERSITY, Baltimore, Md., was founded in 1866 by the munificence of a citizen of the Maryland capital, whose name it bears. It was organized for work in 1876, and has had a successful career under its president (now resigned) Daniel C. Gilman, LL.D. A new site for the institution has been recently offered, conditional on the securing of an endowment fund of a million dollars, which has already been made up by its friends and graduates. The teaching staff numbers 132, including nearly 50 professors and lecturers in Johns Hopkins Medical School. During the twenty-five years of its existence, the university has had close upon 4,000 students, of whom about 2,900 have followed graduate studies. Since 1878, when degrees were first conferred by the institution, nearly 700 have received the B. A. degree, 140 the M. D. degree, and 575 the Ph. D. degree. The library has nearly 100,000 volumes and as many pamphlets. Under the auspices of the university, the following publications are issued: the American Journal of Philology, journals of Chemistry, Mathematics, Experimental Medicine, Terrestrial Magnetism, together with Modern Language Notes, Studies in Historical and Political Science, Biological Memoirs, and Contributions to Assyriology. The value of the present grounds and buildings of the university is estimated at \$750,000, while it has \$3,500,000 of productive funds for its income and expenditures. The number of its students in attendance is 650.

UNIVERSITY OF CHICAGO.—Founded by the munificence of Mr. John D. Rockefeller, in Chicago, Ill., and incorporated in 1890. The university began work in 1892, the buildings occupying a tract of land fronting on Midway Plaisance, between Washington and Jackson parks. Besides the academic and graduate work department, there are schools of law, medicine, divinity, education, technology, engineering, fine arts, and music. It encourages also university extension course work, and for this it has the equipment of an ample library, with 320,000 volumes, extensive laboratories and

museums, with the adjuncts of a university press and allied affiliations. Besides the president, W. R. Harper, LL.D., professor of Semitic languages and literature, there is a faculty numbering about 300, including instructors, and a student attendance of 3,520. The total endowment of the university now exceeds \$10,000,000, and its annual income is close upon \$800,000. Large additions to the university buildings are now contemplated, including a new dormitory, university commons, café, and club houses, and a printing press building, etc.

PENNSYLVANIA, UNIVERSITY OF.—This institution, located at Philadelphia, and chartered so recently as 1875, ranks among the older and well-equipped American universities. It is nonsectarian and coeducational in its graduate department, and is specially strong in law, medicine, and science. The property of the university, including real estate, buildings, library, etc., was in 1900 valued at close upon eight million dollars. It has lately completed a new museum of science and art, a memorial tower and gateway, new dormitories, and it has in contemplation the erection of a university chapel and a new spacious dining hall, with a final accommodation in dormitories for 1,000 students. It has lately received gifts also, to the value of \$250,000, for the erection of a new physical laboratory. Its teaching force, under Provost C. C. Harrison, LL.D., is 260 in number, and its student attendance is close upon 2,755, enrolled as follows: In the college proper (academic course) 970; department of law, 315; philosophy, 175; medicine, 690; dentistry, 490; veterinary medicine, 50; laboratory of hygiene, 20. The library comprises 200,000 volumes, and about 50,000 pamphlets. It has a rich and interesting ethnological collection, and has given much practical aid in the work of Biblical archæology. The Wm. Pepper Hall and the Towne Scientific school are among the useful equipments of the University.

ILLINOIS, STATE UNIVERSITY OF, Urbana, Ill., opened in 1868, has a faculty of about 200 professors and instructors, under its president, Andrew Sloan Draper, LL.D. It is coeducational, but nonsectarian, and has, besides its preparatory and academic courses, departments in agriculture, in law, medicine, and pharmacy. In 1900, the number of students in attendance, in all departments, was over 2,000. It has also schools of engineering, science, library science, and music. The university assets are estimated at \$1,600,000, with a yearly income of about \$500,000. Part of this income is derived from a 5 per cent. interest, paid by the State, on a land grant by the national government of 480,000 acres to the university. The university library contains 45,000 volumes and about 4,000 pamphlets, and the libraries of the State Laboratory of Natural History and of the Agricultural Experiment Station contain, in addition, about 10,000 volumes and 17,500 pamphlets. The institution was in 1867 incorporated as the Illinois Industrial University and opened in the follow-

Colleges.—Continued

ing year: in 1885 the Legislature of the State changed its name to the present one—University of Illinois.

MICHIGAN, UNIVERSITY OF, Ann Arbor, Mich., was founded in 1837, and opened in 1841. It is one of the most successful, as well as one of the earliest, of the State institutions for higher education in the west. It has an annual income of about \$560,000, the State legislature having recently raised the appropriation for its aid from the tax of one-sixth of a mill to that of one-fourth. Its law department has lately been supplied with new buildings, with commodious lecture rooms and a library. It has a Homeopathic medical college, with hospital attached, and a large Dental department; and has had just completed, for the use of women, the Barbour Gymnasium. The campus covers 40 acres, on part of which it is designed to erect a new science building, and one for the use of engineering students. Besides the academic course, and courses in law, medicine, surgery, dentistry, pharmacy, homeopathic medicine, and engineering, it supplies instruction in marine architecture, in the designing of vessels for service on the Great Lakes. The library comprises close upon 150,000 volumes. It has a teaching staff, including professors and instructors, of 160, under the president, Jas. B. Angell, LL.D., with a student attendance, including those of the summer session, of 3,300.

WISCONSIN, UNIVERSITY OF.—Sited at Madison, Wis., a nonsectarian and coeducational institution, was organized in 1848 and reorganized in 1866. Besides the college of arts and science, it has a department of university extension, a summer school, and faculties in music, law, agriculture, mechanics, engineering, and pharmacy. It has an income of about \$550,000 per annum, derived from three sources—a state tax, federal grants, and private gifts or bequests. The grounds of the university comprise 300 acres, on which are erected thirteen buildings. It has a faculty of 151 professors and lecturers, under its president, Chas. Kendall Adams, LL.D., and a student attendance of over 2,400, distributed as follows: College of letters and science, 1,096; agriculture, 382; mechanics and engineering, 327; law, 231; pharmacy, 32; and music 193, besides a considerable attendance in the summer school. The library comprises 56,000 volumes, housed in a spacious and commodious building. The corporation of the University contemplate at an early day to ally with it a medical school or college, to be situated at Milwaukee, and to found a department of forestry, an art greatly needing instruction in a state like Wisconsin.

AMHERST COLLEGE, Amherst, Mass.—An institution of the Congregational denomination, founded in 1821. It has a faculty of 35 professors, under its president, George Harris, D.D., and a student body of 400. The value of its grounds and buildings is in the neighborhood of \$850,000, while it has productive funds for its

annual expenditure of close upon one and a half million dollars. The library contains about 75,000 volumes. Besides the library, the college has an art gallery, a museum of Indian relics, Biblical antiquities, and minerals, an observatory, memorial chapel, gymnasium, and a park and playground of nearly thirty acres.

ARMOUR INSTITUTE OF TECHNOLOGY, Chicago, Ill., founded by the beneficence of Philip D. Armour in 1893, and of which the Rev. D. P. W. Gunsaulus was for some years its president. Its teaching body, professors and instructors, number 70, and its attending students are close upon 1,200. The value of its grounds and buildings are estimated at \$2,000,000, and it is equipped with a good library of nearly 16,000 volumes. Connected with the enterprise and aided financially by the late Mr. P. D. Armour was a city mission, and a group of apartment buildings, rented at a moderate sum to workmen and their families, and known in Chicago as "the Armour flats."

BOWDOIN COLLEGE, Brunswick, Me., under the presidency of Rev. De Witt Hyde, D.D., was founded in 1794 and opened in 1802. Besides its arts department, it has a medical school in affiliation with the College, and on its rolls numbers among its graduates, Longfellow, Hawthorne, Chief-Justice M. W. Fuller, and ex-speaker T. B. Reed. It has a faculty of 36 professors and a student attendance of nearly 400. The library contains about 70,000 volumes, and the College is equipped also with an art gallery and with chemical and philosophical apparatus. The value of its grounds and buildings is \$500,000, and it has productive funds amounting to nearly \$650,000.

BOSTON UNIVERSITY, Boston, Mass., received its charter from the State in 1869 and was opened in 1872. It is under the control of the Methodist Episcopal denomination, its president being the Rev. W. F. Warren, LL.D., S. T. D. It has the reputation of doing good work in its graduate and professional departments, under its professors and instructors, who number in all about 190. Its student attendance averages 1,450. The Mass. Agricultural College at Amherst is affiliated with the institution. The university owns a good library, of about 25,000 volumes, and possesses productive funds of the value of one million dollars. The value of its grounds and buildings is \$850,000.

CALIFORNIA, UNIVERSITY OF.—Sited at Berkeley, Cal., was established in 1868 by act of the state legislature, and is supported by an appropriation in the form of a state tax. Part of the machinery of the University, in addition to its graduate department, colleges of letters, commerce, science (social, natural, and applied) is an agricultural college, which receives aid from the Federal Government. It has also departments of mechanics, mining, civil engineering, chemistry, an institute of art (Mark Hopkins), a college of law (the Hastings), one of pharmacy, a veterinary department, a dental department, and a post-graduate

Colleges.—*Continued*

medical department. Of recent years the University has received large benefactions, especially in the gifts of Mrs. Phoebe A. Hearst, who designs to erect new buildings for the University at a reported cost of \$8,000,000. The present income of the institution for educational purposes is about \$350,000, and it has productive funds amounting to nearly \$3,000,000. The faculty, under its president, Benjamin Ide Wheeler, Ph.D., numbers 380, with a student attendance of about 2,600, a considerable proportion of which are women. The University has a valuable aid in Lick Observatory, and a useful library consisting of about 85,000 volumes.

IOWA, UNIVERSITY OF THE STATE OF.—Located in Iowa City, Ia., was organized in 1847, and is supported in part by legislative appropriations, and in part by the fund derived from the sale of the Congressional land grants. In 1900, it had a faculty of over 100 professors and instructors, under the president, G. E. McLean, LL.D., with a student attendance of 1,450. The university was reorganized on its present basis in 1860, and is coeducational, but undenominational. Besides its collegiate, undergraduate department, it has professional branches in law, medicine, homeopathy, dentistry, and pharmacy. It has a separate geological department, enriched in its museum by specimens from the state geological surveys, and it has a well-developed system of university-extension lectures. Its library comprises 26,000 volumes, and the institution enjoys an income of \$270,000 a year. The amount of its productive funds reaches \$250,000.

CINCINNATI, UNIVERSITY OF, Cincinnati, Ohio, was founded in 1874, and has a faculty of 100 professors and instructors under its acting president, Dean E. W. Hyde, with a student attendance of nearly 800. It has the advantage of being located in a city noted for its art and musical tastes, as well as those drawn to education and literature. It has a library containing about 18,000 volumes, while the institution has productive funds available for its maintenance to the value of one and a half million dollars. The value of its grounds and buildings is estimated at \$260,000.

CLARK UNIVERSITY, Worcester, Mass., was opened in 1889, and is undenominational. Its founder was Jonas Gilman Clark, a resident of Worcester, who endowed the institution with two million dollars, and since his death, in 1900, it received his valuable library, in addition to its own collection of 18,000 volumes. It has a small faculty and small student attendance, though what it has so far accomplished, under its able president, G. Stanley Hall, LL.D., is in the nature of advanced work, research, etc., particularly in the branches of psychology and biology. In connection with the university, there is held a summer school annually, and special Saturday courses for teachers are given during the academic year.

COLGATE UNIVERSITY, located at Hamilton, N. Y., was originally known as Madison University, but began its career in 1846 under its present title, assumed in honor of its large benefactor, James B. Colgate, who endowed it with sums aggregating about \$2,000,000. It is under Baptist control, its president being Geo. E. Merrill, D.D. It has a faculty of 36 instructors, and a student attendance of about 350. The library comprises about 30,000 volumes. The value of its grounds and buildings is estimated at \$650,000. Its graduates number about 2,000.

COLORADO, UNIVERSITY OF.—A state institution, supported by state taxes, opened in 1877 at Boulder, Col., 28 miles N. W. of Denver. It is used by both sexes, and to its general academic branches, in the liberal arts, law, medicine, music, dental surgery, and applied science, it provides instruction in post-graduate courses. Its faculty numbers 86 professors and instructors, under a president, Jas. H. Baker, LL.D., and its student attendance is about 700. It has a library of 18,500 volumes. The value of its grounds and buildings is close upon \$200,000.

DARTMOUTH COLLEGE.—Situating at Hanover, N. H., was founded in 1769, and is under the control of the Congregational body, though unsectarian in its teaching. The institution has had a long history, from before revolutionary times, and to-day it maintains a high character among New England seats of learning. It has a faculty of fifty instructors under its president, W. J. Tucker, D.D., LL.D., and a student attendance of about 650. Its grounds and buildings are prettily situated on the banks of the Connecticut River, and are valued at half a million. It has productive funds of the value of one and a half million. The library contains about 80,000 volumes. Associated with Dartmouth are the New Hampshire Medical School, College of Agriculture and Mechanic Arts, the Chandler Scientific School, and the Thayer Engineering School.

MINNESOTA, UNIVERSITY OF.—Situating at Minneapolis, Minn., is a state institution, first organized in 1851, but properly had its active founding when it was reorganized in 1868. It is coeducational, but undenominational. Its president is Cyrus Northrup, LL.D., and under him there is a faculty of about 200 professors and instructors, with a student attendance of nearly 3,000. The value of its grounds and buildings is estimated at \$1,700,000, while it has productive funds approximating one and a half million. The library contains about 60,000 volumes. Besides its graduate department, the university has a department of medicine, colleges of law, science, agriculture, engineering, and the mechanic arts, and one of literature and the arts. It maintains an experiment station, and geological and natural history surveys.

MISSOURI, UNIVERSITY OF THE STATE OF, Columbia, Mo., was founded in 1842, and has a faculty, under its president, R. H. Jesse, LL.D., of 65 professors, and a student attendance aver-

Colleges.—*Continued*

aging about 1,000. Its buildings and grounds are valued at close upon a million, and it has productive funds estimated at \$1,300,000. The library embraces 30,000 volumes. Besides its graduate and normal school departments, it has a college of agriculture, of engineering, of law and medicine, and a school of mines and metallurgy, the latter located at Rolla, Mo.

MISSISSIPPI, UNIVERSITY OF.—Located at University, Miss., was founded in 1848, and is coeducational. It has a faculty of 24 teachers, under its chancellor, R. B. Fulton, and a student attendance of 300. The value of the grounds and buildings (of which latter there are twelve) is estimated at \$225,000, and the institution has productive funds of the value of \$550,000. The instruction is open to both sexes, three chief courses of study being open to them, viz., those in arts, science, and philosophy. There is a library, with 17,000 volumes. Its endowment is chiefly derived from the sale of township lands given to the state by congress for the purposes of higher education.

NEBRASKA, UNIVERSITY OF.—Situated at Lincoln, the capital of the state, was founded by act of legislature in 1869, and is supported chiefly by a state tax and the income derived from land sales and leases, the gifts of the federal government. It is coeducational, and has a faculty of 115, under its acting-president, Prof. C. E. Bessey, and a student attendance of nearly 1,500. It has a library comprising 45,000 volumes, and productive funds of the value of \$175,000. The value of its grounds and buildings is estimated at \$750,000. Besides the graduate school and a college of literature, science, and art, it has schools of music, of the fine arts, an industrial college, and one of law.

NORTHWESTERN UNIVERSITY.—Situated at Evanston, Ill., is an institution under the control of the Methodist Episcopal body, organized in 1855 for the higher education of both sexes. The university has an endowment of \$3,000,000, with an annual income, exclusive of benefactions, of \$400,000. The value of buildings and grounds, which are situated within twelve miles north of the center of Chicago, exceeds \$2,000,000. The following are its departments, each having a distinct faculty of instruction (in all 230 in number): a college of liberal arts, schools of law, medicine, pharmacy, and dentistry, besides a woman's medical school and school of music. The Garrett Biblical Institute, adjoining, serves as a theological school to the university. Its president is H. W. Rogers, LL. D., and the student attendance in the degree-conferring departments numbers 2,250. The library contains 46,000 volumes and over 30,000 pamphlets.

UNIVERSITY OF THE SOUTH.—Located at Sewanee, Tenn., was organized in 1868, and is under the control of the Protestant Episcopal Church in the South. Besides its undergraduate department, it has five professional schools, viz., those in law, theology, medicine, home-

opathy, dentistry, and pharmacy. Its faculty numbers 55 professors, under Vice-Chan. B. L. Wiggins, M.A., and a student attendance of 420. The library contains 41,000 volumes. Its grounds and buildings are valued at \$450,000, and it has productive funds estimated at \$175,000. The university was founded by Leonidas Polk, bishop and Confederate general, who was killed in 1864 at Pine Mountain, Georgia.

VERMONT, UNIVERSITY OF, Burlington, Vt., was founded in 1800, and is a coeducational but undenominational institution. It has a faculty of 60 instructors, under its president, M. H. Buckham, D.D., with a student attendance of 600. In 1865, the State Agricultural College was incorporated with the University, and its teaching courses embrace arts, medicine, chemistry, agriculture, and civil, electric, and mechanical engineering. The buildings, which overlook Lake Champlain, are with their grounds valued at over six thousand dollars, while the institution has productive funds estimated at about \$400,000. The Billings Library has about 55,000 volumes. There are over 30 scholarships in the academic department.

VANDERBILT UNIVERSITY.—Situated at Nashville, Tenn., was founded in 1872 as an institution for higher learning by the Methodist Episcopal body of the South. It has received benefactions from the Vanderbilt family to the extent of \$1,500,000. It is coeducational, and offers courses, besides the regular academic one, in law, medicine, theology, pharmacy, dentistry, and engineering. Its faculty numbers about 90 professors and lecturers, under a chancellor, J. H. Kirkland, LL.D., with a student attendance of 800. The value of its buildings and grounds is estimated at \$600,000, and its available productive funds amount to \$1,250,000. The library comprises about 16,500 volumes.

ALABAMA, UNIVERSITY OF, Tuscaloosa, Ala., was founded in 1831. It is coeducational, but undenominational, has a faculty of 32 professors and instructors, under its president, Jas. K. Powers, LL.D., with a student attendance of 325. The value of its grounds and buildings is estimated at \$300,000, while it has a like amount of productive funds. The library comprises 16,000 volumes.

BELOIT COLLEGE, Beloit, Wis., is a coeducational institution under the control of the Congregational body, and was founded in 1847. It has a faculty of 25 instructors, under President E. D. Eaton, D.D., and a student attendance of over 400. Its buildings and grounds are valued at \$350,000, and it has productive funds estimated at \$425,000. Its library contains 26,000 volumes.

BRYN MAWR COLLEGE, Bryn Mawr, Pa., is a college for women only, organized in 1885. It has a high standing among institutions of the kind, with a student attendance of close upon 380. The faculty number 42 instructors, under President M. Carey Thomas, Ph. D. The value of its buildings and grounds exceeds \$800,000, while it has over a million of productive funds. The library contains 34,000 volumes and 8,000

Colleges.—Continued

pamphlets. Besides its academic course leading to the B.A. degree, there is an excellent graduate department which confers the degrees of M.A. and Ph. D.

CASE SCHOOL OF APPLIED SCIENCE, Cleveland, Ohio, was founded in 1880 to give instruction to men only in the practical departments of architecture and civil, electrical, mechanical, mining, and sanitary engineering. It has a faculty of 21 instructors and a student attendance of 250, under its president, Cady Staley, Ph. D., LL. D. It has a small but useful library, of about 2,500 volumes. The value of its grounds and buildings is \$500,000, and it has productive funds of over two million dollars.

CENTRAL UNIVERSITY, Richmond, Ky., is an institution under the control of the Presbyterian body, founded in 1873. It has a faculty of 50 instructors and a student attendance of close upon a thousand. Its head is L. H. Blanton, D.D. The value of its buildings and grounds is \$160,000, and it has a like amount in productive funds. The library contains about 10,000 volumes.

COLORADO COLLEGE, Colorado Springs, Col., is a coeducational but undenominational institution, founded in 1874. It has thirty-six instructors and a student attendance of 260, under President W. F. Slocum, LL.D. The value of its buildings and grounds is estimated at \$450,000, and it has productive funds to the extent of \$375,000, with a library comprising 23,000 vols.

CORNELL UNIVERSITY.—Situated on Cayuga Lake, Ithaca, N. Y., and named after Ezra Cornell, a wealthy resident of Ithaca, who, in 1865, gave to the institution \$500,000, subsequently considerably augmented. The University was opened in 1868, and has enjoyed an ample endowment, from the source above indicated, as well as from the income from nearly a million acres of land appropriated to it by Congress. In addition to its academic department, Cornell has colleges of law, medicine, veterinary medicine, agriculture, forestry, architecture, and civil and mechanical engineering. Its teaching staff numbers 315, with a student attendance of 2,140. Its president is J. G. Schurman, LL.D.

COLUMBIAN UNIVERSITY, Washington, D. C., is an institution founded in 1821 for both sexes, under the control of the Baptist denomination. The President is B. L. Whitman, D.D., who has under him a teaching faculty 162 in number, and a student body of over one thousand. Its grounds and buildings are valued at a million, and it has productive funds to the extent of \$260,000, with a library of about 13,000 volumes.

DENVER UNIVERSITY, Denver, Col., is a coeducational institution under the control of the Methodist Episcopal body, and was founded in 1864. Its President is H. A. Buchtel, D.D., who has under him a teaching body of 90 professors and instructors, with a student attendance of 420. The value of its buildings and grounds is estimated at \$650,000, and it possesses

productive funds to the extent of \$175,000, with a library containing about 10,000 volumes.

DE PAUW UNIVERSITY, Greencastle, Ind., is coeducational and is controlled by the Methodist Episcopal body. It was organized in 1837 as the Indiana Asbury University, but its name was subsequently changed when it received the large benefactions of Mr. De Pauw. It has besides the regular school of liberal arts two professional schools of law and theology. It also encourages post-graduate work. It has 35 instructors and nearly 800 students, under President H. A. Gobin, D.D. It has productive funds of the value of \$200,000, besides grounds and buildings valued at \$300,000.

HOWARD UNIVERSITY, Washington, D. C., established in 1867 with the object of giving emancipated slaves and colored youth of both sexes the advantage of a liberal and professional education. The tuition is free, according to the purpose of its founder, Gen. Oliver Otis Howard, at the time at the head of the Freedman's Bureau. It has 75 instructors and a student body of over 600, under its president, J. E. Rankine, D.D. The value of its grounds and buildings is \$600,000, and it has nearly \$200,000 of productive funds, with a library containing 14,000 volumes.

INDIANA UNIVERSITY, Bloomington, Ind., a state nonsectarian institution for collegiate education, open to both sexes, and founded in 1820. It has 60 instructors and a student attendance of over 1,000, under its president, Joseph Swain, LL.D. It has a library of 30,000 volumes, grounds and buildings of the value of \$200,000, with productive funds to the amount of \$600,000.

KANSAS UNIVERSITY, Lawrence, Ky., a State coeducational institution, chartered by the legislature in 1864 and opened in 1866. It has a faculty numbering 58, with a student body of over 1,000, under its president, F. H. Snow, Ph. D., LL.D. It has a library of 29,000 volumes, buildings and grounds estimated at \$450,000, and productive funds of about \$150,000 in value. Tuition is free to residents of the state. It gives instruction not only in the liberal arts, but in law, pharmacy, engineering, and the fine arts.

GEORGETOWN UNIVERSITY, Washington, D. C., founded in 1789, and controlled by the Roman Catholic body, has a faculty of 125 instructors and a student attendance of close upon 700, under the president, the Rev. J. D. Whitney, S. J. It has a small endowment, though the value of its site and buildings is nearly \$1,200,000. It has a library of 80,000 volumes.

GIRARD COLLEGE, Philadelphia, Pa., an institution organized in 1848 under the will of its benefactor, Stephen Girard, for the education and training of poor male white orphans, "free from sectarian doctrine." It has a faculty of nearly 70 instructors and a student body of 1,800, under its president, A. H. Fetterolf, Ph.D., LL.D. It has the handsome

Colleges.—Continued

endowment of \$15,000,000, besides grounds and buildings (the main building is one of the finest specimens of Greek architecture in the New World) of the value of \$3,350,000, with a library containing over 16,000 volumes.

HAMLIN UNIVERSITY, St. Paul, Minn., was founded in 1854, and is a coeducational institution under the control of the Methodist Episcopal body. It has a teaching body, under its president, G. H. Bridgman, D.D., of 63, and a student attendance of 400. The value of its real estate and buildings is \$200,000, and it has over \$110,000 in productive funds, with a library containing 7,000 volumes. The University was originally founded at Redwing, Minn., but was removed to its present site in 1880, and named after Bishop L. L. Hamline.

KENYON COLLEGE, Gambier, Ohio, founded in 1825 and controlled by the Protestant Episcopal body. It has a faculty 22 in number, and a student body of 170, in the college proper and in the theological seminary. Its president is W. F. Pierce, LL.D. It has a library of 33,000, with beautiful buildings, dormitories, etc., the value of which is \$310,000; it has also productive funds of nearly \$300,000 in value.

LAKE FOREST UNIVERSITY, Lake Forest, Ill., a coeducational institution of the Presbyterian denomination, founded in 1857 under the name of Lind University, and in 1865 changed to its present title. It has a faculty, over 120 in number, under President J. G. K. McClure, D.D., and a student attendance of 1,400. It is in affiliation with several institutions, including the Chicago College of Law, Rush Medical College, and the Chicago College of Dental Surgery. Besides its advanced course, it has preparatory departments, boys and girls (the latter known as Ferry Hall). It has productive funds of the value of \$500,000, and grounds and buildings, valued at \$600,000.

LEHIGH UNIVERSITY, South Bethlehem, Pa., founded in 1866 and endowed by Asa Packer. It has an engineering department, besides those in classics, in English branches, and in general science. It has a library of 100,000 volumes, productive funds of the value of \$2,000,000, and buildings and grounds valued at \$1,200,000. The faculty, 42 in number, is under the presidency of Thos. M. Drown, Ph.D., and it has a student body of about 375 in number.

LELAND STANFORD, JR., UNIVERSITY, situate at Palo Alto, Cal., was founded by the beneficence of the Stanford family and opened to students of both sexes in 1891, under the presidency of David Starr Jordan, LL.D. It has a student attendance of 1,225, and a teaching body of 85 instructors. The tuition is free. It has a library containing nearly 40,000 volumes, and a campus embracing 100 acres, the value of which and its buildings is estimated at \$2,000,000. It has productive funds valued at 3½ million dollars, and this has just been added to by

Mrs. Stanford by the princely sum of \$30,000,000. The Palo Alto farm on which the university is built consists of 8,000 acres.

MAINE UNIVERSITY OF, Orono, Me., a state institution, located eight miles north of Bangor, for the use of both sexes, and founded in 1868. It has a faculty of 35 professors and lecturers, and a student attendance of 325, under the president, Ab. W. Harris, Sc. D. It has productive funds of the value of \$220,000, and grounds and buildings valued at \$200,000, with a library containing 15,000 volumes. The tuition fees are but \$30 a year, and the room rent is free. The ancient classics are not taught. Its courses of study are science, agriculture, a preparatory medical course, and courses in civil, mechanical, and electrical engineering. An agricultural experimental station is connected with the institution, and military drill is required to be taught.

MOUNT HOLYOKE COLLEGE, South Hadley, Mass., an institute of learning for women, founded by Mary Lyon in 1837. It has 41 instructors and a student attendance of 400. Its present head is Mrs. F. S. Mead, M.A. The grounds, which comprise 70 acres, are not far from the Connecticut River; with the college buildings they are valued at \$450,000, and the institution has productive funds for its maintenance to the extent of nearly \$300,000, and a library containing 18,000 volumes.

OHIO STATE UNIVERSITY, Columbus, Ohio, is a coeducational, but nonsectarian institution, founded in 1870. It has a faculty of instruction numbering 95, a student body of 1,200, under its president, W. O. Thompson, D.D. Instruction is given not only in the ordinary college courses, but also in agriculture, in pharmacy, engineering, veterinary medicine, and law. It has a spacious campus in the heart of Columbus, 340 acres in extent. The value of these grounds and the university buildings is \$2,000,000, while there are productive funds controlled by the university of nearly \$600,000. The library contains 24,000 volumes. Liberal annual appropriations for the support of the institution are made by the State. Complete scientific laboratories have been added to the equipment of the university.

LOUISIANA STATE UNIVERSITY, Baton Rouge, La., a nonsectarian institution for the higher education of men, founded in 1860. It has a faculty of 21 instructors and a student attendance of 250, under its president, Thos. D. Boyd, M.D. Its grounds and buildings are valued at \$300,000, and it has productive funds of the value of \$320,000, with a library of 21,000 volumes.

NEW YORK UNIVERSITY, University Heights, New York City, was founded in 1831. It is coeducational in the graduate, pedagogical, and law schools, and has a faculty embracing 116 professors and instructors, with a student attendance numbering close upon 1,400. Its president is H. M. McCracken, D.D., LL.D. Its grounds and buildings are valued

Colleges.—Continued

at \$1,800,000, and it possesses productive funds estimated at \$1,600,000, besides a library containing 46,000 volumes.

OSBERLIN COLLEGE, Oberlin, Ohio, founded in 1833, comprises a theological department, a women's and preparatory departments, and a conservatory of music. Its faculty numbers 83 instructors, of whom 24 are attached to the conservatory of music, and its student attendance of close upon one thousand. Its president is J. H. Barrows, D.D. Its grounds and buildings are valued at \$1,600,000, and it has productive funds to the extent of \$1,000,000, with a library comprising 50,000 volumes.

PENNSYLVANIA STATE COLLEGE, located at State College, Centre Co., Pa., was founded in 1859 as a coeducational institution; its name being given to it in 1874. It is especially an industrial school, giving particular attention to practical and scientific agriculture, besides instructing also in the mathematical, natural, and physical sciences. Its agricultural experimental station receives a subvention from the national government, and the state contributes to its general support from the proceeds of a federal land grant held in trust. The faculty numbers 48 instructors, and the attending students number 350. There is a library of 14,000 volumes, and it has productive funds of \$520,000, besides the value of its grounds and buildings, which are estimated at \$500,000.

POLYTECHNIC INSTITUTE, Brooklyn, N. Y. City, founded in 1854 to give instruction in the practical arts. President, Henry S. Snow, LL.D., with a faculty of instructors numbering 50, compose the teaching body; the attendant students are about 650 in number. The real estate of the Institute is valued at \$325,000, and the amount of its productive funds exceeds \$100,000. It has a library containing 8,000 volumes.

PRATT INSTITUTE, Brooklyn, N. Y. City, an industrial coeducational institution, founded in 1887, by a wealthy American merchant and philanthropist, combining academic, business, and manual training. It has 135 instructors in the various departments and a student attendance of close upon 3,000. Its president is Charles M. Pratt. The value of the grounds and buildings of the Institute exceeds \$1,000,000, and it has over \$2,000,000 of productive funds, with a library containing nearly 70,000 volumes. In the industrial department, instruction is given in carpentry, blacksmithing, and other skilled trades, as well as in cooking and house-keeping.

RUTGERS COLLEGE, New Brunswick, N. J., founded in 1776 under the auspices of the Dutch Reformed Church, and to-day under the presidency of Austin Scott, LL.D., has a faculty of 35 instructors and a student attendance of close upon 300. In 1863, a scientific department was added to the Collegiate branch, under the name of Rutgers Scientific School. It has a library of 37,000 volumes.

SMITH COLLEGE, Northampton, Mass., an institution for women, founded in 1875, has 65 instructors and a student attendance of close upon 1,000. Its president is L. C. Seelye, D.D. It is nonsectarian, and has productive funds for its maintenance of \$670,000. The value of its grounds and buildings is estimated at \$660,000. The library contains about 8,000 volumes.

SYRACUSE UNIVERSITY, Syracuse, N. Y., is an institution founded in 1871 under the control of the Methodist Episcopal denomination and is open to both sexes. It has 117 instructors and a body of over 700 students, under its president, J. R. Day, LL.D., S.T.D. It has productive funds exceeding \$1,300,000, and a handsome library building containing 43,000 volumes. The value of its grounds and edifices is \$990,000.

VASSAR COLLEGE, Poughkeepsie, N. Y., founded in 1861 by the philanthropist, Matthew Vassar, as a school for the higher education of women. The institution was opened in 1865, on a beautiful site close to the Hudson, and has been highly successful. Besides the grounds, which cover 210 acres, Mr. Vassar gave the college an endowment of \$400,000; this sum has by later gifts reached a total of a million dollars. Its productive funds amount to a like sum. There are 56 instructors, and a student attendance of over 600. The library contains 30,000 volumes. Its president is James M. Taylor, D.D.

WASHINGTON UNIVERSITY, St. Louis, Mo., a coeducational but nonsectarian institution, incorporated in 1853, with a faculty of 155 professors and instructors, under its president, W. S. Chaplin, LL.D., and a student body of nearly 1,450. The departments besides the undergraduate one, which includes the college, embrace a law school, medical college, dental college, a school of fine arts, the O'Fallon Polytechnic School, and the Henry Shaw School of Botany. To the University are attached three secondary schools, the Mary Institute for girls and the manual-training school. The value of the grounds and buildings is estimated at \$850,000, and the productive funds of the University are close upon a million.

WASHINGTON AND LEE UNIVERSITY, Lexington, Va., was first organized in 1749, and had many vicissitudes in its early career, until it received financial aid from General Washington and later on was rescued from obliteration by General R. E. Lee, who was for a time its president. Its present head is W. L. Wilson, LL.D., who has under him a faculty of 25 instructors and a student attendance of 150. The value of its grounds and buildings is \$200,000, and the university has productive funds to the amount of \$650,000. The courses of study include classics, literature, applied science, philosophy, engineering, and law. In the chapel adjoining sleeps General Lee, a recumbent statue in marble marking his resting-place. In the library are 41,000 volumes.

WESTERN RESERVE UNIVERSITY, Cleveland, Ohio, founded in 1884, after the removal from

Colleges.—Continued

Hudson, O., of Adelbert College, which dates from 1826, to Cleveland, and which now constitutes the academic department of the W. R. University. Its faculty, under the president, Chas. F. Thwing, D.D., comprises 125 professors and instructors, while its student attendance numbers nearly 800. Besides a graduate school and Adelbert College, it has a college for women, and schools of law, medicine, and dentistry. Its buildings and grounds are valued at \$750,000, and it possesses productive funds estimated at \$1,250,000. Its annual income averages \$225,000. The library comprises about 50,000 volumes.

WESTERN UNIVERSITY OF PENNSYLVANIA, a coeducational institution located at Allegheny, Pa., and organized in 1819. It has a faculty of 105 instructors under President W. J. Holland, D.D., and a student attendance of 700. The value of its grounds and buildings is \$300,000, and the university has productive funds to the amount of \$350,000. The library comprises 16,000 volumes.

WILLIAMS COLLEGE, Williamstown, Mass., founded by a bequest of Col. Ephraim Williams, a Revolutionary soldier, who was killed in an ambush of French and Indians at the head of Lake George in 1755, and incorporated in 1793. Though nonsectarian it has turned out a large number of notable ministers and missionaries as graduates, especially those of the Presbyterian and Congregational Churches. It has a faculty of 30 instructors under its president, Franklin Carter, LL.D., and a student attendance of about 400. Its grounds and buildings are valued at \$460,000, and the institution has productive funds to the amount of \$1,100,000. The library contains 42,000 volumes. It has exceptionally good lecture rooms and dormitories, notably those known as the Mark Hopkins Memorial Hall and the Morgan Hall.

WORCESTER POLYTECHNIC INSTITUTE, Worcester, Mass., was founded in 1865 as a school of engineering. It has a faculty of 30 instructors under its president, T. C. Mendenhall, LL. D., and a student attendance of 225. It has extensive buildings, valued at \$500,000, which include a hydraulic laboratory and a complete testing plant, together with machine shops, magnetic and power laboratories, etc. The courses of study are in general science, in chemistry, and in civil, mechanical, and electrical engineering. It has a good library and productive funds exceeding \$600,000.

Collier, Jeremy.—(1650–1726.) An English dissenting clergyman and controversial and historical writer.

Collins, Charles Alston.—(1828–1873.) An English artist and author; brother of William Wilkie Collins, son-in-law of Charles Dickens.

Collins, William.—(1788–1847.) A noted English painter, father of William Wilkie Collins.

Collins, William Wilkie.—(1824–1889.) A noted English novelist.

Collodion.—A glue-like, colorless liquid, with strong adhesive properties, used by surgeons as a coating for wounds. It is soluble in ether, but not in water or in alcohol. Chemically, it consists of pyroxylin (gun cotton) dissolved in a mixture of alcohol and ether. Its chief use is as a vehicle for the sensitive film in photography. For this purpose, two varieties are used, plain and iodized collodion. The former is of two kinds—positive and negative—the pyroxylin for these being prepared according to a special formula. Iodized collodion is the plain variety which has received the addition of some iodides or bromides, generally those of cadmium and ammonium.

Collyer, Robert.—Born at Keighley, England, 1823. A noted American Unitarian clergyman. In youth, he was apprenticed to a blacksmith, came to America in 1850, and settled at Shoemakertown, Pa., where he joined the Unitarian church. In 1860 he founded the Unity Church in Chicago and in 1879 was elected pastor of the Church of the Messiah in New York, since when he has published several works, which include "Nature and Life," "The Life that Now Is," etc.

Cologne (*Ger. Köln*).—A city, fortress, and free port on the Rhine, the capital of Rhenish Prussia. Founded by the Romans, it was termed by them the *Colonia Agrippina*; later, it was city of the Franks, and in the 13th century was one of the famous Hanse towns, but losing its independence it came under the sway of Prussia in 1815. It is now one of the chief seats of German commerce, where tobacco, sugar, and *eau de Cologne* are largely manufactured. It is noted in the development of German architecture and painting; one of its chief attractions is the cathedral, perhaps the finest specimen of Gothic architecture in Europe, said to date back to the era of Charlemagne. The present edifice was begun in 1248, and was completed only about twenty years ago, having been neglected from the 15th century onward. Its towers and spires dominate the vast nave, and are the distinctive feature in the town. Other places of interest in the city are the Rathaus, or Hansa-Saal, with its statues and emblazoned arms of the civic burgomasters and guilds; the Church of St. Ursula, the Museum of Industrial Art, the Ringstrasse, great iron bridge, etc. Pop. (1900), 372,229.

Cologne, Three Kings of.—According to a legend of the Middle Ages, the three Magi or wise men who saw the star in the East at the birth of Christ. Their names were Gaspar, Melchior, and Balthazar. The legend asserts that their bones were deposited in the Cathedral at Cologne.

Colombia.—A republic of South America named in honor of Columbus. It is in the northern section of the continent, and is rich agriculturally and mineralogically. It produces gold, silver, and coffee in large quantities. It has been independent of Spain since 1811. The United States of Colombia has been its official designa-

tion since 1863. The government consists of a president, a senate, and a chamber of representatives. Area 504,773 sq. miles; pop., 4,500,000.

Colonna, Vittoria.—(1490-1547.) A noted Italian poet.

Color.—What is termed the color-sense is the power or ability to distinguish kinds or varieties of light and their distinctive tints. We owe the faculty of doing this to the structure of the eye and its elaborate connecting nerve machinery. The eye in man is specially sensitive to light, and the sensations we feel through it enables us to distinguish the different colors. Over 1,000 monochromatic tints are said to be distinguishable by the retina of the eye, though these numerous tints are, in the main, merely blendings or combinations of the three primary color-sensations, the sense of red, of green, and of violet. Each of these colors, it has been demonstrated, is produced by light of a varying wave length, while white light is only light in which the primary colors are combined in proper proportion. Colored light, on the other hand, as Newton proved, may be produced from white light in one of three ways: First, by refraction in a prism or lens, as observed in the rainbow; second, by diffraction, as in the blue color of the sky, or in the tints seen in mother-of-pearl; and third, by absorption, as in the red color of a brick wall, or in the green of grass,—the white light which falls upon the wall being wholly absorbed, save by the red, and all that falls upon the grass being absorbed except the green. In art, color means that combination or modification of tints which is specially suited to produce a particular or desired effect in painting: in music, the term denotes a particular interpretation which illustrates the physical analogy between sound and color.

Colorado.—One of the Mountain States of the U. S. of America. Bounded on the north by Neb. and Wyo., east by Neb. and Kan., south by Okla. and N. Mex., west by Utah. It is traversed from north to south by the Rocky Mountains, and contains some of the highest and best known summits of that range, including Pike's Peak, Long's Peak, Sierra Blanca, and others. It ranks first as a silver producing state, and also yields gold, lead, and other minerals in large quantities; aside from mining, its chief industry is stock raising; it is noted as a health resort for those suffering from pulmonary complaints. Part of its territory was included in the Louisiana Purchase and part was acquired from Mex.; admitted to the Union in 1876, from which fact it takes the name of the Centennial State; Denver is its capital and only large city; other chief towns are Colorado Springs, Cripple Creek, Leadville, and Pueblo; has 56 counties; area, 103,925 sq. miles; pop. (1900), 539,700.

Colorado River.—A river that flows through Utah and Ariz. and empties into the Gulf of Cal. It abounds with cañons, the most famous of which is the Grand Cañon, with walls from 4,000 to 6,500 ft. high.

Colorado Springs.—A city in Colo., a popular summer resort, especially for invalids, situated near the base of Pike's Peak. Pop. (1900), 21,085.

Color Music for Children.—3201.

The Nursery Period, 3201.

The Muscular Sense, 3201.

Sense of Touch, 3203.

Seeing and Hearing, 3205.

First Lessons in Eye and Ear Training, 3206.

Training by Contrasts, 3206.

Emotional Effect of Tone, 3207.

Colosseum.—A notable Roman amphitheater, now in ruins, chiefly used as an arena for Roman games and gladiatorial combats. It was erected in Rome, near the Via Sacra, in the eras of Vespasian and Titus (72-80 A.D.), and was able to seat between 80,000 and 90,000 people. When Titus dedicated it, it is said that about 5,000 wild beasts were slain, while the inaugural games lasted for a 100 days. Around the arena, which was covered with sand (hence the origin of the word *arena*), the mighty concourse of people assembled, to witness the contests and games; while there were special seats reserved for the emperor, senators, and great folks of the Roman capital. The structure covered about five acres, was 610 feet in length, and 515 feet in width. The exterior was 160 feet in height, and was built in three tiers of columns, surrounded by pilasters.

Colossus of Rhodes.—An immense bronze figure, said to have been over 100 feet in height, representing the Greek god Helios (the Sun), the chief deity of the Rhodians, at one time a leading maritime people living on the Island of Rhodes, in the Ægean Sea. The huge statue was the work of a sculptor, Chares of Lindus, who lived in the 3d century B.C., and who, it is affirmed, spent twelve years on the work. It has been supposed that, as it stood near the harbor, the god in bronze stood astride the entrance; this, however, is deemed an error. Nothing now is known of the artistic value of Chares's work, though it was counted among the Seven Wonders of the World. In 234 A.D., the statue was thrown down by an earthquake and lay an object of curiosity and wonder where it fell for over 400 years, when it was finally sold to a Jew for old metal.

Colt, Samuel.—Born at Hartford, Conn., 1814; died there, 1862. The noted inventor of the revolver, and builder of the large manufactory of arms at Hartford.

Columbia.—A poetical name of the U. S.

"**Columbla.**"—Name of the American yacht that defeated the English yacht "Shamrock," in the contest for the America's Cup, in 1899.

Columbia.—(1) A town in Mo., seat of the University of the state of Missouri. Pop. (1900), 5,651. (2) A borough in Pa., noted for lumber and various manufactures. Pop. (1900), 12,316. (3) The capital of S. C., on the Congaree River. It was founded in 1770 and became the state capital in 1790. It is the seat of the University of South Carolina. Pop. (1900), 21,108.

Columbla, British.—A province of the Dominion of Canada, lying on the Pacific Ocean on the west

of the Dominion. It has the Northwest Territory on the north; Alberta and Athabasca on the east; and the United States on the south. It includes Vancouver and Queen Charlotte islands. The capital is Victoria, pop. (1901), 20,821; the other chief city is Vancouver, pop. (1901), 26,196. Population of the entire province (1901), 190,000. The country is rich in minerals and fish products.

Columbia River.—A large stream which rises in the Rocky Mountains and after traversing Wash. state, falls into the Pacific; is noted for its salmon fisheries.

Columbus.—(c. 1446-1506.) Few events in history have had such far-reaching influence and importance as the discovery of the New World, in 1492, by Columbus.

The ancient world, as known to Europe, was bounded on every side by the shadows of mystery, imagination, and tradition. Along the doubtful margin were pictured gigantic monsters and hideous demons, standing like sentinels to prevent new discoveries. Ships sailed the waters of the well-known Mediterranean Sea and crept a short distance down the western coast of Africa, but sailors did not venture far beyond the shore toward the west. Everything was changed by the pioneer voyage of Columbus across the Atlantic which gave a great impulse to exploration, trade, colonization, research, and many other things that pushed forward the car of progress.

Cristoforo Colombo was born about the year 1446, in or near Genoa, a port from which many vessels sailed. He was the eldest son of Dominico, a wool-comber of some small means—poor but reputable and meritorious. He studied at school until he was fourteen years of age, taking especial interest in mathematical and natural sciences. While very young, he was taught reading, writing, grammar, and arithmetic. He soon showed a strong inclination for the sea, which led his father to send him to the university of Pavia where he learned enough geometry, geography, astronomy, and navigation to urge him forward to the diligent self-schooling, which he later received by casual hours of study amidst the cares and vicissitudes of a rugged and wandering life.

At the age of fifteen Columbus went to sea to finish his education, and to learn to command a vessel. In the fifteen laborious years during which he followed the sea, he had many hazardous adventures. He sailed the seas in an age when even a commercial expedition resembled a warlike cruise, and merchants often had to fight their way from port to port. He sailed as far east as the Greek Isles, as far north as Iceland, and as far south as sailors then went along the coast of Africa. In 1470, after being wrecked in a sea fight and escaping to land on a plank, he reached Lisbon.

He married a Portuguese girl whose father was a famous sailor, and had many maps and charts. For a while he made his home in Lisbon. Then he went to live on Porto Santo, one

of the Madeira Islands where his father-in-law had been governor. Thus situated, on the border of the world, as far as it was then known, he porced over the logs and papers of his deceased father-in-law, and talked with old seamen regarding the mysteries of the dark-blue waters that stretched toward the west. He heard many stories and traditions. He heard that strange kinds of wood, and the bodies of men of a strange race had been found toward the west after a westerly gale of several days' duration. Gradually he conceived the design of reaching Asia by sailing west. In 1474, he explained his views to Toscanelli of Florence, from whom he received the heartiest encouragement.

The story of the life of Columbus is one that shows the value of determination in securing success. He had an idea that the world was round and that he could reach the Indies by sailing westward. He was treated as a dreamer by the people of Genoa, where he was born. He went to England and then to Portugal to get aid by which he could test his ideas. He was not defeated by his failures but bravely decided to try again. Poor, ridiculed as a madman, and almost friendless, he clung to his belief.

In 1485, he turned to Spain who was then at war with the Moors. He received a partial hearing, but it was only after several years of patient waiting that he met with success. He alternated between hope and discouragement. In 1487, he was asked to defend his opinion before the learned professors in the college of Salamanca, who after three years' discussion decided that his scheme was only a day-dream. Sometimes he had to endure rebuffs and jeers—and, in order to live, he had to sell maps and charts which he had made; but he never lost faith in the final triumph of his idea.

After years of patient waiting, Columbus finally secured help from Isabella—after her armies had defeated the Moors and taken Grenada. He was intrusted with the command of three small vessels, which he fitted out at Palos. After many days of preparation at excited Palos, he finally set sail across unknown waters, with three small vessels, ninety sailors, thirty gentlemen and priests, and enough provisions to last a year.

Many interesting events of his voyage are to be found in an abstract of his diary made by Bishop Las Casas. He sailed for the Canaries on August 3, 1492. Three days later he was alarmed by the loss of the "Pinta's" rudder. On September 6 he left the Canary Islands and steered toward the west. On September 13, he noticed the variations of the compass needle, which later caused his men to become frightened, but he clung to his idea with a faith which the variation of the compass could not affect. Two days later he saw a wonderful meteor fall into the sea at a distance of four or five leagues. On the following day he found the water full of seaweed. On September 17,

he found that his men were murmuring, fearing that they were over a reef or in shoal water. He sailed on to clear seas and inspired all with fresh courage. Though he soon saw birds and other signs of land, he found no land. He saw distant clouds that had the appearance of solid earth, but which vanished as the vessels approached.

A courageous sailor and a man of great purpose, Columbus now had to prove himself a master of men. He had to exert his resourceful mind to the utmost to govern the unruly and discontented sailors, who, lacking his faith, and dismayed and alarmed by his wild voyage, began to grow desperate, and in some cases even proposed to throw him overboard so that they might at least make the attempt to return. He had great difficulty in restraining them from mutiny, but he met their threats with calm courage. Sometimes he encouraged them with gentle words, telling them of the great fame and riches that they might obtain, or of the honor they might have in the Church. Sometimes he threatened them with the displeasure of the king. Finally, he promised to turn back if land should not be discovered after sailing a certain distance.

At last, on the night of October 11, after a sail of seventy days he saw a light ahead. On the next day, richly clad and bearing the royal banner of Spain, he landed on San Salvador Island. Kneeling upon the shore, he "kissed the ground with tears of joy." After long years of waiting, and in spite of the mutinous members of his crew, who now prostrated themselves at his feet seeking pardon, he now saw a partial realization of his dreams and projects.

After giving presents to the natives, he embarked again, passed other islands, coasted by Cuba, and reached Haiti which he thought was Japan. After building a fort, and selecting some of his men to remain in it, Columbus returned to Europe, carrying nine natives and many curiosities of the New World. In Spain, he was received with great joy. From Palos to Barcelona, where the Spanish court was assembled, his journey was a triumphal procession. At a great assembly of notables, he told of the wonders and riches of the new empire which he laid at his sovereign's feet. From the king and queen he received the title of Don and a coat-of-arms. He was made an admiral and a viceroy of the countries which he had discovered—which he thought were islands on the east coast of Asia.

Columbus made three later voyages to the New World. On his second voyage, he took a great fleet, with missionaries, soldiers, and men who were seeking their fortunes. He expected to find gold, Christianize the Indians, and make new discoveries. Landing at Haiti he built a new fort, made an armed camp, and set the missionaries to baptizing and teaching the Indians—who were set to work as slaves and in some cases sent to Spain to be sold. When the Spaniards failed to find gold, and found that

they could not compel the despondent Indians to work, he was reviled as the cause of their woes. He was persecuted both in Haiti and in Spain.

He had high and noble views regarding the newly found countries. He desired to build and improve, not to ravage and destroy. Unlike the rabble whom it was his misfortune to command, he sought to colonize and cultivate, and to subject everything to the control of law, order, and religion. His attempts at colonization were embarrassed and complicated by a long series of failures, vexations, miseries, and insults that have rendered his career as a ruler of men most pitiable. The failure of his plans were due both to the unhealthfulness of the climate and the greedy, uncontrollable character of the Spaniards.

On a third voyage (1498), Columbus discovered the northern coast of South America. He found that the settlements in Haiti were growing more prosperous. He still had enemies who were plotting against him. Through their influence, he was seized and sent back to Spain, as a prisoner to answer to criminal charges that had been made against him. After the charges were proven false, he was set free. He gave orders that his chains should be buried with him at his death, as a sign of the reward which he had received for his services.

After a fourth voyage, on which he explored the coast of Central America and met with many hardships, Columbus returned to Spain, where he spent his last days in sickness and poverty. He died in 1506, and was buried at Valladolid. His body was later removed to Seville, and finally (1536) to San Domingo. In 1796, his ashes were taken to Havana, from whence they were carried to Spain after the Americans occupied Cuba in 1898.

Columbus was a great man of his time. But in many respects, he was not in advance of his own age. He was superstitious, and he was engaged in the pursuit of wealth. But he had courage, fortitude, and a knowledge of navigation. He was a man of thought, and was bold enough to venture into unknown places. He was a great man, because he gave himself to a great purpose, which he executed in the face of great difficulties and hardships. He was one of those men of strong natural genius, fitted for working out their own formation. By contending with privations and obstacles, he acquired a fortitude in braving, and a dexterity and ease in overcoming, difficulties. Full of resources of his own energy and invention he learned to accomplish great things by small means.

Though naturally irritable and quick tempered, and keenly sensitive to injury and injustice, he had a benevolent and generous nature, which never ceased to shine with warmth and brightness through all of the troubles of his stormy career. When his dignity was outraged, his authority opposed, and his plans defeated, he practised self-control, and restrained his valiant and indignant spirit. He showed as

great firmness in controlling himself as he showed skill in controlling others. He was temperate not only in language and action, but in eating, drinking, and dress.

By his patient toil he gave to Europe a new world. Though he thought he had only discovered a new route to the Indies, it was his courage, and faith, and wisdom, which carried him across the Atlantic when others only dreamed of such a thing. After his death, the world recognized the value of the discovery, and gave due honor to the great pioneer of the seas.

Columbus.—(1) The capital of Ohio, an important railway center and noted for its manufactures, and for the state capitol and other fine public buildings. Pop. (1900), 125,560. (2) A city in Ga., on the Chattahoochee River, known for its iron and steel manufactures. Pop. (1900), 17,614. (3) A town in western Ky., which was an important strategic point in the early part of the Civil War (1861-62). Pop. (1900), 1,235.

Column of July.—In Paris, a monument erected in 1840, on the site of the Bastille, in honor of the citizens who were killed in 1830 during the attack on the royal government.

Column of Trajan.—A column erected at Rome in honor of the emperor, Trajan. His campaigns are represented in relief upon the base of the column.

Column of Vendôme.—In Paris, erected by Napoleon I. in honor of his victories over the Austrians and the Russians in 1805.

Comédie Française, La.—The name of the Théâtre Français.

Comédie Humaine, La.—A picture of the manners and morals of the time written by Balzac. It includes the collection of his novels. The same characters appear and reappear throughout the series.

Comedy of Errors, The.—A play by Shakespeare.

Comenius, Johann Amos.—(1592-1670.) An eminent Moravian theologian and educational reformer. He was called to Sweden and carried out a complete educational reform in that country.

Comets.—See PLANETS, 2992.

Comets (Greek, *kómē*, hair).—Bright celestial bodies, distinguishable from planets by their irregular, elongated form and rapid motion, moving around the sun in parabolic or elliptical orbits. They are readily detected in the heavens at night, not only by their brightness and sweeping motion, but by their hairy, streamer-like caudal appendages, though there are comets that have no visible tail. They are usually spoken of as of two varieties, those seen by the naked eye, and those visible only through the telescope. An interesting feature in comets is their periodic revolution around the sun, the rate of which has been nicely calculated, as was the case by Astronomer Halley, who noting the great similarity between the elements of the comets seen in the years 1531, 1607, and 1682, fixed the reappearance of the latter for the year 1759, and this actually occurred. The comet of 1744, as seen in the Old World, possessed six tails. Another remarkable comet

was the one of 1843, whose head it is stated, was only 96,000 miles from the sun's surface at its perihelion passage, and whose tail, not less than 100 million of miles long, appeared to sweep through two right angles in two hours. Encke's comet is also of interest in that it returns every 3½ years. Biela's comet, first observed in 1772, is peculiar in that its dissolution or annihilation has been ascertained. Donati's comet, discovered by him in 1858, was remarkable for its great brilliancy, and for the number of months it was visible to observers.

Comines, or Comynes, Philippe de.—(1445-1511.) A distinguished French statesman and historian.

Commission.—A sum allowed to a broker, agent, or commission merchant for the transaction of business. It is usually based upon a fixed percentage of the sum dealt with.

Committee.—One or a number of persons charged, by an assemblage acting in concert, with any business and to report to the appointing or any other designated body on the manner in which the business has been transacted. Committees do very much of the actual work of legislative bodies in this country, Great Britain, and the possessions of the latter. In effect, they save time and labor, and expedite law-making or the discharge of such other business as may be referred to them, for generally in theory, and as often in practice, committees are constituted with special regard to the character of the duties they may have to perform. They present to the larger bodies, for discussion, coherent plans and matured conclusions. The committee system had its rise in the English House of Commons, in Elizabeth's time, and was in great favor during the Commonwealth. Early in colonial history, Va., N. Y., Md., Pa., and N. C. adapted the system to their wants, and the Continental Congress used it freely. Under the Federal Constitution it was not at first popular in Congress, but in the early '20's during the speakership of Clay, standing committees became recognized as valuable adjuncts of legislation. The Senate—which appoints its own committees, while the speaker appoints those of the House—was slow to follow the example of the latter. The prestige the speaker of the House derives from his power of appointment makes him, next to the President, the most influential official in this country. A committee of the whole is an entire legislative or other deliberative body that has assumed the former character and designation that it may discuss matters not in the scope of the regular committees and is under the chairmanship of a person other than the usual presiding officer. In practice, the House of Representatives recognizes two committees of the whole—the committee of the whole on the state of the Union, which has to do with public business and bills appropriating public money or property, and the committee of the whole that has cognizance of private bills and private business. The rules that govern the House in its proceedings also govern the committees of the whole,

as far as practicable. The latter cannot enact legislation. As early as 1744, the legislature of Pa., had a committee on correspondence, ostensibly to keep in touch with the agents of the colony in England but actually to combine the colonies in protest against the tyrannical exactions of the Crown. Samuel Adams, at a town meeting at Boston in 1772, moved the appointment of a committee to define the rights of the colonists and correspond with other New England towns and colonies. The communications were secret and did much to prepare the country for the impending conflict. Va. followed the example of the eastern colonies and went a step in advance, as its committee favored the formation of a confederacy. The committees on correspondence were followed by committees on safety, formed in all the colonies to oppose the encroachments of the royal governors. A committee of this character was appointed by the second provincial congress of Mass., early in 1775, to resist the enforcement of obnoxious laws, muster the militia, and otherwise prepare for the war that was then impending. It corresponded with like committees, and as the Revolution progressed, these bodies assumed the functions of the deposed governors until the adoption of state constitutions relieved them of such self-imposed duties.

Commodore.—Early in the history of the U. S. navy this was a courtesy title given to the senior officer of a squadron. The official grade was created in 1862, and was defined as "the next above that of captain." It was equivalent to the rank of brigadier-general in the army. Until 1862 a captain was the highest naval officer known to the law, and when he or a flag officer commanded more than one vessel at a time he was popularly called a commodore, and this title, once conferred was seldom withdrawn. It was abolished by the naval personnel act, passed in March, 1859, and the number of rear-admirals was increased by the same act to eighteen.

Common Clay.—2949.

"Commoner," The.—A newspaper established at Lincoln, Neb., by William J. Bryan, soon after his second defeat for the presidency, in 1900.

Common Law.—Is largely a law of precedents and is best expressed by those rules of action which are founded upon established usage and the decisions of judges. As used in the U. S. the term "common law" refers more particularly to that of England, and is taken to include uncodified maxims and immemorial customs, as well as statutes of Parliament passed prior to the first settlements in the Colonies that formed the original states. The ancient common law of England is the foundation of the jurisprudence of all the states, and under the first Constitution of the colonies emphasis was laid on the claim that the people were entitled to the benefits of this common law. After the adoption of the Federal Constitution, the strict constructionists held that there was no common law in respect to the jurisprudence of the government, while

the nationalists held the opposite opinion. Common law is still recognized, to some extent, in the U. S. in the administration of justice, although statutory law is generally adhered to. A "common law marriage," for instance, is usually held to be valid and binding on both parties, although no marriage ceremony has been performed.

Commons.—At the time the older New England towns were settled, facilities for fencing were inadequate and a part of the land in a community and in a few cases all of it, was tilled in common. The areas so cultivated were often very extensive, but whether large or small, the right of each freeman to a part was jealously guarded. Selectmen occasionally had authority over such lands. The cultivators were styled proprietors and sometimes formed a body distinct from the ordinary town organization. Common cultivation is an old English custom. (See BOSTON COMMON.)

Common Stock.—The ordinary shares of stock in an enterprise as distinguished from "preferred" or "founder's" stock.

Commonwealth of England, The.—See OLIVER CROMWELL.

Como.—In Italy; the capital of the province of Como. It contains one of the finest cathedrals in Italy. Pop. (1899), 36,426.

Como, Lake of.—A lake in northern Italy, famed for its beauty.

Compass, Mariner's.—An instrument for indicating the magnetic meridian, by which sailors at sea are enabled to steer their course when out of sight of land and when neither sun nor stars are visible. The magnetic needle is subject to slight variation with latitude, so that it usually points E. or W. of the true north, and it is affected also, and often disastrously to ship and mariners, by the reaction of the ship's iron, in the case of steamers, upon the magnet. With precautions so as to overcome these variations, the value of the magnet is great, since once knowing where the north lies the steersman can, by a glance at the circle-card attached to the bar magnet in the compass box, and marked with the 32 equal angles or "points" of the compass, find his true path across the waters.

* The free suspension and movement of the needle are usually secured by attaching to it a cap of agate or ruby, which rests on a hard sharp point. The directive power of the magnet seems to have been unknown in Europe till late in the 12th century, though it is affirmed that the Chinese were aware of it at a very remote period, using the loadstone first and later the magnetic needle. The surveyor's compass is an instrument used in surveying for measuring horizontal angles.

Composition.—3077.

Processes of Composition, 3078.

Description, 3078.

Narration, 3079.

Exposition, 3080.

Argumentation, 3080.

The Plan, 3081.

- The Filling-in, 3082.
 The Choice of Words, 3083.
 Grammar, 3085.
 Naturalness, 3086. [3087.
 Letter-Writing for Practice in Composition,
Composition and Essays, Subjects for.—3088.
- Compromises, Political.**—The South, feeling that it was at a disadvantage under the high tariff duties of 1828 and 1832, carried its opposition to such lengths that at a convention held at Columbia, S. C., Nov., 1832, an ordinance was passed declaring the tariff acts cited to be null and void. This at once made the question of nullification a great national issue, and to placate the South, Congress enacted a new and compromise tariff in 1833. It was virtually the same measure that was introduced in the Senate by Henry Clay, and provided for a gradual scaling of duties until, at the lapse of ten years, a free-trade basis should be attained. This compromise was offered as a substitute for the low-tariff measure that had been introduced in the House, and provided for a gradual diminution of duties so that a 20 per cent. standard should be reached in 1842. (See NULLIFICATION.) The compromise of 1850 was effected to appease the Southern States, which considered the institution of slavery in peril from the growing anti-slavery sentiment in other parts of the country. By the compromise, Tex. was paid \$10,000,000 for N. Mex. and the area of the latter was reduced; Cal. entered the Union as a free state; territorial governments with slavery-option clauses were established in Utah and N. Mex.; the fugitive slave-law was so amended that arrested negroes were denied trial by jury and redress to free colored seamen imprisoned in southern ports was prohibited. (See MISSOURI COMPROMISE.) The important compromises made by the Constitutional Convention in 1787 pledged Congress to the enactment of a fugitive slave law and to non-interference in the slave trade before 1808; to the non-imposition of taxes on imports, and to the arrangement by which each state has an equal representation in the Senate and a proportionate representation in the House. Compromise may, in a general way, be defined as a settlement of differences by mutual concessions or the compact in which such settlement finds expression. The Crittenden Compromise was another effort to settle the slavery question by peaceful means. Senator John J. Crittenden, of Ky., was its author. In 1860 he offered a constitutional amendment to divide the country into slaveholding and non-slaveholding sections and suggested 36° 30' as the line of division, the U. S. to reimburse the owner for every fugitive slave captured. The amendment was never submitted to the states, as the Civil War soon followed and settled the questions at issue.
- Comstock, Anthony.**—Born 1844. An American reformer. Agent of the Society for the Suppression of Vice.
- "Comte de Monte-Cristo."**—A novel by Alexandre Dumas, published in 1844.
- Comus.**—The god of mirth.
- Concepcion.**—(1) A province of Chili. (2) The capital of the province of Concepcion; an important trading point. Pop. (1895) of the province, 188,190; of the capital, 39,837.
- Conch, The.**—See MOLLUSK, 2717.
- Conciergerie** (*kôn-syerzh-vê'*), La.—The old prison of the Palais de Justice in Paris, became widely known during the Reign of Terror. Three hundred and twenty-eight prisoners were executed there in a single week. Marie Antoinette was imprisoned there, and her cell might be seen until 1871, when it was destroyed by the Communists.
- Concord.**—(1) The capital of N. H., formerly called Rumford; incorporated as a city in 1853. Its manufactures comprise cotton and woolen goods, leather, harnesses, vehicles, etc. Pop. (1900), 19,632. (2) A town in Mass., the residence of Emerson, Hawthorne, Thoreau, and other *liverati*; it was the center of what is known as the "Transcendental Movement," and the seat of the "Concord School of Philosophy." In 1775 it was the scene of an engagement between the British and Colonial forces. Pop. (1900), 5,652.
- Concord (Mass.), Battle of.**—Though little more than a skirmish, from a military point of view, it was most important in its immediate consequences, as it convinced Minutemen, fresh from the plow, that they could defeat British regulars. After the engagement at Lexington, 800 British, under Lieut.-col. Smith and Maj. Pitcairn, marched to Concord, where, Apr. 19, 1775, they were confronted by 300 Americans, commanded by Col. Barrett and Maj. Buttrick. The conflict was brief and sharp, and the British did not get the military stores they had been sent to capture or destroy; but, on the contrary, were obliged to retreat to Boston in the face of a galling fire.
- "Concord," The.**—A war vessel which participated in the battle of Manila, May 1, 1898.
- Condé** (*kôn-dâ'*).—A famous French family which took its name from the town of Condé in the department of Nord, France. The members were representatives of the Bourbon house. The greatest of the family was Louis II. de Bourbon, called "The Great Condé" (1621-1686), and he was most famous on account of his brilliant military career.
- Condor, The.**—See VULTURE, 2526.
- Coney Island.**—A popular summer resort for recreation and amusement, visited by multitudes of people from the various boroughs of New York City. It is not an island, but is on the southern shore of Long Island.
- Confederate Battle-Flag Order.**—Issued by President Cleveland, directing that the Confederate flags, held as trophies, should be returned to the states from which they were captured during the Civil War. It caused so much feeling in the North that the order was revoked. (See CLEVELAND, GROVER, 130.)
- Confederate Brigadiers.**—A political epithet applied to the southern Democratic leaders after the war.

It originated with James G. Blaine in Congress, and for a time was in general use by northern political speakers and newspapers.

Confederate Cabinet.—The Cabinet under the constitution of the Confederate states was in its organization substantially the same as that of the U.S., and the members of the one had functions and responsibilities corresponding to those of the other. The Confederate President might remove Cabinet officers. The first or provisional Congress of the seceded states met at Montgomery, Ala., Feb. 4, 1861. The government was removed to Richmond, Va., May 24, of the same year. The regular Congress had 24 senators and about 100 representatives, and met for the last time Mar. 18, 1865. The permanent constitution of the Confederacy resembled, in many important particulars, that of the U. S. It departed from the latter, however, in so far as it recognized the principle of state sovereignty as the South interpreted it; contended for the protection of slavery in all new territories, prohibited internal improvements at the expense of the general government, and also the imposition of duties on imports to promote or foster any branch of industry; provided that new states should be admitted by a vote of the same; gave to state legislatures the power to impeach Confederate officers acting within their jurisdiction; made the presidential term 6 years and the incumbent ineligible for reëlection; limited the power of Congress in appropriations and extended the right of debate in that body to members of the Cabinet.

Confederate States of America.—The eleven states that seceded from the United States in 1860-61. These states were South Carolina, Mississippi, Florida, Alabama, Georgia, Louisiana, Texas, Virginia, Arkansas, North Carolina, and Tennessee. They were readmitted to the Union from 1866 to 1870.—See DAVIS, JEFFERSON, 139

Confederation, Articles of.—June 11, 1776, the second Continental Congress appointed a committee to prepare articles of Confederation and Perpetual Union. The draft, amended, was finally ratified by Congress, Mar. 1, 1781. It provided for a single house of Congress, with authority to raise money by requisitions on the states, but Congress and the articles commanded little respect at home or abroad, as Congress lacked the power to enforce its decrees. So unsatisfactory were the articles in the practical working of government, that a convention to devise a better system met at Annapolis, Md., in 1786, and this body, in turn, called the convention that in Philadelphia, in 1787, framed the existing Constitution.

"Confessions," Les.—An autobiographical series by Jean Jacques Rousseau (1781-82).

Confucius.—(551 B.C.-478 B.C.) China, like other nations, though she has sought to remain apart from the rest of the world, has had her great thinkers and heroes.

Confucius, the Wise, who lived five centuries before Christ, has molded the thoughts of the Chinese for ages. His book is to his country

men what the Bible is to us. His early years were spent in hard study. Later he became a mandarin and a high officer of a province; but he liked study better than office and withdrew from public life to devote his time to learning. His great desire was to revive a respect for law, morals, and religion. He wrote many maxims which have made him famous. He made no parade of wisdom and virtue; but his fame as a sage soon spread far and wide.

Being made governor of Ioo, he took an active interest in the welfare of the people, and lessened the taxes and burdens of the poorer classes. He soon put to death one of the chief magistrates whose acts had favored vice and caused misery. For a while the people turned toward better morals and manners. But truth and virtue were again forgotten, and cheating, thieving, and vice became common. Confucius still lived the virtues which he taught, and set an example for the weak people who tempted him. They finally drove him out into the world to hunt for a new home.

Though he suffered from hunger, and by being put in prison, he bore his troubles and misfortunes with true courage. "The wise man," said he, "is everywhere at home—the whole earth is his." Though the crowd no longer sought him for his wisdom, he still spent his time in serious study, and wrote truths to guide the morals of those yet unborn.

His teaching was simple and easily understood by all. His golden rule was: "Do unto others as you would they should do unto you." His sayings were terse and compact, but full of meaning. The following are examples:—

"A prince can never cease to correct himself in order to bring himself to perfection."

"Resolution is the greatest element of action."

"He who is continually tending towards perfection, who chooses the good and attaches himself strongly to it for fear of losing it, is the sage."

"He who knows how to blush for his weakness in the practice of his duties is very near acquiring the strength of mind necessary for their accomplishment."

"He who shall truly follow the rule of perseverance, however ignorant he may be, will necessarily become enlightened, however feeble he may be, he will of necessity become strong."

"He is a man who first puts his words into practice, and then speaks in harmony with his actions."

"The superior man is he who entertains equal feelings of benevolence towards all men of whatever rank, rich or poor, and has no ego-tism or partiality."

"You are to listen much . . . and be attentive to what you say."

"Watch attentively over your actions and then you will rarely have cause to repent."

"Riches and honor are the objects of human desire; if they cannot be obtained by honest and right means they must be renounced."

"To feed upon a little rice, to drink water, and to have nothing but one's bent arm to lean upon, has its own satisfaction. It is better than to acquire riches by unfair means."

"He who has an unalterable faith in truth, and is passionately fond of study, preserves to his death the principles of virtue, which are the consequences of this faith and love."

"What you do not like when done to yourself, do not do to others. I am not concerned that I have no place; I am concerned how I may fit myself for one. I am not concerned that I am not known; I seek to be worthy to be known."

Confucius made no attempt to explain the origin of things, or to talk of myths, miracles, and ideals. He simply taught a practical system of social economy. He did not originate a religious creed. He simply built a system of morals based on the material wants and tendencies of the people. He taught many virtues, and was not unworthy of the fame which he achieved.

Confucius died in 478 B.C. The place where his disciples buried him was soon visited by the crowds who venerated him as a prophet. He died a sage, but he has long been worshiped as a divine. It is much easier to mourn over a dead teacher than to practise his living precepts. The Chinese ruler gave him the title of "The most holy teacher of all times." See page 1797.

Congo.— See KONGO.

Congo State.— A free, independent State in Central Africa, founded as the Congo International Association in 1883 by Leopold II, King of the Belgians, who remains practically the sovereign. It lies along the Congo River and its tributaries. The population is negro. Gold, iron, copper, lead, coffee, cotton, sugar, cocoa, indigo, and tropical fruits are its products. Area 802,000 sq. miles. Pop., 8,000,000.

Congress— A formal assemblage of persons in a representative capacity, gathered to enact laws or to deliberate on some particular subject for the advancement of a common interest. The U. S. Congress, the powers of which are enumerated and described in the Constitution, consists of a Senate and a House of Representatives. All authority not expressly delegated to the U. S. by the Constitution, nor prohibited to it by the States, is reserved to the States, respectively, or to the people. Congress, acting within the limits of its authority, can be restrained only by the veto of the President, and may override even that by a two-thirds vote. Each State is entitled to two senators and to members of the House proportioned to its population, as shown by the Federal census. "No State," says the Constitution, "without its consent, shall be deprived of its equal suffrage in the Senate." The Vice-president of the U. S.

is by virtue of his office, president of the Senate, but has no vote except in case of a tie. The Speaker, who presides over the deliberations of the House of Representatives, is elected by its members. When a measure has passed both Senate and House, it is sent to the President, who may sign it,—in which case it becomes a law,—veto it, or take no action whatever. In the latter case it also becomes a law if, within ten days after it has been submitted to him, Congress shall not have adjourned. When the President disapproves a bill, he is required to return it with his objections, for reconsideration, to the branch of Congress in which it originated. In such cases, after reconsideration, the measure cannot be passed except by a two-thirds affirmative vote in each of the two houses. The Supreme Court of the U. S. has power to declare unconstitutional and void legislation that Congress may pass in excess of the power delegated to it. Each house is, under the law, the judge of the election returns and the qualifications of its own members. Congress must meet at least once a year, on the first Monday in December, "unless they shall by law appoint a different day."

"Congressional Globe."— The forerunner of the "Congressional Record." The "Globe" was originally issued as a newspaper, containing the proceedings of Congress, between 1833 and 1873. It was followed by the "Register of Debates" and this in turn by the "Congressional Record," as it exists to-day.

Congressional Record.— A complete report, stenographically taken, of the debates and proceedings of Congress, from Dec. 1873 to the present. It is issued daily while Congress is in session, and each member of that body receives gratuitously a special number of copies which he may distribute among his constituents. The subscription price is \$8 for the long term and \$4 for the short term.

Congressman at Large.— A member of the House of Representatives elected by the voters of an entire state and not, as is customary, by the citizens of a congressional district. States elect Congressmen at large to secure for themselves that proportionate representation in the House to which, pending the passage of a redistricting law, they are entitled on the basis of population.

Congreve, William.— (1670-1729.) An English dramatist, who wrote principally along the line of comedy. While his works are marred by the coarseness of his day, his works take a prominent place in the history of plays and play-writing.

Conington, John.— (1825-1869.) An English classical scholar and educator.

Conkling, Roscoe.— Born at Albany, N. Y., 1829; died at New York, 1888. An American lawyer and politician. He was a member of Congress from N. Y. (1859-63 and 1865-67), and U. S. senator (1867-81). He resigned on account of a dispute with the President over the control of Federal patronage in the state of N. Y. On seeking

- reëlection he was defeated. He was a lawyer of high renown.
- Connaught.**—The extreme western province of Ireland. It comprises the counties Rosecommon, Galway, Mayo, Sligo, and Leitrim. Pop. (1901), 649,635.
- Connecticut.**—One of the New England States, and one of the original thirteen states of the American Union. Bounded on the north by Mass., east by R. I., south by Long Island Sound, west by N. Y. Its surface is hilly and its chief agricultural products are grain and tobacco; it is chiefly a manufacturing state, the leading articles being cotton and woolen goods, silks, hardware, firearms, and clocks. It was settled by the Dutch and by colonists from Mass. in 1633, and English colonies were formed soon afterward. Called the Nutmeg State, from a popular fiction that the "Yankees" of Conn. manufactured wooden nutmegs. The state is divided into eight counties; the capital is Hartford; its other leading cities are New Haven, the seat of Yale University, Bridgeport, Danbury, Meriden, New Britain, Waterbury, Norwich, and Stamford. Area, 4,900 sq. miles; pop. (1900), 908,355.
- Connecticut River.**—A river of New England which flows into Long Island Sound. It is about 500 miles in length and several flourishing towns are situated on its banks, *viz.*, Northampton, Springfield, Hartford, Middletown, etc.
- Conrad I.**—(Died 918.) King of Germany (911-918).
- Conrad II.**—(Died 1039.) King of Germany (1024-1039) and Roman emperor.
- Conrad III.**—(1093-1152.) King of Germany (1138-1152).
- Conrad IV.**—(1228-1254.) King of Germany (1250-1254).
- Conscience Whigs.**—Members of the Whig Party in Mass. who opposed the "Cotton Whigs" on the question of slavery, about 1850.
- Conscript Fathers.**—Roman senators, so called because their names were "written together" on the registers.
- Consignee.**—The person to whom goods are delivered or transmitted.
- Consignment.**—The goods sent or transmitted to an agent or consignee.
- Consignor.**—The person who delivers or transmits goods to an agent or broker.
- Consols.**—English three per cent. annuities issued at various times and at last consolidated into one stock.
- Constable, John.**—3476.
- Constantinople (Turk., STAMBOUL).**—Capital of the Ottoman empire (anciently Byzantium), situated on the Bosphorus, the Golden Horn, and the Sea of Marmora, in European Turkey. The beauty of its situation, with its seven hills, numberless palaces, mosques, minarets, and gardens, make it exceedingly attractive, while it is important to trade and commerce as a connecting link between the eastern and the western worlds. Tramways now connect the city with its many suburbs, such as Galata, Pera, etc., while ferries across the Bosphorus communicate with the Asiatic city of Scutari. Constantine the Great made Byzantium the capital of the Roman empire in 330 A.D., and it has been subject to many sieges, notably those of the Saracens, the Latins, Byzantines, and finally the Turks, who have occupied it since 1453 and made it the residence of their sultans. The most striking of its churches is the Mosque of St. Sophia, which has a mighty and graceful dome: it is in the form of a Greek cross, adorned with over 100 columns and 4 minarets. Another fine church is the mosque of Suleiman I., of much interest also are the Greek Hippodrome (the obelisks of the Atmeidan), the Citadel of the Seven Towers, the numerous bazaars, and the imperial palaces on the Bosphorus. The magnificence and luxury of one of the latter (Tcheragan Serai), in the style of the new Turkish Renaissance, are great. Its population exceeds a million.
- "Constellation," The.**—Launched at Baltimore, Md., in 1798, she was made the flagship of Commodore Thomas Truxton and was sent, with his squadron, to the West Indies in 1799, to protect U. S. shipping during the trouble with France. Feb. 9, 1799, she captured "L'Insurgente" a French frigate of 40 guns, and Feb. 1, 1800, defeated "La Vengeance" of 54 guns, which, however, got away in a storm. Truxton received from Congress a gold medal and a vote of thanks in recognition of his bravery and skill.
- Constellations, The.**—3000.
- Constitution.**—As understood in the U. S., and in the individual states of the latter, it is a written statement of the powers of government. In Great Britain it is the sum total of traditions, customs, royal charters, Parliamentary statutes, common law, Magna Charta, the Declaration of Rights, the Act of Settlement, the Reform Bill, and other measures. The British Constitution has never, except tacitly and by acquiescence, received the sanction of the people, while the Constitution of the U. S., and that of each particular state, has been directly so approved. The Constitution of the U. S., framed in 1787, went into effect Mar. 4, 1789. Limited monarchies and republics have constitutions. See HAMILTON, ALEXANDER, 247; also MARSHALL, JOHN, 400.
- Constitution, Amendments to.**—A grave defect in the original Articles of Confederation was that they could be amended only by the unanimous consent of the states. Much needed changes were proposed, but, failing of ratification, a convention to consider amendments was called in 1787. The deliberations of this body resulted in the present Constitution, which provides that: "The Congress, whenever two-thirds of both houses shall deem it necessary, shall propose an amendment or amendments to this Constitution, or, on the application of the legislatures of two-thirds of the several states, shall call a convention for proposing amendments, which in either case shall be valid, to all intents and purposes as part of the Constitution, when ratified by the legislatures of

three-fourths of the several states, or by the conventions thereof, as the one or the other mode of ratification may be proposed by the Congress." Only fifteen of the many proposed amendments to the Constitution have been ratified. They refer to (1) freedom of speech, the press, and religion; (2) right to establish state militia; (3) quartering of troops in private houses; (4) security against unreasonable search and seizure; (5) capital crime; (6) criminal prosecutions; (7) trial by jury under common law; (8) forbidding excessive bail or fines or cruel and unusual punishment; (9) relation of constitutional to natural rights; (10) powers reserved to the states; (11) suits of nonresidents against states in Federal courts; (12) election of President and Vice-president; (13) slavery; (14 and 15) abridgment of the franchise, etc., by the states. The first 10 amendments were submitted to the state legislatures by Congress in 1789, at the first session of the First Congress, and were ratified by the required number of states on or before Dec., 1791. The eleventh amendment was adopted in 1798; the twelfth, 1804; the thirteenth, 1865; the fourteenth, 1868, and the fifteenth, 1870.

"Constitution," The.—Better known as "Old Ironsides," the celebrated American frigate, is still in existence, though built in 1797. She carried 44 guns. July 17, 1812, she met five British frigates, but through the skilful handling of Capt. Hull, she escaped capture. Aug. 19, of that year she encountered the British frigate "Guerrière," 38 guns. In less than half an hour the "Guerrière" was helpless, with 85 of her crew killed or wounded. Dec. 29, 1812, after a fierce battle of two hours, the British man-of-war "Java" surrendered to the "Constitution," the former losing 161 in killed and wounded, while the Americans lost but 34. Feb. 20, 1815, the "Cyane," 20 guns, and the "Levant," 18 guns, struck their colors to the "Constitution," the British loss outnumbering that of the Americans more than five to one. Great public indignation was excited in 1830 at the proposal of the secretary of the navy for her dismantlement and sale. It was this that suggested Holmes's well-known poem, "Ay, tear her tattered ensign down." Eventually she became a schoolship, and in 1897 was taken to Boston, where she was at first built.

Constitutionalists.—Pa. forerunners of the Democrats and Anti-federalists, who later became prominent and important under the leadership of Jefferson. The Constitutionalists, who as such had little prestige outside of Pa., favored the maintenance of the Constitution that was in force during the Revolution and down to 1790, as against those who wished a government stronger than was possible under that instrument. When between 1806 and 1808 another party that wished to amend the Federal Constitution was organized, it adopted the name Conventionalist, and the party that particularly took issue with it was known as the Constitutionalist.

Constitutional Union Party.—Was founded by members of the disrupted Whig party, who early in 1860 nominated John Bell, of Tenn., for president and Edward Everett for vice-president. Twenty states sent delegates to the nominating convention, which denounced the platforms of the other parties as fostering political divisions and avowed the dominant principle of the Constitutional Union Party to be "The Constitution of the country, the union of the States, and the enforcement of the laws." In Nov., 1860, it carried Va., Ky., and Tenn. It was also called the American party, and among its members were many of those who had previously been styled "Know-nothings."

Constitutions of the United States and of Great Britain—Distinctions between Them.—The chief distinction between the English Constitution and that of the United States lies in the fact that the English nation is a monarchy and the United States is a republic. England is the home of the parliament and a responsible ministry. The United States that of a congress and an executive not having seats in or directly responsible to the legislature. On this continent, in Canada alone is responsible English parliamentary government found in complete operation. It is England that has given representative government to the world at large. The system followed in the United States is based on English institutions of a century ago and on the legislative model of the old English colonies. The characteristic of the local or state government in this country is pretty much that of the Federal power. In the several states, the governor is the head of the executive and has no responsible ministers in the English or Canadian sense, while the executive or administrative officers are generally elected. Further contrast lies in the fact that the head of the nation in the United States is elected for a brief period and has to make way for a rotation in office, while in England the office of the sovereign is a life position.

Constitutions, State.—When the Declaration of Independence was adopted, the governments of the Colonies, with few exceptions, were only temporary. Constitutions were adopted by the original states in this order: Md., N. H., N. J., N. C., Pa., and Va. in 1776; Ga. and N. Y. in 1777; S. C. in 1778; Mass. in 1780; Del. in 1792; Conn. in 1818; R. I. in 1842.

Consuls.—A consul is primarily the business agent of one sovereign state in a port or other important city of another similar state. His duties are to collect and present to the government he represents, facts bearing on the industrial and economic conditions of the country to which he is accredited, and to see that his fellow-countrymen residing in the latter or traveling therein are duly protected in their civil and commercial rights. He must be officially recognized by the government within whose territory he is to act, before he can lawfully discharge his duties. The U. S. has long had a consular service, and Congress by acts passed in 1848 and

1860, empowered its consuls, in some Oriental countries, to take testimony and decide judicial cases. A consul-general differs from a consul inasmuch as he has supervision of all the consuls of his government in any specified country.

Contagion.—1064.

Continental Congress.—This body had its origin in a recommendation of the Virginia Assembly, adopted in 1774, on receipt of the news of the passage of the Boston Port Act. The First Continental Congress met in Philadelphia, Sept. 5, 1774, with representatives present from all the colonies except Ga. Its action was very moderate. It commended Mass. for her temperate resistance to obnoxious Parliamentary legislation, and declared that all America should endorse its course. This Congress suggested a compact not to import British goods after Dec. 1, 1774, nor to export goods to Great Britain later than Sept. 10, 1775, unless in the meantime the government of the latter had redressed the grievances of the Colonists. The Second Continental Congress assembled in the same city, May 10, 1775, and each state, which was allowed one vote, was represented by delegates. It formally declared the independence of the U.S. and began the Revolutionary War, remaining in session until Dec. 12, 1776, when it adjourned to meet at Baltimore. Influenced by the changing course of events, it went back to Philadelphia, whence it adjourned to Lancaster, Pa. There it spent but one day, going to York, Pa., June 27, 1778, only to return to Philadelphia, July 7, 1779. Here it held its deliberations for four years and then met, in the order named, at Princeton, N. J., Annapolis, Md., Trenton, N. J., and finally New York, there adjourning Nov. 5, 1787, when the Federal Congress, under the present Constitution, came into existence.

Continental Money.—The Second Continental Congress authorized an issue of paper money in 1775 and other issues were made until 1779. This money was in the form of bills of credit, and its value fluctuated with the varying fortunes of the Revolutionary army. About \$242,000,000 was circulated, and it was received at first on a par with gold, but within two years it had fallen 50 per cent. It was finally quoted at less than three cents on the dollar. Thereupon Congress ordered the notes bought at their market value and replaced them by others at the rate of 20 to 1, the new issue to bear interest at five per cent. Alexander Hamilton, the first Secretary of the Treasury under the Federal Constitution, persuaded Congress, in order to firmly establish the credit of the National Government, to redeem the latter notes at par.

Continental Soldiers.—The troops commanded by Washington and paid by the Government. Congress in 1775 appropriated £6,000 for their maintenance. They were regular soldiers constantly employed and under discipline, as distinguished from guerrillas and militia.

Continents, The—How Named.—Australia (formerly New Holland) derives its name from its geographical location (*Australis*, southern): Africa

was originally the name of a small tract on the north coast, still surviving in the *Friga* of the Tunisian Tell, and was extended under Roman influence to the whole of the "Dark Continent." The origin of the term Asia cannot be accurately determined: it is supposed to have been a local name given by the Greeks to the plains of Ephesus, and afterwards extended to the Anatolian peninsula, and later to the whole of the continent. Europe (Lat. *Europa*) is so named by the Asiatic Greeks, either from its wide coast or from the Phœnician Princess Europa.

Contraband Goods are such as are prohibited to be imported or exported and are subject to seizure and confiscation if the attempt is made.

Contraband of War.—This term has been traced back to the year 1625, when it was used in a treaty between England and Spain. It embraces according to the Declaration of Paris, signed in 1856, all arms, ammunition, and supplies that may be useful in conducting military operations, offensive or defensive, and these may be seized by either belligerent, should a neutral try to convey them to the other. Gen. Benjamin F. Butler, in 1861, was the first to proclaim contraband of war the slaves of those who had rebelled against the U. S. Government. The name "contrabands" was at once applied to the negroes and was in universal use, particularly in the Union army during the war.

Contractor and the Builder, The.—5162.

Convention, Diplomatic.—A convention in diplomacy has much the same meaning as a treaty, with the distinction that a convention usually relates to a few matters of minor importance. The informal understanding or protocol is occasionally referred to as a treaty. (See **PROTOCOL**.)

Convention, Nominating.—A body of delegates or representatives assembled to nominate candidates for office. Early in the history of this country, aspirants to office nominated themselves, or were placed in nomination by a caucus. (See **CAUCUS**.) The first state convention of which we have knowledge was held at Harrisburg, Pa., in 1788. The Anti-Masons held a national convention at Baltimore in 1831, and soon thereafter the Whigs followed their example, which has since become general among all parties.

Conventions, Revolutionary.—These were meetings of colonial assemblies that, in consequence of their opposition to the obnoxious measures of Parliament, had been dissolved by the royal governors. With the lapse of time the authority of these conventions displaced that of the mother country.

Convention Troops.—The soldiers of Burgoyne's army, after their surrender at Saratoga, Oct. 17, 1777, were known as Convention troops, because by the convention or articles of capitulation they were under a pledge that they would refrain from hostile acts against the U. S. They were allowed to march out of camp with the honors of war, and, while they were awaiting transportation to England, they were at Winter Hill and Prospect Hill, Boston. Con-

- gress, fearful that they would violate their parole, revoked it. After much delay, Burgoyne and his officers were sent to England and their men were taken, first to Rutland, Vt., and thence to Charlottesville, Va., where they remained until 1780, when the Englishmen were quartered at Fort Frederick, Md., and their German allies at Winchester, Va. They were moved once again, some to Lancaster, Pa., and others to East Windsor, Conn. The Revolutionary War virtually ended with the surrender of Cornwallis in 1781, and by the end of 1782 Burgoyne's army had been dissipated by exchange or desertion.
- Conway, Frederick B.** (1819-1874).—A noted English actor.
- Conway, Hugh.** (The *pseudonym* of **FREDERICK JOHN FARGUS**).—British novelist.
- Conway, Thomas.**—Born in Ireland, 1793; died about 1800. An American general in the Revolutionary War. He originated the intrigue known as the Conway Cabal, the object of which was to supplant Washington in the chief command of the army, in favor of General Gates.
- Cook Islands.**—In the South Pacific, an archipelago belonging to Great Britain. The chief island of the group has a population of about 3,000.
- Cook, James.**—(1728-1779.) A famous English navigator.
- Cooke, Rose Terry.**—Born at West Hartford, Conn., 1827; died at Pittsfield, Mass., 1892. An American author. Her chief works are "Poems by Rose Terry," "Somebody's Neighbors," "Steadfast," etc.
- Coolie.**—A term at first applied to one of the aboriginal hill tribes of India. It now has a broader meaning and is often applied to any unskilled Asiatic laborer. In a more particular sense, it describes the ordinary laborer of China or Japan who, under contract, emigrates to a foreign country. Europeans in Hindostan call all laborers coolies. In the U. S. Chinese laborers are often spoken of as coolies, and their appearance here in large numbers years ago resulted in protests and political action by bodies of workingmen, who urged that the newcomers, occupying squalid quarters and living cheaply, underbid white labor. The agitation resulted in national legislation by which the immigration of the Chinese was stopped.
- Coon, The.**—See **RACCOON**, 2443.
- Cooper, James Fenimore.**—Author, sketch of, 134.
- Cooper, Peter.**—Business man and philanthropist; sketch of, 137.
- Cooper, Samuel.**—3467.
- Cooperstown.**—A town in Otsego County, N. Y.; founded by the father of James Fenimore Cooper, the author. It is a favorite summer resort. Pop. (1900), 2,368.
- Cooper Union.**—An institution in New York founded by Peter Cooper and intended for the instruction of the working classes. The plan of instruction provides for free schools, free reading, and lecture rooms, etc.
- Coote, Sir Eyre.**—(1726-1783.) A distinguished British general, noted for his service in India.
- Copenhagen.**—The capital and commercial center of Denmark, situated partly on the island of Zealand and partly on the island of Amager, on the strait of the Sound. It is commanded by the citadel, Frederikshavn, but its fortifications have been dismantled. The city was founded in the 12th century and became the capital in 1443. It has suffered much by sieges and bombardments, and especially by the fire of the British fleet in Sept., 1807. In the adjoining harbor, Nelson, in 1801, destroyed the Danish fleet. The city is specially interesting to art-lovers and antiquaries, for it is rich in the masterpieces of Thorwaldsen, as well as in its natural history specimens, its numismatical collections, and in its store of antiquities, including early stone and bronze implements, and relics of prehistoric times. The chief public buildings are the University of Copenhagen, the Church of Our Lady, the metropolitan church of the kingdom, the Trinitatis and the Holmens Kirke, the Castle of Rosenborg, the Palace of Christiansborg, with its fine library, and the Royal Museum of Natural History. Its commerce, chiefly foreign, is considerable, but its manufactures are local and trifling. It has numerous squares, the finest of which is the new King's Market. In the fine harbor are generally to be seen several ships of the Danish fleet, and many vessels of the merchant navy. Pop., with suburbs (1895), 408,300.
- Copernicus** (*kô-per'ni-kus*).—(1473-1543.) The founder of modern astronomy, and the system is known as the Copernican.
- Copley, John Singleton.**—Born at Boston, Mass., 1737; died at London, 1815. An Anglo-American artist and portrait painter. While a youth, he began to sketch and displayed marks of uncommon genius in his productions, one of which, "Boy with Squirrel," at the suggestion of Benjamin West, caused him to be elected a member of the Society of Artists in London. After a tour through Europe, he finally settled in London and became an associate and full member of the Royal Academy in 1777. His most famous work is "The Death of Lord Chatham," for which he refused an offer of \$7,500, and which he exhibited privately. See page 3521.
- Coppée** (*kop-â'*), **François Édouard Joachin**, was born at Paris in 1842. He is a noted French writer of plays. He has published a number of poems, prose writings, and plays.
- Copper.**—The most widely distributed, as it is the earliest of metals used by man. In the island of Cyprus, whence the metal derived its Latin name (*cuprum*), it is known to have been smelted by the Greeks and Romans at an early age and used by them in the peaceful arts as well as in war. By them it was generally mixed with other metals, chiefly tin, and formed what we now term bronze. Copper is not only found abundantly in its native condition, as in our Lake Superior mines and in those of Russia and Great Britain (especially in Wales and Cornwall), but in various other ores, such as cuprite, malachite, copper pyrites, etc. Mixed

with tin it forms bell-metal, and with zinc it forms brass and other alloys. This useful metal is both ductile and malleable, as well as very tenacious, and it is one of the best conductors of heat and electricity. It has a peculiar red color and a bright lustre. It is largely used in the arts, alike in its pure state and alloyed with other metals. The chief copper-producing countries are Spain and Portugal, Australia, Canada, Mexico, Chile, Germany, and Japan; but by far the largest yield is in the United States, where it is freely found in Michigan, Montana, and Arizona. The yield in this country of domestic copper was in the year 1899 estimated at 615,887,360 pounds. From our extensive native supply, copper is now a large export of the United States, in addition to its great and increased use at home in manufactures. See page 2948.

Copperas.—The commercial term for the sulphate of iron or ferrous sulphate. It is known also as green vitriol and is obtained by dissolving iron in dilute sulphuric acid. On a large scale, copperas is also obtained from iron pyrites, the mineral ferric sulphide, which oxidizes readily in the presence of moisture. It forms double salts with the sulphates of potassium and ammonium. Copperas is used in the arts in the dyeing of black fabrics and in the manufacture of ink; it is also an ingredient of some medicines. It is composed of 25.7 per cent. of protoxide of iron, 28.9 per cent. of sulphuric acid, and 45.4 per cent. of water.

Copperhead.—An epithet popularly applied during the Civil War to residents of loyal states who opposed the war and used their influence to discourage enlistments and otherwise to embarrass and hamper the Government in its efforts to suppress the rebellion. The name is that of a poisonous snake that infests portions of the U. S. The "Copperheads" of 1861-65 were analogous to the Tories of Revolutionary days.

Copperhead Snake, The.—See SERPENTS, 2640.

Copts.—Descendants of the ancient Egyptians. Their language, the Coptic, was used in Egypt until within the past two centuries, and has given place to the Arabic.

Copyright.—Copyright is the protection that the law affords to the product of a person's intellectual genius and industry in literature and art. The first U. S. copyright law was passed by Congress in 1790, when that body enacted that copyrights should be granted to authors and patents to inventors. Under this act authors were given the exclusive right to their works for 14 years, with the right to renew the copyright for another term of 14 years. In 1831 the original copyright was made good for 28 years, the period of renewal remaining as before. In 1870 this latter right was extended to the widow or children of an author, who in his own lifetime, had received a copyright for an original term of 28 years. Under the international copyright law, passed in 1891, the privilege of American copyright was extended to authors of such countries as grant like privileges to American

writers. Many writers of this country and of Europe have taken advantage of international copyright.

Coquelin (*kôk-lan'*), **Benoît Constant.**—A noted French actor, born in 1841 at Boulogne-sur-Mer. He has appeared recently with Sara Bernhardt.

Coques, Gonzales.—3485.

Coral.—See RADIATES, 2713.

Coral.—The skeleton or hard structure developed in the tissues of minute animal life, resembling somewhat the sea-anemone, and inhabiting comparatively shallow and warm water in the Mediterranean and mid-Pacific. In these seas, the polyp or anthozoa, by their secretions, construct reefs or atolls, or branching tree-like structures, usually red in color, which when hard is susceptible of a high polish. These reefs often extend to a considerable length, and form barriers in shallow waters, at a depth not greater than from 15 to 30 fathoms. The coral-producing animals generally live in colonies or communities, and form, in many instances, entire islands, such as may be seen among the Keys and Everglades of Florida.

Corbett, Boston.—The slayer of John Wilkes Booth, the assassin of Abraham Lincoln. He was a member of a cavalry regiment and was engaged in the pursuit of Booth. The latter was in a barn, which had been set on fire by the soldiers. Corbett fired on Booth, contrary to orders, for which he was court-martialed. He died insane, after a long confinement in an asylum in Kansas.

Corcoran Art Gallery was established in Washington, D. C., by William Wilson Corcoran. It contains a valuable collection of marbles, bronzes, and a gallery of paintings.

Corcyra or **Kerkyra.**—The ancient name for Corfu, an island belonging to Greece in the Ionian Sea, off the coast of Epirus or Albania. Its area is 431 square miles, its length being about 40 and its greatest breadth about 20 miles. The island was colonized by the Corinthians in 734 B.C., and it soon rivaled the mother country (Corinth) and became an important maritime state. Owing to dissensions which sprung up with the parent state, the Peloponnesian War was precipitated, after which it suffered many vicissitudes, and was for a time a naval station of the Romans. In 1815, with the Ionian Islands, Corfu came under the protectorate of Great Britain, but in 1864 was transferred to Greece. The population of the island was, in 1896, 124,578, and that of the town of Corfu 18,000.

Corday d' Armans, Marie Anne Charlotte.—(Charlotte Corday). See WOMEN WHO HAVE INFLUENCED HISTORY.

Cordova (*kor'dô-vā*).—The capital of a province of the same name on the Guadalquivir River in Spain. It is famous for its manufacture of leather. From it we get the word cordovan and cordwainer—an obsolete word for a shoemaker. In the Middle Ages it was the center of art learning and literature. It had then one

million inhabitants. It derived much of its architectural splendor from the Moorish influence.

Corea.—See KOREA.

Corelli, Marie, is the adopted daughter of the late Charles Mackay; was educated for a musical career, but turned to the writing of fiction, and has attained a popularity beyond that of many other novelists.

Corfu.—(1) A nomarchy of Greece. (2) The largest of the Ionian Islands. (3) A seaport and the capital of Corfu. Pop. commune (1889), 28,000.

Corinth.—A city of Greece near the Gulf and Isthmus of Coriuth. It was noted in very early times as a center of commerce, literature, and art. In modern times it has been taken and retaken by the Turks. It was destroyed by an earthquake in 1858 and was rebuilt 3 miles from the old site. Pop. commune (1889), 11,150.

Corinth (Miss.), Battle of.—This should not be confounded with the siege of Corinth (April-May, 1862) immediately following the battle of Shiloh, or Pittsburg Landing. After the Confederates evacuated Corinth, May 31, the Union army of 100,000 men, which had been under the command of Gen. Halleck, was broken up. A third of it under Buell marched to the eastward toward Chattanooga; Grant with 40,000 men moved westward toward Vicksburg; while Rosecrans, with 25,000, commanded in northern Mississippi. The summer passed without any important engagements, but in Sept. a large Confederate force commanded by Gen. Earl Van Dorn made its presence felt. Sept. 19, there was a severe engagement at Iuka (which see), after which Van Dorn planned an attack on Corinth. This place was strongly fortified and was occupied by Rosecrans, with about 18,000 men. The Confederate strength was about twice that number. Fighting began Oct. 2, 1862, and on the 4th, Van Dorn made a furious assault. The soldiers of both sides fought with the greatest gallantry. The assailants were repulsed with great loss. In their hasty retreat they were vigorously pursued, and at the crossing of the Hatchie River they were attacked by the divisions of Hurlbut and Ord, who captured a battery of artillery and several hundred prisoners. In these engagements the Confederates lost 1,400 killed, 6,000 wounded, and 2,500 prisoners, a total of about 10,000. Rosecrans's loss was 315 killed, 1,800 wounded, and 230 prisoners. Among the slain on the Union side was Gen. Pleasant A. Hackleman.

Coriolanus, Cnæus Marcius.—A Roman legendary hero, who lived in the 5th century B.C.; leader of the Volscians against Rome.

Cork.—(1) The largest county of Ireland. (2) The capital of the county of Cork, and third city of Ireland. Pop. (1901), 75,978.

Cork (Latin *cortex* bark).—The outer rind or bark of a species of oak (*Quercus Ilex* or *Q. suber*), a native of southwestern Europe, chiefly Spain, Portugal, and southern France, with the islands of Sardinia and Corsica. The imperviousness of

cork (its walls are waterproof) to liquids, and its compressibility and elasticity render it suitable for stoppers to bottles and for bungs to barrels; its other important uses are as inside soles, for hat frames, life-preservers, mattresses, false limbs, and for the construction of life-boats. In Spain, walls are sometimes lined with cork to keep out dampness, while, with caoutchouc, it constitutes the material, Kampulicon, used as a carpet or floor-cloth.

Cork Tree.—A species of oak which grows from 30 to 40 feet in height, and has a remarkable development of soft cellular tissue in its bark, known and utilized as cork. The bark is taken from trees generally after their twentieth year, and is removed every eight or ten years—an operation, which, curiously enough, instead of blighting the tree, promotes a hardier and more vigorous growth, and leads to the production of cork of a finer and closer texture. For its uses, etc., see CORK.

Corliss, George Henry.—Born at Easton, N. Y., 1817; died at Providence, R. I., 1888. Noted as a designer of steam engines, in which he made many valuable improvements. A great Corliss engine supplied the motive power for Machinery Hall, at the Philadelphia Centennial Exposition in 1876. At the opening, May 1, the engine was set in motion by President Grant.

Corn.—In the United States, we mean by the term Corn maize or Indian corn, a species of the grass family, which next to rice is perhaps the most important of food plants. In Great Britain, the term is generally applied to such cereals and farinaceous grains as wheat, rye, barley, and oats. The maize plant has been long known in this country, being originally, it is supposed, a native of Mexico, and largely in use by the Aborigines. It forms about two-thirds of all the grains grown in the United States, the average annual yield being over 2,000 million bushels. Its chief use is as a food for cattle, sheep, and hogs, though when coarsely ground it makes hominy and when finely ground cornmeal. Indian corn is, moreover a large constituent of starch, glucose, and grape sugar, while the leaves and stalks of the plant, when dried, are largely used for cattle fodder. Besides the sweet or sugar corns, there is also the variety in use as pop corn, with its small kernels and ears. Broom corn is *Sorghum Dora*, while Kaffir corn is a sweetened sorghum, akin, probably, to the Arabian millet or to the Chinese sugar-cane.

Cornelle (*kor-nâ'y'*), **Pierre.**—(1606-1684.) A noted French dramatist.

Cornelius, Peter von.—(1783-1867.) A noted German painter, called the leader of the new school of German art.

Corner.—An artificial scarcity caused by holding property to sell at higher prices, by reason of the increased demand.

Corn Laws.—Duties under these laws were greatly reduced in England in 1846, while Sir Robert Peel was prime minister, further reduced in 1849, and wholly abolished later. The first Corn

- Laws in England were passed in 1436, and in the course of the four centuries that followed they were often changed. The protective duty on grain was, at one time, so high as to make importation impossible and large bounties were paid to stimulate its exportation. The repeal of the Corn Laws was effected only after excited agitation and intense opposition by interests that had thrived under their operation.
- Cornwall.**—(1) A county of England lying west of Devonshire. Pop. (1891), 322,571. (2) A part of entry in Ontario, Canada. Pop. (1901), 6,704.
- Cornwallis, Charles.**—(1738-1805.) An English statesman and soldier, entered the army in 1756 and took part in the battle of Minden and other battles. He was elected to parliament in 1760 and entered the House of Lords in 1763. He took part in the American Revolutionary War; gained the battle of Brandywine and took possession of Philadelphia, Apr., 1778; in 1780 he defeated Gen. Gates at Camden; won the battle of Guilford Court House, 1781; and surrendered at Yorktown to Washington, Oct. 19, 1781. He then went to India as governor-general; was viceroy and commander-in-chief in Ireland; and went a second time to India as governor-general, where he died.
- Corot** (*ko-rō'*), **Jean Baptiste Camille.**—(1796-1875.) A celebrated French landscape-painter.
- Corpus Christi Day.**—A festival of the Roman Church, in honor of the Consecrated Host.
- Correggio.**—3435.
- Correspondent, Special.**—3138.
- Corsica.**—An island and department of France, situated in the Mediterranean, south of Genoa, and separated from Sardinia by the Strait of Bonifacio. At the close of the First Punic War it was acquired by the Romans, and has been held successively since by Vandals, Goths, Franks, Saracens, and Pisans, and from the 14th century by the Genoese. It was also held for a time by the British, and since 1796 has been occupied by France. It was the birthplace of Bonaparte. The country is mountainous and is much beset by brigands and vendettas. The capital is Ajaccio, but the chief town is Bastia. The population is 290,000, a large proportion of which speaks Italian.
- "Corsican Brothers, The."**—A French play; translated by Boucicault.
- Cortés, or Cortez, Hernando, or Fernanda.**—(1485-1547.)—A celebrated Spanish soldier; conqueror of Mexico.
- Corydon.**—In poetry, a name applied to a shepherd, or country swain.
- Cosmos Club.**—A society in Washington, D. C., organized in 1878 and composed chiefly of scientists.
- Cossacks.**—A people of an uncertain origin (probably Tatars or Slavonians), of a warlike character, and whose habitat has chiefly been Russia, Caucasia, and Siberia. Historically, they are usually spoken of as forming two branches, viz., the Don Cossacks who inhabit the steppes of Russia, and those of Little Russia, the turbulent and predatory Cossacks to be found, in the main, on the banks of the Dneiper. There are also those residing on the frontiers of Russia, in southern Siberia, and those inhabiting the region of the Caucasus. They constitute an important part of the Russian army, being very serviceable as light cavalry. They have borne the character of a gallant, independent, and democratic people whose spirit has shown itself at times troublesome to Russia in occasional unsuccessful revolts.
- Costa Rica.**—Translated from Spanish into English, it literally means "rich coast." The name of a Central American republic. The soil is fertile, coffee is the principal crop, and there are some very valuable gold mines. The country, which has been independent of Spain since 1821, is governed by a president and a house of deputies. Area, 23,000 sq. miles; pop. (1899), 310,000.
- Coster or Koster, Laurens Janszoon.**—A citizen of Haarlem, whose life is veiled in obscurity, but for whom the Dutch claim the honor of having invented the art of printing with movable types (about 1440).
- Cotman, John Sell.**—(1782-1842.) A noted etcher and landscape painter of England.
- Cotopaxi.**—A volcano of the Andes, near Quito, Ecuador. The highest active volcano known. Height 19,613 ft.
- Cottle, Joseph.**—(1770-1853.) An English bookseller and poet.
- Cotton.**—The hairy covering of the seeds of various species of *Gossypium*, a genus of plants which belong to the mallow family. The plant is indigenous to China, India, Brazil, Egypt, and the southern regions of the United States. Next to wheat, corn, and rice, cotton is perhaps the most valuable to man in the manufactures. The cotton plant, which is cultivated only in tropical or subtropical regions, is a herbaceous, or shrubby perennial plant, growing from 3 to 12 or 15 feet in height. It has large and showy flowers, and it is from the long filaments of the seeds that cotton is derived. In each pod of the plant are several chambers which break open and disclose a globular mass, known technically as the "cotton boll" covering the seeds. The cotton, when cleaned and worked up, is manufactured into all kinds of fabrics, for domestic and for fancy purposes, such as calicoes, cambrics, shirtings, and also as muslin, laces, etc. Yarn, of the finer sorts, is made usually from Egyptian and the sea island cottons. The manufacture and consumption of all varieties are now enormous; the production in the U. S. alone for the year 1899 being 9,345,391 bales (of an average weight of 500 lbs.). The world's consumption for the same year was estimated at 13,500,000 bales. The chief states growing cotton in America are Texas, Georgia, Mississippi, Alabama, North and South Carolina, Arkansas, Louisiana, and Tennessee.
- Cotton Gin, The.**—For a history of this important invention, see WHITNEY, ELI, 606.
- Cotton, John.**—Born at Derby, England, 1585; died at Boston, Mass., 1652. A Puritan divine who

settled in Boston in 1633; sometimes called "the patriarch of New England." He is said to have introduced in New England the practice of keeping the Sabbath from the evening of Saturday to the evening of Sunday.

Cotton-seed Cake and Oil.—The seeds of cotton are rich in oil, which is now largely used as a substitute for olive oil, as a lubricant. In its preparation the seeds are treated in the same manner as linseed, and yield a brownish fluid oil used for general purposes. Oil-cake is the refuse of cotton and flax seeds, or other vegetable substance from which oil has been expressed. Compacted into a solid mass, it is used as a manure, and especially as food for cattle.

Cotton States.—The lower belt of the south; Ark., Tenn., and N. C. are also usually included in the group. Cotton is the staple product of these states—hence the name. They were all slave states before the Civil War, and all of them seceded in 1860 and 1861 and organized the Confederate States of America.

Cottonwood Poplar, The.—See **POPLAR**, 2832.

Coues, Elliott.—Born at Portsmouth, N. H., 1842; died, 1899. He was a celebrated ornithologist and biologist. His principal works are "Key to North American Birds," and "Field Ornithology." He also edited the narration of Lewis and Clarke's travels, with copious notes.

Council.—A body, usually small, gathered for deliberation or to advise. In some cases political councils enact legislation. Colonial governments often had councils corresponding to the senators or upper houses of existing legislatures. In Del., Ga., S. C., and Vt., the higher branches of the legislature were so described. The term is still applied to the upper division of territorial legislatures. The governor, in certain states, has an executive council.

Council Bluffs.—A city in Iowa, a large railway and trading center. Pop. (1900), 25,802.

Council of Ten.—A secret tribunal of Venice, established in 1310 and continuing until 1797. Its members supervised, with great strictness, and even at times with oppression, the internal and external affairs of the republic.

Counter Entry.—An entry made to balance one on the opposite side of the debtor or creditor columns.

Counting a Quorum.—A parliamentary method resorted to by Thomas B. Reed, when speaker of the lower branches of the Fifty-first Congress, to defeat the filibustering practices of the opposition. It resulted in a radical change in the rules governing the deliberations of that body. (See **REED**, **THOMAS BRACKETT**, 486.)

County.—In England, where the term county originated, it was used to describe the territory of a count or earl, and from that country the colonies derived the system of county divisions. In 1639 Va. had eight counties and 40 years later, 20. In the South the county government was modeled closely upon that which prevailed in the mother country. The Mass. counties were incorporated in 1643. The only state that did

not adopt the term county in its geographical subdivision is La., which is composed of parishes. These are, however, substantially the same as counties.

Coup d'Etat (French for *stroke of state*).—A sudden, arbitrary encroachment or attack upon the Constitution and government of a nation or state; a stroke of policy, or a violent measure of state in public affairs. In French history, the phrase *coup d'état* is generally applied to the 18th Fructidor (Sept. 4, 1797), when part of the Directory executed a *coup d'état* against the Royalist reaction. The participators in the *coup* assembled thousands of armed men with cannon round the Tuilleries, arrested and transported 52 of the deputies, suspended many public journals, and canceled a number of department elections.

Courbet, Gustave.—(1819-1877.) A celebrated French painter. He joined the Commune in 1871 and was the leading spirit in the destruction of the Column de Vendôme.

Court, Supreme.—The Supreme Court of the U. S. now consists of a chief-justice and eight associate justices, who are appointed by the President, with the advice and consent of the Senate. This tribunal was provided for in the final and accepted draft of the Constitution and was organized under the judiciary act of 1789. It convenes annually for a single term at Washington, on the second Monday in October. The members hold office for life, or during good conduct, at a compensation that cannot be diminished during their terms, and those who have served 10 years may be retired at the age of 70 on full pay. The court's jurisdiction covers all questions in law and equity under the Constitution; the laws of the U. S. and the treaties made by the latter; all cases concerning ambassadors, ministers, and consuls, admiralty and marine cases; controversies in which the U. S. is involved as a party; litigation between the states themselves, between citizens of various states, between those of the same state with claims for land under grants from different states, and between citizens of a state and foreign states, citizens, or subjects. In every case in which ambassadors, public ministers, or consuls, or a state or states shall be parties, the Supreme Court has original jurisdiction; in all others, it has appellate jurisdiction as to law and fact. It also has appellate jurisdiction over U. S. circuit court cases involving more than \$2,500.

Courtenay, William.—(1342-1396.) An English prelate; archbishop of Canterbury 1381-96.

Court of Claims.—Composed of five judges whose duty it is to pass upon claims (pensions excepted) against the U. S., when the claims are based upon laws of Congress, regulations of an executive department, or contracts made by the Federal Government. Claims must be presented by petition, and such petitions brought before Congress may be by that body referred to the Court of Claims. Cabinet officers, acting for their departments, may do likewise. The

- Court of Claims sits in Washington. In some cases appeals may be carried from it to the Supreme Court.
- Court of St. James.**—The Court of Great Britain.
- Courts.**—Tribunals established to administer justice and construe law. They are, according to their degree and class, charged with the protection of private rights, the punishment of crime, the regulation of opposing interests, and the safeguarding of society. The Supreme Court is the highest in the U. S. (See COURT, SUPREME.) The lower Federal courts are district, circuit, and circuit courts of appeal. All have law and equity jurisdiction, and cases tried in these inferior courts are, in many cases, finally appealable to the Supreme Court itself. There are more than 60 district courts in this country, and each of these has original jurisdiction in civil, criminal, and admiralty cases. The U. S. is divided into nine judicial circuits, and each district court has jurisdiction concurrent with the circuit. The latter are not appellate courts.
- The circuit courts of appeal date from 1891, when they were established to relieve the Supreme Court of much of the less important business that pressed upon it.
- In the various states, the lines that mark the formation of the national judiciary are closely followed in the constitution of the local courts. Territorial courts are presided over by judges appointed by the President.
- In the District of Columbia, there are a supreme court and a court of appeals, the Supreme Court of the U. S. possessing appellate jurisdiction over both. U. S. consuls in certain Oriental countries are empowered to hold courts.
- "Courtship of Miles Standish."**—The title of a poem by Longfellow; published in 1858.
- Cousin** (*kō-zan'*), **Jean.**—(1501-1590.) A painter, engraver, and sculptor. He painted on glass and is celebrated also for his miniatures. See page 3452.
- Cousin, Victor.**—(1792-1867.) A French statesman and philosopher.
- Couture, Thomas.**—(1815-1879.) A French painter of distinction.
- Covenanters.**—There were two classes of Covenanters in English history: (1) Those who observed the National Covenant, which was a bond drawn up by the leading Presbyterians in 1638 at Edinburgh. (2) Those who observed the Solemn League and Covenant which the Scotch drew up in 1644 to oppose the attempt of King Charles I. to impose Episcopacy upon the Scotch.
- Covent Garden.**—That quarter of London which in ancient times constituted the convent garden of the monks of St. Peter, Westminster. It lies between the Strand and Longacre.
- Covent Garden Theatre.**—A famous theatre established in London in 1731. After many vicissitudes the old theatre became in 1847 the "Royal Italian Opera House," and was destroyed by fire in 1856.
- Coventry.**—In England, a city in Warwickshire, near Birmingham. It has various manufactur-
- ing interests and was once famous for its fine woolens. The legendary scene of the ride of Lady Godiva.
- Coverdale, Miles.**—(1488-1568.) Noted as the first translator of the entire Bible into English.
- Coverley, Sir Roger de.**—Steele and Addison's character in the "Spectator."
- Covington.**—A city in Ky. on the Ohio River, connected with Cincinnati by a great suspension bridge, and noted for its manufacture of iron, tobacco, etc. It narrowly escaped capture by the Confederates under Kirby Smith, in Sept., 1862. Pop. (1900), 42,938.
- Covoda** (N. Mex.), **Battle of.**—A brief but brisk engagement in Jan., 1847, between Col. Sterling Price with 400 troops and 1,500 Mexicans, whom he quickly routed. Price's expedition was undertaken to suppress the uprising that had taken place on Jan. 15, and which had resulted in the assassination of Gov. Bent, Sheriff Elliot, and twenty others at San Fernando de Toas and seven others at Turley's.
- Covode Investigation.**—Two "Anti-Lecompton" Democrats declared that President Buchanan had tried to persuade them, by corrupt means, to vote for the Lecompton bill. (See LECOMPTON CONSTITUTION.) The investigating committee consisted of three Democrats and two Republicans. The former voted to exonerate the President and the latter to sustain the charges. Congress took no action beyond the appointment of the committee.
- Cow, The.**—2410.
- Cowan's Ford** (N. C.), **Battle of.**—An incident in Cornwallis's expedition in Feb., 1781, to prevent the union of Morgan's division of the Revolutionary army with the main army commanded by Gen. Greene. The Americans, followed by the British, crossed the Catawba River at Cowan's Ford, where Gen. Davidson, with 300 militia, made a stand against the British. Davidson was killed and his men were dispersed.
- Cowbird, The.**—2569.
- Cowboy.**—A name given to one who is employed in herding cattle and sheep on the western ranches. They lead a rough, rollicking outdoor life, and are noted for their skill in horsemanship.
- Cowley, Abraham.**—(1618-1667.) An English poet, of much note in his time.
- Cowpens** (S. C.), **Battle of.**—One of Gen. Morgan's most brilliant exploits in the Revolutionary War. Morgan had but 900 men when, Jan. 17, 1781, Tarleton attacked him with 1,100 British. The battle was splendidly contested but Morgan clearly outgeneraled his adversary, of whose command only Tarleton, himself, and about 270 men escaped. The Americans took, besides prisoners, 800 muskets and two cannon. Their loss was 12 killed and 61 wounded.
- Cowper, William.**—(1731-1800.) A famous English poet.
- Cowry, The.**—See MOLLUSK, 2717.
- Cox, Kenyon.**—Born at Warren, O., 1856; a distinguished American painter, son of Gen. Jacob D. Cox. After a prolonged residence in Paris

where he studied under the leading artists of the time, he established himself in New York, in 1883.

Cox, Samuel Sullivan.—Born at Zanesville, O., 1824; died at New York, 1889. A politician and diplomatist, more widely known under the sobriquet "Sunset" Cox. He served many years in Congress and became U. S. minister to Turkey in 1885. He was the author of "A Buckeye Abroad," "Eight Years in Congress," and "Three Decades in Federal Legislation," etc. As a speaker he was noted for his wit.

Coyote, The.—See WOLF, 2466.

Crab, The.—See CRUSTACEAN, 2708.

Crab-Apple, The.—See APPLE, 2842.

Cracow.—A city of Austria-Hungary. Contains a famous castle and a cathedral, and possesses much historical interest. Pop. (1890), about 75,000.

Craddock, Charles Egbert.—The pseudonym of Miss Mary N. Murfree.

Cradle of Liberty.—This name was first applied to Faneuil Hall, Boston, by Daniel Webster. The building was presented to that city in 1742, by Peter Faneuil and originally consisted of a large room for public meetings, with small apartments above and a market on the ground floor. Destroyed by fire in 1761, it was soon afterward rebuilt and before and during the Revolution it was the scene of many important political meetings. When, in 1850, Daniel Webster was refused the use of Faneuil Hall in consequence of his erratic political course toward the end of his life, he wrote: "I shall defer my visit to Faneuil Hall, the cradle of American liberty, until its doors shall open on golden hinges to lovers of Union as well as of liberty."

Craik, Georgiana Marian (Mrs. A. W. MAY).—(1831-1895.) An English novelist.

Craik, Mrs. (DINAH MARIA MULLOCK).—(1826-1887.) A noted English novelist; author of "John Halifax, Gentleman," etc.

Cramer, John Baptist.—(1771-1858.) A noted pianist and composer. His studies for the piano are widely used.

Crane, Ichabod.—In Irving's "Legend of Sleepy Hollow," a country schoolmaster, of ungainly appearance.

Crane, The.—2610.

Crane, Walter.—Born in 1845. A noted English artist, popularly known by his illustrations for children's books.

Cranmer, Thomas.—(1489-1556.) Archbishop of Canterbury; tried for heresy and suffered death at the stake.

Crawfish, The.—See CRUSTACEAN, 2707.

Crawford, Francis Marion.—Born at Lucca, Italy, in 1854; a well-known American novelist, son of Thomas Crawford, the sculptor. He began his literary career as editor of the "Indian Herald" at Allahabad, India. For several years past, he has resided in Italy. His principal novels are "Mr. Isaacs," "Dr. Claudius," "A Roman Singer," "Zoroaster," "Saracinesca," "With the Immortals," "Khaled," "The Witch of Prague," "The Three Fates," etc.

Crawford, Thomas.—American sculptor, 3604.

Crayon, Geoffrey, Gent.—A pseudonym used by Washington Irving in his "Sketch-Book."

Creatine (Greek, *kreas*, flesh).—A discovery made in 1835 by Chevreul, a French chemist, and 12 years later called attention to by Liebig, the German chemist, in his "Researches on the Chemistry of Food." It is a white, crystalline, nitrogenous substance, resembling sugar of lead, and found in the fiber of muscles, and hence in the extract of meat. It occurs also in blood and in the substance of the brain. Liebig states that the flesh of hens furnish creatine abundantly, to the extent of 0.32 per cent., while ox and horse flesh yield, on an average, 0.07 per cent. To extract it from meat, the latter is mashed and digested for a time with cold water; the clear aqueous extract thus obtained is boiled to coagulate albumen, filtered, mixed with baryta water, again filtered, and evaporated to a syrup, when at length creatine crystallizes out.

Creation.—A term used to signify the act of bringing the universe of this world into existence. It implies the forming by the Deity, a Being of Supreme Power, of worlds out of nothing, and causing them to exist, and move in their orbits in vast space. It is the statement with which our Bibles open (Gen. I., 1.): "In the beginning God *created* the heaven and the earth." Creation has been the theme which has inspired many men, eminent as poets, painters, and musical composers, in the attempt to interpret it to the world. The poet Milton has dealt with the subject in his great epic of "Paradise Lost"; it is the subject of frescoes in the Sistine chapel, at Rome, by Michelangelo, and in the Vatican by Giulio Romano, after a design by Raphael; and it is the subject of a famous oratorio by Haydn, produced at Vienna in 1798. As to the date, era, or epoch of Creation we know nothing definitely. Theologians and modern scientists have of recent years been much exercised over this point and have reached no harmony, the former assigning a date varying from about 4,000 to 7,000 years B.C., while the latter (who include eminent geologists and physicists) from calculations as to the successive deposits on the earth's crust conclude that over 50 million years must have elapsed since the globe began to spin round on its orbit, first as a molten, moonless, and waterless planet. The Scriptures, it should be added, do not give a *scientific* account of the origin or work of creation, though the Mosaic order, science admits, has no doubt been followed.

Creation, The (Norse Mythology).—1636.

Crèche (*krāsh*).—A public nursery for the taking care, for the day, of the children of poor women, who go out to work, either as charwomen or in the factories of France. There are many such homes in Paris and other French cities, while in this country and in England somewhat similar institutions have come into existence. In London, there are two estimable organizations, known as the Children's Fresh-air Mission, and the Children's Country Holidays Fund, where

poor and sickly children are sought out and taken to the country for two or more weeks for change of air and to be furnished with nutritious, wholesome diet. In the hot summer time, they are also given holidays in the country, being boarded with country cottagers, and the expense is borne by the funds of the societies and from the donations of the wealthy.

Cr cy or Cressy.—A village in northern France, 30 miles N. E. of Amiens, in the department of Somme, where in August, 1346, Edward III. of England, with about 35,000 of an army, defeated about 80,000 French, including the flower of French chivalry. The French, who were under Philip VI. and the Count of Alen on, it is estimated, lost 30,000 men in the action, together with the blind king of Bohemia, who was one of their allies. In the battle, the English king's son, the Black Prince, won his spurs, and ten years later gained the battle of Poitiers against 60,000 French under King John II., known as "*Le Bon*" (the good).

Credit Mobilier.—Originally this was known as the Penn. Fiscal Agency, and was chartered by the legislature of that state, with a capital of \$2,500,000. Its charter was bought by a company that had the contracts to build the Union Pacific Railroad, and as the stock depended on the liberality of the contracts made by Congress, and as Congress proved very liberal, it rapidly and greatly appreciated, and enormous dividends were earned in the construction of the road. A political scandal resulted, and in the national election of 1872, Democrats accused the speaker of the House, the Secretary of the Treasury, the Vice-president, and the Vice-president elect of receiving Credit Mobilier stock in consideration of political influence. An investigation revealed the fact that many congressmen held blocks of the stock.

The Senate decided to expel one of its members, but as his term had nearly expired, no action was taken. Oakes Ames, of Mass., and James Brooks, of N. Y., both representatives, were censured by the House.

Creditor.—A person to whom a sum of money is due.

Creedmoor.—A village of Long Island, N. Y. The National Rifle Association has its rifle-range here.

Creek Indians.—Of Muskogean stock. When most numerous and powerful, they occupied Ala., Ga., and much of Fla. Incited by the Spaniards, the Yamasi Creeks repeatedly attacked the white settlers of other nationalities, early in the 18th century, and the tribe generally sided with the British in the Revolutionary War. In 1792, they broke a treaty of peace, which they had signed only two years before. Between 1802 and 1805, they ceded much of their lands to the whites. Aug. 30, 1813, when they were again allies of the British, they attacked Fort Mims and slew 400 people. In 1814, they were thoroughly conquered by Gen. Jackson, after which they ceded most of their lands to the U. S. The Seminoles, a branch of the Creeks, warred upon the U. S. from 1835 to

1843. The Creeks now dwell in the Ind. Ter., where they have made some advance in the arts of civilization. They number about 15,000.

Creek Indian War.—This conflict was inspired and in its early stages directed by Tecumseh, the great Shawnee chief and his brother, known as the Prophet, who planned a conspiracy of all North American Indians against the U. S.

The Indians made common cause with the British in the War of 1812, and though Tecumseh was defeated by Harrison at Tippecanoe, and fell in the battle, Wethersford or Red Eagle proved scarcely less troublesome. The most serious damage done by the Indians was in the massacre at Fort Mims. (See CREEK INDIANS.) Immediately after this event, the whites practically abandoned Ala. Gen. Jackson assumed command of the Tenn. militia, Gen. Floyd led the Georgians, and Gen. Claiborne the La. and Miss. contingents. Jackson was placed in charge of the entire force and defeated the Creeks at Horse Shoe Bend, Mar. 27, 1814.

Jackson's victory was particularly important, because it rendered impossible that Indian aid in the southwest upon which the British had counted.

Cremation.—To-day, in our crowded cities especially, earth-burial is a serious menace to health, and intramural burial is a violation of sanitary laws, which, but for our ignorance or prejudice, we should never suffer to take place. If one reflects at all on the subject, nothing could well be more gruesome, when life has departed, than that the body should slowly putrefy in a coffin, tricked out with our poor posthumous vanities, rather than be returned as speedily as possible to the original elements of the dust. The Ancients in this respect were wiser than we, in immolating the human frame when life had gone from it, or like the Egyptians embalming it and so keeping it from the corruption of the grave. Modern science has, here and there, striven to recall the world of to-day to a change in our burial customs which sanitary precepts enjoin upon us. But public sentiment and ultra-conservatism still force the world to adhere, in the main, to old ways of disposing of the dead. Cremation or incineration, is in this country as well as abroad (especially in Paris), becoming more general, however; in New York, San Francisco, Boston, Philadelphia, and Chicago, it is now considerably practised. In 1899, 1,699 bodies of decedents were thus disposed of in the United States, the average cost of the process being \$35 for adults and \$20 for children under 12 years of age. Cities, it is estimated, could cremate paupers and criminals at a cost of \$1.00 each, against \$3.00 merely to dig a grave.

Cremona.—(1) A province in Lombardy, Italy. (2) The capital of the province of Cremona; noted for its manufacture of violins, and silks.

Creole Case.—On the trip of the brig "*Creole*," laden with slaves and bound from Hampton Roads to New Orleans, in November, 1841, the negroes mutinied, killed one of the owners and made sail

for Nassau, New Providence, where all, except those charged with murder, were liberated by the British authorities; the United States demanded that the slaves be returned to its custody, but Great Britain refused and the matter remained in dispute until settled by a treaty in 1842. While this treaty was pending, Joshua R. Giddings, of Ohio, offered in Congress resolutions embodying the principles of the Anti-slavery party. The House censured him and he resigned, only to be returned by an overwhelming majority, and with instructions again to present the resolutions.

Creole State.—Louisiana.

Creosote.—Used in medicine as an antiseptic, and by many as a remedy for toothache. It is obtained by the distillation of wood-tar, generally that of beechwood. When pure, the oil is clear, but is more frequently of a yellow or brown color, the result of impurity or of exposure, and it has a burning smoky taste. It is a good deodorizer, and is used in the prevention of putrefaction. Coal-tar creosote is another somewhat similar preparation, and resembles wood-tar oil alike in its composition and in its properties.

Crescent City.—A popular name for the city of New Orleans, La.

Cresilas.—3552.

Crete.—An island in the Mediterranean, southeast of Greece, under Turkish government.

Crichton, James (THE ADMIRABLE CRICHTON).—(1560–1583.) A Scottish scholar and adventurer.

Cricket.—2038.

Crimea (*Chersonesus Taurica*).—A peninsula projecting into the Black Sea in southern Russia, and connected with the latter by the Isthmus of Perekop. The place is interesting as the scene of important events during the war of 1854–55 between Russia and the allied armies of England, France, Turkey, and Sardinia. The war was occasioned by Russian encroachments upon Turkey and her demand for a protectorate over the Greek subjects of the sultan. The real motive of Russia was the dismemberment of Turkey, and to this, in the interest of the security of Europe, the Allies would not consent, and so the war was precipitated. Russia was defeated in the war, and her fleet was debarred from the Black Sea.

Crimean War.—(1853–56.) A war between Russia and the allied forces of Great Britain, France, Turkey, and Sardinia. The war was ended by the Treaty of Paris, 1856.

Cripplegate.—An old gate of London, said to have been built, originally, by King Alfred, 886 A.D. Destroyed in 1760.

Crispi.—(1819–1901.) A distinguished Italian statesman.

Crisp Klinge.—The Christ Child.

“Cristobal Colon.”—A Spanish battleship which belonged to the squadron commanded by Admiral Cervera at the battle of Santiago, July, 3, 1898. When the Spanish ships steamed out of the harbor and attempted to escape, the “Colón,” which had great speed, eluded the U. S. vessels, and headed westward along the Cuban coast,

under the highest possible pressure of steam. She was struck by several shots, but not in a vital spot and continued on her way. For a time it seemed that she would make good her escape. She was pursued by the battleship “Oregon” and the cruiser “Brooklyn,” and after an exciting chase of 50 miles was overhauled, driven upon the rocks and sunk. Nearly all of her crew who were not killed or drowned were made prisoners. See SCHLEY, WINFIELD SCOTT.

Crith (Greek *κριθή*, a barleycorn, a small weight).—In chemistry the unit for estimating the weight of æriform substances;—the weight of a liter of hydrogen at 0° centigrade, and with a tension of 76 centimeters of mercury. It is 0.0896 of a grain, or 1.38274 grains.

Crittenden, John Jordan.—Born in Ky., 1787; died near Frankfort, Ky., 1863. He took part in the War of 1812 and was governor of Ky. (1848–50); was attorney-general under President Fillmore, U. S. senator (1855–61), and member of Congress (1861–63); was the author and strong advocate of the Crittenden Compromise, in 1860–61, as a proposal to avert Civil War.

Crittenden, Thomas Leonidas.—Born at Russellville, Ky., 1819; died on Staten Island, N. Y., 1893. A general in the U. S. army. He served in the Mexican War; was commissioned brigadier-general of volunteers in 1861 and major-general in 1862; served in the Army of the Ohio (Cumberland) under Buell and Rosecrans; during the march of Buell from Nashville to Pittsburg Landing to reinforce Grant, in April, 1862, he commanded one of the leading divisions, reached the field of Shiloh during the night of Apr. 6, and took part in the fighting of the second day; commanded the 21st corps at Stone River and Chickamanga; at the latter battle, when Longstreet pierced the Union right, Crittenden believed the day lost and rode to Chattanooga, leaving the greater part of his corps still on the firing line, where it remained till night, under Thomas; he was relieved of his command and resigned in 1864.

Croatia.—A division of Bosnia; the latter a territory of southeastern Europe.

Crockett, Davd.—Born at Limestone, Tenn., 1786; killed in Tex., 1836. A noted American pioneer and politician, was member of Congress from Tenn. (1827–31) and took part in the Texan War. He published his autobiography in 1834.

Crockett, S. R., age 41; was a Free Church minister at Penicnik, Scotland, when “The Stickit Minister” (1893) made him famous; has since written more than a dozen novels.

Crocodile, The.—2649.

Cræsus.—A king of Lydia, who succeeded to the throne, 560 B.C. Through his conquests, he acquired great power and riches.

Crofters and Cottars.—A term in use in Scotland to designate the tenant of a small holding of tillable land, the rental value of which does not exceed \$150 per year. Frequently, these holdings are hillside pastures, where a little farming is done and live stock raised. The cottar is

generally lower in the economic and social scale than the crofter, being little above, if in any degree, what are called squatters in this country. The term means cottager, of the peasant and farm-laboring class—survivors of the primitive custom of land tenure once common in the highlands of Scotland.

Crome, John.—(1768–1821.) A distinguished English landscape painter.

Cromer, Evelyn Baring, Viscount, Cairo, Egypt, age 60; the maker of modern Egypt, a prince of diplomats, a heaven-born administrator; has been officially connected with Egyptian affairs since 1877; "The master of us all," said Lord Kitchener after the conquest of the Sudan.

Cromwell, Oliver.—(1599–1658.) Oliver Cromwell was an extraordinary man—a strong man, with an immovable resolution, an iron will, a marvelous energy and fervid zeal, great resourcefulness, fertility of invention, a genius for command, and a sincere feeling for religion. His extensive capacity enabled him to form the most enlarged projects and execute them in the face of the greatest difficulties and dangers. Oliver was born at Huntingdon, England, April 25, 1599. He was a distant relative of Thomas Cromwell, who was for a brief period minister of Henry VIII. Little is known of his early life. Little is known of his boyhood. A royalist biographer says he had "a cross, peevish disposition" from his infancy. A contemporary admirer credits him with "a quick and lively apprehension, a piercing and sagacious wit, and a solid judgment." Stories are told of how he acted the part of a king in a play, and placed the crown upon his head. Thus do fictions cluster around the early life of great men. He was educated at the free school of Huntingdon, under an austere Puritan schoolmaster, who corrected his manners "with a diligent hand and a careful eye." At the age of seventeen, he entered Sussex College, Cambridge, where he was subjected to severe discipline. Here he devoted special attention to mathematics, history, and football. After the death of his father, he went to London to get the smattering of law needed by country gentlemen. In 1620 he married Elizabeth Bouchier, whose affection for him was sincere and lasting. He settled at Huntingdon and occupied himself in farming. In 1628 he was elected to Parliament, where he made one short speech, and observed the ways of political life. During the eleven years (1629–40) while Charles I. ruled without a Parliament, Cromwell was busy, his obscure life as a Puritan farmer unconsciously preparing him for a future life of wider action. He found time to read narratives of the daring exploits of Gustavus, and to watch the growth of arbitrary government with keen interest. By taking an active interest in guarding the rights of the peasants and small freeholders, he became well known, and gained great influence in the eastern countries. He was elected a member of the Parliament of April, 1640, which boldly refused to give Charles the money

he desired in his struggle with Scotland; and he also sat in the Long Parliament which met on November 3, 1640. His appearance at this time is described by Philip Warwick as follows:—

"His linen was plain and not very clean; and I remember a speck or two of blood upon his little band which was not much larger than his collar. His hat was without a hat-band; his stature was of a good size; his sword stuck close to his side; his countenance swollen and reddish; his voice sharp and untunable; and his eloquence full of fervor. It lessened much my reverence unto that great Council, for he was very much hearkened unto."

The life of the Long Parliament, though it ended in shame, began in honor. It swept away the whole machinery of tyranny and injustice; it abolished the Star Chamber and High Commission courts, and set at liberty the Englishmen who were languishing in prison without trial; it provided for greater independence of the judges and of Parliament; it impeached Strafford and Laud for the part they had taken in oppressing the people; it resisted the arrest of its members, and finally raised armies against the king. When the break came between the Parliament and king, Cromwell was the first to offer his aid in defense of the state. In July, 1642, he raised two companies at Cambridge at his own cost and supplied them with arms. The next month he seized the magazine in Cambridgeshire and acted against the Royalists. He was first made a captain of a troop of horsemen; but was soon promoted to the rank of colonel, and then to lieutenant-general. Though he had not been trained to war, he knew how to organize and control armies. Seeing that the king, through his brave, high-spirited troops, had the advantage at the beginning of the struggle, he resolved to attract the best of the middle classes and create a genuine citizen army to replace the hired rabble of discharged soldiers and deserters of which the Parliamentary army had at first been composed. He attracted men of spirit, and formed a few squadrons of strict Puritans which served as a pattern for the new army. His regiment became famous under the name of "Ironsides." He finally organized an army of earnest, but intolerant, psalm singing, religious enthusiasts, who were irreproachable in their moral conduct. He practically transferred the Puritan congregation into the camp. He had men who were devoted to the cause, and ready to behave and to obey. His troops were timid at first, but they were made of the stuff that grew bolder in the face of danger. Accustomed to the yardstick and pitchfork, they had to learn the use of the sword, and gain greater confidence in the heat of battle. Cromwell carefully drilled and disciplined his men. He severely punished drunkenness, swearing and nicknaming. He suppressed all plundering with an iron hand. He was a practical man. He recognized his fellows for what they were really worth

without regard to creed or caste. He gave every one a fair show according to his merits. He realized that number of troops were not of so much consequence as quality—that only the best men can be made into the best soldiers, and that the best men make poor soldiers without training. By his iron discipline, and by stern religious enthusiasm, he secured a body of soldiers that was always ready to preach, pray, exhort, or fight. With his invincible army, he conquered the north of England on the field of Marston Moor, in 1644. In 1645 he practically ended the war by gaining the decisive victory at Naseby, after which the king threw himself into the hands of the Scotch, who soon gave him up to the Parliamentary commissioners.

While the opponents of the king were fighting against him they were united; but when they were victorious, divisions appeared, for men of widely different sentiments and opinions had been gathered into the same army and had fought together, though not for the same cause. Some desired to check the king; some wanted him deposed and the monarchy to remain; and some looked for the establishment of a republican government with an elective chief executive. These elements gradually crystallized into two antagonistic parties; the more conservative rallying about the Parliament, and the more radical about the the Independent army. The Presbyterians who had had the majority, both in and out of Parliament, did not desire a republic or abolition of monarchy, and desired to get rid of the army, which they regarded as their worst foe. When the news of the majority plans reached the camp, through the Independents in Parliament, the army began to move and was soon in open mutiny. In fact, the camp became an opposition to Parliament. The army which had begun by being the servant ended by being the master—and the tyrant Cromwell feared that Parliament, now master of the king's person, might enter into a compromise with a royalty, fatal to the interests of the republic. He sent one of his officers, at the head of five hundred men, to bring the king to the army. By this assumption of authority, he aroused the indignation of Parliament, which now demanded that the king should be returned. In reply, he marched to London at the head of the army. With his hand on his sword he demanded the dismissal of eleven members of Parliament, who finally withdrew. He induced Parliament to concede all that the army had demanded. From that time, by means of his troops, he controlled Parliament as he would a tool, and became the real ruler of England. He made overtures to Charles without effect. Seeing that the King was a trifler, who was trying to foment division and play one party against the other, and who refused to give any satisfactory statement of purpose, he and the army decided that it was time to depose him and bring him to justice. After Colonel Pride carried off forty-one Pres-

byterian members of Parliament and excluded one hundred and sixty other members, the remaining fifty or sixty, who were Independents, agreed that the king should be tried for his life, and soon they sentenced him to death, which he met with the firmness and calm dignity worthy of a king. Cromwell, with his army, was now supreme—though he allowed a sort of shadow of Parliament to linger for a time, while he had other things to manage. Though the country was in a desperate condition, he was equal to the situation, and continued to cure evils by prompt and severe remedies. He descended upon the Irish rebellion "like a torrent of heaven's lightning," crushed it by measures that were often very cruel, and trampled the country into order and partial peace. He marched into Scotland at the head of his invincible army and defeated the Royalists in a great battle at Dunbar.

While engaged in war against the Dutch, he urged the necessity of calling a new Parliament that would better represent the whole country. When he became convinced that the old "Rump" Parliament was working a scheme to keep its members in perpetual power he walked into the House one day in 1653 with a body of soldiers, had the speaker pulled out of the chair by force, called his mace a bauble, and, after abusing and insulting the members, turned them all out, locked the door and put the key in his pocket—thus furnishing the occasion for some Royalist wag to place on the door a placard which bore the inscription: "This house to let, unfurnished."

With the whole country at his feet he resolved to govern in the old way with a House of Lords and a House of Commons. He called a Parliament of his own choosing, which proposed several reforms, discussed the Scriptures, and finally resigned all of their power into the hands of Cromwell. Though he called another Parliament, he felt that his power really rested on the influence of the army. When his new Parliament ventured to criticise his course, he dissolved it. In 1655 becoming fearful of intrigues he divided the country into eleven military districts and placed over each a major-general who ruled by martial law and despotic power. He tried to escape from the necessity of using force, but he finally concluded that it was the only way. Cromwell was a prince of wirepullers. He handled men as puppets who performed what part he chose. As the manager of the show, he had men play his game while they thought they were playing their own. Sometimes his play was a mystery which puzzled the players, the spectators, and the reporters, and even "men of wicked spirits" who tried to peep behind the curtain.

Though he felt that he was compelled to resort to severe measures to secure peace, he tried to secure good government. Though leading only a minority, and maintaining his power by force of arms instead of by persuasion, he favored justice and order. Though he was, in

one sense, a usurper and a tyrant, he had at heart the welfare of his country. He was even reasonably tolerant in religion—though many of his followers were not yet ready for religious liberty. He befriended the Quakers and permitted the immigration of Jews, who had been banished from the country under Edward I. He protected the Protestants of Europe from persecution. In an age of religious bigotry and Puritan fanaticism, he showed unusual moderation and good sense. In 1657, when his last Parliament proposed to make him king, he declined, stating that he preferred to be the first constable of the nation. But he became practically a king, with unlimited power to name his own successor. He also prevailed upon the Parliament to permit the establishment of a House of Lords. He found difficulty in selecting members for the new House, and in 1658 when a conflict broke out between the two Houses, he dissolved Parliament with these words: "and let God judge between you and me."

In every crisis he had been the leading spirit, and had met emergencies by prompt decision. He still held the helm of the Ship of State with a firm hand. He knew how to act, while others discussed. He was such a man as was needed in those perilous times. If, as Napoleon said, "the tools belong to him that can use them," he had the right to rule. He wished to govern constitutionally. He accepted the first principle of democracy, the sovereignty of the people. He said that the good of the governed was the supreme end of all governments, but he added that what was for the good of the people was not necessarily the thing that pleased them. He established a government *for* the people, but he was not ready to admit that it should always be a government *by* the people. "Uneasy lies the head that wears the crown." Cromwell passed the latter part of his life in almost constant fear of assassination. He wore a steel shirt under his clothes and kept pistols in his pocket. He never went out unless attended by an escort, and seldom came home by the same road on which he started. He dared not sleep always in the same chamber, but had several different ones, each of which had a secret door.

Cromwell closed his stormy career, on September 3, 1658, while nature was giving vent to one of the most fearful and raging storms that had ever swept over England. As he looked back on his career, he seemed to have some misgivings as to parts of his conduct. He was buried in Westminster Abbey with more pomp and honor than had been shown to some of the greatest kings.

Cromwell, as a soldier or as a statesman, was far greater than any Englishman of his time. He "bestrode the narrow world" of Puritan England "like a colossus." He had the energy, the resolution, and the judgment which was demanded of leaders. Out of the military chaos he organized the forces by which he won great victories for Puritanism. Without previous ex-

perience in war, he made "an army whose order and discipline, whose sobriety and manners, whose courage and success, made it famous and terrible over the world." By constant fighting he learned how to fight. He earned his first laurels as a leader of cavalry. At Marston Moor, he showed that he had the necessary faculty of coming to a prompt and sure conclusion in a sudden emergency. When he rose to command an army, he proved himself a master in skill and strategy. He had military genius equal to every duty and occasion. In politics, as in war, he struck with energy. In every political crisis, he tried to interpret the meaning or purpose of events. On his interpretation he based his later action. If he was in doubt as to the meaning of what had happened he waited for more light; but when his mind was made up he neither hesitated nor looked back to observe precedents. He disposed of each case, or crisis, as it arose—without regard to consistency, or constancy and without any attempt to exercise foresight. He felt that he was but a blind instrument in the hands of a higher power. He was high-minded and patriotic, and gave England a strong rule suited to the time. While Cromwell by the rigor of his rule secured obedience at home he awakened the fear as well as the admiration of foreign nations. He gave England the strongest government she had had since Henry VIII. and Elizabeth. He gave her a great and powerful fleet. He was victorious in a war with Holland. He took Jamaica from Spain, crippled the Spanish army, and humbled Spanish pride. He compelled the French duke of Savoy to cease persecuting the harmless Protestant Vaudois whose humble homes nestled in the valleys of the Alps. He also sent word to the Pope that Protestants must be better treated, else the roar of English guns would speedily awaken the echoes of St. Peter's Cathedral. Oliver left no one strong enough to take his place. His timid son Richard, whom he named as his successor, soon realized that he was not able to command as his father had done, and retired to private life. Charles II., who had learned wisdom in the school of adversity came with an old suit of clothes and received a welcome everywhere. The people tired of stern Puritan rule were glad to return to their May-poles and pleasures.

Though Puritanism laid down the sword, quietly and without a struggle, many Puritan ideas did not die. Though the ghost of Demos was feared for many years, the Cromwellian episode led to a greater respect of the common Englishman. It taught that kings and their ministers, as well as the common people, are subject to the laws.

Green says that in 1688 Puritanism did the work of civil liberty, which it had failed to do in 1642-58. Slowly, but steadily, it introduced into English society, literature, and politics, much of its seriousness and purity. The whole history of English politics since the Restoration

has been the outgrowth of Puritanism. Before the break came between Charles I. and his Parliament, a little band of Puritans had sailed from the shores of England to seek a home in the wilds of the new continent of America. Carrying with them the love of their native land, they gave the name New England to the rocky coast on which they landed, in December, 1620. There they planted Puritan ideas which took new root, and bore fruit. From the coast of Maine to the Golden Gate, the spirit which animated Oliver Cromwell still dwells in many hearts.

Cromwell, Thomas, Earl of Essex.—(1485-1540.) A noted English statesman; beheaded on a charge of treason.

Cronje, Piet.—Famous in the first Transvaal War, cornered Jameson at Doornkop, defeated Methuen at Magersfontein, surrendered to Roberts at Paardeberg, and was sent to St. Helena; before this he had been a member of the Transvaal Executive Council; a fierce fighter and resourceful commander.

Cronstadt or Kronstadt.—(1) The capital of the county of Croustadt in Hungary. (2) A seaport on the Gulf of Finland; founded by Peter the Great, 1710, and in the government of St. Petersburg.

Crook, George.—Born at Dayton, O., 1828; died at Chicago, 1890. A general in the U. S. army. He was graduated from West Point in 1852; entered the army and in it spent his whole life, reaching the rank of major-general in the regular establishment; when the Civil War began he was a captain in the 4th Infantry; in Sept., 1861 he was appointed colonel of the 36th Ohio Volunteers, which he commanded till made a brigadier-general in 1862; he served at Antietam and in W. Va.; was conspicuous in the campaign of Sheridan against the Confederates under Early, in the Shenandoah Valley, in 1864; he participated in the battle of Opequan, Cedar Creek, Fisher's Hill and other engagements, in which he commanded the 8th corps; after the war he served in several arduous campaigns against hostile Indians in the Far West.

Crookes, Sir William, F. R. S.—7, Kensington Park Gardens, W., London, age 69; an eminent chemist and electrician, his address to the British Association (1898), dealing with psychical research and the wheat problem, started a lively and prolonged discussion.

Cropsey, Jasper Francis.—Born at Rossville, N. Y., 1823. A noted landscape painter. He was a pupil of Edward Maury and became a member of the National Academy in 1851.

Croquet.—2047.

Crosby, Howard.—Born at New York, 1826; died there in 1891. An American Presbyterian clergyman and classical scholar. In 1870 he became chancellor of the University of New York and a member of the American committee for the revision of the New Testament. He was also president of the Society for the Prevention of Crime in 1877.

Cross (from the Latin *crux*, a cross).—The chief Christian symbol since the crucifixion of Christ, and anciently used in the gibbeting or hanging of slaves, criminals, and other malefactors undergoing the punishment of or consigned to death. The forms of these gibbets or crosses were various; ordinarily they consisted of two pieces of timber placed transversely upon each other as a +, or †, with the horizontal piece a little below the upper end of the upright, or thus X, known as saltire-wise, as in the blazoning of a shield in heraldry. The latter cross is known as the cross of the martyr St. Andrew, the patron saint of Scotland. The first form above shown is the Latin or Roman cross, the *crux immissa* or *crux ordinaria*. The Greek, Egyptian, or St. Anthony's cross is designed thus: †, the cross on which the apostle Philip is said to have suffered death. The Papal or triple cross is a double one, thus: †. A cardinal's cross or the Patriarch's in the Greek Church is a double Greek cross, thus: †. The Maltese, akin to the *Cross pattée*, is the Greek cross narrowing towards the centre, with two points at each extremity, thus: †.

Cross Keys (Va.), Battle of.—An action fought near Strasburg in the summer of 1862, during "Stonewall" Jackson's campaign in the Shenandoah Valley. The battle took place June 8, between 8,000 Federals under Gen. Fremont, and Ewell's division of Jackson's army. The result of the fighting was inconclusive. The Federal loss was 600 and that of the Confederates 400.

Cross, Mrs. (Mary Ann Evans) pseudonym, George Eliot.—(1819-1880.) A celebrated English novelist.

Croton.—A river in southeastern N. Y., from which New York City obtains its chief water supply through the Croton aqueduct.

Crow, The.—2537.

Crown of Thorns and Cross of Gold.—Words applied to the gold money standard, by William J. Bryan, in a speech before the Democratic national convention at Chicago, in 1896. Mr. Bryan's eloquence so electrified the convention that he was nominated as its candidate for President. (See BRYAN, WILLIAM JENNINGS, 77.)

Crown, Oration on the.—A celebrated oration of Demosthenes.

Crown Point (N. Y.), Capture of.—Followed closely upon the fall of Ticonderoga, which was taken by Col. Ethan Allen, May 12, 1775. It is on Lake Champlain and had 114 cannon, but the British garrison numbered only 12 men. It surrendered to Col. Seth Warner with a small force.

Cruikshank, George.—(1792-1878.) A noted English caricaturist. The first illustrator of Dickens's works.

Crusade, or Cross-ade, a war on behalf of the Cross, first preached in Europe by Peter the Hermit, in A.D. 1095, against the Turks who had taken possession of Palestine, or the Holy Land. There were seven of these expeditions, undertaken between the closing years of the 11th and 13th centuries, the most notable being the 1st Crusade under Godfrey of Bouillon (1096-99);

the 3d (1189-92) led by Richard I., King of England, called Cœur-de-Lion (the Lion-hearted), and the Princes Frederick Barbarossa of Germany, and Philip Augustus of France; and the 4th, undertaken in 1202-04, under Count Baldwin of Flanders. The 3d, under Richard Cœur-de-Lion, against Saladin, Sultan of Egypt and Syria, and the Mahommedan forces under that famous warrior, may be entertainingly read of in Sir Walter Scott's novel, "The Talisman." These wars of the Crusades are frequently spoken of as the "Wars of the Crescent and the Cross," and for this reason that the Cross was the emblem of the Christian Crusaders, and all who went on the Crusades wore a cross on their banners, on their shields, or on their breasts. On the other hand, the Mahommedans had for their sign the Crescent, such as is still seen on the flag of Turkey. The story of Richard the Lion-Heart's deeds in Palestine, of the battle he fought at Jaffa, and the truce he forced upon Saladin, after the attack upon Jerusalem, as well as of his adventures by the way, may be read in the novel referred to, and in any good history of England.

Crusades, The (Latin *crux*, a cross) were expeditions, some seven in number, undertaken during the 11th, 12th, and 13th centuries by the Christians of Europe for the recovery of the Holy Land from the Mohammedans, and to make safe Christian pilgrimage thither. Besides these seven expeditions, one other, known as the Children's Crusade, was undertaken, and some other minor ventures, in and about the year 1212 A.D.; but those best known in history are the following four, which were partly military, for at this era, it will be remembered, the feudal system was at its height and a spirit of restlessness was abroad among the nations. The First Crusade set forth in 1096, led in part by Peter the Hermit, a native of Amiens, who had a following of about 250,000 men, women, and children. This immense throng or rabble, as it really was, moved across Europe from eastern France and reached Constantinople only to be cut to pieces by the Turks. The main body, 500,000 strong, and a considerable number of whom were fighting men, were under the feudal chiefs of the era, Godfrey of Bouillon, Count Robert of Flanders, the Duke of Normandy, and Tancred, the hero of all the historians of the Crusades. Fighting as they went, they reached and took Nicæa, in Asia Minor, then had a sanguinary cavalry engagement with Sultan Suleiman, lay siege to and took Antioch, and on reaching Jerusalem subjected the Holy City to a five weeks' siege, which resulted in opening its gates to the crusaders, but only after 70,000 Mohammedans had been slain and numbers of Jews were burned. The Second Crusade, preached by St. Bernard, Abbot of Clairvaux, and occupying the years 1147-49, was unsuccessful. The Third (1189-92) had for its leader Frederick Barbarossa of Germany, Richard Cœur de Lion (Lion Heart) of England, and Philip Augustus of France, failed to

take Jerusalem, which was now held by Saladin, Sultan of Egypt; but after two years' fighting a truce with Saladin was formed, which allowed the Christians free access to the Holy Places and gave them possession for a period of the coasts from Joppa to Tyre. The chief incidents of this, the Third Crusade, was the heroic siege of Acre, which was captured by Richard the Lion-Heart in 1191, and the drowning in a river of Asia Minor, of Barbarossa (Red Beard), the most noted of the emperors of the Holy Roman Empire. The Fourth Crusade (1201-04) was directed chiefly against Constantinople, where it set up a Latin kingdom under Baldwin, Count of Flanders and emperor of Constantinople. The subsequent expeditions, as we have said, were minor affairs, and resulted in little. They cover the period between 1204 and 1272, and practically accomplished nothing. To complete the enumeration, it may be said that the Fifth Crusade (1228-29) was under the emperor Frederick II.; the Sixth (1248-50) was under the auspices of St. Louis (Louis IX. of France); and the Seventh and last, undertaken in the years 1270-72, was also under Louis IX. of France. The Children's Crusade occurred in 1212, the period between the 3d and 4th crusades. It was incited by Stephen, a French lad of twelve. A section of this expedition included 30,000 French children, a moiety of whom succeeded in taking ships at Marseilles, only to be sold as slaves in Mohammedan markets by the sailors; the other section, including about 50,000 German boys and girls, forced its way across the Alps to the Italian coast, to find, however, no way across the Mediterranean, save for about 3,000 of their number, who succeeded in embarking on coasting vessels, but only to meet the pathetic fate of their little brother crusaders who had set forth from Marseilles.

Cryolite (Greek, *κρύος*, frost, icy cold, + *-lite*).—A double fluoride of sodium and aluminium, found in Greenland, in white clearable masses, and important as a source of the metal aluminium. It is used in the manufacture of soda; when fused it can be made into tableware, somewhat resembling porcelain, and known as hot-cast porcelain. See 2949.

Crystal Palace.—In Hyde Park, London. A building constructed of iron and glass, for the great exhibition of 1851. The materials of the building were used to rebuild, in 1852-53, the present Crystal Palace, near Sydenham, in Kent.

Cuba.—The largest island of the West Indies, with an area of 42,000 sq. miles, and a coast line, including indentations, of nearly 7,000 miles. Cuba has a soil that for fertility is hardly exceeded by that of any other part of the world. The surface is swampy near the sea, particularly along the south side, with high tablelands and mountains in the interior. Much of Cuba is within the tropics, but, in consequence of the varying altitudes, it has, in one part or another, all the climates of the temperate zone. The year is commonly divided into a hot, wet season and a cool, dry season, the latter extending

from November to May. There are 20,000,000 acres of untilled land in Cuba, and of these 12,000,000 are covered with virgin forest, in which the palm tree predominates. The main crops, exclusive of fruits, are sugar, coffee, tobacco, cocoa, cotton, sarsaparilla, vanilla, copal, china root, cassia, palma christi, mustard, pepper, ginger, licorice, balsam, and India rubber. There are minerals, but, with the exception of iron and copper, they have not of late years been mined in paying quantities. Cigar factories are the only important manufacturing plants. There are about 1,100 miles of railroad, exclusive of suburban roads, and it is, to a great extent, in poor condition. The telegraph system, when Spain ruled the island, was also most unsatisfactory. Under the same régime the Cuban debt rose at one time to \$1,250,000,000. The first Spanish settlement in Cuba was made in 1514 at Santiago, which was for some time the capital. Havana was founded in 1519. It was destroyed by privateers in 1538, but was speedily rebuilt and made the capital in 1550. There were repeated revolts, some local and others widespread, against Spanish authority during the second half of the 18th century and through the 19th. One rising broke out in 1827, another in 1844, a third in 1851, a fourth in 1868, and the last, which was made successful by the intervention of the U. S. in 1894. In 1848, President Polk urged the purchase of the island for \$100,000,000, but the proposition found no favor among the Spaniards. In 1854, the claim was advanced in the Ostend Manifesto that should Spain refuse to sell, the U. S. might properly annex the island, and revolutionists took advantage of this contention to prepare for an insurrection. Before the plan was matured, however, the Spanish authorities, apprised of the conspiracy, arrested and executed the leaders. The insurrection of longest duration was that which began in 1868 and lasted for ten years. During this revolt the Spaniards captured the American ship "Virginus," executed most of her crew and passengers, and almost precipitated a war with the U. S. (See "VIRGINUS.") The story of the conflict that ended in the liberation of the island from Spain, in 1898, is told in this volume under the caption SPANISH-AMERICAN WAR (which see). Cuba was discovered by Columbus, Oct. 28, 1492, and bore in succession three names—Juana, Fernandina, and Ave Maria, before its native designation, Cuba, was finally determined upon. All through the period of its possession by Spain, the statesmen of that country had apparently little other use for it than as a means to enrich themselves and the influential families of Spain. Its population in 1894 was estimated at 1,725,000. If well governed, cultivated, and developed, it would support millions. Under the provisional government of the island by the U. S., the school attendance has increased largely, and, through improved sanitary arrangements, the ravages of yellow fever have been greatly reduced.

The provinces of Cuba are Havana, Matanzas, Santiago, Santa Clara, Puerto Principe, and Pinas del Rio, which, with the city of Havana, the capital (pop., 235,981), have, by the late census, a total population of 1,572,797. The recent election returned T. Estrada Palma as president of Cuba, though the United States troops are still in military occupation of the island. The question of Cuba's future is, as we write (1902), not yet determined, forces being in operation favoring independence, with some control by this country and the regulation of its tariff, and also contrary forces that may make it possible to incorporate it into the Union. In 1900, the exports of Cuba for the year amounted to \$42,228,346 and the imports to \$71,681,187. In 1900 the value of the tobacco exports to this country was close upon \$10,000,000. By act of Congress freedom and self-government were granted to Cuba. The act went into effect on May 20, 1902.

Cubit (Latin, *cubitus*, *cubitus*, an elbow, an ell).—An ancient measure of length, being the distance from the elbow to the extremity of the middle finger. In England the cubit is 18 inches; the Roman cubit was 17.47 inches; the Greek 18.20; and the Hebrew somewhat longer.

Culloden (*ku-lö'den*) **Moor**.—A moor five miles east of Inverness, in the north of Scotland, where a battle occurred, Apr. 27, 1746, between the Royalists and the Highlanders under Charles Edward, the Young Pretender, in which the latter were defeated.

Culture of the Rose, The.—2925.

Cumberland.—A city of Md., situated on the Potomac River, with large coal deposits in its vicinity. Iron and glass are among its manufactures. Pop. (1900), 17,128.

Cumberland, Army of the.—One of the grand divisions of the Union army during the Civil War. It was at first called the Army of the Ohio, under Gen. Buell, but the name was changed when Gen. Rosecrans took command in Oct., 1862. With Louisville, Ky., as its base, it operated in Ky., Miss., Tenn., Ala., and Ga. Two of its three corps went with Sherman from Atlanta to the sea. It was commanded successively by Generals Don Carlos Buell, William S. Rosecrans, and George H. Thomas. Its fighting strength varied from 40,000 to 70,000. Its principal battles were 1862, Shiloh, Perryville, Stone River; 1863, Chickamauga, Lookout Mountain, Missionary Ridge; 1864, the engagements of the Atlanta Campaign, Franklin, and Nashville. See BUELL, DON CARLOS, 91.

Cumberland Gap.—A pass separating Ky. and Tenn., and an important strategic point in the Civil War. It was through this gap that Bragg's Confederate army, pursued by Buell, escaped from Ky. into Tenn. in 1862.

Cumberland Mountains.—A part of the Appalachian system separating Ky. from Va. Rich mineral deposits abound in the district.

Cumberland River.—A stream which rises in the Cumberland Mountains, flows west and north, and empties into the Ohio. It is navigable, ex-

- cept at very low water, from Nashville, Tenn., to its mouth.
- Cummins, Maria Susanna.**—Born at Salem, Mass., 1827; died at Boston, 1866. Author of "The Lamplighter," a novel which was very widely popular.
- Cunard, Sir Samuel.**—(1787-1865.) A merchant and civil engineer. The founder of the Cunard line of trans-Atlantic steamers. The first sailing of the line was that of the "Britannia" from Liverpool to Boston July 4-19, 1840.
- Cunaxa.**—A place near the Euphrates about 75 miles from Babylon, noted for the battle between Artaxerxes and Cyrus the Younger (401 B.C.). Cyrus was defeated and slain.
- Cupid.**—1612.
- Curaçoa.**—An island and Dutch possession lying off the Venezuelan coast in the Caribbean Sea. Its area is 210 square miles and has a population of 30,000. The colony embraces several other islands, including Bonaire, Aruba, part of St. Martin, etc., the total area of which, including Curaçoa is 403 sq. miles. Its affairs are administered for the Netherlands by a Governor and local council. It produces tobacco, maize, figs, coconuts, citrons, oranges, etc., and exports cattle, sheep, goats, salt, etc. Here is made the well-known liqueur or sweetened spirit, known as curaçoa.
- Curfew** (Fr. *couvre-feu*, cover fire).—The evening hour when, according to an old English custom, the people were notified, by the ringing of a bell, to cover up their fires, extinguish lights, and retire for the night. The practice is referred to in many English poems, and in a lyric of Longfellow's, especially in the first line of Gray's "Elegy":—
- "The curfew tolls the knell of parting day."
- William the Conqueror, it is said, introduced the practice, to prevent the assembling of people, under cover of night, for the purpose of hatching rebellion. It is, however, more likely to have originated as a precaution against fires, which were more common and desolating in early times, when houses were often flimsy in structure, and the machinery for extinguishing fires did not then exist, in the efficient scale of to-day. The curfew or evening-bell, is still rung in many towns and villages of modern England.
- Curling.**—2091.
- Curran, John Philpot.**—(1750-1817.) An Irish orator, was associated with Grattan and defended the prisoners in the prosecutions during the insurrection of 1798.
- Currants.**—A small raisin (seedless), or the dried berry of a seedless variety of grape, imported from the Levant. It derives its name from the city of Corinth, Greece, whence currants were probably first imported. They are also brought from Zante and Cephalonia, and other of the Ionian Islands, and are largely used in cookery as an ingredient in puddings and cakes. They are of three varieties—the red, the black, and the white currant; all of which are the acid fruit or berry of the genus *Ribes*, which includes also the gooseberry.
- Currer Bell.**—See BRONTE, CHARLOTTE.
- Curtis, George Ticknor.**—Born at Watertown, Mass., 1812; died at New York, 1894. A noted lawyer and legal writer. He wrote "The Law of Patents," "Constitutional History of the United States," "Life of Daniel Webster," etc.
- Curtis, George William.**—Born at Providence, R. I., 1824; died on Staten Island, N. Y., 1892. A prolific American journalist, distinguished as an orator, publicist, and author. He was a member of the Brook Farm association for 18 months; after traveling abroad some years he became editor of "Harper's Weekly" in 1863. He took great interest in civil service reform and was appointed by President Grant one of the commissioners to draw up rules for the regulation of the civil service. He was author of "Nile Notes of a Howadji," "Lotus-Eating," "Potiphar Papers," "Trumps," "Prue and I."
- Curzon of Kedleston, Baron.**—Government House, Calcutta, age 42; Lord Salisbury's Under-Secretary for Foreign Affairs 1895-98, filled the post with great ability and energy; has succeeded beyond expectation as Viceroy of India; a much traveled man, with a gift of rhetoric; married to a beautiful American.
- Cushing, Caleb.**—Born at Salisbury, Mass., 1800; died at Newburyport, Mass., 1879. He was a member of Congress from Mass. (1835-44), attorney-general of the U. S. (1853-57), counsel before the tribunal of arbitration in Geneva (1871-72), and minister to Spain (1874-77).
- Cushing, William Barker.**—Born in Wis., 1842; died in Washington, D. C., 1874. An officer of the U. S. navy, celebrated for his conspicuously gallant achievement in destroying the Confederate ram "Albatross," at Plymouth, N. C., the night of Oct. 27, 1864. (See ALBATROSS.)
- Cushman, Charlotte Saunders.**—(1816-1876.) An American actress, who had a very successful career both here and abroad. She appeared with Macready in 1842-44. Her strongest characters were "Romeo," "Wolsey," "Hamlet," "Claude Melnotte," "Meg Merrilies," and "Nancy Sikes."
- Cushman, Robert.**—Born in England about 1580; died there, 1625. An English merchant who came to America and was one of the founders of the Plymouth Colony.
- Custard-Apple Family, The.**—2879.
- Custer, George Armstrong.**—Born in Ohio, 1839; killed by Indians in Mont., June 25, 1876. A Union cavalry general of the Civil War, noted for his conspicuous gallantry. He was graduated from West Point in 1861 and at once entered active service as a lieutenant in the 5th U. S. cavalry. His capacity and courage attracted attention, and after a few months he was made colonel of the 2d Michigan cavalry. He was soon promoted to brigadier-general and later to major-general. He commanded a cavalry brigade at Gettysburg and a division in Sheridan's cavalry corps in 1864. At all times and places he was a dashy and fearless leader. He had long yellow hair and was a unique and inspiring figure

- as he rode at the head of his men in a charge. After the war he served in the Indian campaigns. He explored the Black Hills in 1874. In 1876 he conducted an expedition against the Sioux in Montana. He found them in a strong force on the Little Big Horn River. He divided his command and sent one part under Maj. Reno to attack in the rear while he himself led the assault in front. Reno was driven back, and the Indians, in overwhelming numbers, fell upon Custer. The latter and his entire force were massacred.
- Custer Massacre.**— Resulted in the slaughter of Maj.-gen. George A. Custer and his entire command of nearly 300 men. See preceding.
- Cutts, George Washington Parke.**— Born at Mount Airy, Md., 1781; died at Arlington House, Va., 1857. An American writer. His father was a son of Martha Washington by her first husband, Daniel Parke Custis. After his father's death George Washington adopted him as a son.
- Cuthbert.**— A noted English monk who lived in the 7th century. He was bishop of Lindisfarne.
- Cutlas, The.**— See **SWORDFISH**, 2666.
- Cuttlefish, The.**— See **MOLLUSK**, 2715.
- Cuvier, Baron.**— (1769-1832.) A famous French naturalist who was the founder of the science of comparative anatomy.
- Cuyahoga (kī-ā-hōg-ā).**— A river of northern Ohio, which flows into Lake Erie at Cleveland after a course of about 90 miles.
- Cuyp, Albert.**— 3507.
- Cuzco.**— A district in Peru. The capital of the district bears the same name, and is very interesting on account of the remains of the Temple of the Sun and other relics of the Incas. Pop. of the city, about 20,000.
- Cyclades (sik'la-dēs).**— A group of islands in the Ægean Sea, belonging to Greece. They are 12 in number, and take their name from the Greek word for "a circle," on account of their arrangement. Hermopolis is the capital. The total population is about 136,000.
- Cyclops (sī-klops).**— A mythological race of one-eyed giants, 1726.
- Cygnus.**— A constellation — the swan — of the northern heavens.
- Cyprus.**— A large island in the eastern portion of the Mediterranean, and south of Asia Minor. The government is administered by England, though the island nominally belongs to Turkey. It is regarded as an important base for the protection of the Suez Canal.
- Cyrene (sī-rē'nē).**— In ancient times this was the chief city of Cyrenaica, a district in Africa, and was situated about ten miles from the Mediterranean.
- Cyrus.**— (Died 529 B.C.) The life of Cyrus like many other early heroes, has been surrounded with an atmosphere of myth. According to Herodotus, he was the son of Cambyses, a Persian prince, and Mandane, a daughter of the Median king, Astyages. He received the simple, hardy education of a Persian, and at the age of twelve visited the court of Media, where he soon showed great courage in helping his grandfather to suppress a revolt.
- The Persians had long been a horde of wandering herdsmen along the slopes east of the Caspian Sea, and apart from the vast empires of Babylon and Nineveh. They were energetic, free, and noble. "They wore leathern clothing; they ate not the food which they liked, but rather that which they could obtain from their rugged country; they drank water instead of wine, and had no figs for dessert." They had faith in themselves and in a supreme ruler of the universe. While empires were decaying they were gaining strength. Finally, they found a great leader who extended their power and made them a great nation.
- When Media and Babylon were at war in 549 B.C. Cyrus led a revolt against the Median king. Being an Aryan of the royal blood, he had no trouble in getting the Medes to submit. He made them his followers rather than his subjects. He soon received homage from the vassal kings who had served the Medes, including his own relatives in Persia. Then he turned against nations whom the Medes had left unconquered. By his great ability and soldierly genius, he soon built up an empire more extended than any over which man had ruled before. With a solid army, he swept down upon the plains, and one by one the empires fell before him, until he controlled all from the Mediterranean to the Indus and from Tartary to the Arabian Gulf. For twenty years, he passed from west to east and from east to west, in his career of conquest. At first, he was simply a king, but after his conquests he became "the powerful king," and finally "the supreme king, the great king, the king of Babylon, the king of Sumir and Akkad, the king of the four races." He took title upon title as he extended his power.
- In 546 he defeated the wealthy and great Cræsus of Lydia, who had just formed an alliance with Babylon and Egypt. Thus he came into direct relation with the Greeks of Asia Minor who soon did him homage. After pushing his frontiers to India and the borders of the great plateau of Pamir, the "roof of the world," he turned back and in 538 took Babylon, which gave him undisputed authority in Chaldea, Mesopotamia, and Syria. Egypt alone, of the powers that had joined forces against him, he left untouched. Though he continued to extend his borders on the east, the last nine years of his life were rather peaceful. He was finally slain, in 529, B.C., in a battle with a tribe of southern Siberia.
- Kings in the olden time were more apt to write their histories in blood than in ink. The sword was more familiar to their hand than the pen. Cyrus, however, left some writings on clay cylinders and stone which throw some light upon his character as a Persian monarch.
- Though he was a hero of war and conquest, he won the hearts of his people by his kind and generous disposition. He liked his subjects,

and listened to their petitions or complaints. He refused to treat harshly those whom the fortunes of war had thrown into his power. The Persians spoke of his rule as that of a "father." He did not seek to destroy the gods and the customs of those whom he conquered. He adopted a system of toleration, allowing the people the free exercise of their own religion.

Though he could form the motley tribes of Asia into a conquering army, he did not form them into an organized empire. His empire was only loosely bound together. He, himself, was the force that held the provinces together during his life, and when his master hand lay cold in death, there were tendencies toward disunion in every province. He left his work uncompleted to be taken up by other hands.—See page 1796.

Czar of Russia, Nicholas II., age 33, is the son of Alexander III., his mother being sister to Queen Alexandra; succeeded to the throne Nov. 1, 1894; has shown himself a ruler of humane tendencies, favorable to religious toleration, and not disregarding of liberty in general, although the suppression of the little Finnish nation has been carried out during his reign; on Aug. 24, 1898, the Czar issued his famous Peace Manifesto to the Powers, proposing a conference for the preservation of international

peace by disarmament. The Czar was married Nov. 26, 1892, to Princess Alix of Hesse-Darmstadt, daughter of the late Princess Alice of England.

Czars.—The rulers of Russia. The word is a corruption of Cæsar, and it is sometimes written Tsar. The title was first assumed by Ivan IV. "The Terrible" in 1547. Those of the rulers of Russia who have borne this title are: Ivan IV., 1533-84; Feodor I., 1584-98; Boris, 1598-1605; Basil, 1606-13; Michael Romanoff, 1613-45; Alexis, 1645-76; Feodor II., 1676-82; Ivan V. and Peter I., 1682-89; Peter I., 1689-1725; Catherine I., 1725-27; Peter II., 1727-30; Anne, 1730-40; Ivan VI., 1740-41; Elizabeth, 1741-62; Peter III., 1762; Catherine II., 1762-96; Paul I., 1796-1801; Alexander I., 1801-25; Nicholas I., 1825-55; Alexander II., 1855-81; Alexander III., 1881-94; Nicholas II., 1894.

Czechs (*chechs* or *cheks*).—A Slavonic race including the Bohemians or Czechs proper, the Slovaks and the Moravians. There are about 000,000, and they live in Bohemia, Moravia, and Hungary.

Czerny (*cher'ně*).—(1) George or Kara George (Black George) (1766-1817.) The leader in the rising of the Servians against the Turks in 1804. (2) Karl (1791-1857).—An Austrian composer and pianist.

D

Da Capo.—A musical term. See 3404.

Dace, The.—See CARP, 2696.

Dacia.—A Roman province formed by the Emperor Dacian (101). It comprised all of modern Rumania and some of the adjacent countries. The Romans abandoned it during the reign of Aurelian (270-275).

Dactyl.—In prosody, a foot consisting of one long and two short syllables, or of one accented and two unaccented syllables, as, mer'rily, 3060.

Dædalus.—In Grecian mythology the personification of trades and arts. He was confined in the famous labyrinth at Crete. He and his son, Icarus, escaped on wings of wax which Dædalus had made. Icarus flew too near to the sun, which melted the wax of his wings and he fell into the sea, named Icarian from this event.

Dago.—One born of Spanish parents. The name was so applied, originally in Louisiana. Now it is a term extended to Italian, Portuguese, and Spaniards.

Daguerre (*dä-gär'*), Louis Jacques Mandé.—(1789-1851.) A French painter and the inventor of the daguerreotype process of photography, in 1839.

Dahl, Michael.—(1656-1743.) A Swedish portrait-painter, who settled in London.

Dahlgren, John Adolf.—Born at Philadelphia, 1809; died at Washington, D. C., 1870. A distinguished American naval officer. He was the inventor of the naval gun which bears his name and in-

troduced important improvements in naval armament. He became commander in 1855, was made chief of the bureau of ordnance in 1862, and rear-admiral in 1863. He conducted the naval operations in Charleston harbor and in conjunction with the land forces under Gen. Gillmore took Fort Wayne and silenced Fort Sumter, but failed to capture the city. In 1864 he coöperated with Sherman in the capture of Savannah. He was the author of several technical works.

Dahomey.—A negro kingdom in West Africa, near the slave coast. Capital, Abomey. The area is 60,000 sq. miles, and the population is estimated at a million.

Dale, Richard.—Born in Va., 1756; died at Philadelphia, 1826. An American naval officer who distinguished himself as first lieutenant under Paul Jones on the "Bonhomme Richard" in the battle with the "Serapis," 1779. During hostilities with Tripoli, he commanded a squadron in the Mediterranean.

Dallas.—(1) A small town in northwestern Ga., the scene of spirited engagements during the Atlanta campaign in 1864, between the Federals under Sherman and the Confederates under Johnston. (2) A city in northern Texas, on the Trinity River, noted for its rapid advance in manufactures, etc. Pop. (1900), 42,638.

Dallas, George Mifflin.—Born at Philadelphia, 1792; died there, 1864. He was U. S. senator from Pa.

- (1831-33), minister to Russia (1837-40), vice-president of the U. S. (1845-49), and minister to England (1856-61).
- Dalles, The.**—A city in Ore., near which are the Dalles or rapids and cataracts of the Columbia River. Pop. (1900), 3,542.
- Dalmatia.**—A kingdom in Austria-Hungary, bordering on the Adriatic Sea. Zara is the capital. The area is 4,940 sq. miles. The population is about 530,000.
- Dalton, John Call.**—Born at Chelmsford, Mass., 1825; died at New York, 1889. An American physiologist, professor of physiology in the College of Physicians and Surgeons in New York City, and author of "Treatise on Human Physiology," etc.
- Damages.**—The money compensation claimed for injury received through the action of another.
- Damaraland.**—A district in German Southwest Africa. It was annexed by Germany in 1884. The English occupy Wolfisch Bay in this district.
- Damascus.**—Once the capital of Syria. It is situated on the edge of the desert in Coele-Syria. Pop., about 150,000. It has been intimately connected with Biblical history from the time of Abraham.
- Damien (dä-myän')** **de Veuster, Joseph** (1840-1889).—Father Damien devoted his life to the care of the lepers in the government hospital at Molokai, Hawaii. He contracted the disease and died April 15, 1889.
- Damietta.**—(1) One of the branches—the eastern—of the Nile River. It, with the Rosetta, forms the Delta of the Nile. (2) A city in lower Egypt between the Damietta branch and Menzaleh. Pop. (1897), 31,515.
- Damocles (dam'-ô-klēz)**, a Syracusan, who extolled the prosperity of Dionysius the Elder, was invited by the tyrant to a feast. On looking up he saw a sword suspended above his head by a single horse-hair. He was obliged to sit thus through the banquet in constant terror. The term "sword of Damocles" is used to signify impending danger.
- Damon.**—A Syracusan follower of Pythagoras, famous for his friendship with Pythias. In the first half of the 4th century Pythias plotted against the life of the tyrant Dionysius I. He was condemned to die; but wishing to put his affairs in order, received permission to do so, when Damon offered himself as a substitute and was willing to die in his stead if he did not return on a stated day. At the last moment Pythias returned and Dionysius was so impressed by the friendship that Pythias was pardoned.
- Damon and Pythias in Dog Life.**—See ANIMAL STORIES, 276.
- Damrosch, Leopold.**—Born in Prussia, 1832; died at New York, 1885. Distinguished as a musical composer and violinist. By his efforts, the Metropolitan Opera House, New York, was established, of which he became the director.
- Dana, Charles Anderson.**—Born at Hinsdale, N. H., 1819; died near Glen Cove, L. I., 1897. Noted as one of the leaders in the Brook Farm Association in 1842. He was assistant secretary of war (1863-64), and became editor of the New York "Sun" in 1868. He had been for fifteen years associated with Horace Greeley on the New York "Tribune." He compiled the "Household Book of Poetry," and edited the "American Cyclopædia" in connection with Ripley. He was a vigorous political writer and made the "Sun" a journal of great influence.
- Dana, James Dwight.**—Born at Utica, N. Y., 1813; died at New Haven, Conn., 1895. A noted professor of geology and mineralogy at Yale College from 1845. After acting as mathematical instructor of midshipmen in the U. S. navy (1833-35), he accompanied the Wilkes exploring expedition (1838-42). Besides interesting and valuable reports on geology, corals, and crustaceans, he wrote "System of Mineralogy," "Manual of Geology," "Corals and Coral Islands," "Characteristics of Volcanoes."
- Dana, Mt.**—(13,277 ft.) In the Sierra Nevada range.
- Dana, Richard.**—Born at Cambridge, Mass., 1700; died, 1772. A prominent American lawyer and patriot. He presided over the Boston town-meetings between 1763 and 1772, and took an active part in movements which preceded the Revolutionary War.
- Dana, Richard Henry.**—Born at Cambridge, Mass., 1815; died at Rome, Italy, 1882. Son of R. H. Dana; distinguished as a jurist, politician, and author. After a voyage on the Pacific for the restoration of his health, he published "Two Years before the Mast," "The Seamen's Friend," and Wheaton's "Elements of International Law." He was one of the founders of the Free-Soil party.
- Danai.**—The Argives or early inhabitants of Argos; used by Homer as a name for the Greeks generally.
- Danbury.**—A city in Conn., noted for its manufacture of hats. It was burned by the British in 1777. Pop. (1900), 16,537.
- Dandelion, The.**—2913.
- "Daniel Deronda."**—The title of a novel by George Eliot.
- Danish Fairy Tales.**—1342.
- Danites.**—A secret order within the Mormon church, the members of which bind themselves by solemn pledge to uphold the authorities of the church in whatever they may do. It was established by Brigham Young, who was at its head until his death. The Danites, it is alleged, had much to do with the persecution of "Gentiles" who emigrated to Utah and the adjacent regions occupied by Mormons. It is the popular belief that the order was responsible for the massacre of 120 anti-Mormon emigrants at Mountain Meadows, Utah, in 1857.
- Dannat, William T.**—Born at New York in 1853. Noted as a figure painter. He was a student under the famous artist Munkacsy, and gained the third-class medal at Paris in 1883.
- Dannecker, Johann Heinrich.**—German sculptor, 3595.
- Dante (dan-tè) Alighieri.**—(1265-1321.) An Italian poet, born at Florence and died at Ravenna.

His romantic passion for Beatrice Portiuari, begun when she was eight years old and he was nine, inspired him in his work through life. His chief work is the "Divina Commedia."

Danton, Georges Jacques.—(1759-1794.) A noted French revolutionist. Guillotined at Paris.

"**Dan Tucker.**"—The title of a negro song, once popular in the United States.

Dantzic.—In Prussia; a seaport and capital of west Prussia; one of the most important ports of Germany and the second grain center in Europe. Population (1890), about 120,000.

Danube.—The second river in size in Europe. Length 1,770 miles.

Danvers.—A town in Mass., seat of the state insane asylum. Pop. (1900), 8,542.

Danville.—(1) A city in Ill., on the Vermilion River, a railway and coal mining center. Pop. (1900), 16,354. (2) A borough in Pa., noted for its iron manufactures. Pop. (1900), 8,042. (3) A town in Va., the center of a large tobacco growing district. Pop. (1900), 16,520.

Daphne (*daf'nē*).—In Greek mythology, a nymph; transformed by Apollo into the bay-tree.

D'Arc, Jeanne.—(1412-1431.) Few exploits in history have such a fascinating interest as that of the young peasant girl who, filled with unbounded and enthusiastic patriotism, aroused the courage and hope of the French troops and led them to victory at Orléans.

Women show their patriotism in a way different from men. They act largely by the heart and emotions. They are by nature more impassioned, more sensitive, and more loving; they identify themselves, more strongly, by all their sentiments, and with their entire hearts, with what surrounds them. They have more of the divine feeling. They have more heart and imagination. They have two natural gifts—pity and enthusiasm—which especially distinguishes them from men. Through pity they make great sacrifices, and by enthusiasm they are made nobler. Hence, they are more heroic than heroes.

All nations have in their annals some of those miracles of patriotism in which a woman is an instrument in a great cause. When everything is desperate in the cause of a people, we need not yet despair, if the spirit of resistance still subsists in the heart of a woman, whether she be a Judith, a Clelia, or a Joan of Arc—a Cava in Spain, a Victoria Colonna in Italy, or a Charlotte Corday. Judith and Charlotte Corday sacrificed themselves, but they sacrificed themselves even unto crime. This inspiration was heroic, but it made a wrong choice of weapons—it took the knife of the assassin instead of the sword of the hero. Their devotion became celebrated; but it bore a stain, and was therefore justly blamed. Joan of Arc wielded only the sword of her country, and in her time, accordingly, she was regarded not only as inspired with patriotism, but as the prophetess of God.

Joan of Arc, the Maid of Orléans, was the daughter of respectable peasants. She was

born in 1412, in the village of Domremy, France. She was taught, like other young women of her station in that age, to sew and to spin, but not to read and write. She was different from most other girls in her simplicity, modesty, industry, and piety.

In her childhood she heard many superstitious legends and mythical stories, from the simple people among whom she lived. In her lonely life, as a shepherdess, she grew dreamy and imaginative. She was a girl of natural piety who saw God in forests, hills, and fountains. In her deep religious fervor, she saw visions. When she was about thirteen years of age, she believed she saw a light and heard an unearthly voice, which enjoined her to be modest, and to be diligent in her religious duties. This revelation made a great impression on her excitable mind.

At the age of fifteen she thought she heard St. Michael tell her that she was sent to deliver France from England, whose armies were overrunning the country, and many believed her story.

The Hundred Years' War was in progress. Edward III. of England, who laid claim to the crown of France, had overwhelmingly defeated the French at the battles of Crécy, Calais, and Poitiers. So discouraged were the French that a large party of them, in the Treaty of Troyes, agreed to give the crown to the English king upon the death of the dauphin—Prince Charles. But patriotism was not yet extinct. There were many who regarded the concessions of the Treaty of Troyes not only as weak and shameful but as unjust to the Dauphin Charles, who was thereby disinherited. The result was, that the terms of the treaty were not carried out, and the war dragged on. The leaders of the party that stood by their native prince were at last reduced to most desperate straits. They saw the greater part of their country in the hands of the English who were holding in close siege the important city of Orléans, whose starving inhabitants saw no hope of relief. They were in deep gloom, but it was the gloom that precedes the dawn of a better day when the sun of victory would again brighten the distressed country.

Joan, the young peasant girl, with her imagination all aflame from brooding over her country's wrongs and sufferings, felt that she was bidden to undertake the work of delivering France. She was obedient to this call, and continued to urge that she had a mission which she must perform. At the age of twenty, she attracted the notice of the French court, and was invited to state her plans to the king. Though her story when first told was rejected as the story of an insane person, she now made her way to the Dauphin, persuaded him that she had a mission and induced him to place her at the head of the French army.

She assumed male attire and warlike equipments. Mounted upon a white horse, with a sword, glittering armor and a white banner,

she put herself at the head of the troops, whom her daring and courageous example, and the idea of her heavenly mission, inspired with new enthusiasm. She aroused the imaginative, impulsive French nation exactly as it had been stirred by the preachers of the Crusades. Received by her countrymen as a messenger from heaven, the maiden kindled throughout the land a flame of enthusiasm that nothing could resist. Inspiring the dispirited French soldiers with new courage, she forced the English to raise the siege of Orléans. After this important victory, which rekindled the national ardor of the French to the utmost, she became the dread of the previously triumphant English. She conducted the Dauphin to Rheims, where he was crowned in 1429. With many tears she saluted him as king.

Her success was simply that of a heroic warrior who inspires his troops with his own courage and confidence of victory and rushes into the action carrying his admiring and enthused soldiers with him. She was aided by her angelic form and the purity of her beauty and childlike sweetness.

She now wished to return home, believing her mission accomplished; but acceding to the wish of Charles, she consented to remain with the army. But she no longer heard any unearthly voice and began to have fearful forebodings. She still accompanied the army and was present in many conflicts, but she lost her enthusiasm, her courage, and her success.

On May 24, 1430, she threw herself, with a few troops, into Compiègne, which the Burgundian forces besieged; and being driven back by them in a sally, was taken prisoner and sold by the Burgundian officer to the English for the sum of 16,000 francs. She was conveyed to Rouen, the headquarters of the English, and was brought before the bishop of Bouvais for trial on the charge of being a sorceress and a heretic.

While her trial was in progress, she submitted to many cruel indignities which were given for the purpose of making her confess her errors. She remained obstinate, and clung to her male attire, stating that she acted according to the voices from heaven which she claimed to hear. Though the court showed great patience with her, she persistently declined to dress as a woman. When her man's clothing was pulled from her, she resumed it again at the first opportunity. After a long trial, accompanied by many shameful circumstances, she was condemned to be burned to death at the stake. Hoping to have her sentence changed to imprisonment for life, she recanted some of her alleged errors and expressed penitence. Words which fell from her when subjected to great indignities and her resumption of male attire were made grounds for concluding that she had relapsed, and she was taken to the stake and burned, May 31, 1431.

When she was brought to the place of execution she knelt down in the cart not to ask her life of the judges, but to implore mercy from

heaven for the bishop and the priests who were about to burn her. She clasped her hands and bowed her head; and addressing herself with a mild and pathetic energy, sometimes to her celestial protectors and sometimes to her destroyers, who were seated below her on the scaffold, she tenderly asked for their aid, their compassion, and their prayers. Sometimes she gave relief to her feelings by womanish sobs, mixed with dreadful shrieks. Influenced by the sight of her youth, innocence, and beauty, about to be reduced to ashes, and by the sound of the wail that seemed already to be rising from her funeral pile, the doctors, inquisitors, and officers burst into tears. Some of them, unable to bear the sight, and faint with emotion, came down from the stand and were lost in the crowd.

As the flames arose around the martyr, she lifted her eyes toward heaven and cried aloud that her celestial voices had not deceived her and that she had saved her country, even the hardened English soldiers were touched, and one of the leaders exclaimed: "We are lost; we have burned a saint."

Joan's trial was watched with great interest. The English government, by a long circular letter, notified all of the sovereigns of Europe of the result and gave them an outline of the proceedings. The University of Paris sent a special account of it to the Pope, to the cardinals, and to the chief prelates.

Speaking of her trial, De Quincey says: "Never from the foundations of the earth was there such a trial as this, if it were laid open in all its beauty of defense, and all its hellishness of attack. Oh, child of France, trodden under foot by all around thee, how I honor thy flashing intellect, quick as God's lightning, and true as God's lightning to its mark, that ran before France and laggard Europe by many a century, confounding the malice of the ensnarer, and making dumb the oracles of falsehood! Is it not scandalous, is it not humiliating to civilization, that, even at this day, France exhibits the horrid spectacle of judges examining the prisoner against himself, seducing him, by fraud, into treacherous conclusions against himself?" De Quincey asks why she contended, why she answered her persecutors, why she did not retire in silence from the superfluous contest. Then he answers: "It was because her quick and eager loyalty to truth would not suffer her to see it darkened by frauds, which she could expose, but other, even of candid listeners, perhaps could not."

De Quincey refused to believe that Joan recanted either with her lips or in her heart. "Nothing but her angelic constancy, united with her angelic gentleness, drove the ten thousand English soldiers to weep when her life was consumed by fire; and to turn away penitents for life, saying everywhere that they had seen a dove rising upon wings to heaven from the ashes where she had stood."

Joan had been no wilful impostor. She thought she heard voices speaking from an un-

seen world. She was a noble-hearted girl, true to what she believed to be her heaven-given mission. She courageously faced difficulties and danger in order to do what she considered her duty. By her wonderful career she aided Charles to win back to the royal house of Valois the whole kingdom of France. She will long be remembered.

Dardanelles.—The strait which connects the Ægean Sea and the Sea of Marmora; the ancient Hellespont. It is 45 miles long and has an average width of from 3 to 4 miles; its narrowest point is $1\frac{1}{4}$ miles.

Darien. See PANAMA, ISTHMUS OF.

Darius (*da-rî'us*) I.—The son of Hystaspes, king of Persia, reigned (521–486 B.C.). He enlarged the boundaries of his kingdom by aggressive war; undertook the conquest of Greece, but was defeated at Marathon by Miltiades (490).

Darius III. Codomannus.—The last king of Persia, (336–330 B.C.) was dethroned by Alexander the Great.

Dark and Bloody Ground, The, is said to be the meaning of the Indian word for Kentucky, and applied to that state through its association with Indian warfare.

Dark Horse.—A phrase applied to a candidate who, in a political convention, is not pushed forward at first, but is held in reserve in anticipation of a deadlock. If the right moment appears, his name is "sprung" as a compromise, and the strategic movement is often successful.

Darley, Felix Octavius Carr.—Born at Philadelphia, 1822; died at Claymont, Del., 1888. An American artist, distinguished for his illustrations of Dickens, Cooper, Irving, and other authors.

Darling, Grace.—(1815–1842.) A young Englishwoman noted for her heroic rescue of a number of lives from a wrecked vessel, 1838.

Darmstadt.—In Germany; the capital of the grand duchy of Hesse. Commercial and manufacturing interests. Pop. (1895), 63,745.

Dartmoor Massacre.—In 1815, 10,000 Americans—prisoners of war taken in the War of 1812 and impressed seamen who had refused to fight against their country—were held in Dartmoor prison in Devonshire, Eng. The war was ended and they were impatient for their liberty. Apr. 6, a number of sailors attempted to escape and came into collision with the guards. Seven Americans were killed and 33 wounded. The British, after an investigation, gave full disavowal and ample satisfaction.

Dartmouth College.—Situated at Hanover, N. H., and founded by Eleazer Wheelock, its first president, in 1770. It is conducted on nonsectarian principles; has a library of 93,000 volumes and 20,000 pamphlets. Its instructors number 68, and its student attendance, 768.

Dartmouth College vs. Woodward.—A celebrated case in the U. S. Supreme Court, conducted for the plaintiffs by Daniel Webster and resulting in 1819 in one of the most important decisions ever rendered by that tribunal. In 1816, the N. H. legislature amended the charter of Dartmouth

College, increasing the number of trustees to 21, and creating a new corporation to which the property of the old corporation was transferred. The old trustees brought suit against Woodward, the secretary and treasurer of the corporation under the new charter, for the recovery of the property. The State court decided against them. The case was taken to the U. S. Supreme Court, which reversed the decision of the State court, declaring the charter of Dartmouth College to be "a contract within the meaning of that clause of the Constitution which prohibits States from passing any law impairing the obligation of contracts." This decision settled the law holding that a charter granted to a private corporation is a contract which cannot be altered in a material point without the consent of those who hold it, unless the power of revision is reserved to the legislature by a clause in the charter or by a general law of the State.

Darwin, Charles Robert.—(1809–1882.) The founder of the "Darwinian" theory of evolution, or "Darwinism" as especially enunciated in "The Descent of Man."

Dash into the Enemy's Country.—A playful phrase by which William J. Bryan characterized his speaking trip through the eastern states, during his campaigns for the presidency in 1896 and 1900. In that section the sentiment, even of his own party, was strongly opposed to the free coinage of silver, strenuously advocated by him—hence, "the enemy's country." (See BRYAN, WILLIAM JENNINGS, 79.)

Date.—In 1582 it was discovered that there was a discrepancy in the mode of reckoning time by the Old Style or Julian Calendar and that this was caused by the fact that there was a difference of 11 minutes between the year as fixed by Julius Cæsar and the solar year. This had amounted to 10 entire days. To correct this, Pope Gregory XIII. ordered that the year 1582 should consist of only 356 days by causing the 5th Oct. to become 15th Oct. of the New Style or Gregorian Calendar.

Date-line, International.—In sailing westward around the world the traveler is each day a little behind the sun in point of time, so that the sum of these differences which he has consumed each day amounts to an entire day. It is necessary that he drop 24 hours somewhere that he may overtake the sun. In traveling eastward the reverse is the case, and he must add a day to make his time accord with the calendar. It has been agreed by nations that the 180th meridian is the best place at which to rectify the loss or gain. The international date-line does not follow the 180th meridian exactly, as it varies slightly to accommodate conditions which have existed in some of the islands adjacent to it. Thus, the Sandwich Islands on one side of the line and the Society Islands on the other, though only a few degrees apart, observe different Sabbaths; because the missionaries sailing to these islands from opposite directions neglected to rectify their calendars.

Dating Ahead.— See ANTEDATE.

Daubigny (*dō-bēn-yi'*), **Charles François.**— (1817-1878.) A celebrated French landscape-painter.

Daudet, Alphonse.— (1840-1897.) A celebrated French novelist and dramatist.

Daughter.— See WOMAN UNDER THE LAW.

Daughters of Temperance.— An association of women organized about 1840, to promote the cause of temperance. (See ANTHONY, SUSAN BROWN-ELL, 18.)

Daughters of the Revolution.— A patriotic society founded in New York, 1891. Its terms of membership are (1) Descent from an ancestor actually engaged in the military or naval forces under any of the Thirteen States; (2) Descent from any of the signers of the Declaration of Independence or from any official who actually assisted in establishing American independence.

Davenant, Sir William.— (1606-1668.) An English dramatist and poet.

Davenport.— A city in Iowa, important as a distributing center. Pop. (1900), 35,254.

Davenport, John.— Born at Coventry, Eng., about 1598; died at Boston, Mass., 1670. A Puritan clergyman who emigrated from England and settled at Boston, 1637. He was one of the founders of the New Haven Colony, in 1638.

David, Jacques Louis.— 3456.

David.— The second king of Israel (1055-1015 B.C.), 1483.

David I., King of Scotland, died 1153; was defeated at the battle of the Standard, near Northallerton (1138).

David II.— (1324-1371.) King of Scotland, son of Robert Bruce; was defeated and captured at the battle of Neville's Cross (1346).

"David Copperfield."— A novel by Charles Dickens; in part, a history of his own early life.

Davidson, Harry.— Born at Philadelphia, Pa., 1858. A noted American wood engraver. His chief works are "Canterbury Cathedral," "Israel," "The Golden Gate," "An Old Mill."

Davidson, William.— Born in N. C., 1746; killed at Cowan's Ford, N. C., 1781. An American brigadier-general in the Revolutionary War. While interrupting the passage of Cornwallis across the Catawba, he was mortally wounded and died on the following day.

Da Vinci, Leonardo.— 3428.

Davis, Charles Henry.— Born at Boston, Mass., 1807; died at Washington, D. C., 1877. A distinguished officer of the American navy. He served under Dupont, who captured Port Royal, S. C., in 1861; commanded the "Mississippi" gunboat flotilla and gained a victory over the Confederate fleet off Port Pillow, May 10, 1862 and another before Memphis, June 6, 1862; became rear-admiral in 1863. He wrote "The Coast Survey of the United States" and "Narrative of the North Polar Expedition of the U. S. S. 'Polaris.'"

Davis, Jefferson.— Soldier and statesman; sketch of, 139.

Davis, Jefferson C.— Born in Ind., 1828; died, 1879. A general in the U. S. army. He served in the

war with Mexico and at the beginning of the Civil War was a captain in the 1st U. S. artillery; was one of the garrison of Fort Sumter when it was bombarded and taken by the Confederates in Apr., 1861; was promoted to brigadier-general and major-general; commanded a brigade at Pea Ridge, Ark., a division at Stone River, Chickamauga, Missionary Ridge, and in the Atlanta campaign; during the latter he succeeded Gen. Palmer in the command of the 14th corps and with it made the "march to the sea" and the campaign through the Carolinas. Gen. Davis shot and killed Gen. William Nelson, in the Galt House, at Louisville, Ky., Sept. 29, 1862, in an altercation growing out of their official relations. Davis was tried by a military commission, acquitted, and restored to duty.

Davis, John.— Born at Plymouth, Mass., 1761; died at Boston, 1847. An American jurist. He became Comptroller of the U. S. Treasury in 1795, and was the youngest and the last survivor of those who voted for the adoption of the Federal Constitution in the Convention of 1789.

Davis, Richard Hardlog.— Born 1864. An American writer of fiction.

Davis Strait.— A strait connecting Baffin Bay with the Atlantic Ocean, and separating Greenland from the Cumberland Peninsula.

Davy, Sir Humphry.— (1778-1829.) A noted English chemist, and inventor of the Davy lamp. He wrote extensively on scientific subjects and made most valuable additions to the science of chemistry.

Dawson, Sir John William.— (1820-1899.) A noted Canadian naturalist and geologist.

Day Book.— See BOOK-KEEPING.

Days, Table of.— See following page.

Days of Grace.— In many states "three days grace" beyond the time of payment stated in the note is permitted.

Dayton.— A city in Ohio, on the Miami River. Its manufactures include railway cars, paper, stoves, etc. Pop. (1900), 85,333.

Dayton, Elias.— Born at Elizabethtown, N. J., 1737; died there, 1807. He was actively engaged throughout the Revolutionary War and took part in many of the chief battles. He was a member of the Continental Congress and was major-general of the N. J. militia.

Dayton, William Lewis.— Born at Baskingridge, N. J., 1807; died at Paris, France, 1864. He was associate judge of the supreme court of N. J., was Republican candidate for Vice-president in the first national campaign of that party, in 1856, on the ticket with John C. Fremont; was minister to France (1861-64).

Dead Account.— One to which further entries will probably never be made.

Dead-Letter Office.— See POSTAL INFORMATION.

Dead Sea.— In Palestine, a salt lake a few miles southeast of Jerusalem. Its principal tributary is the Jordan. Owing to the great quantity of salt it contains the water of the Dead Sea is very heavy and of great buoyancy. Length, 46 miles.

DAYS, TABLE OF :

FROM ANY DAY OF	TO THE SAME DAY OF NEXT											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
January	365	31	59	90	120	151	181	212	243	273	304	334
February	334	365	28	59	89	120	150	181	212	243	273	303
March	306	337	365	31	61	92	122	153	184	214	245	275
April	275	306	334	365	30	61	91	122	153	183	214	244
May	245	276	304	335	365	31	61	92	123	153	184	214
June	214	245	273	304	334	365	30	61	92	122	153	183
July	184	215	243	274	304	335	365	31	62	92	123	153
August	153	184	212	243	273	304	334	365	31	61	92	122
September	122	153	181	212	242	273	303	334	365	30	61	91
October	92	123	151	182	212	243	273	304	335	365	31	61
November	61	92	120	152	181	212	242	273	304	334	365	30
December	31	62	90	121	151	182	212	243	274	304	335	365

When February is included between the points of time, a day must be added in leap year.

Deadwood.—A city in S. D., situated in the Black Hills. It is an important mining town, and the district is said to abound in gold and silver. Pop. (1900), 3,498.

Dealing in Securities.—See LAW OF BUSINESS.

De Amicis (*de-àm'chès*), **Edmondo.**—(1846-.) An Italian writer. His works record for the most part his travels.

Dearborn, Henry.—Born at Hampton, N. H., 1751; died at Roxbury, Mass., 1829. An American officer, greatly distinguished in the Revolutionary War. He was Secretary of War (1801-09), and minister to Portugal (1822-24). He captured York (Toronto) in 1813.

Dearborn, Henry Alexander Scammell.—Born at Exeter, N. H., 1783; died at Roxbury, Mass., 1851. He became a state senator in 1830, and was elected to Congress in 1831; in 1835 he was appointed adjutant-general of Mass., but because he had furnished arms to R. I. during the Dorr Rebellion, he was removed in 1843. He wrote "Internal Improvements and Commerce of the West."

Death of a Hero, The.—See ANIMAL STORIES, 2741.

Death of Gélert, The.—See ANIMAL STORIES, 2743.

Death Penalty.—Modes of execution in some of the leading countries of the world (1889). In Bavaria, Belgium, Denmark, France, Hanover, and Saxony, the guillotine is used. The gallows in Austria, Netherlands, Portugal, Great Britain, and the United States except in New York, where electricity has been substituted. The musket is used in Ecuador and in Oldenburg. In Prussia, the sword. In China, sword or the cord. Russia, musket, gallows, or sword. Switzerland, sword or guillotine. Spain, garrote.

Death Valley, or Amargosa Desert.—A desert region in eastern Cal., 160 feet below sea-level.

Debenture.—A certificate, signed by a public officer as evidence of a debt, in which the person is specified.

Debit.—To charge with debt on the debit side of an account.

Debt.—See LAW OF BUSINESS.

Debt, Public.—When the government of the U. S. began to operate under the Constitution, in 1789, it had a foreign debt of \$13,000,000 and a domestic debt of \$42,000,000. It then assumed the debts of the states which had been contracted in the revolutionary cause amounting to \$21,500,000. The debt was funded and the total in 1796 was \$83,800,000. This was increased \$15,000,000 by the Louisiana Purchase; reduced to \$45,200,000 by 1812; raised to \$127,000,000 by the War of 1812; virtually extinguished by 1835; increased to \$68,300,000 by the Mexican War; decreased by 1837 to \$28,700,000 and raised to \$2,245,000,000 in 1865, by the Civil War. The prosperity of the country, the enormous revenues from customs, and the successive fundings of the debt at lower rates of interest, reduced it by 1893 to \$820,109,339. Jan. 1, 1898, the debt amounted to \$1,811,543,269. In 1898 the debt was further increased by the war with Spain and on Jan. 1, 1899, it amounted \$1,977,388,764.

Debtor.—A person who owes another; the side of an account in which debts are charged.

Debts, British.—Under the treaty of 1783 with Great Britain, provision was made for the payment of all debts due by Americans to British subjects. Some of the state governments, however, provided, even after the ratification of the treaty, that such debts might be paid into the state treasury, and the state would then refuse to entertain suits on the part of the creditors. The Supreme Court, in 1796, declared that such

- debts must be paid, and that no state law could repudiate them. (See *WARE vs. HYLTON*.)
- Decameron.**—A celebrated work comprising 100 stories, by Boccaccio, which see.
- Decamps** (*de-kou'*), **Alexandre Gabriel.**—(1803-1860.)—distinguished French painter, 3459.
- Decatur.**—(1) A town in northern Ala., on the Tennessee River. Pop. (1900), 3,114. (2) A town in Ga., the county-seat of Kalb Co. Pop. (1900), 1,418. (3) A city in Ill., on the Sangamon River. Pop. (1900), 20,754.
- Decatur, Stephen.**—Naval commander; sketch of, 153.
- Decan** (*dek'kan*).—The popular name for the peninsular portion of India south of the Nerbudda.
- Decemviri.**—(450 B.C.) A council of ten under the control of Appius Claudius, who were sent to Greece to study their laws and amend the Roman law. A popular insurrection overthrew it. (See *VIRGINIA*.)
- Deciduous Trees.**—Those trees whose leaves fall every autumn and are renewed each spring; opposed to the term evergreen.
- Decimal System.**—That system of weights and measures in which the unit or standard is divided into tenths and multiples of tens. It is applied to the U. S. money system, and the French metric system. (See *WEIGHTS AND MEASURES*.)
- Decimal System of Coinage, Weights, and Measures.**—A decimal currency system, designed to simplify the money of the states, was proposed by Gouverneur Morris in 1782. Having ascertained that the 1,440th part of a Spanish dollar was a common divisor for the various currencies, he proposed, with this as a unit, a coinage of 10 units to be equal to one penny; ten pence to one bill; 10 bills to one dollar (equal to about 75 cents of the present money); 10 dollars to one crown. In 1784 Jefferson, as chairman of a committee of Congress, proposed a system of four coins, based upon the Spanish dollar,—a gold piece worth 10 dollars, a dollar of silver, a tenth of a dollar in silver, and a hundredth of a dollar in copper. Congress adopted this proposition, making the dollar the unit, July 6, 1785, and the coins became known as the cent, dime, dollar, and eagle. By an act of Congress in 1866, the five cent nickel piece was made to conform to the decimal or metric system as to size and weight. The use of the metric system of weights and measures was authorized by Congress, but was not made obligatory, and a table of equivalents was approved by Congress July 28, 1866. In 1858, Canada adopted the decimal system of currency in use in the U. S.
- Decius** (*dē-shi-us*), **Caius Messius Quintus Trajanus.**—Emperor of Rome 249-251. Killed in battle with the Goths.
- Declamation.**—3107.
- Declaration of Independence.**—The first step toward the independence of the colonies was taken by N. C., in a resolution, Apr. 12, 1776, "to concur with those in the other colonies in declaring independence." The same state had declared previously (May 31, 1775), in her famous Mecklenburg resolutions, which were forwarded to the Continental Congress, that the people of the colonies were "a free and independent people." Va. in her resolution of May 17, 1776, directed her representatives to propose in Congress a "declaration of independence." A resolution to that effect was introduced in the Continental Congress by Richard Henry Lee, and adopted June 11. The document was prepared by a committee composed of Thomas Jefferson, John Adams, Benjamin Franklin, Roger Sherman, and Robert R. Livingston. The draft was made by Jefferson. It set forth the rights of men in general and of the colonies in particular, citing their grievances against the British Government and declaring that "these united colonies are and of right ought to be free and independent states." The Declaration was adopted July 4, 1776, by the unanimous vote of 12 states. N. Y. did not vote but afterward ratified it. The adoption of the Declaration by Congress was hailed with enthusiastic acclaim by the people, and that day, July 4, became the national patriotic holiday. See *JEFFERSON, THOMAS*, 330.
- Declaration of Rights.**—In 1765, the "Stamp Act Congress" published a "Declaration of Rights and Grievances of the Colonists of America," in which they vigorously protested against the Stamp Act and all other schemes to tax them by a parliament in which they had no representation, and demanded all the rights of British subjects. This was the first general declaration of rights of which there is any official record. In 1774, the Continental Congress made a similar declaration against later aggressions of Parliament. Declarations of the same character were incorporated in the Declaration of Independence. (See also *BILL OF RIGHTS*.)
- "Decline and Fall of the Roman Empire."**—The title of a celebrated history written by Edward Gibbon, and first published in 1776-88.
- Decoration Day.**—The 30th of May, a national holiday, set apart for decorating with flowers the graves of men who served in the army or navy of the U. S., in memory of their patriotic sacrifices and sufferings and their glorious deeds. This beautiful custom was established soon after the organization of the Grand Army of the Republic, by the survivors of the Civil War. Its purpose was especially to honor the hundreds of thousands of Union soldiers who were killed in battle or died of disease during the war, but the scope of the ceremony was naturally and properly enlarged so as to include the graves of soldiers who had served in other wars, and of those who died from time to time. The people of the South testify to their remembrance of those who served their cause, by strewing flowers upon the graves of the Confederate dead. The passions of war have so wholly disappeared that the resting-places of both Union and Confederate soldiers are decorated at the same time, by survivors of the hostile armies, side by side. Many civic orders, such as the

- Masons, Odd Fellows, Knights of Pythias, etc., have adopted the custom and each year decorate the graves of members who have died.
- Dec.**—(1) A river in North Wales and Cheshire. Length, 90 miles. (2) A river of Scotland, flowing into the North Sea. Length, 87 miles. (3) A river of Scotland flowing into the Solway Firth. Length, 48 miles.
- Deed, What it Includes.**—All the fences standing on the farm; all the fencing material which had once been so used, and taken down and piled for future use.
- New fencing material, never used, is not so included, nor are loose boards and other loose lumber piled across beams in the barn.
- Standing trees, trees blown down or cut down and lying in the woods where they fell. But they are not included if cut up, staked out, or corded up ready for sale.
- All manure or compost, in the absence of agreement, unless it has been sold to a third party previous to the sale of the farm.
- All growing crops and all buildings are included.
- Deep-sea Soundings.**—The greatest known depth of soundings prior to the investigations of Capt. Ross in 1840 is supposed to be 6,000 ft. In 1843 Admiral Davis of the U. S. Coast Service obtained a depth of 12,600 ft. off Block Island. In 1847 Capt. Stanley of the English navy reported 15,000 ft. between Africa and South America. The North Atlantic though on an average a shallow basin has registered 23,250 ft. off Cape Sable. The South Atlantic furnishes 9,000 ft. near the Equator; the Indian Ocean, 12,000 ft. The apparatus employed is very delicate, yet strong; and greater accuracy is being secured with the later improvements.
- Deer, The.**—2415.
- Deerfield.**—A town in Mass., the scene of the "Bloody Brook Massacre" in 1675.
- "**Deerslayer, The.**"—A novel by Fenimore Cooper; published in 1841.
- Default.**—Failure to pay interest or charges; or to account for money or trust funds. This latter is called defalcation.
- "**Defender.**"—A sloop yacht that defeated "Val-kyrie III." in competition for the America's cup in 1895.
- Defender of the Faith** (*Fidei Defensor*).—A title conferred upon Henry VIII. as a recognition of his services in publishing a pamphlet against Luther and the Reformation in 1521.
- Defoe, Daniel.**—(1661-1731.) An English novelist and political writer. His popular reputation rests upon the fact that he wrote "Robinson Crusoe," which was published in 1719.
- Degree.**—(1) The 360th part of a circumference. (2) A unit in thermometric measurement; that of Fahrenheit's scale being the 180th part of the distance between the freezing and boiling points; in the Centigrade system it is the 100th part, and in Réaumur's the 80th part of the distance between zero (the freezing point) and the boiling point.
- De Hooch, Pieter.**—3502.
- Deism.**—The belief in God, as opposed to Atheism. There is a restriction of meaning, inasmuch as Deism rejects a belief in revelation, but rests upon the evidence of reason.
- De Kalb, Johann.**—Born at Huttendorf, Bavaria, 1721; died near Camden, S. C., 1780. He served as general in the American army in the Revolutionary War, being one of the force that came from France to aid the Colonists. He was mortally wounded at the battle of Camden.
- Dekker, or Decker, Thomas.**—Born about 1570. An English dramatist; author of a great many plays, and collaborator in the production of other plays with Middleton and others.
- Delaborde, Henri, Vicomte.**—(1811-1899.) A French figure-painter; a pupil of Delaroche. Also the author of a number of valuable works on the history of art.
- Delacroix** (*de-lä-krwä'*), **Ferdinand Victor Eugene.**—(1799-1863.) The leading painter of the French "romantic" school. See page 3459.
- Deland, Mrs. Margaretta Wade.**—Born 1857. A noted American novelist.
- De la Ramée, Louise.** ("OUIDA.")—Born 1840. A noted English novelist.
- Delaroche, Paul Hippolyte.**—Celebrated French painter. See 3458.
- Delaware.**—One of the Middle States, and one of the original Thirteen States of the American Union. Bounded on the north by Pa., east by N. J., Delaware Bay, and the Atlantic Ocean, south and west by Md. The state took its name from Baron Delaware (Thomas West), an English lord who was governor and captain-general of the colony of Virginia, early in the 17th century; the first permanent settlement was by Swedes in 1638; it passed under the rule of the Dutch in 1655 and of the English in 1664; in 1682 it was united with Pennsylvania, but was separated in 1703; after the Revolutionary War it was the first state to ratify the Federal Constitution, Dec. 7, 1787; it was a slave state until 1863, but remained loyal to the Union during the Civil War. The surface is generally level and the soil fertile; the staple product is fruit, especially peaches; Dover is the capital and Wilmington the chief city; except R. I., it is the smallest state in the Union and has but three counties. Area, 2,050 sq. miles. Pop. (1900), 184,735. Called the Diamond State—small but of great wealth.
- Delaware Indians.**—A confederacy of Indians of the Algonquin stock, who called themselves the Lenni-Lenape ("original men" or "preëminent men") and at one time inhabited the valley of the Delaware. William Penn found them dwelling peaceably there, and cultivated friendly relations with them. Their chief council fires blazed on the site of the present city of Philadelphia. They refused to join the Iroquois against the English in 1726, but later they turned hostile to the Colonists and were driven beyond the Alleghanies. The remnants of the tribe, numbering about 1,600, now live, well civilized, in the Ind. Ter. among the Cherokees.

Delaware Water Gap.—A small town and summer resort in Pa., near which is a gorge, two or three miles in length.

Delft.—A town of South Holland, Netherlands, once celebrated for its manufacture of porcelain. Pop. (1894), about 31,000.

Delhi.—In British India, a division of the Punjab, also the name of the capital of the district and the division of the Punjab. Area of the division of Delhi 15,530 sq. miles; pop. about 5,000,000. Pop. of the district 750,000; of the city (1901), 208,385.

Delibes, Leo.—(1836-1891.) A French composer and one of the best-known writers of light opera of the day. His works, in this department, number over 25.

Della Robbia, Luca.—3565.

De Long, George Washington.—(1844-1881.) A noted American explorer; perished in Siberia, with all of his party (14 men) except two who had gone forward in search of relief.

Delphin Classics.—An edition of the classics, which Louis XIV. ordered to be prepared for the use of the dauphin. "*Delphinus*" is the Latin translation of dauphin. They were published in 1674.

Delsarte, François Alexandre Nicolas Chéri.—(1811-1871) Originally a painter on China; then a distinguished tenor singer. Upon the sudden loss of his voice he gave instruction in dramatic and musical subjects. His desire was to make elocution a science. His system—the Delsartian System—is constantly gaining adherents.

Deluge Myth (Indian Mythology).—1653.

Demerara.—(1) A river in British Guiana, which enters the Atlantic at Georgetown after a course of 200 miles. (2) A county in British Guiana.

Demeter (*de-mĕ'ter*).—The goddess of vegetation, among the Greeks; the protectress of society and of marriage. She was the mother of Proserpine. She was replaced among the Romans, by the goddess Ceres.

Demetrius (*de-mĕ'tri-us*).—(338-283 B.C.) A king of Macedonia, and son of Antigonus.

Democratic Party.—In its early history it was first known as the Democratic-Republican party, then as the Republican party, and since the time of James Monroe, as the Democratic party. Its founder and the leading exponent of its principles was Thomas Jefferson. It was opposed by the Federal party, whose most conspicuous, able, and influential members included Washington and Hamilton. The dominant concerns of the Democracy of that day were the rights of the individual and the rights of the states, whereas the paramount tenets of the Federalists were the importance of nationality and the acceptance of the principle that all states are indissolubly welded together and not loosely strung one with another, like pearls on a cord; that the U. S. is a country rather than a confederation that may be dissolved at the pleasure of the elements that compose it. The Democrats of Jefferson's time, so far sympathized with the French revolutionists, that the more pronounced among them were willing to

involve the U. S. in war with England to help the French radicals. When, in 1801, the Democratic party came into power with the election of Jefferson, the sense of responsibility served to steady it. Some of its more extreme tenets were held in abeyance and many of its members became nationalists. Adams and Clay and their personal followers, were avowed protectionists, supported national aid for internal improvements, were not strict constructionists of the Constitution, and, in a word, had as much in common with the Federalists as with the Democrats. The disciples of Adams and Clay were early known as National Republicans, and when they received large accessions from the opponents of Jackson, they formed the Whig party. From 1800 to 1860, the Democrats, well organized and powerfully led, carried every presidential election except those of 1824, 1840, and 1848. It was in power before and during the war with Mexico, annexed Tex. and Cal. and abolished the U. S. bank. During the '50's its stand on the slavery question greatly weakened it in the North. In 1860 it had two candidates for President—Stephen A. Douglas, of Ill., nominated by the "popular sovereignty" wing of the party, and John C. Breckinridge, of Ky., by the pro-slavery Democrats. John Bell, of Tenn., nominated by the American party, had also the support of many Democrats, with the opposition so divided the Republican party carried the election. The Democratic party did not regain its possession of the administration until 1884, when Cleveland defeated Blaine, only to be himself defeated by Harrison on a strong protection platform, four years later. Cleveland was again elected on a tariff revision platform in 1892. In 1896 and in 1900, William Jennings Bryan, the Democratic candidate for President, was defeated by William McKinley, on a free-silver platform.

Democratic Societies.—Societies organized in 1793, in various parts of the U. S., to express sympathy with the French revolutionists and propagate extreme democratic views. They were similar to the Jacobins of France. They opposed Washington's efforts to suppress the Whiskey Insurrection in western Pa. in 1794, for which he vigorously denounced them. They soon died out.

Democritus (*dĕ-mok'-ri-tus*).—(460-357 B.C.)—A Greek philosopher, sometimes called "The Laughing Philosopher," on account of his cheerful disposition and his custom of laughing at the follies of men. It is said that he put out his eyes so that the outside world would not distract him from his philosophical meditations.

Demonetization of Metal.—When a metal is deprived of its standard monetary value and thus made merely a commodity, it is said to be demonetized.

Demosthenes.—(384-322 B.C.) Demosthenes was born in 384 B.C. He was the son of an Athenian citizen of rank, who owned a sword factory in which he employed many men. He was only eight years of age when his father died.

He was left with a large fortune, but was too young to attend to it. He was greatly neglected by his guardians, who squandered and wasted his money, so that even his teachers were cheated out of their salaries. Besides being cheated out of his money, he was weak and delicate, and his mother would not allow him to study hard. Soon after his sixteenth year, he became very studious.

His future was decided by an event which awakened in him an ambition to speak in public. He had often heard of an orator named Callistratus, who had won a great reputation. Hearing from his tutors that the famous orator was to plead a celebrated case in the courts, he felt a curiosity to hear him. He obtained admission through his master, who knew the officers of the court. By the kindness of the doorkeeper, he found a seat where he could hear without being seen. He listened with profound attention, and was so much impressed that he soon employed an orator named Isæus to teach him, and began to study the style of Plato.

He took great interest in his subject, and studied it with much energy and perseverance. At the age of twenty he won a suit against his guardians who had managed his property badly. His success caused a sensation at Athens, where he afterward found many clients. In the courts of Athens it was the rule that every man should be his own lawyer. Those who could not compose speeches recited what they hired others to write for them. The judges, however, could allow a man to choose a friend to make a second speech. Demosthenes thus had an opportunity to set up as a lawyer for his friends. His fame as an orator constantly increased. Later he gave up speaking and composing speeches for others, and became a political worker and adviser of the people.

In 354, he made his first appearance in the Athenian Assembly, where he strongly opposed the policy of forming a league against Persia. He urged that Athens should prepare a navy before thinking of making an attack on Persia. He succeeded in cooling the warlike zeal of the people. He encouraged the self-importance of Athens, and was opposed to any plan that might increase the strength of Sparta and Thebes. It was his policy to preserve a balance of power between the Greek states.

He had several defects to overcome before he could be a great orator. He had a weak voice, a short breath, a clumsy manner, and an imperfection in his speech which made him unable to pronounce the letter R. In order to strengthen his voice and breathing, he climbed up steep and craggy places; to remedy his speech, he practised speaking with pebbles in his mouth; to enable him to correct his awkward gestures, he spoke before a mirror. He learned of the best actors, and made a constant study of Thucydides, the historian.

He studied in the caves of the earth; he walked along the seashore and talked aloud to

the rolling waves; and finally, by his long, intense application, he laid the foundation for his reputation as an orator.

Demosthenes used all his influence against Philip of Macedonia, whose plans to unite Greece he feared would lead to subjugation. By his fervid eloquence at Athens he at last succeeded in forming a league against the ambitious king of the North. Though he was bold and fearless in addressing a crowd, and did not shrink from telling the people what he believed to be their faults, he did not display the same courage on the battle-field. At the battle of Chæronea, which placed Greece at the mercy of Philip, he threw away his arms and fled. Some of his enemies soon brought grave charges against him; but the people acquitted him and invited him to continue to take part in public affairs. When the bones of those who had fallen at Chæronea were brought home for burial, he was chosen to deliver the funeral oration. He mounted the rostrum every day and made speeches against the designs of Macedonia.

After the death of Philip, Demosthenes revived his hopes and induced the Greek cities to form another league. He was defeated in his plans when Alexander destroyed Thebes. When Alexander sent to demand ten of the orators of Athens, including Demosthenes, the latter made one of his most eloquent appeals to the people to prevent them from sacrificing those who had been their guardians in public affairs. He told them the fable about the sheep which the wolves promised to leave at peace if they would surrender their dogs.

The orators were saved by the pleadings of Demades who went to Macedonia and saw Alexander. For a while Demosthenes sank into obscurity, but he was soon shining again brighter than ever. When at his own expense he rebuilt the walls of Athens, a crown of gold was voted to him. This was considered the most splendid reward that a Greek citizen could receive. In reply to Æschines, who spoke against presenting the crown, he made one of the most famous of all his orations.

In a famous discourse, he justified his conduct in giving his country the advice that had only led to disasters. He said he had based his course, not upon interest but upon duty, honor, and devotion to his country. Later, he was compelled to leave Athens, on account of a feeling against him which arose from a charge of accepting a bribe. After Alexander's death, he returned to Athens and was welcomed with great demonstrations of joy. He became the soul of a new league against Macedonia. When the confederacy was broken up, he retired to an island off the coast of Argolis, where he soon ended his life.

Demurrage.—A penalty exacted for undue detention of a vessel in port while loading or unloading.

Denderah (*den'der-ā*).—A town on the Nile in Upper Egypt, noted for its ruins, especially that of the temple of Hathor.

Denmark.—A kingdom of northern Europe, comprising a part of the peninsula of Jutland and a group of islands adjacent thereto. The government is a constitutional hereditary monarchy, with a legislature composed of two bodies. Norway, Sweden, and Denmark were united in 1397 under the latter name. Sweden separated from Denmark in 1523, and Norway was ceded to Sweden in 1814. An unsuccessful war waged in 1864 against Prussia and Austria resulted in the loss to Denmark of Schleswig-Holstein, and Lauenburg. The present constitution was adopted in 1866. Denmark has recently parted with her West Indian Island possessions to the United States for \$5,000,000. Area, including islands, 15,289 sq. miles; pop., about 2,200,000.

Denver.—The capital of Col. It was first settled in 1858 and is now noted as an important railway and commercial center and for its large smelting works. Pop. (1900), 133,859.

Departments, United States.—See UNITED STATES, THE.

Depew, Chauncey Mitchell.—Born at Peekskill, N. Y., 1834; became member of the N. Y. assembly (1861-62); secretary of state for N. Y. (1863-65), and was appointed counsel of the New York Central Railroad in 1869. He was an unsuccessful candidate for the Republican presidential nomination in 1888. In 1899 he was elected U. S. senator from N. Y. Mr. Depew is famous in America and in Europe as a *raconteur* and after-dinner speaker, and also as an orator on public occasions.

De Peyster, Abraham.—(1658-1728.) An American merchant, son of Johannes De Peyster, a Dutch colonist of New Amsterdam; mayor of New York 1691-95 and afterward filled several important offices.

Deposition.—That to which one deposes or swears. A statement under oath.

Deposits, Public, Removal of.—President Jackson, in 1833, determined to discontinue the practice of depositing the public funds of the government in the Bank of the U. S., and to deposit them in state banks, while those already deposited in the Bank of the U. S. should be withdrawn as needed. William J. Duane, Secretary of the Treasury, was opposed to the removal of the funds, particularly before the meeting of Congress. The President therefore requested his resignation, which was given, and on the same day, Sept. 23, 1833, Roger B. Taney, the Attorney-general, was appointed in his place. Taney promptly gave the desired orders. The Senate passed a resolution of censure of the President and rejected the nomination of Taney. The President, in a paper which he read before his Cabinet, gave his reasons for removing the government funds from the Bank of the U. S. Two or three years later, after a long and acrimonious debate, the resolution of censure was expunged.

De Quincey, Thomas.—(1785-1859.) An English essayist and writer for the magazines. He was a confirmed opium-eater, and his reputation rests chiefly upon his narrative entitled "Confessions of an English Opium-Eater."

Derby, Elias Haskett.—Born at Salem, Mass., 1739; died there, 1799; prominent as an American merchant in the India and China trade and for the activity he displayed in equipping privateers during the Revolutionary War.

Derby-Day.—A race for three-year-olds held annually at Epsom. It was instituted by the Earl of Derby in 1780. The races are held on the last Wednesday in May. The 2,000 guineas, the St. Leger, and the Derby form "the triple crown," which has been won by only five horses.

De Reszke, Jean, occupies, in the world of music, a position such as no other tenor has ever reached. He is a remarkable illustration of success in musical art, honestly attained and honestly maintained. He has won his fame and earned the wealth which this fame has brought him by merit, pure and simple.

Success in art is as difficult of attainment as it is in the ordinary walks of life. The path to artistic glory is as beset with obstacles as the road to material triumph. In either case, the summit is reached only by strenuous effort, by perseverance and courage, and by a strict adherence to principle. Nature, with all her generosity, can only endow with embryo talent. Man must do the rest. Great singers, great pianists, great painters, are, after all, self-made. They are the product of years of study, incessant, arduous study, self-control, self-abnegation, hourly sacrifices, of nerve with which to meet disappointment, and of courage with which to try again.

The eminent tenor who, at the present day, is vindicating his claim to continued sovereignty—Jean de Reszke, the unrivaled artist—is an illustration of all this. What an object lesson to his contemporaries, with voices that fail after a brief career, and to the thousands of students! He is a living illustration of true musical art, and of the way to conserve one's powers.

Of his boyhood life, little is known beyond the fact that he grew up in a musical atmosphere. His father was a lover of the divine art; his mother, a devotee of it, possessing a glorious soprano voice, which Garcia and Viardot had trained; his home, the rendezvous of all the musicians of Warsaw. His youthful falsetto was so melodious in quality that he was drafted for the choir of the cathedral, where, surpliced and capped, the great Lohengrin of to-day sang the old Gregorian chants.

Why is Jean de Reszke declared to be, by the critics, the best tenor of his time? This question is one that is asked at every turn by those who do not feel competent to decide for themselves. The answer is a simple one. It is not because of his vocal equipment, for his voice is not a pure tenor, nor is its quality exceptional. It is not because of his histrionic abilities, for his acting is never characteristically realistic or dramatic, but, rather, typical in its portrayal and expression of abstract emotions. It is because in him there is the rare combina-

tion of nature and art, of brain and heart, and because he illustrates the science of singing in its highest degree,—production, control, fluency of emission, proper breathing, tone coloring, and the poetry and idealism of the art as well.

Of his private life there is little to be said. He was born at Warsaw, Russian Poland, in 1853. He has been one of the deciding agencies in the love of Wagner.

Derne Expedition.—In 1805 the U. S. consul at Tunis, Gen. Wm. Eaton, espoused the cause of Hamet, pasha of Tripoli, against the latter's usurping brother. With the coöperation of the U. S. naval forces in the Mediterranean, they defeated the usurper at Derne, Apr. 27, 1805. After this success, a treaty highly favorable to the U. S. was negotiated with the pasha.

Descartes (*dā-kār't'*), **René.**—(1596-1650.) A French philosopher and founder of modern philosophy and of Cartesianism, who wrote voluminously upon philosophical subjects.



DESCENT FROM CROSS

Descent from the Cross.—The subject of several noted paintings. That by Rubens, in the Antwerp cathedral, is considered the artist's masterpiece; see 3484.

Desdemona.—In Shakespeare's "Othello," the wife of Othello, the Moor, by whom she was smothered from a belief that she had been unfaithful to him.

Deseret.—The name by which Utah was formerly known and under which various attempts were made for admission into the Union.

Deserted Village, The.—The title of a poem by Oliver Goldsmith, published in 1770.

Des Moines.—The capital of Iowa, noted as a great center of trade and of extensive and varied manufactures. It was made the state capital in 1857. Pop. (1900), 62,139.

Desmoulins (*dā-mō-lan'*), **Benoît Camille.**—(1760-1794.) A French revolutionist, who contributed to the excitement of the times by his pamphlets and other published matter. Guillotined at Paris.

De Soto, Hernando or Fernando.—(1500-1542.) A Spanish soldier. He discovered the Mississippi River, 1541.

Despard's Conspiracy.—A conspiracy against the government, organized by an Irishman, Edward Marcus Despard (1751-1803), for which he was hanged in London.

Dessau.—The capital of Anhalt, Germany. The seat of the ducal palace and several fine art collections. The birthplace of the noted philosopher, Moses Mendelssohn. Pop. (1895), 42,375.

Detaille (*de-täy'*), **Jean Baptiste Édouard.**—Born, 1848. A noted French painter of battle scenes.

De Tocqueville (*tok'vil'*), **Alexis Charles Henri Clérel.**—(1805-1859.) A French statesman and writer. In 1831 he visited the U. S. as a special commissioner to study the prison system. The results of his studies in America were made the subject of a book ("On Democracy in America") which possessed such merit and value that it was crowned by the French Academy.

Detroit.—A port of entry in Mich., of which it is the first city in population and manufactures. It has an extensive American and Canadian trade in grain, wool, pork, etc. It is also noted for its manufacture of car-wheels. It is situated on the Detroit River. Pop. (1900), 285,704.

Detroit River.—The outlet for Lakes Superior, Michigan, Huron, and St. Clair into Lake Erie. It is a highway of the greatest internal commerce in the world.

Detroit (Mich.), Surrender of.—Aug. 16, 1812, Gen. Brock, the British commander at Sandwichi, Canada, with a force of 1,300 men, sent a party of Indians and regulars across the river to assault Fort Detroit, which was commanded by Gen. Hull, who had 1,000 men available for duty. Hull surrendered the fort and the whole Territory of Michigan, of which he was governor, without firing a shot. During the attack by the British, seven Americans were killed and several wounded, and the entire force became prisoners of war. Gen. Hull was afterward court-martialed, convicted of cowardice, and condemned to death, but President Madison pardoned him, in consideration of his age and his services in the Revolutionary War. Subsequent investigation greatly lessened the blame attached to Gen. Hull.

Dettingen (*det'ting-en*).—A village in Bavaria, at which George II. in command of the Anglo-German army defeated the French army under Noailles, June 27, 1743.

Deucalion—A legendary king, whom, with his wife Pyrrha, Ovid in his "Metamorphoses" represents as the sole survivors of the flood.

Devereux, Robert, second Earl of Essex.—(1567-1601.) A favorite of Queen Elizabeth, who occupied many state offices and enjoyed the confidence of the queen, but incurred her displeasure on account of his mismanagement of a rebellion in Ireland and was beheaded at London.

Devilfish, The—See MOLLUSK, 2715.

Devil's Darning Needle, The.—See DRAGONFLY, 2782.

Devil's Lake.—A lake in the northeastern part of N. D.

Devonshire.—In southeastern England, a maritime county, noted for its cattle. Pop. (1901), 660,444.

Dew.—The condensation of the aqueous vapor of the atmosphere under the influence of a falling temperature. The vapor of the atmosphere is deposited upon the earth in the form of mist or liquid.

Dexter, Samuel.—Born at Boston, Mass., 1761; died at Athens, N. Y., 1816; noted as jurist and politician. He was secretary of war in 1800 and secretary of the treasury in 1801.

Diachylon.—Healing or adhesive plaster composed of litharge, or red oxide of lead, with olive oil, forming a kind of soap.

"**Dial, The.**"—A literary magazine, the organ of the Transcendentalists. It was published at Boston and edited by Margaret Fuller (1840-42) and by Ralph Waldo Emerson (1842-44).

Diamond—Consists of carbon, in its greatest purity crystallized. They are usually white, but from foreign substances sometimes assume various colors. They are cut usually into either brilliants or rose diamonds. They are found chiefly in Brazil, South Africa, and India. The largest diamond, "the Cape Diamond," was found in the mines at Kimberley, South Africa, in 1880. It weighed in the rough 475 carats; when cut, 300 carats. The famous Koh-i-noor originally weighed 800 carats, but by the awkward cutting it was reduced to 279 carats. It was then recut and now weighs 106 $\frac{1}{16}$ carats.

THE LARGEST DIAMONDS IN THE WORLD.

NAME.	CARATS CUT.
Braganza	367
Star of the South	254
Orloff	194
Florentine	139 $\frac{1}{2}$
Pitt	136 $\frac{3}{4}$
Koh-i-noor	106 1-10
Shah	86
Pigott	82 $\frac{1}{2}$
Nassac	78
Blue	67 $\frac{1}{3}$
Sancy	53
Dudley	44 $\frac{1}{2}$
Pacha of Egypt	40

The diamond and other gems are weighed by the carat, which is about 3.2 grains Troy.

Diana.—A Roman goddess of the moon and guardian of the female sex. The Greek Artemis, 1611.

Diana.—See GREEK AND ROMAN MYTHOLOGY, 1611.

Diana Monkey, The.—See MONKEY, 2453.

Diarrhœa.—1095.

Dias, Bartholomeu.—(1445-1500.) A Portuguese navigator who sailed past the Cape of Good Hope and Algoa Bay; the first to double the south of Africa. He was lost in a storm off the coast of Brazil.

Dibdin, Charles.—(1745-1814.) An English writer of sea songs, such as "Tom Bowling," "Ben Backstay," etc. He wrote also about 70 operas and musical dramas.

Dickens, Charles.—(1812-1870.) A celebrated English novelist.

Dickinson, Anna Elizabeth.—Born 1842. A noted lecturer and advocate of woman suffrage and labor reform.

Dickinson, Emily.—(1830-1886.) An American poet.

Dickinson, John.—Born at Crosia, Md., 1732; died at Wilmington, Del., 1808. An American statesman and author. He was a member of the Colonial Congress in 1765, and of the first Continental Congress of 1774; also president of Pa. (1782-85) and a member of the Federal Convention of 1787. He published the "Fabius" letters in 1788, and was the founder of Dickinson College, Pa.

Dicotyledonous Plants.—Plants in which the seed-plant or embryo is provided with two leaves, lobes or cotyledons, or with more than two. The stems are exogenous and are usually branched.

Diderot (dê-drô'), Denis.—(1713-1784.) A French writer and philosopher.

Dido.—Another name for the Phœnician goddess of the moon (Astarte). Often confounded with Elissa, the founder of Carthage.

Didot (dê-dô).—The name of a famous family of publishers in Paris, which has existed as such for over a century and a half.

Didymus (Gr., "The twin").—(1) A name applied to the Apostle Thomas.

(2) An Alexandrian scholar, who lived in the first half of the 1st century.

(3) An Alexandrian scholar (308?-399?) who, though blind from childhood, became one of the most learned men of his day.

Dieppe (dê-ep).—A seaport in France, on the English Channel, is a celebrated watering-place. Pop., 25,000.

Dies Iræ.—A famous medieval hymn on the Last Judgment, the composition, it is believed, of Thomas of Celano, a native of Abruzzi, and friend of St. Francis of Assisi, who died in 1255. Sir Walter Scott has introduced part of it into his "Lay of the Last Minstrel":—

On that day, that day of ire,
Saith the King of Wisdom's sire,
Earth shall melt with fervent fire.

Diet.—See HEALTH, 1813.

Diet for Children, 675.

Dieu et Mon Droit.—"God and my Right" is the royal motto of England. When Richard I. of England fought the battle of Gisors in France in 1198 (Sept. 20) he chose the expression as the pass-word for the day. It was first used as the royal motto by Henry VI. (1422-1461).

Digestion.—1040. Average time required for the digestion of various articles of food:—

	HOURS MIN.		HOURS MIN.
Apples, sweet (boiled)...	2 30	Lamb (boiled).....	2 30
Barley, boiled.....	2	Milk (raw).....	2 15
Beans, Lima (boiled)...	2 30	Milk (boiled).....	2
Beef (roast).....	3	Mutton (boiled).....	3
Beef (fried).....	4	Mutton (roast).....	3 15
Beef, salt (boiled).....	2 45	Oysters (roast).....	3 15
Bread.....	3 30	Oysters (stewed).....	3 30
Butter.....	3 30	Pigs' feet, soused (boiled)	1
Cheese.....	3 30	Potatoes (baked).....	2 30
Chicken (fricasseed)...	2 10	Pork, salt (stewed)....	3
Custard (baked).....	2 45	Pork (roast).....	3 15
Duck (roast).....	4	Rice (boiled).....	1
Eggs (raw).....		Sago (boiled).....	1 45
Eggs (soft boiled).....	3	Soup, barley.....	1 30
Eggs (hard boiled).....	3 30	Soup, chicken, etc.,	
Eggs (fried).....	3 30	(avg.).....	3 15
Fish.....	2 44	Tripe, soused (boiled)...	1
Fowl (roast).....	4	Turkey (roast).....	2 20
Hashed meat and vege-		Veal (boiled).....	4
tables.....	2 30	Veal (fried).....	4 30

Diggers.—A tribe of North American Indians, so named from their habit of digging for roots for food. They are spread over Oregon, Idaho, Utah, California, Arizona, and Nevada.

Dighton.—A town near Taunton in Massachusetts. Near it is Dighton Rock, upon which there is an inscription wrongly attributed to the Northmen who visited America with Eric in the 10th century.

"Dignity and Impudence."—A painting of two dogs by Sir Edwin Landseer, 3477.

Dijon.—A town on the river Ouche, in the old duchy of Burgundy in France. It is famous for its Burgundy wine. Pop. (1896), 67,736.

Dilke, Sir Charles Wentworth.—(Born 1843.) An English author and politician, who has held several cabinet offices.

Dillon, John.—(Born 1851.) One of the leaders of the Irish National party in the British Parliament.

Dime.—The smallest piece of silver now coined by the U. S., one-tenth of a dollar in value. The word is taken from the French dixième, one-tenth, and was spelled "disme" on some of the first coins. The dime was authorized in 1792 with a weight of 41.6 grains; reduced in 1853 to 38.4 grains. The first dimes were issued in 1796.

Dinwiddie, Robert.—(1690-1770.) Lieutenant-governor of Va. (1752-58). Under his command, George Washington was despatched in 1753, to remonstrate with the commanders of the French forts on the Ohio and Allegheny Rivers against their violation of British territory. He took also an active part in the French and Indian War.

Diodorus Siculus.—A Greek historian who lived in the 1st century.

Diogenes.—(412-323 B.C.) A Greek cynic philosopher, who is said to have lived in a tub. He was seen walking through the streets with a lighted lantern in the daytime, and on being questioned regarding his peculiar action replied that he was looking for an honest man.

Diomed.—A thoroughbred chestnut horse, that won the first Derby in 1780.

Diomedes (*dī-ō-mē'dēs*).—One of the most famous Greek warriors at the siege of Troy.

Dionysius.—(1) "The Elder" (430-367 B.C.). A tyrant of Syracuse.

(2) "The Younger" (395-343 B.C.), a tyrant of Syracuse, succeeded the former.

(3) A theologian died at Alexandria 265 A.D.

Dionysus (*dī-ō-nī'sus*).—The Greek god of wine. Also called Bacchus, 1618.

Diphtheria.—1113.

Directors.—Are those chosen by the stockholders of a company to manage the business.

Directory, The.—(Nov. 1, 1795-1799.) A council of five men who held the chief power in France. It was overthrown by Napoleon and the consulate succeeded it.

Discharge.—The release from obligation, penalty or debt.

"Discob'olus."—A statue by Myron, a copy of which stands in the Vatican at Rome, 3548.

Discount.—Commercial discount is a reduction of a certain per cent. from the list price of goods. When no discount is allowed the price is "net."

Bank discount is the interest of the face of a note charged by the bank for the advance payment of the note.

"Discovery," The.—(1) A ship sent out by the East India Company to find a passage to China by way of Hudson Bay, in 1602, under the command of Capt. George Waymouth.

(2) A steam vessel which in company with the "Alert" made the polar voyage under Capt. Sir George Nares (1875-76).

Dismal Swamp, Great.—An extensive morass in southeastern Va. and northeastern N. C. It contains Lake Drummond and is traversed by a canal which connects Chesapeake Bay and Albemarle Sound; part of the swamp has been reclaimed for tillage.

Disraeli, Benjamin, Earl of Beaconsfield.—(1804-1881.) A celebrated English statesman and author. He was leader of the House of Commons for many years and was the foremost statesman of England in the Conservative party.

Dissolution.—The breaking up of a copartnership or corporation.

Distances of Various Foreign Cities, from the city of New York, as prepared by the post-office department:—

	MILES.
Adelaide, via San Francisco.....	12,845
Alexandria, via London.....	6,150
Amsterdam, via London.....	3,985
Athens, via London.....	5,655
Bahia, Brazil.....	5,870
Bangkok (Siam), via San Francisco.....	12,900
Berlin, via London.....	4,385
Bombay, via London.....	9,765

	MILES.
Buenos Ayres.....	8,045
Calcutta, via London.....	11,120
Cape Town, via London.....	11,245
Constantinople, via London.....	5,810
Florence, via London.....	4,800
Glasgow.....	3,375
Greytown, via New Orleans.....	2,810
Halifax, N. S.....	645
Havana.....	1,400
Hongkong, via San Francisco.....	10,590
Honolulu, via San Francisco.....	5,645
Liverpool.....	3,540
London, via Queenstown.....	3,740
Madrid, via London.....	4,925
Melbourne, via San Francisco.....	12,265
Mexico City (railroad).....	3,750
Panama.....	2,355
Paris.....	4,020
Queenstown (Ireland).....	2,800
Rio de Janeiro.....	6,730
Rome, via London.....	5,030
St. Petersburg, via London.....	5,370
Shanghai, via San Francisco.....	9,920
Stockholm, via London.....	4,975
Sydney, via San Francisco.....	11,570
Valparaiso, via Panama.....	5,910
Vienna, via London.....	4,740
Yokohama, via San Francisco.....	8,725

Distances from New York City to the Various Cities Named.

CITIES.	MILES.	CITIES.	MILES.
Albany, N. Y.....	142	Milwaukee, Wis.....	985
Atlanta, Ga.....	882	Montgomery, Ala.....	1,057
Baltimore, Md.....	188	Montpelier, Vt.....	327
Bismarck, N. Dak.....	1,738	New Orleans, La.....	1,344
Boisé City, Idaho.....	2,738	Omaha, Neb.....	1,383
Boston, Mass.....	217	Philadelphia, Pa.....	90
Buffalo, N. Y.....	410	Pittsburg, Pa.....	431
Carson City, Nev.....	3,036	Portland, Me.....	325
Charleston, S. C.....	804	Portland, Ore.....	3,181
Chattanooga, Tenn.....	853	Prescott, Ariz.....	2,724
Cheyenne, Wyo.....	1,899	Providence, R. I.....	189
Chicago, Ill.....	900	Richmond, Va.....	344
Cincinnati, Ohio.....	744	St. Louis, Mo.....	1,048
Cleveland, Ohio.....	568	St. Paul, Minn.....	1,300
Concord, N. H.....	292	Salt Lake City, Utah.....	2,452
Deadwood, S. Dak.....	1,957	San Francisco, Cal.....	3,250
Denver, Col.....	1,930	Savannah, Ga.....	905
Des Moines, Iowa.....	1,257	Tacoma, Wash.....	3,209
Detroit, Mich.....	743	Topeka, Kan.....	1,370
Galveston, Tex.....	1,789	Trenton, N. J.....	57
Helena, Mont.....	2,423	Vicksburg, Miss.....	1,288
Hot Springs, Ark.....	1,367	Vinita, Ind. T.....	1,412
Indianapolis, Ind.....	808	Washington, D. C.....	288
Jacksonville, Fla.....	1,077	Wheeling, W. Va.....	496
Kansas City, Mo.....	1,302	Wilmington, Del.....	117
Louisville, Ky.....	854	Wilmington, N. C.....	593
Memphis, Tenn.....	1,163		

District of Columbia.—The Federal district which contains the national capital of the U. S. It lies on the eastern bank of the Potomac, between Md. and Va., and contains besides the city of Washington, which includes Georgetown, various small towns. It is governed by three commissioners appointed by the President and confirmed by the Senate. It was formed of cessions made by Md. in 1788 and Va. in 1799, comprising 100 sq. miles, part on each

side of the Potomac River; was organized in 1791 and the seat of government was removed thither in 1800; the Va. portion west of the Potomac was retroceded to her in 1846. Territorial government was established in 1871, a provisional government succeeded in 1874, and the present form was established in 1878. Area 70 sq. miles. Pop. (1900), 278,718.

Districts.—Those portions of U. S. territory which are without elective or representative institutions are called districts, as the District of Columbia. In S. C., counties were formerly called districts. From 1804 to 1812, that portion of the Louisiana Purchase lying north of the northern boundary of the present state was called the District of Louisiana. Before their admission as states, Ky. and Me. were called districts of Va. and Mass. respectively. The name district is also applied to those divisions of a state into which are grouped counties or wards of a city, for the election of representatives in Congress. These are called Congressional districts.

Dividend.—That share of the profits or interest in trade, stock, or venture, which belongs to the holder or proprietor in proportion to his share of stock.

"Divina Commedia" (*dē-vē'nā kom-mā'dē-ä*).—The celebrated epic poem of Dante, which was written in 1300-18.

Divorce.—See WOMEN UNDER THE LAW.

Dix, Dorothea Lynde.—(1805-1887.) An American philanthropist and author.

Dix, John Adams.—(1798-1879.) A statesman and general in the Union army. He was in public life for more than forty years. He entered the army at the age of 15, but at 30 resigned to study law; was secretary of State and afterward comptroller of N. Y.; U. S. senator (1845-49). Dix was secretary of the U. S. Treasury in 1861, and was the author of the famous words, in an official order: "If any man attempts to haul down the American flag, shoot him on the spot!" He was made a major-general of volunteers in 1861 and continued in service throughout the war, though his age rendered him incapable of active field duty. He commanded at Fortress Monroe and other fixed stations. Dur-

ing his political life he was an unyielding opponent of slavery.

Dixie.—A term applied originally to New York City when slavery existed there. According to a myth or legend, a person named Dixie owned a tract of land on Manhattan Island and a large number of slaves. As Dixie's slaves increased beyond the requirements of the plantation, many were sent to distant parts. Naturally the deported negroes looked upon their early

- home as a place of real and abiding happiness, as did those from the "Ole Virginny" of later days. Hence "Dixie" became the synonym for a locality where the negroes were happy and contented. In the South, Dixie is taken to mean the Southern States. There the word is supposed to have been derived from Mason and Dixon's line, formerly dividing the free states from the slave states. It is said to have first come into use there when Texas joined the Union, and the negroes sang of it as Dixie. It has been the theme of several popular songs, notably that of Albert Pike, "Southrons, Hear Your Country Call"; that of T. M. Cooley, "Away Down South where Grows the Cotton," and that of Dan Emmett, the refrain usually containing the word "Dixie" or the words "Dixie's Land." During the Civil War, the tune of "Dixie" was to the Southern people what "Yankee Doodle" had always been to the people of the whole Union and what it continued, in war times, to be to the Northern people, the comic national air. The tune is "catchy" to the popular ear and it was played by the bands in the Union army during the war as freely as by those on the other side. During the rejoicing in Washington over the surrender of Lee at Appomattox, a band played "Dixie" in front of the White House. President Lincoln began a short speech, immediately afterward, with the remark: "That tune fairly belongs to us now; we've captured it."
- Dixville Notch.**—An extraordinary ravine in N. H., near Colebrook.
- Dnieper** (*ně'per*).—The third river in size in Europe. It flows through Russia into the Black Sea. Length about 1,200 miles.
- Dniester** (*nēs'ter*).—A river of Russia and Galicia, rising in the Carpathian Mts., and flowing into the Black Sea. Length about 800 miles.
- Dobson, Austin.**—Born 1840. An English poet of note.
- Doctors' Commons.**—The term "Doctor" originally meant "teacher," and it was not until the 12th century that it became a title of honor for the learned. The Doctors' Commons was in the 8th century a college for the teachers of civil and ecclesiastical law. In 1568, the Society took quarters in a building where a number of courts were held and the whole section was called Doctors' Commons.
- Dodd, William.**—(1729-1777.) An English clergyman and writer; executed at London on a charge of forgery.
- Dodge, Grenville M.**—Born at Danvers, Mass., 1831. A U. S. general in the Civil War. He entered the service in 1861 as colonel of the 4th Iowa Volunteers and rose to the rank of major-general; served in Mo. and Ark. during the early part of the war and was then assigned to the Army of the Tennessee, in which he commanded a division and, in 1864, to the 16th corps, in Sherman's army, late in that year he succeeded Gen. Rosecrans in the command of the Department of Missouri.
- Dodge, Mary Abigail** (*pseudonym*, GAIL HAMILTON).—(1830-1896.) An American author.
- Dodge, Mary Elizabeth Mapes.**—An American author and editor.
- Dodge, William Earl.**—(1805-1883.) An American merchant and philanthropist noted for his disinterested labors on behalf of the freedmen and foreign missions.
- Dodgson, Charles Lutwidge** (*pseudonym*, LEWIS CARROLL).—(1832-1898.) An English clergyman and author; for many years lecturer on mathematics at Christ Church, Oxford. Popularly known by his books for children, especially by his "Alice's Adventures in Wonderland."
- Dodo.**—An extinct bird of the order of *Columbæ*; described as stupid and incapable of flying. Its remains were found on the Island of Mauritius, and it is from these bones that the naturalists have been able to form their conclusions as to the bird's characteristics.
- Doe, John.**—A fictitious name in law representing the plaintiff in cases of ejectment.
- Dog, The.**—See KEEPING OF PETS, 2316. See also 2410.
- Dog and the Dishonest Baker, The.**—See ANIMAL STORIES, 2729.
- Dog and the Hidden Coin, The.**—See ANIMAL STORIES, 2733.
- Dog, the Man, and the Snake, The.**—See ANIMAL STORIES, 2744.
- Doge's Palace.**—In Venice, the palace of the doges or dukes.
- Dogfish, The.**—See SHARK, 2672.
- Doggett, Thomas.**—An English actor, died 1721. The custom now prevailing, of giving a prize in an annual rowing match on the Thames, was established by Doggett, 1716.
- Dog's Tooth Violet, The.**—2920.
- Dogs who changed Places, The.**—See ANIMAL STORIES, 2742.
- Dogwood, The.**—2835.
- Dogwood, The Red-Osier.**—2923.
- Dole, Sanford B.**—Born in Honolulu, 1844, of American missionary parents, elevated to supreme court bench (1887); member of Legislature (1884, 1889); chosen president of the provisional government of Hawaii (1893) and appointed territorial governor after the annexation of Hawaii by the U. S.
- Dollar.**—Derived from daler or thaler. The first American silver dollar was modeled after the Spanish milled dollar, and was authorized by act of Congress in 1792. It was first coined in 1794 and weighed 416 grains, 371¼ grains being of silver and the remainder alloy. In 1837 the weight was reduced to 412½ grains for use in trade with China and Japan, known as the "trade dollar." The gold dollar was issued under the act of Mar. 3, 1849, its coinage being discontinued in 1890. The act of Feb. 12, 1873, suspended the coinage of silver dollars—trade dollars excepted—and made the gold dollar the standard of value.
- Dolly Varden.**—A character in Dickens's "Barnaby Rudge."
- Dolores.**—A river in Col. and Utah, flowing through a cañon 3,000 feet in depth.
- Dolphin.**—2678.

- "Dombey and Son."**—A novel by Charles Dickens; issued first in numbers; in book form, 1848.
- Domestic Fowl, The.**—2495.
- Domett, Alfred.**—(1811-1887.) An English poet and colonial statesman.
- Domingo, Santo, or San Domingo.**—The Dominican Republic, West Indies.
- Dominica.**—One of the Lesser Antilles, West Indies. It belongs to Great Britain and is engaged chiefly in the sugar trade. Area 291 sq. miles. Pop. (1891), about 27,000.
- Dominican Republic.**—A republic occupying the eastern part of the Island of Haiti, West Indies. Founded in 1844, after a revolution which separated it from Haiti. Pop., about 400,000. See SANTA DOMINGO.
- Dominoes.**—1894.
Block Game, 1895.
Draw Game, 1896.
Muggins or Fives, 1896.
Bergen, 1898.
- Don.**—(1) An important river of Russia; length, 1,100 miles, navigable, 700 miles. (2) A river in Yorkshire, England. (3) A river of Scotland flowing into the North Sea near Aberdeen.
- Donatello (DONATO DI NICCOLO DI BETTO BARDI).**—(1386-1466.) A celebrated Florentine sculptor. See 3562.
- Donegal.**—In northern Ireland, a county of Ulster.
- Dongan Charter.**—A charter granted to New York City by Thomas Dongan, lieut.-gov. and vice-admiral of N. Y., in 1686, which remained in force until 1730. Another charter given to the city of Albany is known by the same name.
- Don Giovanni.**—An opera by Mozart, first produced in 1787.
- Donizetti, Gaetano.**—(1797-1848.) A noted Italian composer of operas.
- Donkey, The.**—2409.
- Donnelly, Ignatius.**—Born at Philadelphia, 1831. A noted politician, author, and student of Shakespeare. He was elected lieut.-gov. of Minn. in 1859 and 1861, and Republican member of Congress in 1863. He is the author of "Atlantis," "Ragnarok," and "The Great Cryptogram," the latter a cipher which he claimed to have discovered in the plays of Shakespeare, proving their Baconian authorship.
- Donner, Georg Raphael.**—3586.
- Donnybrook.**—A village near Dublin, Ireland, famous at one time for its annual fair, which was established under King John and ceased to exist in 1855.
- Don Pasquale.**—An opera by Donizetti, produced first in 1843.
- "Don Quixote."**—The title of a famous romance by Cervantes, published at the beginning of the 17th century.
- "Don't Give up the Ship!"**—The dying words of Capt. James Lawrence, commander of the U. S. frigate "Chesapeake," when he fell to the deck with a mortal wound, in the combat with the British frigate "Shannon," in 1813. (See CHESAPEAKE, THE.)
- Doomsday Book.**—A record in detail of all the land, houses, cattle, and personal property in Eng-
- land, made by order of William the Conqueror. It has been of the utmost value, from an historical standpoint, as a reliable authority upon the condition of the people. The original, in massive binding and heavy hinges, occupies a place in the British Museum.
- Doorkeeper.**—By an act of Congress, in 1805, the designation of doorkeeper of the Senate was changed to sergeant-at-arms. He executes all orders relating to decorum and is officially charged with all matters appertaining to the keeping of the doors of the Senate. He orders persons into custody and makes arrests by direction of the Senate. The duties of the doorkeeper of the House of Representatives are varied and complicated. He is required to enforce the rules relating to the privileges of the floor, and is responsible for the conduct of his subordinates—messengers, pages, laborers, etc. He also has charge of all the property of the House. He reports to Congress annually the amount of U. S. property in his possession, also the number of public documents in his possession subject to the orders of members of Congress. He has more patronage than any other officer of the House and appointments made by him number between 160 and 200.
- Dordrecht, or Dort.**—A seaport town of Holland, near Rotterdam; said to be the oldest town in Netherlands. It has extensive lumber interests. Pop. (1899), 38,459.
- Doré, Paul Gustave.**—(1833-1883.) A noted French painter and illustrator, popularly known by his illustration of the Bible, the "Divina Commedia de Dante," and "Don Quichotte."
- Dorking, Battle of.**—A work of fiction by General Sir George T. Chesney (1871), which describes an imaginary invasion of England by a foreign army; it called attention to England's need of better defense against foreign powers.
- Dorr, Thomas Wilson.**—(1805-1854.) He was a member of the assembly of R. I. (1833-37) and the leader of Dorr's Rebellion. Elected governor by the "Suffrage" party in 1842, he was convicted of high treason and sentenced to perpetual banishment in 1844 but subsequently was released and restored to his civil rights, under an amnesty act (1847).
- Dorr Rebellion, The.**—A Revolutionary movement in R. I., that originated through dissatisfaction with the laws relating to the suffrage. In 1840, a party, calling itself the Suffrage party, was organized by T. W. Dorr. A mass meeting was held at Providence and authorized the calling of a constitutional convention which met Oct. 4, 1841. It drew up a new form of constitution which was submitted to the people Dec. 27 of the same year and received a majority of the popular votes. A government was elected under the leadership of Dorr, Apr. 18, 1842, which, after making an unsuccessful attempt to seize the arsenal at Providence, was subsequently dispersed, June 25, 1842.
- Dottheboys Hall.**—In Dickens's "Nicholas Nickleby," the name of the Yorkshire school for boys, where Nicholas served as an assistant teacher.

Dotted-Fruited Thorn.—2826.

Doubleday, Abner.—An officer of the U. S. army. He was graduated from West Point in 1842; served through the Mexican War (1846-48); at the beginning of the Civil War he was major of the 17th U. S. Infantry; was made brigadier-general in Feb., 1862, and major-general later in that year; he served in nearly all the campaigns of the Army of the Potomac; he succeeded to the command of the First Corps on the death of Gen. John F. Reynolds, the first day at Gettysburg. He wrote a volume, "Chancellorsville and Gettysburg."

Doubtful States.—A designation applied in national political campaigns, to those states in which the opposing parties seem to be so evenly balanced that it is not possible to forecast the result.

Doughface.—A term first applied by John Randolph, of Va., to Northern congressmen who supported the Missouri Compromise of 1820. It was intended to apply to those who were easily influenced by personal or unworthy motives to forsake their principles. It was generally applied to Northern people who favored slavery, but was also sometimes used to stigmatize those Southern citizens who opposed the prevailing sentiment of their section on the slavery question.

Douglas, Ellen.—The heroine of Sir Walter Scott's poem, "The Lady of the Lake."

Douglas, James, Earl of.—The ninth and last earl who in 1452-55 headed a rebellion against James II., for which he was outlawed and deprived of his estates. He was the father of Ellen Douglas, "The Lady of the Lake."

Douglas, Stephen Arnold.—(1813-1861.) A statesman and politician. While young he learned the trade of a cabinet-maker but afterward studied law. In 1841 he was elected a judge of the supreme court of Ill.; was a member of Congress from Ill. (1843-47) and U. S. senator (1847-61). He originated the doctrine of popular or "squatter" sovereignty in relation to slavery in the territories, and reported the Kansas-Nebraska Bill in 1854. In 1860 he was unsuccessful as the candidate of the Democratic party for the presidency. Mr. Douglas was short of stature and was popularly known as the "Little Giant," so called for his power of mind.

Douglass, Frederick.—(1817-1895.) A noted colored American orator and journalist. A slave, born on the plantation of Col. Edward Lloyd, he escaped from his master in 1838 and subsequently became an agent of the Mass. Anti-slavery Society. He was the founder at Rochester, of the paper, "The North Star," and at Washington, D. C., of "The New National Era." He was U. S. marshal for the District of Columbia (1876-81); recorder of deeds in the district (1881-86); in 1889 U. S. minister to Haiti. He published "The Life and Times of Frederick Douglass from 1817 to 1882," an autobiography.

Douw, or Dou, or Dow, Gerard.—Dutch painter. See 3501.

Dover.—A seaport of Kent, England; it is a popular health resort and has much historical interest. Pop. (1891), 33,418.

Dover, Strait of.—A strait connecting the English Channel with the North Sea, and separating England from France. Width at Dover, 21 miles.

Dover, Treaty of.—Between Charles II. and Louis XIV. A secret treaty, concluded at Dover, 1670, among the terms of which Charles was to aid France against Holland, and France to be responsible financially and to supply troops.

Dow, Neal.—(1804-1897.) Distinguished as an advocate of Prohibition. He was the drafter of the "Maine Law" in 1851 and the unsuccessful candidate of the Prohibition party for President in 1880. He served in the Civil War, having the rank of brigadier-general.

Downes, John.—(1786-1855.) An American naval officer. After serving on the "Essex," under Capt. Porter, in the War of 1812, and commanding the "Épervier" in the war against Algiers, he obtained command of a squadron in the Pacific Ocean in 1832 and bombarded Quallah Batoe, on the coast of Sumatra, on account of an outrage committed on an American vessel. For several years he was in command of the navy-yard at Boston.

Downing, Major Jack.—A pseudonym used by Seba Smith, in his letters in Yankee dialect.

Doyle, A. Conan (Dr.).—Born, 1859. A Scottish novelist, popularly known by his "Adventures of Sherlock Holmes."

Doyle, Richard.—(1824-1883.) An English artist.

Drachmann, Holger Henrik Herholdt.—Born 1846. A noted Danish writer.

Draco.—In ancient astronomy, a northern constellation.

Draco, or Drakon.—An Athenian legislator of the 7th century.

Draft, Military.—A drawing by lot to select men to fill the ranks of the army in time of war. The method of increasing the army by draft was first resorted to in 1814, during the war with Great Britain. Militiamen only were subject to this draft and the result was unsatisfactory. During the Civil War effort was made to recruit the army by drafts upon able-bodied citizens between the ages of 18 and 45. April 16, 1862, and July 18, 1863, the Confederate Congress passed conscription laws, and during the last two years of the war conscription was enforced with much rigor in order to fill the ranks that had been depleted by the ravage of war. Able-bodied men were scarce and it became necessary to include as subject to draft all such within the ages of 15 and 50.

Draft Riots.—During the Civil War there was throughout the North a very strong popular feeling against forcing men into the army by the operation of the conscription act which had been passed by Congress. The drafting of men for military service caused a violent outbreak in New York City, July 13-16, 1863. A great mob completely overpowered the civil authorities and broke up for the time the work of conscription. For four days the city was the scene of wild turbulence and bloodshed. The rioters were inflamed against the negroes, and scores

of these were shot down or hanged in the streets. A detachment of veteran troops from the Army of the Potomac was sent to New York, and the muskets and cannon, freely used, soon quelled the riot. The loss of life during the insurrection is not known, but the best authorities place it at fully 700. Much damage to property was done by the torch and otherwise. The same year there was an organized resistance to the draft in Holmes Co., Ohio. The rioters built a fort, in which they placed two or three old pieces of artillery. No blood was shed, for the men in buckram fled with precipitation on the approach of a small body of troops that was sent against them. The fortification became known as "Fort Fizzle," and the name continues attached to the spot to this day.

Dragonades.—A form of persecution of the French Protestants, under the government of Louis XIV. This particular persecution was at the hands of the troops of dragomen, who were licensed by the King to commit various misdeeds against the Protestants.

Dragon-fly, The.—2782.

Drake, Sir Francis.—Born about 1540; died 1596 (O. S.). A naval hero of England. He made many adventurous voyages and circumnavigated the globe, 1577-80.

Drake, Joseph Rodman.—(1795-1820.) An American poet.

Drama, The.—3171.

Draper, John William.—Born in England, 1811; died at Hastings-on-the-Hudson, N. Y., 1882. A scientist and historian, noted for his researches in chemistry, physiology, and photography. He came to America in 1832 and became professor of chemistry in the University of New York in 1839 and president of the Medical College in 1850. His principal works are "Text-book on Chemistry," "Human Physiology," "History of the Intellectual Development of Europe," "History of the American Civil War."

Draper, Sir William.—(1721-1787.) An English officer, who took charge of an expedition against Manila (1762). He is noted for his controversy against the mysterious "Junius."

Draughts.—1886.

The Losing Game, 1889.

Drave.—A river in Austria-Hungary. It rises in Tyrol and forms the boundary between Hungary and Croatia and flows into the Danube after a course of 465 miles.

Drawback.—A term used in commerce to signify the remission or refunding of tariff duties when the commodity upon which they have been paid is exported. By means of the drawback, an article on which taxes are paid when imported, may be exported and sold in foreign markets on the same terms as though it had not been taxed at all. The drawback enables merchants to export imported articles taxed at home and sell them in foreign markets on the same terms as those offered from countries where no tax is imposed.

Drawing, Mechanical.—3971.

Instruments and Materials, 3971.

Preliminary Directions and Exercises, 3981.

Lettering, 3985.

Geometrical Construction, 3987.

Problems, 3988.

Drawing Easy and Artistic Design, 3998.

Working Drawings—Projections, 4000.

Shade Lines and Surface Shading, 4004.

Surface Shading, 4008.

Sections, 4009.

Drawing Elements and Details of Machines, 4011.

Intersection of Solids, Patterns, 4020.

Simple Machinery, 4023.

Perspective, 4027.

Drawing, Modeling, and Handicraft, Rudimentary.—3951.

Drayton, William Henry.—(1742-1779.) When chief-justice of S. C., in 1776, he delivered a charge to the grand jury which greatly accelerated the cause of independence. He was a member of the Continental Congress from 1778 until his death.

Dred Scott Case.—A celebrated Supreme Court case, decided in 1857, important from its bearing on the Missouri Compromise of 1820. Dred Scott was a Missouri slave, and, upon being taken into territory covered by the Missouri Compromise, sued for his freedom. He was then sold to a citizen of another state, and transferred his suit from the state to the Federal court, under the power given to the latter to try suits between citizens of different states. The case went on appeal to the Supreme Court of the U. S. Chief-Justice Taney, for the court, delivered an exhaustive opinion, holding that the Missouri Compromise was unconstitutional and void; that one of the constitutional functions of Congress was the protection of property; that slaves were recognized by the Constitution as property, and that Congress was therefore bound to protect slavery in the territories. Scott was put out of court on the ground that he was still a slave, and being such could not be a citizen of the U. S., or have any standing in the Federal Court. Associate-Justices Curtis and McLean filed dissenting opinions. The decision aroused great excitement throughout the country, particularly in the North, and did much to increase and intensify the fast growing anti-slavery sentiment in that section.

Dresden.—The capital and a principal city of the kingdom of Saxony; possessed of much historical interest. Pop. (1900), 395,349.

Dresden, Treaty of.—A treaty consummated in 1745, between Prussia, Austria, and Saxony; it ended the Silesian War.

Dress as a Fine Art.—2329.

Fashion, 2331.

Fabrics, 2334.

Color, 2341.

Jewels, 2346.

Fur, 2351.

Dresses, 2354.

Dress Reform, 2358.

Expression or Dramatic Effects, 2361.

- Dreux, Battle of.**—Dec. 19, 1562, about 15,000 Huguenots, under Condé, met and were defeated by an equal number of men under Montmorency. Condé was taken prisoner.
- Drew, John.**—Born 1853. American actor, son of John Drew.
- Drew, Mrs. (LOUISA LANE).**—(1820-1897.) An English actress; wife of John Drew, comedian.
- Dreyfus, Alfred (drä-füs').**—A French officer of Jewish descent who was the victim of a conspiracy. Was accused of treason, convicted, degraded, and imprisoned. By the efforts of M. Zola, he was released and granted a new trial, which resulted in the vindication of his character.
- Dreyschock, Alexander.**—(1818-1869.) Composer and pianist; for many years associated with the conservatory of St. Petersburg.
- Drôme.**—A department of France, engaged in the manufacture of wine and silk. Pop. (1896), 303,491.
- Dromedary, The.**—See CAMEL, 2478.
- Druïds.**—(1) In ancient times, the priests of the Celts of Gaul, Britain, and Ireland. (2) The members of a society founded in London, 1781, and called the United Order of Druids.
- Drum, The.**—2675.
- Drummond, Henry.**—(1851-1897.) A Scottish clergyman and author. Among his most widely read works is "Natural Law in the Spiritual World."
- Drummond Lake.**—A lake in Va., situated in the middle of the Great Dismal Swamp.
- Drummond, William, of Hawthornden.**—(1585-1649.) A noted Scottish poet.
- Drury Lane.**—A street of London, so called from the Drury House, built by Sir William Drury in the 16th century.
- Druses.**—A people and religious sect of Syria.
- Drusilla, Livia.**—Wife of Augustus and mother of Tiberius.
- Dryden, John.**—(1631-1700.) An English poet and dramatist. Much of his work was along the line of political satire.
- Dry Tortugas.**—A group of coral keys in the Gulf of Mexico, included in Monroe Co., Fla. During the Civil War a penal station was established on one of them. Dr. Mudd and others of the Lincoln conspirators were confined here.
- Duane, William John.**—(1780-1865.) Secretary of the Treasury under President Jackson, in 1833, but was dismissed for refusing to remove the government deposits from the U. S. Bank without authority from Congress.
- Du Barry, Comtesse, Jeanne Bécu, or Marie Jeanne Gonnard de Vaubernier.**—(1746-1793.) Courtesan of Louis XV., was notorious for her extravagance. She was guillotined at Paris.
- Dublin.**—The capital of Ireland is situated on the Liffey on Dublin Bay on the east coast of Ireland. Population (1901), 289,108.
- Dubois, Paul.**—French sculptor, 3593.
- Dubuque.**—A city in Iowa, noted for its large trade in lumber and grain. In its vicinity are several lead mines. Pop. (1900), 36,297.
- Du Challu, Paul.**—An African explorer, born at Paris 1835. He came to America in 1855, and has made several explorations of Africa. He was the first white man to shoot a gorilla. He is now (1902) planning a four years' journey to Siberia.
- Duck, The.**—2498.
- Ducrot (dü-kró'), Auguste Alexandre.**—(1817-1882.) A French general who commanded a division in the Franco-German War (1870) under MacMahon.
- Dudley, Joseph.**—(1647-1720.) He was one of the commissioners for the united colonies of New England (1677-81); appointed president of New England (1686); became chief-justice of the Supreme Court (1687); was chief-justice of N. Y. (1690-93); governor of Mass. (1702-15).
- Duluth.**—A city and lake port in Minn., at the western end of Lake Superior; terminus of the Northern Pacific Railway; has an extensive trade in grain, and is noted for its shipbuilding industry. Pop. (1900), 52,969.
- Dumas (dü-mä), Alexandre Davy de la Pailleterie, or Alexandre Dumas père.**—(1803-1870.) A noted French novelist and dramatic author.
- Dumas, Alexandre, or Alexandre Dumas fils.**—(1824-1895.) A French author and dramatist, son of the above.
- Du Maurier (dü-mō-ryä'), George Louis Palmella Busson.**—(1834-1896.) An English artist and author.
- Dumbarton.**—(1) A shire in the center of Scotland. Pop. (1901), 113,870. (2) A seaport town in the shire and the capital of it, at the junction of the Leven and the Clyde, 13 miles from Glasgow. Pop., about 18,000.
- Dumfries.**—(1) A shire in the south of Scotland, bordering on Solway Firth. Pop. (1901), 72,569. (2) The capital of the shire on the Nith. Robert Burns died here. Pop., about 18,000.
- Dumourlez (dü-mō-ryä'), Charles François.**—(1739-1823.) A French general who served in the Seven Years' War, and went into exile during the French Revolution.
- Duna, or Dwina.**—A river in Russia which flows into the Gulf of Riga, after a course of 500 miles.
- Dunbar.**—A seaport in Haddingtonshire, Scotland, 27 miles from Edinburgh. A battle was fought at this place between Cromwell and the Royalists (1650) in which the Scots were defeated.
- Dunciad, The.**—A satirical poem written by Alexander Pope.
- Dundee.**—A town in Forfarshire, Scotland, on the coast. The third city in Scotland. Pop., 160,871.
- Dunkirk.**—A city and lake port of N. Y. on Lake Erie. The terminus of a division of the Erie Railway. Pop. (1900), 11,616.
- Dunkirk.**—A seaport in France on the Straits of Dover. It was strongly fortified and changed hands many times in the wars between France and England. Pop., about 40,000.
- Duns Scotus.**—(1265-1308.) A famous scholar and founder of a philosophic system. His name—Duus—came to be applied satirically to ignorant persons, whence our word "dunce."
- Dunstan, St.**—(925-988.) An archbishop of Canterbury.

- Dupont, Samuel Francis.**—(1803-1865.) An officer of the U. S. navy. He entered the navy as a midshipman, in 1815, and rose to the rank of rear-admiral; commanded the "Cyane" during the war with Mexico; at the beginning of the Civil War he was a member of a board to prepare a plan of naval operations against the Confederate States; commanded the naval part of the expedition which captured Port Royal, S. C., in Nov., 1861, in conjunction with a land force under Gen. T. W. Sherman; commanded a naval attack on Fort Sumter, Charleston Harbor, in Apr., 1863, which was unsuccessful; his health became greatly impaired and he was relieved of command in July, 1863.
- Dupré, Giovanni.**—3591.
- Dupré, Jules.**—(1811-1889.) A celebrated French landscape-painter.
- Duquesne, Fort.**—A fort erected by the French in 1754 on the present site of Pittsburg, Pa.; taken by the English in 1758.
- Duquesnoy, François.**—3587.
- Duraan, Carolus** (CHARLES AUGUSTE ÉMILE DURAND).—Born 1837. A celebrated French portrait-painter.
- Durand, Asher Brown.**—(1796-1886.) A noted landscape-painter and engraver.
- Dürer, Albrecht.**—3510.
- Durham.**—A county of northern England; rich in minerals and noted for its cattle. Area 647,281 sq. miles; pop. (1901), 1,187,324.
- Durham Station.**—A small town in N. C., where the Confederate general, J. E. Johnston, with 29,924 men, surrendered to Gen. W. T. Sherman, Apr. 26, 1865.
- Duse** (*dö'sä*), **Eleanora.**—Born 1861; a noted Italian actress.
- Düsseldorf.**—An important commercial city of Prussia. It is the seat of one of the leading art schools of Europe. Pop. (1900), 213,767.
- Duxbury.**—A town in Mass., the terminus of the French Atlantic cable, laid from Brest in 1869. Pop. (1900), 2,075.
- Dvorák** (*dvor'zhäk*), **Antonin.**—Born in Bohemia, 1841. A celebrated composer.
- Dyce, Alexander.**—(1798-1869.) A British literary critic and student of Shakespeare. Best known through his edition of the works of Shakespeare.
- Dyer, or Dyar, Mrs. Mary.**—Died at Boston, Mass., 1660. She was a Quaker fanatic, who on pain of death, if she returned, was twice banished from the Massachusetts colony. Refusing to obey the mandate, she was hanged on Boston Common.
- Dying Gaul, The** (THE DYING GLADIATOR).—A celebrated antique statue, 3541.

E

- Eads, James Buchanan.**—Born at Laurenceburg, Ind., 1820; died at Nassau, Bahama Islands, 1887. A naval and military engineer. During the Civil War he designed and constructed for use in the Mississippi River, a number of U. S. ironclads and mortar boats; (1872-74) he constructed the steel arch bridge over the Mississippi at St. Louis; latter, he was employed by the U. S. government to deepen the channels at the mouth of the Mississippi, which he accomplished by means of jetties, pronounced by the world a great feat of engineering.
- Eagle.**—The \$10 gold coin of the U. S. Its coinage was authorized in 1792. Coined first in 1794, it has ever since been a legal tender to any amount. The first delivery was of 100 eagles Sept. 22, 1795. Coinage was suspended in 1805 and resumed in 1837. It takes its name from the figure of the national bird which is stamped on the reverse.
- Eagle, The.**—2521.
- Eagle Pass.**—A place in southwestern Tex., on the Rio Grande, where the Mexican International railroad connects with the Southern Pacific.
- Eames** (*ēms*), **Emma.**—An American soprano singer; was born at Shanghai, China, in 1868. She married Mr. Julian Story in 1891.
- Earle, Pliny.**—Born at Leicester, Mass., 1762; died there, 1832. An inventor, chiefly known by his invention of a machine for making cards for cotton and wool-carding.
- Earle, Pliny.**—Born at Leicester, Mass., 1809; died at Northampton, Mass., 1892, son of Pliny Earle, noted for his humane treatment of the insane. He was professor of psychology in Berkshire Medical Institution at Pittsfield, Mass., in 1852, and was appointed Superintendent of the Mass. State Hospital for the Insane in 1864. He published "A Visit to Thirteen Asylums for the Insane in Europe," and "The Curability of Insanity."
- Earle, Thomas.**—Born at Leicester, Mass., 1796; died at Philadelphia, Pa., 1849. He practiced as a lawyer in Philadelphia many years and was an influential member of the State Constitutional Convention in 1837; was the vice-presidential candidate of the Liberal party in 1840.
- Early, Jubal Anderson.**—Born in Va., 1816; died at Lynchburg, Va., 1894. An officer of the U. S. army and a noted general in the Confederate service during the Civil War. He graduated at West Point in 1837, served in the Seminole War in Fla., and then resigned to practice law in Va. During the Mexican War he served as a major of volunteers. He entered the Confederate army in 1861 and rose rapidly to the rank of lieutenant-general. During 1862 and 1863 he held a subordinate command under Gen. Lee in Va. In 1864 Lee sent him to the Shenandoah Valley, to make a diversion by menacing Washington, in the hope that Grant would be compelled to detach largely from his army before Richmond and Petersburg. In July Early swept down the Valley, turned eastward and reached the very outskirts of Washington, after defeating a force under Gen. Lew. Wallace, at

Monocacy, Md. His sudden irruption created extreme alarm and consternation. Troops were assembled from all available points and Grant detached the 6th corps from his army and sent it on swift steamers up the Potomac. Had Early shown more enterprise it can scarcely be doubted that he could have taken Washington, but the veterans of the 6th corps arrived at the critical moment and Early was beaten off, in an action July 12, at Fort Stevens, less than five miles from the Capitol building. Thousands of citizens, government clerks, and convalescents were under arms. Early returned to the Valley. He dispatched a cavalry force under McCausland into Pa., and the result of the raid was the burning of Chambersburg. Grant sent Sheridan to the Valley and in Sept., at the battle of Opequan and Fisher's Hill, Early was routed with great loss of men and guns. He was reinforced, and Oct. 19 fell upon the Union army at Cedar Creek. Sheridan was at Winchester, "twenty miles away," on his return from Washington. He galloped to the scene of action, and found the army beaten and in danger of rout. He rallied the troops, turned upon Early and drove him from the field, making large captures of prisoners and artillery. In these engagements Early lost nearly all of his cannon, apropos of which a Confederate legend tells that a wag in Richmond, seeing a large consignment of artillery about to be sent to Early, so changed the address as to make it read, "To Gen. Phil Sheridan, care of Gen. Jubal A. Early, Shenandoah Valley." Early was a large man, of massive build, and very popular among his soldiers, by whom he was familiarly known as "Old Jubal," or "Jube." He was one of the unique figures of the Civil War.

Earth, Creation of (Koran).—1739.

Earth, The.—The third planet in order of distance from the sun,—Mercury and Venus being nearer to it. It is in shape a sphere slightly flattened at the poles and bulged at the equator, hence it is called an oblate spheroid. The equatorial diameter or axis measures 7,926 miles and 1.041 yds., and the polar diameter is 7,899 miles and 1.023 yds. The earth revolves upon its axis, completing its diurnal or daily revolution in a sidereal day, which is 3 minutes and 55.9 seconds shorter than a mean solar day. It revolves around the sun in one sidereal year, which is 365 days, 6 hours, 9 minutes, and 9 seconds. Its orbit or path around the sun is an ellipse, having the sun in one of the foci. The earth's mean distance from the sun is 93,000,000 miles. Its axis is inclined to the plane of its orbit at an angle of $23^{\circ} 27' 12.68''$. The circumference at the equator measures 24,899 miles. The total surface is 196,900,278 sq. miles, and the solid contents is 260,000,000,000 cubic miles. As we descend into the earth the temperature rises at the rate of 1° Fahr. for every 50 ft. At the

depth of 10 or 12 miles the earth is red-hot, and at a depth of 100 miles the temperature is such that at the surface of the earth it would liquefy all solid matter in the earth.

Earthenware.—2958.

Easter.—The first Sunday after the full moon which occurs on or next after March 21. If the full moon happen on a Sunday, Easter is the following Sunday. The festival commemorates the Resurrection. The Anglo-Saxons, before



THE RESURRECTION

their conversion to Christianity observed a festival of spring and the beginning of the year, which they called the festival of *Ostern* or of *Eastre*, the goddess of the morning of the East, or of spring.

Eastern Question.—In its broad, political sense, this means the difficulties which have arisen from time to time regarding the diplomatic relations between Turkey and Russia.

Easthampton.—A town in Mass., noted for its manufactures and as the seat of Williston Seminary. Pop. (1900), 5,603.

East Indies.—The two great peninsulas of southern Asia and all the adjacent islands from the Indus to the Philippines.

East Liverpool.—A town in Ohio, on the Ohio River, noted for its manufactures of pottery. Pop. (1900), 16,485.

Eastman, Seth.—Born at Brunswick, Me., 1808; died at Washington, D. C., 1875. A brig.-gen. of the U. S. army, employed by the bureau of the com-

- missioner of Indian affairs as an illustrator of "The History, Condition, and Future Prospects of the Indian Tribes of the United States," published by order of Congress (1850-1857).
- Easton.**—A city in Pa., noted for its extensive manufactures and as the center of a large iron ore district. It is the seat of Lafayette College. Pop. (1900), 25,238.
- Easton, Nicholas.**—Born in England in 1593; died at Newport, R. I., 1675. He was governor of the United Colonies of Rhode Island and Providence in 1650-52.
- Eastport.**—A seaport in Me., the easternmost town of the U. S. Pop. (1900), 5,311.
- Eaton, Daniel Cady.**—Born at Fort Gratiot, Mich., 1834; died at New Haven, 1895. A noted botanist, grandson of Amos Eaton. He became professor of botany at Yale College in 1864, and was the author of "Ferns of the Southwest" and "Ferns of North America."
- Eaton, George W.**—Born at Henderson, Pa. 1804; died at Hamilton, N. Y., 1872. A Baptist minister and president of Madison University (1856-68), as also of Hamilton Theological Seminary (1861-71).
- Eaton, Nathaniel.**—Died in London after 1660. He was the first head-master appointed at Harvard College, in 1637. On account of gross brutality to one of his ushers, he was fined 100 marks, to evade payment of which he fled to Va., leaving debts amounting to \$5,000.
- Eaton, Theophilus.**—Died at New Haven, Conn., 1658. The first governor of the New Haven Colony from 1639 until 1658, the date of his death.
- Eaton, William.**—Born at Woodstock, Conn., 1764; died at Brimfield, Mass., 1811. He was American consul at Tunis (1799-1803), and during the Tripolitan War organized a movement among the natives in favor of Yussuf Caramalli, brother of the reigning bey. He was on the point of marching on Tripoli when peace was concluded between the U. S. and the ruler of Tripoli (1806).
- Eau Claire.**—A city in Wis., noted for its extensive lumber trade. Pop. (1900), 17,517.
- Ebers, Carl Friedrich.**—(1770-1836.) A German composer of music.
- Ebers, Georg.**—(1837-1898.) A German novelist and Egyptologist.
- Eblis, or Iblis.**—In Arabian mythology, the chief of the evil spirits.
- Ecce Homo.**—The name applied to representations of Christ with the crown of thorns.
- Echo.**—In Greek mythology, a mountain nymph. Through her love for Narcissus she pined away until she became a bodiless voice.
- Echo Cañon.**—A remarkable cañon in northern Utah in the Wahsatch Mountains.
- Eck, Johann von.**—(1486-1543.) A German theologian, noted for his fierce opposition to Luther.
- Eckert, Thomas Thompson.**—Born at St. Clairsville, Ohio, 1825. He was organizer of the U. S. military telegraph service in 1862; brig.-gen. in 1865, and assistant Secretary of War (1866-67). He became president of the Western Union Telegraph Company in 1893.
- École de Beaux Arts.**—A noted art school of Paris.
- Economy.**—4584.
- Ecuador.**—A republic of South America bounded on the north by Colombia, south by Peru, west by the Pacific Ocean, and eastward its claims extend to the confines of Brazil. The country is traversed from north to south by the Andes and contains some of the highest peaks in South America. The chief products are sugar, rubber, cacao, and hides. The inhabitants are whites of Spanish descent, Indians, and mixed races. Ecuador was conquered by the Spaniards in 1533-34. With the aid of Bolivar, the Spanish rulers were deposed and the country was united to the Colombian Confederation. It seceded in 1830, and adopted its present name. Political revolutions have been frequent in its history. Area, about 120,000 sq. miles; pop., 1,270,000.
- Eddas, The (Norse Mythology).**—1635.
- Eddystone Lighthouse.**—On the Eddystone Rocks, off the coast of Plymouth, in the English Channel. The first structure, which was destroyed in 1703, was commenced in 1696. Two lighthouses were successively erected and destroyed after this, the foundation of the present structure being commenced in 1879.
- Edgehill.**—In England; scene of the first battle of the civil war (Oct. 23, 1642) between the Royalists under Charles I. and the Parliamentarians under the Earl of Essex.
- Edgeworth, Maria.**—(1767-1849.) An English novelist.
- Edict of Nantes.**—An edict issued by Henry IV. by the terms of which Protestant subjects were tolerated. It was confirmed by Louis XIII. in 1610 and by Louis XIV. in 1652, but was revoked in 1685 by Louis XIV.
- Edinburgh.**—The ancient capital of Scotland. Seat of the judicial and administrative government of the country. A noted publishing center. Pop. (1901), 316,479.
- "Edinburgh Review."**—A literary and political review established at Edinburgh in 1802.
- Edison, Thomas Alva.**—Inventor; sketch of, 165.
- Edith.**—Died 1075. Wife of Edward the Confessor.
- Edmund, Saint.**—(840-870.) King of East Anglia (855-870).
- Edmund, Saint.**—(1170-1240.) Archbishop of Canterbury.
- Edmund I., "The Magnificent."**—(922-946.) King of the West Saxons and Mexicans (940-946).
- Edmund II., "Ironsides."**—(989-1016.) King of the West Saxons (April-Nov., 1016).
- Edom, or Idumea.**—The country of the Edomites, descendants of Esau; it comprised the lowlands lying south of the Dead Sea.
- Education, Bureau of.**—An office established by the government in 1867 to collect statistics showing the condition and progress of education throughout the country, and to publish such information as would benefit the cause of education. It was made a bureau of the Interior Department at Washington in 1868.
- Education, How to Overcome Defects in Early.**—4871.
- Education, Should a Young Man Have a College?**—4859.
- Education, Supplementing an Imperfect.**—4876.
- Education as a Success Factor.**—4456.

Education in Spite of Difficulties, An.—4338.

Educational Land Grants.—Large tracts of land in the Northwest Territory were granted to the states formed therefrom, to be sold by the Legislature or by the Federal Government for educational purposes. As early as 1785, Congress, foreshadowing the permanent policy of the nation in encouraging education, enacted that one-thirty-sixth of all the public lands should be set apart for and dedicated to the cause of education, and by the act of July 23, 1787, this reservation was made perpetual.

Edward, "The Martyr."—(963-979.) King of the West-Saxons (975-979).

Edward, "The Confessor."—(1004-1066.) King of the West-Saxons (1045-1066).

Edward I., "Loughshanks."—(1239-1307.) King of England (1272-1307).

Edward II.—(1284-1327.) King of England (1307-1327).

Edward III.—(1312-1377.) King of England (1327-1377).

Edward IV.—(1441-1483.) King of England (1461-1483).

Edward V.—(1470-1483.) King of England (April-June, 1483).

Edward VI.—(1537-1553.) King of England (1547-1553).

Edward VII.—(1841-.) King of England (1901-).

Edward, Prince of Wales, "The Black Prince." (1330-1376.)

Edwards, Amelia Blandford.—(1831-1892.) An English novelist and writer of miscellaneous matter. Through her archæological studies she became honorary secretary of the Egyptian exploration fund; lecturer on Egypt and its antiquities.

Edwards, George.—(1693-1773.) An English naturalist.

Edwards, Jonathan.—Born at East Windsor, Conn., 1703; died at Princeton, N. J., 1758. A renowned American theologian and metaphysician. In the latter part of his ministerial career he was a missionary to the Indians at Stockbridge, Mass. (1751-58); subsequently he became president of Princeton College in 1758, but died the same year. His principal works include "An Essay on the Freedom of the Will," "Doctrine of Original Sin Defended," "History of Redemption," etc.

Edwards, Justin.—Born at Westhampton, Mass., 1787; died at Virginia Springs, Va., 1853. An American clergyman, noted as a temperance advocate and author of various tracts on temperance subjects.

Edwin Drood, Mystery of.—The novel by Dickens which was left unfinished at his death.

Eel, The.—2694.

Egbert.—(775-837.) King of Wessex (802-837). First king of all England (827-837).

Eggleston, Edward.—Born at Vevay, Ind., 1837. A versatile American author and editor of various religious publications. In 1879 he retired from the ministry and devoted himself to literature. His chief works of fiction include, "The Faith Doctor," "The Hoosier Schoolmaster," "The Circuit Rider," "Roxy," and "The End of the

World." He also wrote "History of the United States for Schools," a "First Book of American History," etc.

Egypt.—A country in northeastern Africa, now a dependency of Turkey. It is bounded on the north by the Mediterranean Sea, east by the Gulf of Suez and the Red Sea, south by Nubia, west by the African Desert. Its soil is very productive, largely due to the inundations of the river Nile. It is composed of fourteen provinces, and is a hereditary vice-royalty, ruled by the khedive, subordinate to Turkey. The prevailing language is Arabic. Area, 380,000 sq. miles; pop. of Egypt proper (up to Wadi Halfa) 1897, 9,734,000. Capital, Cairo (pop. 570,000); chief port, Alexandria (pop. 320,000).

Egyptian Mythology.—1583.

Solar Gods, 1585.

The God-Man Osiris, 1590.

The God of the Nile, 1592.

Legends of the Gods, 1595.

Ehrenbreitstein (*ä'ren-brit'stîn*).—A town in Prussia, on the Rhine opposite Coblenz, noted for its fortress, which is built on a rock 385 feet high. Pop., 5,270.

Eichberg, Julius.—(1824-1893.) A musical composer, who came to America from Germany. He was the director of the Boston Museum orchestra. In 1867 he established the Boston Conservatory of Music.

Eider Duck, The.—See DUCK, 2498.

Eiffel Tower.—An iron framework tower, in the Champ-de-Mars, Paris, in the form of a concave pyramid 984 feet high. The lantern is fitted for meteorological observations. It was built by Alexandre Gustave Eiffel for the Exhibition in 1889.

Eight-Hour Law.—Aug. 1, 1892, Congress passed a law restricting to eight hours the working day of all laborers and mechanics employed by the government or upon government contracts, but no corresponding reduction in wages was made.

Eight to Seven.—A phrase common in the politics of the country for some years after 1877, when the Electoral Commission, by a vote of eight to seven, declared Rutherford B. Hayes to have been elected President over Samuel J. Tilden.

Elaine.—1788.

Eland, The.—See ANTELOPE, 2418.

Elba.—An island in the Mediterranean, east of Corsica. It belongs to the province of Leghorn, Italy. Napoleon resided there during a period of exile 1814-1815. It is 18 miles long and has an area of 90 miles. Pop., about 24,000.

Elbe.—A river which rises in Bohemia, flows through Germany and empties into the German Ocean 65 miles below Hamburg. It is 725 miles long and is navigable for large vessels to Hamburg.

El Caney (*el kã'nã*).—A town 3 miles from Santiago, Cuba. In a battle fought here July 1, 1898, between the United States troops and the Spanish, the former were victorious.

El Dorado.—The Spanish words mean "The gilded." During the 15th century it was believed that somewhere in the northern part of South Amer-

ica there existed a great city of fabulous wealth, the king of which was periodically bathed in oil or balsam and then covered with gold-dust so that his whole body was gilded. Beginning about 1532 many expeditions were made by the Spaniards in search of this city of treasures. Most of them resulted disastrously and hundreds of the explorers perished. From this quest resulted the settlement of New Granada and Guiana and the discovery of the mountain regions of Venezuela, the Orinoco and Amazon, and the great forests east of the Andes. It has been supposed that the El Dorado myth arose from a yearly ceremony of an Indian tribe near Bogota, in which the chief smeared himself with balsam and gold-dust, threw jewels into a sacred lake and then bathed there, but the ceremony was never witnessed by the Spaniards, and may have been another version of the story of El Dorado. The name El Dorado as commonly used is applied to the city or country instead of to the chief himself. Since that time the name has been poetically given to any region believed to be rich in gold, silver, and precious stones. It was applied to California during the few years following 1848, when the "gold fever" prevailed throughout the country.

Election Laws.—Art. I, § 4, of the Constitution provides that "the times, places, and manner of holding elections for senators and representatives shall be prescribed in each state by the legislature thereof, but the Congress may at any time by law make or alter such regulations, except as to the places of choosing senators." Uniformity in the election of U. S. Senators was first provided for by act of Congress in 1866, and of members of the House in 1875. July 2, 1890, a measure was introduced in the House to amend and supplement the election laws of the U. S. and to provide for a more efficient enforcement of such laws. It passed the House, but was defeated in the Senate.

Elections.—The deliberate choice of a person or persons for office of any kind by the voting of a body of qualified or authorized electors. The first presidential election was held in 1788. All the candidates stood for the office of President and Vice-president, the one receiving the largest number of votes being declared elected President and the one having the next highest number, Vice-president. Up to 1824 the electors in many of the states were chosen by the legislatures. In the colonial period, the people of Mass., Conn., and R. I. elected their governors. In all the Colonies the people elected the representatives of their assemblies, either by ballot or by a *viva voce* vote. Laws against treating and violence were in force, but disturbances were not uncommon at voting places.

Electoral College.—The name commonly given to the electors of a state when assembled to vote for President and Vice-president. Though informally used since about 1821, the term first appeared in the law of Jan. 23, 1845, which empowered each state to provide by law for

the filling of vacancies in its "College of Electors." Under the Constitution, the electors of each state are to meet at a time and place designated by the law of their state, and separately vote by ballot for President and vice-president. By the law of 1792, the electors are required to make three lists of the persons voted for, the respective offices they are to fill, and the number of votes cast for each. They must make, sign, and seal three certificates, one for each list, certifying on each that a list of the votes of such state for President and Vice-president is contained therein, adding thereto a list of the names of the electors of the state made and certified by executive authority. They appoint a suitable person to deliver one certificate to the president of the Senate at the seat of Government. Another certificate is to be forwarded by mail to the President of the Senate. The third certificate is to be delivered to the Federal judge of the district in which they assemble. The Electoral College, having discharged the duty for which it was created, is then dead, whether it adjourn or not. The Constitution provides that the number of electors from each state for choosing President and Vice-president shall be equal to the number of Senators and Representatives from that state; no one of them to be the holder of a national office. In 1872 the general ticket method of selecting electors was adopted in all the states. Before this, several methods were in vogue—in some states by joint ballot of the legislature, in others by a concurrent vote of the two branches of the legislature, in still others by a distinct vote or by general vote.

Electoral Commission.—In the presidential election of 1876, Rutherford B. Hayes and Samuel J. Tilden were the respective Republican and Democratic candidates. Charges of fraud were made concerning the electoral votes of Fla., La., Ore., and S. C. Jan. 29, 1877, Congress appointed an Electoral Commission to investigate the charges and determine the validity of the returns. This was the first time that a commission of this kind had been appointed and much doubt has been expressed as to its constitutionality. The commission consisted of 15 members—three Republican senators, two Democratic senators, three Democratic representatives, two Republican representatives, and five associate-justices of the Supreme Court. Its members were Justices Nathan Clifford (president of the commission), Samuel F. Miller, Stephen J. Field, William Strong, and Joseph P. Bradley; Senators George F. Edmunds, Oliver P. Morton, Frederick T. Frelinghuysen, Thomas F. Bayard, and Allen G. Thurman (replaced later by Francis Kernan), and Representatives Henry B. Payne, Eppa Hunton, Josiah G. Abbott, George F. Hoar, and James A. Garfield. The commission, by a vote of eight to seven, on Feb. 9, 1877, decided to sustain the validity of the Hayes electoral ticket in Fla. and later gave similar decisions regarding the returns from the other states. After the work of the commission the

vote of the electoral college stood 185 for Hayes and 184 for Tilden. (See HAYES, RUTHERFORD B., 279.)

Electoral Votes, Count of.—The electoral votes of the states are handed to the president of the Senate, who in the presence of the two Houses convened in joint session, on a day designated by law, opens the returns. These are counted by tellers, who declare the result. In 1876, grave

trouble was for a time apprehended through the receipt of two sets of votes from some of the states, and Congress appointed an Electoral Commission to decide which were the proper returns, and to prevent, as far as possible, a recurrence of this condition. Congress in 1887 enacted that contests over electors should be decided under state laws whenever practicable. (See ELECTORAL COMMISSION.)

ELECTRICITY AND MAGNETISM

PERHAPS you have noticed, that if you pass a hard rubber comb through your hair, in frosty weather, a crackling sound is produced, and the strands of hair show a tendency to stick to the comb. You may have observed, also, that, after being drawn through your hair a few times, the comb has the property of attracting small, light particles, such as scraps of paper or chaff. This attractive property is due to the fact, that the comb has become *electrified*, or *charged with electricity*, by friction against your hair. There are many other substances, besides rubber, that may be electrified by friction. For example, a stick of sealing wax rubbed with flannel, or a rod of glass rubbed with silk, will show attractive properties, similar to those manifested by the rubber comb; and, by experimenting with these objects, you may learn a number of facts about electricity.

The following experiments will be found interesting, as well as instructive. Electrify a stick of sealing wax, by rubbing it briskly with a piece of warm flannel, and then bring it near a small ball of elder pith, suspended by a silk thread. The pith ball will at once be attracted to the sealing wax, and, if the wax be brought close enough, the ball will adhere to it for a few moments, and will then fly away from it.

Instead of being drawn toward the sealing wax, the pith ball will now be repelled by it. Electrify a glass rod, by drying it thoroughly and then rubbing it with silk. Bring the glass near the pith ball, which will be attracted by the glass, as it was, at first, by the sealing wax, but, if allowed to come into contact with the rod, the ball will adhere to it, for a few moments, and will then fly away, just as it did from the sealing wax. Now, bring the stick of sealing wax near again and the pith ball will be attracted, as it was at first, but if it touches the wax it will again adhere for a moment and then drop off. By bringing the sealing wax and glass alternately into contact with the pith ball, you will find, that when it is repelled by one, it is attracted by the other, and that, after it has been in contact with either for a few moments, it is no longer attracted by it.

From these experiments you will see that the charges upon the glass and the sealing wax are not the same, and, to distinguish the two kinds of electricity, the glass is said to be charged with *positive*, or *vitreous electricity*, while the charge on the sealing wax is called *negative*, or *resinous electricity*.

Now, when the pith ball was touched with the sealing wax, it became charged with negative electricity, and was then no longer attracted by the wax, but was repelled by it and attracted by the glass. On the other hand, when the ball had been charged with positive electricity, it was repelled by the glass and attracted by the wax. We conclude from these facts that *bodies charged with the same kind of electricity repel each other, while bodies charged with opposite kinds of electricity attract each other.*

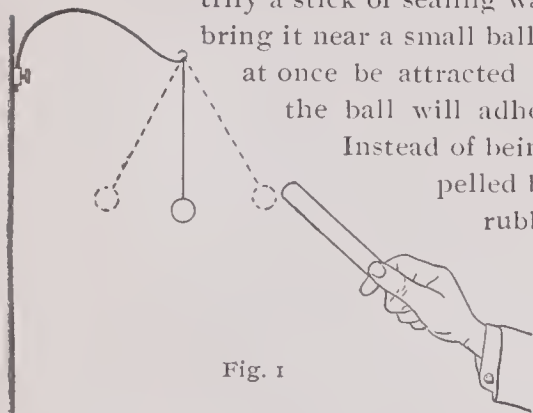


Fig. 1

If two bodies, charged with opposite kinds of electricity, are brought together and allowed to remain in contact, for some time, the two charges disappear, one appearing to neutralize the other. From this, we may suppose, that any body, that is not electrified, contains both kinds of electricity, in equal amounts. Accordingly, when we rub a piece of glass with silk, we do not create electricity, but simply separate the two kinds, so that the positive kind adheres to the glass, and the negative kind remains behind, on the silk. In like manner, when we electrify sealing wax with flannel, the negative electricity remains in the sealing wax, and the flannel becomes charged with the positive. Whenever a body is electrified by friction, both kinds of electricity are produced; it is impossible to produce one kind without the other.

If a part of the glass rod, or piece of sealing wax, is rubbed, only that part becomes electrified, as may be shown by trying to attract a pith ball, with the part that has not been rubbed. But, if the charged part of the sealing wax is brought into contact with a metal rod resting on a glass tumbler, the rod becomes charged, not only at the point of contact, but all over its surface. Substances over which electricity flows readily, as it does over metals, are called *conductors* of electricity, and substances like glass and sealing wax, over which electricity does not flow readily, are called *non-conductors*, or *insulators*. In the former class are included water, the human body, and the earth; in the latter, rubber, porcelain, most resins, and dry air.

You have already been told that bodies charged with opposite kinds of electricity attract each other, and bodies charged with the same kind repel each other. Let us now seek to discern, why it is that bodies charged with either kind of electricity attract small light objects, like pith balls, when they are not charged with electricity. It has been stated, that all uncharged bodies are supposed to have both kinds of electricity present in them, in equal amounts. Now, when an uncharged body is brought near a charged body, there is a tendency for the two kinds of electricity in the uncharged body to separate, the kind opposite in character, to that on the charged body, being attracted toward the charged body, and the other kind being repelled. Thus, if a stick of sealing wax, charged with negative electricity, is brought near a ball of pith, the positive electricity in the ball is attracted to the side nearest the sealing wax, and the negative electricity is repelled to the farther side. (See Fig. 2.) As the positive electricity on the pith is nearer to the sealing wax than the negative, its attraction for the negative charge, on the sealing wax, is stronger than the repulsion between the negative electricities of the two objects, and consequently, the ball is attracted to the sealing wax. If the charged sealing wax is brought near an insulated conductor, that is, a conductor supported on some non-conducting substance, such as glass, silk, or rubber, over which electricity will not flow, there is a much more complete separation of the two kinds of electricity on the conductor than there was on the pith ball. If the charged sealing wax is brought near one end of the metal rod, the charge of negative electricity upon the sealing wax will attract the positive electricity on the metal, to that end, and will repel the negative electricity, to the other end. If a pith ball suspended by a silk thread is brought near either end of the metal rod, while the charged sealing wax is near one end of it, the pith ball will be attracted toward the rod; but, if brought near the middle of the rod, it will not be attracted. This shows, that the rod becomes electrified, only in the part nearest to the charged body and in the part farthest from it. At the middle, between these parts, the two kinds of electricity neutralize each other.

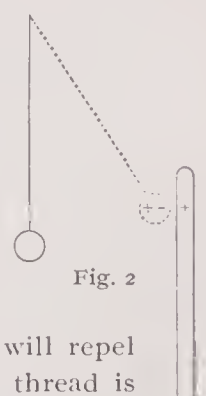


Fig. 2

By taking two conductors, and placing them end to end, we form what is, practically, a single conductor, but it has the advantage of being easily separated into two parts. When a charged body is brought near one end of a conductor, made up of two separate parts, a charge of one kind is attracted to the nearer part of the conductor, and

a charge of the opposite kind is repelled to the farther part. By now separating the two parts of the conductor, we find that one of the ends, that were in contact, is charged with positive and the other with negative electricity.

The separation of the two kinds of electricity, upon a conductor, by means of a charge upon another body, which is not allowed to come into contact with the conductor, is called *induction*, and two charges of electricity, produced in this way, are known as *induced* charges. The charge, by means of which the separation is brought about, is called the *initial* or *inducing* charge.

Another way, in which a charge of electricity may be induced upon a conductor, is to have one end of the conductor connected with the earth by means of some conducting material, and then to bring a charged body near the other end. A charge, opposite in character to the initial charge, is attracted to the end of the conductor that is near the charged body, and the electricity of the opposite kind is repelled, through the conductor to the earth. By breaking the connection with the earth, while the charged body is near the conductor, a charge is obtained upon the conductor, that is opposite in character to the initial charge. This method of charging conductors, by induction, is practically the same as the one first described, for the earth is a conductor of electricity, and corresponds to the more distant part of the two-piece conductor.

An instrument, known as the *electrophorus*, which is especially designed for the production of electric charges by induction in the manner just described, is shown in Figure 3. This instrument consists of a brass plate, A, on an insulating handle of glass,

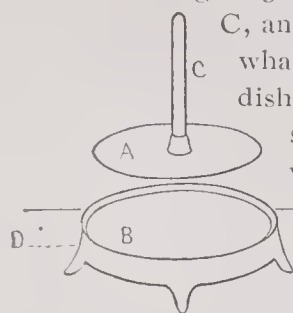


Fig. 3

and a disk of sealing wax, B, fitted into a brass dish, D, whose edges rise somewhat higher than the surface of the wax. In using the electrophorus the brass dish, or *sole*, is placed upon some support that will conduct electricity, and the sealing wax disk is then rubbed vigorously with a piece of flannel, or catskin, which electrifies the sealing wax, with negative electricity. The brass plate, A, is then taken by the glass handle, C, and brought close to the charged sealing wax. The charge of negative electricity on the wax attracts a charge of positive electricity to the under surface of the plate, A, and repels a negative charge to its upper surface. If the charged plate is now brought into contact with the edge of the brass dish, D, the negative charge, on the back of the plate, flows away, through the legs of the dish, to the earth, but the positive charge remains on the under surface, where it is *bound*, by the attraction of the negative charge on the disk of sealing wax. If the brass plate, A, is now removed, it will be found to be charged with positive electricity.

The negative charge upon the sealing wax is not reduced or diminished by its action in charging the brass plate, and it is possible to charge the plate an indefinite number of times by means of one charge on the sealing wax.

The charges of electricity, produced in any of the ways that have been described, are necessarily small, and the disturbance produced, when they are destroyed by bringing oppositely charged conductors together, is very slight, merely a little snapping noise and, perhaps, a small spark, that seems to leap from the positively charged conductor to the negatively charged one, when they come very close together. By the use of electrical machines of various kinds, in some of which the electricity is produced by friction, and in others by induction, conductors may be charged with much larger quantities of electricity, and the disturbance produced by their discharge is greatly increased. The noise produced is louder, and the spark is much brighter, and leaps from one conductor to the other, while they are much farther apart. It is possible to produce still larger charges of electricity upon conductors, if they are arranged so as to form what are called *condensers*. One of the commonest forms of condenser is the *Leyden*

jar, which is so named because it was invented at Leyden, in Holland. (Fig. 4). This is a glass jar, G, upon the outside of which is fastened a coating of tin foil, T, that covers the bottom of the jar and extends two-thirds of the way up the sides. Inside the jar there is a similar coating of tin foil, T', and through the top of the jar, S, which is usually made of wood, extends a metal rod, R. On the upper end of the rod, there is a metal ball, and, at the lower end, is attached a chain, C, which runs down to the bottom of the jar and rests upon the inner tinfoil coating.

In using the Leyden jar, the ball on the metal rod that runs through the top of the jar is connected with an electrical machine, and the jar is supported upon some conducting material, through which electricity may be conveyed from the outer coating of tinfoil to the earth. If the inner coating of tinfoil is now charged with positive electricity, by means of the electrical machine, it induces, upon the outer coating of foil, a charge of negative electricity, which is bound by the attraction of the positive charge on the inside of the jar. At the same time, the positive electricity, on the outer coating of foil, is repelled, through the conducting support, to the earth.

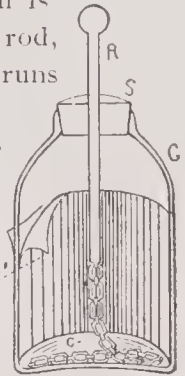


Fig. 4

The charge that can be communicated to the coating of the foil, inside the Leyden jar, is greatly increased by the presence of a charge of the opposite kind of electricity, on the coating on the outside of the jar. Each of these charges attracts the other, through the glass of the jar, and serves to bind or hold it. If either coating of foil is removed, the charge on the other coating tends to fly off the tinfoil, and will immediately do so, if a conductor is brought near. It is because the attractive effects of the initial charge, inside the jar, and of the induced charge outside the jar, make it possible to communicate, to each coating of foil, a larger charge than it could otherwise be made to receive, that a Leyden jar is called a condenser.

When a Leyden jar is disconnected from the electrical machine, two opposite charges of electricity are present on it, one inside and the other on the outside. If the two coats of tinfoil are now connected, by means of a conductor, they will at once neutralize each other, and the jar will be discharged. A jar may be discharged, by simply taking hold of the tinfoil on the outside of the jar, with one hand, and touching the metal rod, running through the top of the jar, with the other. If you do this, there will be a sudden flow of electricity through your body, your muscles will give a sudden jerk, and you will feel a peculiar tingling sensation. In other words, you will have received a *shock*.

It is not necessary, for the hand that does not grasp the jar, actually to touch the rod that runs through the top. If the hand is brought toward the rod, rather slowly, you will see a spark leap across the space, between the rod and your hand, while your hand is still some distance from the rod. The greater the distance, across which the spark leaps, the brighter will be the spark, and the stronger the shock produced. This distance is sometimes spoken of as the *length of the spark*, and it indicates the size of the charges on the tinfoil coatings of the jar.

It may seem difficult to believe, that the tiny spark and weak snapping noise that are produced when a Leyden jar is discharged, are, in many respects, the same as lightning and thunder, but it is nevertheless true. This was proved by Benjamin Franklin, about the middle of the 18th century, in the following way. One afternoon, when a thunder shower was approaching, he sent up a kite, to the string of which he fastened a large metal key; and to the key, a ribbon of non-conducting silk, which he held in his hand. When the rain had been falling long enough to wet the string thoroughly, it became a good conductor of electricity, and Franklin found that the key had become charged with electricity transmitted from the clouds, along the wet kite string. The non-conducting silk ribbon, that formed the continuation of the kite string, from the

key to his hand, was employed to prevent him from receiving shocks from the passage of the electricity, through his body, to the earth.

Up to this point, your attention has been directed to charges of electricity. You have been told how they may be produced, what some of their leading properties are, and what effects they produce, when they are discharged. The subject that will now be explained to you is that of *electric currents*.

By an electric current, is meant a flow of electricity along a conductor. The flow of electricity, through your body, when you receive an electric shock, is a current, but it lasts only for an instant, and it is difficult to learn much about its nature. By the use of various devices, it is possible to produce currents, that will continue as long as we want them, so that we are enabled to study their properties quite thoroughly.

One of the oldest and simplest forms of apparatus, for producing electric currents, is that which is known as the *voltaic cell*. This form of apparatus may very easily be constructed. (See Fig. 5.) Pour some water into a glass jar, and add a little sulphuric acid. Now place in the water a strip of clean zinc and one of clean copper. Do

not let the strips of metal touch in the water, but connect them outside the water by means of a piece of wire. When this has been done, a current of electricity will be set up along the wire and through the water between the two strips of zinc and copper. This current is said to flow along the wire from the copper, which is called the *positive pole* of the cell, to the zinc, which is called the *negative pole*. In the liquid in the cell (*i. e.* the jar), the current travels from the zinc to the copper, thus completing what is called the *electric circuit*. Whenever the circuit is broken, that is, when-

ever there is a gap made in the wire connecting the poles, or anything else is done to destroy the completeness of the conducting path, along which the current travels, the current ceases; consequently, when it is desirable to stop the current, all that is necessary is to cut the wire connecting the two

strips of copper and zinc.

The production of a current of electricity, by means of an apparatus of this sort, depends upon the chemical action of the acid in the water upon the strip of zinc. As long as the acid continues to act upon the zinc, a current is produced, and when the acid ceases to act upon the zinc, the current ceases to flow. If the zinc is clean, the chemical action of the acid ceases, whenever the circuit is broken, and consequently, when the cell is not being used to produce a current, the zinc is not destroyed by the acid. But if the zinc is not clean, small electric currents are set up, within the liquid, between the zinc and the impurities on its surface, and around the points where these impurities lie the acid acts upon the zinc and dissolves it. This action of the acid upon the zinc, when the circuit is broken, is known as *local action*, and it is very desirable to prevent it, as far as possible. For this purpose the zinc is often rubbed with mercury, which soaks into the zinc and forms a film on its surface, upon which the impurities float. This treatment of the zinc is known as *amalgamation*, and it serves to prevent almost all the local action, due to impurities of the zinc.

Many other substances, besides zinc and copper, have been found capable of yielding an electric current, when placed in a suitable liquid, and many other fluids, besides water that contains a little sulphuric acid, have been employed to act upon the zinc and copper, or the substances used in their stead. Numerous cells of different kinds have, therefore, been devised, but, in all of them, the current is produced by chemical action. Most of them contain a liquid of some sort, which is called the *exciting fluid*, and two solid substances, which are called the *elements* of the cell. One of these *elements* is always much more susceptible to the chemical action of the exciting fluid, than the other, and this one is known as the *positive element*. The other element, upon which

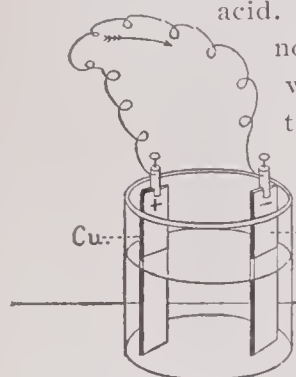


Fig. 5

the exciting fluid may have no action, is called the *negative* element. In cells, in which the elements are zinc and copper, the zinc is always the positive element. This may seem strange to you, for you have already learned, that the zinc is the *negative pole* of the cell, but, to avoid confusion, you must fix well in your mind the fact, that the zinc is not the *positive element* of a voltaic cell, but its *negative pole*, and that the copper, which forms the *negative element* is the *positive pole* of the cell. The currents, produced by the various forms of voltaic cells, vary considerably in strength, but none of them are very strong. In order to obtain a stronger current, a number of cells must be used together. Such a collection of cells forms a voltaic battery, and, in some instances, as many as fifty thousand cells have been used in a single battery.

Some of the effects produced by electric currents have already been mentioned, in the preceding pages of this volume. In the article on water, you learned that an electric current has the property of decomposing water into the elementary gases, oxygen and hydrogen. This is a chemical effect of the electric current. But water is not the only substance that is decomposed by electricity; almost all chemical compounds may be decomposed, by the passage of a current through them, provided a current of sufficient strength is used.

Another effect of the current, that has previously been mentioned, is its heating effect. It has been found that the passage of an electric current, through any body, is always productive of a certain amount of heat. The amount of heat produced depends upon the strength of the current of electricity, and the resistance to its passage that is offered by the body through which it travels. This amount is increased by increasing either the strength of the current or the resistance of the conductor along which it travels. You have already been told, that some substances allow electricity to pass over them very readily, and are therefore called conductors, while substances, through which electricity does not flow readily, are known as *insulators* or *non-conductors*. No substance is a perfect non-conductor, for electricity can be made to pass through any substance, if the current is sufficiently powerful. Neither is any substance a perfect conductor, for all substances offer some resistance to the passage of an electric current. Those substances that are ordinarily considered good conductors offer varying degrees of resistance to electric currents. For example, a copper wire offers less resistance than an iron wire of the same length and diameter.

The resistance of a body depends not only upon its material, but also upon its length and size. In conductors of the same material, the resistance is directly proportional to the length of the conductor, and inversely proportional to the square of its diameter. This is not surprising, for an electric current bears a strong resemblance to a current of water, in many of its properties, and you know that it is harder to force water through long, narrow pipes, than through short, wide ones.

From what has been stated about resistance, you may see, that a current will produce more heat, in passing through a long, fine wire, than through a shorter and thicker one, and that, of two conductors of the same length and size, but of different material, one may be heated much more by a current than will another.

A third effect of the electric current, which has not previously been mentioned, is its magnetizing effect. It is upon this, that some of the most important effects of electricity depend.

By coiling a wire around a bar of iron or steel, and then sending an electric current through it, the piece of iron, or steel, is made to show magnetic properties. By this is meant, as you doubtless know, that the iron will now attract other pieces of iron, or steel, to it. The strength of this attraction depends upon the strength of the current, and upon the number of turns of wire around the bar. By increasing either the strength of the current, or the number of turns in the coil of wire, around the bar of

iron, the strength of its magnetic attraction is increased. When the current is stopped, the magnetic properties of the iron disappear almost completely. A magnet, that depends upon a current of electricity for its magnetic power, is called an *electro-magnet*.

Besides electro-magnets there are others, which are called *permanent magnets*. Electro-magnets are composed of soft iron, the softer the better, and, as soon as the current of electricity ceases to flow around them, their magnetic properties disappear. Permanent magnets, on the contrary, are made of steel, and their magnetism is independent of the action of a current of electricity. No coil of wire is wound around them, and no current is employed to maintain their magnetic properties. A piece of steel may be made to become a permanent magnet, by passing a current of electricity, for a considerable time, through a coil of wire wound around it, or by allowing a piece of steel to remain for some time in contact with a strong magnet. When a current of electricity passes through a coil of wire, wound around a bar of steel, it takes longer to magnetize the steel than it would to magnetize iron, but, when the current ceases, the magnetism does not all disappear from the steel. A portion of it remains, and the steel becomes permanently magnetic.

If a thin bar of steel is magnetized, and is then suspended, by its middle, so that it can swing freely, it will be found, that one end tends to point toward the north, and the other toward the south. Whenever the bar is swung out of this position, it swings back to it, and if the north end is turned entirely around to the south, it does not remain, but swings back to its former position. This shows that there is a difference in the magnetism at the two ends of the magnet. To indicate this difference, the north-seeking end of a magnet is called the *positive*, or *+*, *pole* of the magnet, and the south-seeking end is known as the *negative*, or *-*, *pole*.

By suspending two bar magnets, in the manner described, it can be shown that the positive and negative poles of the magnets act like positive and negative charges of electricity. Poles of the same kind repel, and poles of opposite kinds attract, each other.

Permanent magnets are usually made in two forms, either straight or horseshoe shaped. A compass needle, as has been shown, is an example of a straight magnet. The horseshoe variety, which has a little bar of iron, called the keeper, laid across the poles, is a common toy. Electro-magnets are seldom seen, except in electrical instruments or machinery.

Besides the electro-magnet, and the permanent magnet of magnetized steel, there is another kind known as the *natural magnet*, or *lodestone*. This kind of magnet is a variety of iron ore, some forms of which have magnetic properties. Many startling stories were formerly told of the power of lodestones, but we now know that they were great exaggerations, and that no natural magnet ever found had one-hundredth part of the power of the large electro-magnets.

Having discussed some of the properties of charges of electricity, electric currents, and magnets, we may now take up the operation of some of the more important applications of electricity, such as the telegraph, the telephone, electric lights, electric railways, and the like.

The telegraph in its simplest form may be represented by the diagram in Figure 6, in which B represents a battery, composed of a number of voltaic cells, K a telegraph *key*, L a line of wire, and S, a *register*. One wire, from the battery B, runs to a plate of metal, G, buried in the earth, which is known as a *ground*. The other wire, from the battery, goes to the piece of metal, C, over which is the key, K. From K, a wire runs to another station and is there connected with an electro-magnet, M, from which another wire goes, to another ground, H. Over the electro-magnet, M, is a pivoted box,

T, on which is fastened a piece of iron that is so placed that the attraction of the electro-magnet, M, may draw it down into contact with the magnet. The bar, T, is supported by a spring, S, which keeps the piece of iron on the bar out of contact with

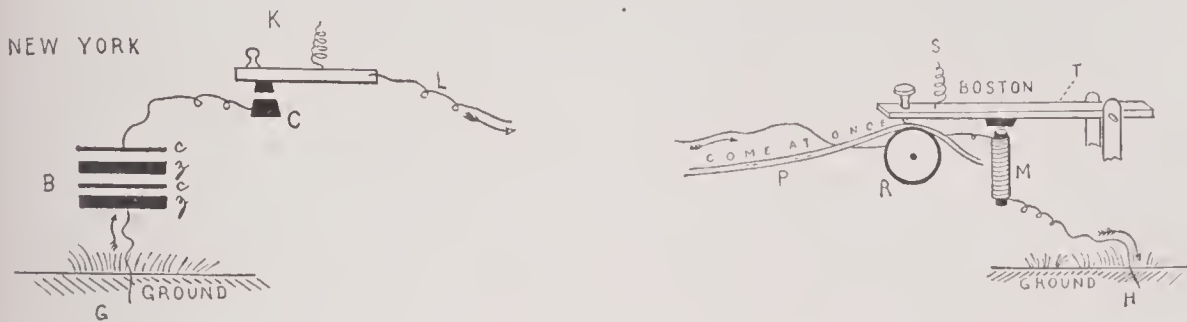


Fig. 6

the electro-magnet, when a current of electricity is not passing through the coils of the magnet. At the free end of the bar, T, is a point that makes marks on a narrow strip of paper, P, which passes over a roller, R, under the point.

When the key, K, is in the position shown in the diagram, no current can flow through the wire, from the battery, B, and consequently the electro-magnet, M, is not excited and the bar, T, remains suspended by the spring, S. If the key, K, is pressed down upon the metal, C, the wire, L, is connected with B, and, as the earth is a conductor, the circuit is completed. A current then flows through the line L, down through the coils of the electro-magnet, M, and through the earth back to B. As soon as the current passes through the coils of M, the iron bar, that forms the core of the electro-magnet, becomes magnetic, and attracts the piece of iron on the bar, T. This causes the piece of iron to strike the core of the magnet with a sharp click, and, at the same time, causes the point at the end of the bar, T, to come into contact with the paper, P, which travels over the roller, R, beneath it. The point that strikes the paper carries ink, and makes a mark on the paper every time it strikes it. By keeping the key, K, down on the piece, C, or in other words, *closing the circuit*, for an instant only, a dot will be produced on the paper. By keeping the circuit closed for a longer time a dash will be formed on the paper. As the key, K, can be raised and lowered at will by the operator, it is evident that he can cause the point to make dots or dashes as he pleases. Various combinations of dots and dashes have been chosen to represent the letters of the alphabet, and by their use words may be spelled and sentences formed.

The telegraph, as described above, is what its name implies, an instrument for writing at a distance. That was the form in which the telegraph was first brought into general use, but as now employed it is not really a telegraph. The register, S, has been replaced by a *sounder*, shown in diagram in Figure 7.

In the sounder the bar, T, is not provided with a point for registering dots and dashes on a strip of paper, but is so arranged that when the circuit is closed and the magnet, M, excited, the bar, T, will be drawn down so that the point, P, will strike against the standard, S, and when the circuit is broken, or opened, the bar will move in the opposite direction and strike the point, R. The interval between the two clicks that are produced when the metal bar strikes the points, P and R, will indicate the length of time that the circuit was closed. A very short interval corresponds, of course, to a dot, and a longer interval to a dash, as made on the strip of paper used in the old form of instrument. Since telegraph operators soon learn to recognize the

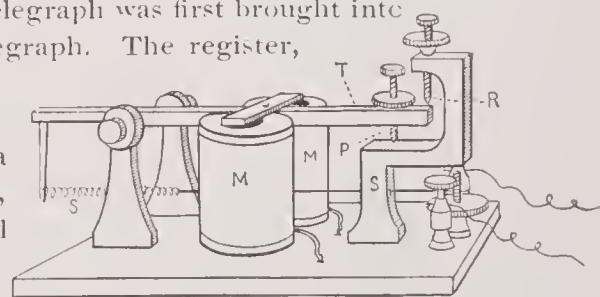


Fig. 7

length of the intervals between the clicks of the sounder, they can read the message from the sounds, and have no need for the paper.

In order to send messages in both directions over the same line, there must be both a key and a sounder at each end of the line, and if there are stations along the line, all the keys of the way stations must be closed, when a message is sent from one end of the line to the other.

In recent years improvements in the telegraph have been invented which make it possible to send messages over the wire in both directions at once, but these and several other improvements are too complicated to be easily understood.

The telephone is naturally associated with the telegraph, because the names and uses of the two instruments are similar; but in structure and operation they are quite different. The telephone, as invented by Professor Bell, which is the one that will be described, is shown in diagram in Figure 8.

In this kind of telephone the same form of instrument was used both for the *transmitter* and for the *receiver*. The transmitter is the instrument into which you speak, and the receiver is the one at which you listen. In constructing each of these instruments Professor Bell used a thin sheet of iron, D, a steel magnet, M, and a coil of very fine wire, C. From this coil, C, a wire ran to the earth, and another ran to the coil in the other instrument, from which a wire also ran to the ground, and the circuit was thus completed. No battery was required.

In using the Bell telephone, one speaker stood facing one of the instruments and spoke into the opening, O. The sound waves that issued from the speaker's lips struck the iron diaphragm, D, and caused it to vibrate. When it moved toward the magnet, M, it increased the strength of the magnet, and this caused a current of electricity to be set up in the coil of wire, C. When it swung back, the strength of the magnet was weakened, and a current, that was opposite in direction, was set up in the coil. These currents were transmitted to the coil of the receiving instrument, and, in passing through it, they caused the strength of the magnet to vary, as it did in the transmitting instrument. The variations in the strength of the magnet, in the receiving instrument, caused the iron diaphragm to be thrown into vibrations, similar to those caused in the transmitting instrument by the sounds of the speaker's voice, and the vibrations, so produced in the receiving instrument, gave rise to waves in the air that could be recognized as sounds similar to those of the speaker's voice.

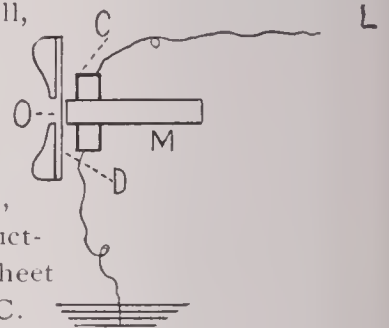


Fig. 8

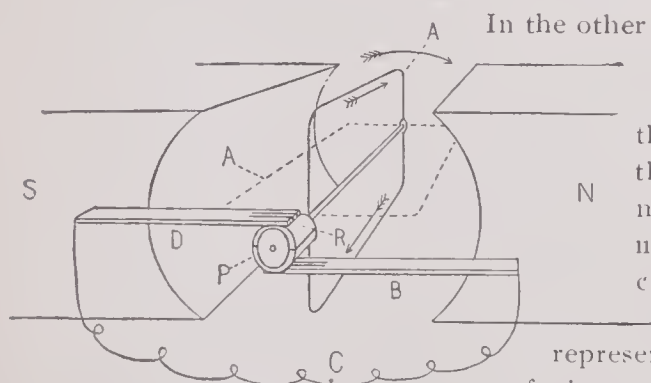


Fig. 9

In the other great applications of electricity, such as the driving of machinery, the propulsion of railway cars, and electric lighting, much stronger currents are required than can be readily produced by any of the methods that have been described in the preceding pages. The means by which these large currents are produced is a machine called a *dynamo*. The principle governing the construction and operation of the dynamo is illustrated in diagram in Fig. 9, in which N and S respectively represent positive and negative magnetic poles and A is a loop of wire so placed that it may be revolved between the poles. The ends of the loop terminate in two semicircular pieces of copper, P and R. When the loop of wire is revolved between the magnetic poles, a current of electricity is set up in it, which travels in one direction during half a revolution, and in the opposite direction during the other half. If the machine were so

arranged that one end of the loop were always connected with the same end of the outside conductor, C, the current through C would be changing its direction, at every half revolution of the loop. A current of this sort is called an *alternating* current. In the diagram, however, the machine is arranged to produce a continuous current. Each of the semicircular pieces of copper, to which the ends of the loop are connected, comes into contact with the spring, B, during one half revolution, and with the spring, D, during the other half revolution of the loop. By this means the current is always made to flow from the machine, through the spring, B, for, when the current ceases to flow through the semicircle of copper at one end of the loop, that semicircle passes into contact with the spring, D, and the other semicircle, from which the current is about to flow, comes into contact with B. The semicircles of copper, at the ends of the loop, form what is called the *commutator* of the dynamo. This name is given them, be-

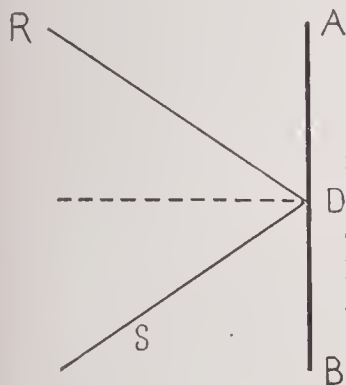


Fig. 10

cause, by their use, the current is changed from an alternating to a continuous one. In a dynamo, such as is actually used to generate very strong currents of electricity, the single loop, A, is replaced by a great many loops, which are carefully insulated from each other, and are wound on an iron drum or core. These loops, or coils, together with the core on which they are wound, form the *armature* of the dynamo. Instead of semicircles of copper at the ends of each loop, the commutator now consists of smaller pieces of copper arranged as shown in Fig. 10, for there are now too many loops for a whole semicircle to be placed at the end of each. The pieces of copper, in which the loops terminate, are carefully separated from each other, by non-conducting material, and they

serve the same purpose that the semicircles did in the simple machine already described.

It is sometimes desirable to have an alternating current, instead of the continuous form, obtained from a dynamo, through the agency of a commutator. Dynamos designed to yield alternating currents have two insulated brass or copper rings, on the axis of the armature, in place of the commutator, and one set of ends of the loops on the armature is attached to one of these rings, and the other set to the other ring. The springs, or brushes, B and D, shown bearing on the commutator in Fig. 11 are so placed that one rests upon one ring, and one upon the other. By this means, an alternating current is sent through the outside conductor.

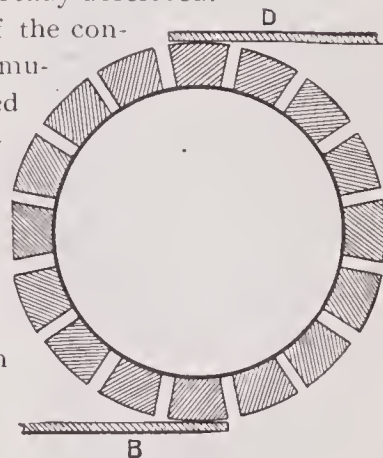


Fig. 11

The strength of the current obtained from a dynamo depends upon the strength of the magnets, the number of coils, or loops, on the armature, and the speed at which the armature revolves.

A dynamo can be used to produce electric currents when its armature is made to revolve by mechanical energy, and, conversely, when currents are passed through the armature, the dynamo is made to revolve. When used in the latter way a dynamo is called a *motor*, and it can be employed to drive machinery. Any dynamo can be used as a motor, but it is customary to construct the machines that are to be used as motors somewhat differently from those that are to be used as generators of electric currents. Hence, the machines that are ordinarily called dynamos differ considerably in appearance from those that are called motors.

In driving machinery, or in propelling railway cars by means of electricity, a dynamo is required to produce the current, and a motor to convert the power of the current into motion. The advantage obtained by the use of electricity, for these purposes, is, that the dynamo may be situated in some convenient place, and the current may be transmitted, through wires, to the places where it is needed.

Most of the electric railways, now in use, have an overhead wire, which transmits a very strong current from a dynamo at the power house, and each car is provided with a motor. By means of a copper wheel, which rolls along on the overhead wire, and a wire which runs from it to the motor, the current is conveyed from the overhead wire to the motor on the car, and, from the motor, the current is transmitted to the ground, through the wheels of the car. In this way, a circuit is completed, and the current passes through the overhead wire to the car, thence, through the car motor and the car wheels, to the ground, and through the ground back to the dynamo. The strength of the current that passes through the motor on the car is controlled by means of a device, called a *controller*, which is operated by the motorman on the car. By its use he can regulate the speed of the car, and can start, or stop, it at will.

Of the other applications of electric currents to useful purposes, only the electric light will be considered here. Up to the present time, only two forms of electric lights have come into general use. These are known as the *incandescent* and the *arc* light. The former, Fig. 12, which is used chiefly for house lighting, consists of a glass bulb, G, from which the air has been exhausted by an air pump, and which is fitted with a very slender filament of carbon, C, formed by charring a thin strip of bamboo. This filament of carbon opposes high resistance to the passage of a current of electricity, and, consequently, when a current passes through it, the filament is heated white hot and gives off a bright light.

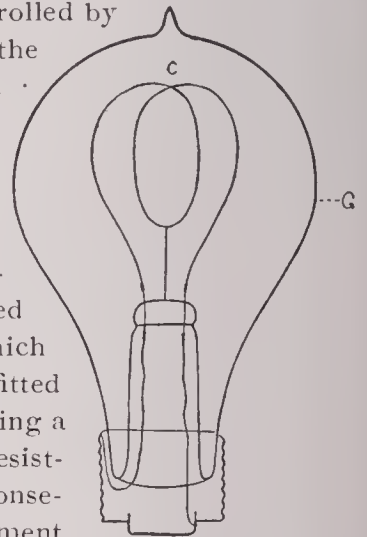


Fig. 12

The removal of the air from the bulb prevents the carbon from burning up, as it would do if oxygen were present.

In the arc light (Fig. 13) a current of electricity is made to leap across from the tip of one rod of carbon to the tip of another that is held a short distance from the first. In passing across, the current does not follow a straight path, but makes a curve, or arc, whence comes the name "arc light." In this form of light the carbons are not enclosed in a space from which air is excluded, consequently there is some destruction of the carbon. The light is due to the fact that the air between the tips of the carbon rods opposes a high degree of resistance to the current, so that the rods become intensely hot at their tips. The high degree of heat causes a slow burning of the carbon at the tips, and the small particles that burn are heated white hot before they are consumed, thus producing light.



Fig. 13

In order to keep the light from an arc light uniform in strength, it is necessary to keep the tips of the carbon rods always the same distance apart. This is practically impossible, and, as a result, the arc light does not produce light that is well adapted for reading or for other purposes that require constant use of the eyes. The light produced by the arc light is very powerful, however, and for that reason it is much used for street-lighting.

THE ROENTGEN OR X-RAYS

It was discovered by Professor Conrad Roentgen in 1895, that if a current of electricity be passed through a certain form of glass bulb, from which most of the air has been exhausted, a disturbance is produced in the ether that bears some resemblance to

light waves. For want of a better name to give to a disturbance which was not well understood, Roentgen called his discovery the X-ray, but it is now frequently called in his honor the Roentgen ray. The nature of this disturbance is not yet known, but as it does not affect the eye it is not light. In Fig. 14 T is the glass vacuum tube and B the battery from which a current of electricity is sent through the tube. The wires of the battery are connected with the electrodes *a* and *b*, the former of which consists of a concave disk of aluminum, and the latter of a flat disk of platinum. The X-rays are discharged in straight lines as shown in the figure. The most striking property of the X-ray is its power to penetrate many substances that are impermeable to light. All vegetable substances, and the flesh of animals, are penetrated by it very readily. Glass, metals, bones, and mineral substances generally, are opaque to it. Consequently when a limb, or even the body of an animal, is exposed to X-rays they pass through the fleshy parts, but are stopped by the bones. Certain substances have the property of glowing, or becoming *fluorescent*, when exposed to the X-ray, and when screens of paper are coated with these substances they form a convenient means of detecting the presence of X-rays. By holding the hand between a tube that is giving off X-rays and a screen of this kind, the bones of the hand will be outlined in shadow on the screen, and the rest of the surface will glow with a greenish light. If a bullet or other piece of metal has become imbedded in the body, it may easily be located, if it is not in a bone, and the extent of an injury to a bone or a joint may be plainly shown. For this reason the X-ray is now widely used by surgeons.

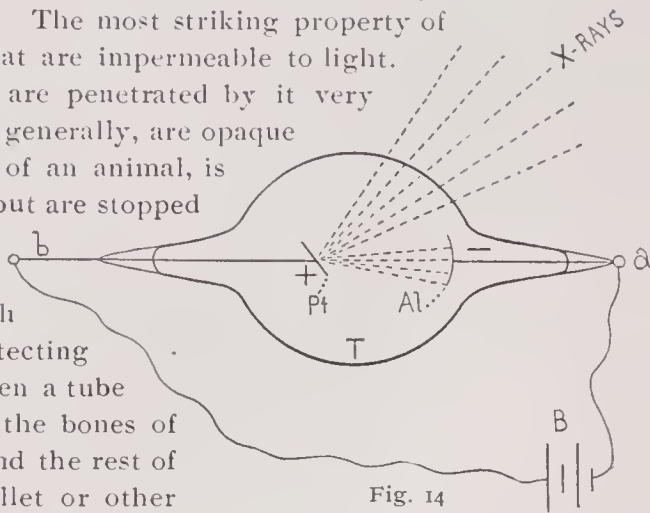


Fig. 14

ELECTRICITY, HOW IT IS MEASURED.—

A *Unit* is such an amount of electricity as will, for example, serve to maintain 33 10 candle-power lamps alight for one hour.

The *Volt* is the unit of electrical pressure or electro-motive force. The usual pressure at which electricity is supplied to consumers is 100 volts. The London Board of Trade defines the limits of —

- Low pressure - - - 300 volts.
- High pressure - - - 3,000 "
- Extra high pressure, above 3,000 "

THE AMPÈRE is the unit of current. The amount of current in any conductor at any instant is expressed in ampères.

Example: An ordinary 8 candle-power incandescent lamp glows with three-tenths of an ampère at 100 volts pressure. The usual 2,000 candle-power arc lamp requires 10 ampères at 48 volts pressure.

THE WATT (OR VOLT AMPÈRE) is the unit of power on the rate of working.

A WATT IS AN AMPÈRE MULTIPLIED BY A VOLT. 746 watts are equivalent to 1 horse-power, or 33,000 foot-pounds per minute.

Examples: A 2,000 candle-power arc lamp, burning with a current of 10 ampères at a pressure of 48 volts, uses 480 watts (10 ampères multiplied by 48 watts), or about two-thirds of a horse-power. An 8 candle-power incandescent lamp, taking 0.3 of an ampère at 100 volts, absorbs 30 watts.

THE OHM is the unit of resistance. The resistance of conductors is expressed in ohms. The resistance of insulators is expressed in megohms. A megohm is 1,000,000 ohms.

The relation of these units will be understood from the following:— A volt is the pressure that is required to force a current of an ampère through a conductor having the resistance of an ohm.

The resistance of a conductor may be found by dividing the pressure in volts required to send a current through it by that current. Thus the carbon filament of an 8 candle-power lamp, mentioned above, has a resistance of 100 volts ÷ 0.3 ampère = 333 ohms.

THE KILOWATT IS 1,000 WATTS. It is equal to 1 1/3 horse-power.

The unit of electrical energy, as already stated, as defined by the Board of Trade, is a kilowatt-hour, that is to say, 1,000 watts for one hour, or 500 watts for two hours, and so on. It will keep 33 10 candle-power incandescent lamps alight during one hour, or it will maintain one arc lamp of 2,000 candle-power for two hours.

INCANDESCENT LAMPS.—It was not until the development of the Dynamo Electric Machine as a means of producing the electric current on a large scale economically that the electric light came to be of commercial importance. Incandescent lighting was not brought to a practical issue till 1879, when Mr. Edison (and almost the same time Mr. Swan) made lamps in which the incandescent conductor was a fine thread or filament of carbon enclosed

Electricity, How it is Measured.—*Continued*

in a glass globe from which the air was exhausted as completely as possible.

In ordinary use incandescent lamps consume from three or four watts per candle of light, and last for some 1,500 hours. They can be forced to a higher efficiency by increasing the electro-motive force, so that the temperature of the filament is further raised and the light much increased, but this shortens the life of the lamp.

INCANDESCENT *v.* ARC.—The temperature of the filament is in no case so high as the electric arc, hence incandescent lighting is less efficient than arc lighting as regards the proportion of light to power, and the color of the light is more yellow. But, in point of steadiness and pleasantness, facility for distributing light, and convenience in placing and management, incandescent lights have many claims to be preferred for indoor use.

ELECTRICAL INSTRUMENTS AND TERMS.—**Rheostat, A.**, is an instrument invented by Wheatstone, the English physicist, for the comparison of electric resistances. It is sometimes called a "resistance coil," constructed for regulating or adjusting a circuit so that any required degree of resistance may be maintained. It consists of two cylinders, one of brass and the other of a non-conducting material, so constructed that by turning a handle a wire can be wound off one cylinder on to the other. A screw thread is cut along the whole length of the non-conducting cylinder, so that the various turns of the wire which is wound on to it are well insulated from each other. Two binding screws are provided for introducing the rheostat wire into a circuit. The resistance thus introduced depends entirely upon the length of wire on the non-conducting cylinder; for as soon as the current passes to the brass cylinder, it leaves the wire and spreads itself over the surface of the cylinder, which offers no resistance to its passage. The resistance introduced can be varied at pleasure by winding the wire on and off the non-conducting cylinder.

ARC LAMPS.—Arc lamps are devices for holding the carbon rods; the carbon points being exposed to the air gradually burn away, a mechanical arrangement becomes necessary and is brought into use to keep the points near together, otherwise the arc would break and the light disappear. Generally the carbons (which are round rods formed by making powdered coke into a paste and baking it), stand in a vertical line, and the upper one is fixed in a heavy holder which tends to slide down until the points are nearly together; the downward motion is checked by mechanism and descends little by little, and only when the length of the arc and the distance between the two carbons has become unduly great.

VOLTAIC (OR VOLTA'S) PILE.—What is known as Volta's or the Voltaic Pile is the earliest form of chemical battery devised by Volta, an Italian

physicist (1745-1827), who shares with Galvani the honor of having discovered the means of producing an electric current at the expense of chemical action upon one of two united plates of dissimilar metals. Of the two, says the "Century Dictionary" in its definition of the term, the higher credit is due to Volta; consequently *voltaiic* is more commonly used than *galvanic*. The Pile Volta built on an insulated plate, a number of discs arranged in the following order: a disk of copper, one of zinc, and one of cloth, flannel, or pasteboard moistened with acidulated water. This series being repeated a great many times, and arranged in the form of a column, constituted the battery. The series begins with copper and ends with zinc, and the two disks at the extremities are joined by a wire. The current flows from the zinc to the copper through the connecting wire, and in the pile from the zinc to the cloth, and from the cloth to the copper above it.

Elephant, The.—2474.

Elephant's Revenge, The.—See ANIMAL STORIES, 2732.

Elevation of the Cross.—A painting by Rubens (1610), 3484.

Elgin.—A city in Ill., on the Fox River, noted for its manufactures of watches, dairy produce, etc. Pop. (1900), 22,433.

Elgin Marbles.—The greater part of the decoration of the Parthenon at Athens. They were taken to England by the Earl of Elgin (1801-03). They are the work of Phidias, about 440 B.C., 3458.

Elia (*ʔli-ā*).—The name under which Charles Lamb wrote the essays which he contributed to the "London Magazine."

Elias, Mount Saint.—A mountain in Canada near the boundary between it and Alaska. It was once thought to be the highest peak in N. A., but it is surpassed by others in Mexico and Canada. Height, 18,023.

Eliot, Charles William.—Born at Boston, Mass., 1834. He was professor of analytical chemistry in the Mass. Institute of Technology in 1865, appointed president of Harvard College in 1869. His principal work is "A Compendious Manual of Qualitative Chemical Analysis."

Eliot, George (MARY ANN, OR MARIAN, EVANS), was the pseudonym of Mrs. Cross (1819-1880). A celebrated English novelist.

Eliot, John.—Born at Boston, 1754; died there, 1813. A celebrated clergyman and author of "New England Biographical Dictionary."

Eliot, John.—Born in England, 1604; died at Roxbury, Mass., 1690. A distinguished missionary, known as "The Apostle of the Indians." A translator of the Bible into the Indian language. He also composed an Indian grammar and catechism.

Elis.—A county in Ancient Greece, in the west of the Peloponnesus.

ELIZABETH, QUEEN.—(1533-1603.)

Elizabeth ruled in a great age, when the world had grown larger by learning and dis-

Elizabeth.—Continued

covery. For England it was an age of patriotism, adventure, daring enterprise, and triumph. People looked across the Atlantic with imaginative visions and extravagant hopes. They engaged in explorations and planted colonies. During her reign Sir Francis Drake circumnavigated the globe, and Sir Walter Raleigh and others made expeditions for the purpose of exploring and settling the New World. It was also an age of literature and philosophy. "There were poets, who by the glow of their own hearts, felt a life and soul in history, a tender and awful beauty in nature, a vastness and mystery in the heart and fate of man, and in his relations to his Maker, which enlarged the spiritual world in which we dwell more than ever Columbus had enlarged the natural one."

Elizabeth was the daughter of Henry VIII. and the unfortunate Anne Boleyn. She was born Sept. 7, 1533. After her mother was beheaded in 1536, she was sent to the country, where she lived in comparative poverty and seclusion, under ladies who leaned toward the "new learning." When Henry married Catherine Parr, with whom she was a favorite, she was seen more at the Court; but from some unknown cause she incurred her father's displeasure, and was again sent to the country. Her father died when she was twelve years old. During the reign of her brother Edward, her life passed quietly and peacefully. She was then remarkable for her great sobriety of manner, discoursing with her elders with all the gravity of advanced years. Edward used to speak of her as "his sweet sister Temperance." Her Protestantism, and the way in which court was paid to her by the Protestant nobility, caused uneasiness to Mary and her council. At her sister's command she outwardly conformed to papacy, but she was always more interested in politics than in church doctrines.

She was placed in prison for several months by Mary, upon the pretext of having been concerned in Wyatt's rebellion. The warrant for her execution, it is said, was prepared at one time, and she would probably have been executed but for the fear of popular commotion. The people regarded her with great favor.

In November, 1558, at the age of twenty-five, she was crowned queen of the realm by an adoring people, who were surprised and delighted with the discovery that she was a scholar as well as a graceful, handsome, self-reliant, and self-poised young woman. Though she was new to the cares of empire, she was not unprepared for her new duties. With untiring industry through all of the dark years of her childhood and youth she had been getting an education which now became an element of unflinching strength in her ascent to her high position.

During the five years of Mary's reign, she had been watched by spies, who tried to surprise her in some false step so that she might

be put to death as a conspirator; but she had skilfully avoided all snares, and had not allowed her sufferings to crush her spirit, nor to disturb her confidence in the world. "As triumphant as if she had had a happy life to look back upon, she stepped from her prison to the throne, resolved to remember no longer that her life had been schemed against." She did not hate those who had hated her. She was ready to bury personal matters, and devote all her energy to such policies as would result in England's national greatness.

She had a long and auspicious reign, during which the Protestant religion was restored, tranquillity was maintained, and England rose from the rank of a secondary kingdom to a level with the first states of Europe.

When she succeeded to the throne, she found the country weak, and distracted within, and threatened from without. She resolved to depend upon herself and her people. She showed much wisdom in the choice of her counselors and ministers, most of whom had sprung from the middle classes. Though surrounded with many difficulties and dangers, she stood at the helm of the ship of state and directed it toward the safest channels. She carefully and skilfully kept England independent of Spain, and at every step thwarted the designs of her brother-in-law, Philip, who thought of marrying her for the purpose of getting a firmer hold on her and her country.

She showed much tact in regard to the question of her marriage. When Parliament begged her to consider the question of taking a husband, she replied that she had resolved to live and die a maiden queen, with England for her husband and Englishmen for her children. At another time in reply to an address urging her to marry, she replied that "she was not surprised at the Commons; they had had little experience, and had acted like boys; but that the Lords should have gone along with them, she confessed, filled her with wonder."

At a time when the country was divided in religion, she resolved to marry neither a Catholic nor a Protestant, but to keep both sides in a state of hopeful expectation. She had her preferences, but, when the question of marriage arose, she always chose what she thought best for her national policy. She was by nature a confirmed coquette. She flirted with Leicester and others, but would not permit any one of them to become her master. She enjoyed playing with her suitors and keeping them in suspense, wondering, hoping, and fearing, while she matured her own plans in secret. Mary, Queen of Scots, once wrote her: "Your aversion to marriage proceeds from your not wishing to lose the liberty of compelling people to make love to you." Even at the age of sixty-five, Elizabeth was delighted to hear the praise of her charms, and showed the jealousy of a silly girl toward every female competitor.

Avoiding the extremes of both Catholics and Calvinists, she worked for the national interest

Elizabeth.—Continued

like Henry VIII. Loving the state better than religious quarrels and doctrines, she took the Church into her own hand, as a means of keeping it in order. She kept Englishmen from driving swords through each other's bodies and cutting each other's throats. She stood for peace and justice—and for compromise. She chose the most convenient way of settling questions. She regarded herself as the queen of the whole country, and not of any particular faction or party. She appealed to the national spirit and the humanity side of life. She persecuted for treason, but not for religion. In order to uphold the authority of the state, she sometimes resorted to harsh methods, but she saved her country from the dangers of a religious war.

Though she was more tolerant and less cruel than her Catholic sister who had ruled before her, she interfered in religious worship. She was determined that all of the people in the country should go to church and use the new prayer-book. She persecuted those who would not conform. She imprisoned clergymen for holding private religious meetings, but she did not burn them at the stake. She dressed in deep mourning when she heard of the "Massacre of St. Bartholomew" at Paris. She was led to regard the Catholics as more dangerous than the Puritans, and she severely punished them for acts which she regarded as treasonable. On account of Catholic plots against her, she was finally led to sign the death warrant of Mary, Queen of Scots, who after conducting herself disgracefully in her own country, had gone to visit Elizabeth.

Elizabeth possessed a strong will, indomitable courage, admirable judgment, and great political tact. It was these qualities which rendered her reign the strongest and the most illustrious in the record of England's sovereigns, and raised the nation from a position of insignificance to a foremost place among the states of Europe. Her three leading maxims of policy were to secure the affections of her people, to be frugal of her treasures, and to excite dissension among her enemies.

In 1588, after she had called her people to arms for defense against Philip II. who threatened to invade English soil, she appeared in the camp at Tilbury, like an Amazon in armor, and proudly said to her soldiers as they stood in rank and file: "Let tyrants fear. I have always so behaved myself that, under God, I have placed my chiefest strength and safeguard in the loyal hearts and good-will of my subjects, and therefore, I am come amongst you, as you see by this time, not for my own recreation or disport, but being resolved in the midst and heat of the battle to live or die amongst you all; to lay down for my God and for my kingdoms, and for my people, my honor and my blood, even in the dust. I know I have the body but of a weak and feeble woman, but I have the heart and stomach of a king, and of a king of England too; and think foul scorn that

Parmia, or Spain, or any prince of Europe should dare to invade the borders of my realm, to which rather than any dishonor shall grow by me, I myself will take up arms; I myself will be your general, judge, and rewarder of every one of your virtues in the field."

She aroused an enthusiasm which was only exceeded by the later destruction of the Spanish Armada—an event which gave renewed courage to the cause of the Reformation in every Protestant country in Europe, and also prepared the way for England to rule the waves.

Though she was moderate and humble in the early part of her reign, she became haughty and severe when suppressing insurrection. When a rebellion broke out in Ireland, she began a war of extermination, which was so merciless that she declared if the destruction continued much longer "she should have nothing left but ashes and corpses to rule over."

Though she was economical, she kept a brilliant, royal household, and crowded her receptions with many gay and frivolous courtiers. Her dining-hall resounded with the music of drums and trumpets. Twenty-four courses were served at dinner on gilded dishes, and were brought in by gentlemen and lady attendants in gorgeous costumes. As a protection against poisoning, every person who brought in a dish of food was obliged to taste it before it was placed on the royal table.

"Elizabeth herself is an enigma," says Mary. "We do not quite know whether she was a short-sighted, fickle-minded woman, living along from hand to mouth, trying at first one experiment then another, or whether she possessed a sort of superhuman genius for statesmanship which enabled her to foresee the outcome of the most occult political forces, to form a secret plan and carry it into effect by deceiving and outwitting her own statesmen and philosophers, and the potentates of Europe. Looking at results Elizabeth's reign was fortunate for England. On the theory that the monarch was weak and fickle, there was a fortunate coincidence between these qualities and the needs of England. On the theory of transcendent ability, Elizabeth saw into the mind and heart of her people and determined at all hazards to give that people the best possible chance. Whatever may be the theory accepted, the fact remains that there is essential harmony between the apparent needs of the nation and the personal qualities of the monarch."

In childhood, she was especially fond of history, and in her later life she read it almost every day without growing tired of it. She saw the follies and mistakes of her ancestors, and was enabled to avoid many shoals and quicksands. She learned to work hard, and to rule her household with rigid economy. She was conscious of her power, and knew how to court popularity, but she kept a head turned by flattery and homage. By her fantastic dress she dazzled the eye with her pomp, and impressed the mind with her power, but she acted

Elizabeth.—*Continued*

from policy rather than from vanity. She closely watched the drift of public opinion, and with a clear judgment she always knew when to change her policy. She could hesitate, fume, and bluster, but she knew when to yield. She could see the tendencies and needs of the age, and knew how to adapt herself to them.

Though gay and artful she had many fine and strong points of character. She was a woman of strong will and great courage, but of a peaceful and conciliatory spirit. She had a remarkably good judgment. Though she often appeared self-willed, vain, changeable, fickle, and deceitful, she truly loved her country and her people and sincerely sought their happiness. In her first speech to Parliament she said that "nothing, no worldly thing under the sun, was so dear to her as the love and goodwill of her subjects." Though she domineered over bishops and nobles, she desired to use her will for the good of the nation. When her will clashed with that of the nation, she knew how to give way, frankly, heartily, and gracefully. She was prudent and moderate.

In her private character, Elizabeth lacked the milder and softer virtues of her sex. She had an arbitrary, passionate temper which sometimes led her to swear like a trooper, spit on a courtier's new velvet suit, beat her maids of honor, and box the ears of her favorite suitors. Living in an age of craft and intrigue, when fraud had partly taken the place of force, she practised deceit until she had few equals in the art of lying.

Near the end of March, 1603, Elizabeth became restless and melancholy. She refused all medicine, and for days and nights she sat silent, with her finger pressed on her mouth. When Cecil asked whom she desired to succeed her, she said: "My seat has been the seat of kings; I will have no rascal to succeed me." On March 24, she expired and went to join the silent majority. When her body was being taken down the Thames to Westminster, an extravagant eulogist declared that the very fishes that followed the funeral barge, "wept out their eyes and swam blind after." The "golden days of good Queen Bess" were long remembered in contrast with those of her successor.

Elizabeth, Pauline Ottilie Luise.—The Queen of Rumania, wrote under the name of "Carmen Sylva"; was born in 1843 and is the wife of Charles of Rumania, whom she married in 1869.

Elizabeth City.—A city in N. C., on the Pasquotank River; the scene of a naval victory by the Federals under Commodore Rowan, Feb. 10, 1862. Pop. (1900), 6,348.

Elk, The.—See DEER, 2417.

Elk Mountains.—Situated in western Col., of which the highest summit is Castle Peak, 14,115 feet.

Elkhart.—A city in Indiana, at the junction of the Elkhart and St. Joseph Rivers. Pop., 15,184.

Ellery, William.—Born at Newport, R. I., 1727; died there 1820. He was one of the signers of the Declaration of Independence.

Ellet, Charles.—Born at Penn's Manor, Pa., 1810; died at Cairo, Ill., 1862. An engineer, who first introduced the use of wire suspension bridges in America. When acting as colonel in the Union army during the Civil War, by a fleet of Mississippi steamers which he had converted into rams, he sank or disabled several Confederate vessels off Memphis, in 1862. During the action he was mortally wounded.

Ellicott City.—A city in Md., on the Patapsco, formerly called Ellicott's Mills; the seat of St. Charles and Rock Hill Colleges, both Roman Catholic. Pop. (1900), 1,331.

Elliott, Charles Loring.—Born at Scipio, N. Y., 1812; died at Albany, N. Y., 1868. An American artist, elected national academician in 1846.

Elliott, Jesse Duncan.—Born in Md., 1782; died at Philadelphia, 1845. An officer of the U. S. navy. At the battle of Lake Erie (1813), he was second in command under Commodore Perry. In the Algerian War (1815), he commanded the war-sloop "Ontario," in Decatur's squadron.

Elliott, Stephen.—Born at Beaufort, S. C., 1771; died at Charleston, S. C., 1830; distinguished as a botanist, and author of "Botany of South Carolina and Georgia."

Elliott, Stephen.—Born at Beaufort, S. C., 1806; died at Savannah, Ga., 1866; son of Stephen Elliott. He was a bishop of the American Protestant Episcopal Church.

Elliott, Washington L.—Born in Pa., 1821. An officer of the U. S. army. At the outbreak of the Civil War he was a subaltern in the 1st U. S. Cavalry; was made colonel of the 2d Iowa Cavalry; served in the west, and reached the rank of major-general.

Ellis, George Edward.—Born, 1814; died, 1894. A noted Unitarian clergyman, and professor of Systematic Theology in Harvard Divinity School (1857-63). He was the author of "A Half Century of the Unitarian Controversy" and other works.

Ellsworth, Ephraim Elmer.—Born at Mechanicsville, N. Y., 1837; killed at Alexandria, Va., May 24, 1861. A volunteer officer of the U. S. army in the Civil War. He went to Chicago a few years before the war and engaged in business as a solicitor of patents. He had a strong military bent and organized a company of zouaves, which he brought to very high proficiency in drill. He made a tour of the country with his company and gave exhibitions. The wonderful agility and skill of the zouaves and their fantastic uniforms attracted multitudes of people. Ellsworth and his company escorted President-elect Lincoln, from Springfield, Ill., to Washington, in Feb., 1861. At the first note of war, Ellsworth went to New York, organized the famous New York Fire Zouaves—11th New York Volunteers—and was elected its colonel. It was a unique body of men, composed entirely of members of the New York fire department. It was quickly raised and equipped for service, and early in May went to Washington. On the day of its arrival a fire broke out in Willard's Hotel and got beyond the control of the local

- firemen. Col. Ellsworth marched his Zouaves to the scene, at a double-quick pace. They swarmed around and into the burning building and soon had the fire subdued. May 24 the Fire Zouaves were sent to occupy Alexandria, Va., on the Potomac River, a few miles below Washington. The few hostile troops in the town fled at their approach. Col. Ellsworth saw a Confederate flag flying from the roof of the Marshall House, a hotel kept by James T. Jackson. Ellsworth dashed into the building to secure the flag. As he was ascending a stairway he was shot and killed by Jackson.
- Ellsworth, Oliver.**—Born at Windsor, Conn., 1745; died there, 1807. A statesman and jurist. He was U. S. senator from Conn. (1789-96); chief-justice of the U. S. Supreme Court (1796-1800); envoy extraordinary to France, 1799.
- Ellsworth, William Wolcott.**—Born at Windsor, Conn., 1791; died at Hartford, Conn., 1868. Son of Oliver Ellsworth, and governor of Conn. (1838-42).
- Elm, The.**—2858.
- Elm City.**—A name for New Haven, Conn., on account of the number and beauty of its elms.
- Elmira.**—A city in N. Y., on the Chemung River; noted for its manufactures of iron, etc., and as the seat of Elmira Female College and of the State Reformatory. Pop. (1900), 35,672.
- Elocution.**—3102.
- Breathing, 3103.
 - Quality of the Voice, 3104.
 - Vocal Inflections, 3106.
 - Declamation, 3107.
 - Gesture, 3108.
 - Oratory, 3110.
 - Preparation, 3111.
 - The Debating Club as an Educator, 3112.
- El Paso.**—A town in El Paso County, Tex., on the Rio Grande, opposite El Paso del Norte. Pop. (1900), 15,906.
- El Paso del Norte.**—A town in Chihuahua, Mexico, on the Rio Grande opposite El Paso. Pop., about 8,000.
- Elsinore or Helsingor.**—A seaport town in Zealand, Denmark. A reference is made to it in Shakespeare's "Hamlet." Pop., about 12,000.
- Elysian Fields.**—A region near the ancient town of Baiæ, Italy, which was especially fertile and beautiful and was thought to resemble the Elysian Fields of Greek mythology.
- Elysium.**—The resting-place of the souls of the good and of heroes who have been immortalized. It was thought to be a place of exceeding bliss.
- Elzevir.**—A family of Dutch printers who published editions of the classical authors between the years (1583-1670). They published in all 1,213 works of all kinds.
- Emancipation Proclamation.**—Early in the Civil War many persons began to agitate for a proclamation from the President declaring the slaves free. It was the intention of President Lincoln, as he declared, to preserve the Union without freeing the slaves, if possible. Sept. 22, 1862, he issued a preliminary proclamation, as a war measure, calling upon all the people in rebellion against the U. S. to return to their allegiance, promising measures of relief in case of compliance and declaring that in a 100 days thereafter he would declare the slaves to be forever free in those states and parts of states which should then be in rebellion. This had no effect. Accordingly, on Jan. 1, 1863, President Lincoln issued an official proclamation, declaring the freedom of the slaves in all the states which had seceded, excepting the 48 counties in W. Va., seven counties in Va., including the cities of Norfolk and Portsmouth, and 13 parishes in La., including the city of New Orleans. The thirteenth amendment to the Constitution, in force Dec. 18, 1865, completed the work of emancipation by which 3,895,172 slaves were made free.
- Emanuel I.**, called "The Great" and "The Happy." King of Portugal.
- Embargo.**—See JEFFERSON, THOMAS, 337.
- Emerald Isle, The.**—A name given to Ireland because of its verdure.
- Emerson, Ralph Waldo.**—(1803-1882.) A celebrated essayist and lecturer. He was the eighth in succession in a line of Puritan ministers, but left the church as he felt that the restrictions of the pulpit narrowed his expression and teaching. He formed a close and important friendship with Thomas Carlyle. Except when he came out of his retreat at Concord, Mass., to



lecture and to speak to the people, he had little intercourse with the world. He is best known by his "Essays," "The Conduct of Life," and the "Oration on the Death of President Lincoln." He was also a writer of verse, which, like his prose is marked by an uplifting and encouraging style, though philosophical and mystic in treatment of subject.

Émigrés, Les.—The emigrants who left France in 1789 and later.

Emin Pasha, or Bey (EDUARD SCHNITZER).—Born Germany, 1840. Killed in 1892 by the Arabs. A noted African explorer.

Eminent Domain.—The original or superior ownership, retained by the people or state, by which land or other private property may be taken for public use or benefit. This is the most definite principle of the fundamental power of the government, with regard to property remaining in the government or in the aggregate body of the people in their sovereign capacity, giving the right to resume original possession in the manner directed by law, whenever its use is essential to the mutual advantage and welfare of society. If, for instance, the proper authorities deem it necessary for the general good to open a street, lay out a park, dig a canal, abate a nuisance, charter a railroad, etc., and the owners of the land on the route or space desired refuse to sell, or demand an exorbitant price for their property, the state, by right of eminent domain, has the power of control, and the courts may compel the surrender of the property, upon due compensation being determined by a board of appraisers. The Constitution of the U. S. limits the exercise of the right of eminent domain to cases where public good demands it, and requires adequate compensation to those from whom property is taken.

Emmet, Thomas Addis.—Born at Cork, Ireland, 1764; died at New York, 1827. An Irish-American lawyer and politician; brother of Robert Emmet, the Irish patriot. In 1804 he settled in New York, where he practised law and became attorney-general of the state in 1812.

Emory, William Hemsley.—Born in Md., 1811. An officer of the U. S. army. He was graduated from West Point in 1831, and became a lieutenant of topographical engineers; was on the staff of Gen. Kearny in the Mexican War; served through the Civil War as brigadier-general and major-general; in 1863 he commanded a division in La., under Gen. Banks, and was conspicuous in the operations against Fort Hudson; in 1864 he commanded the 19th corps in Bank's Red River expedition; later in that year he was transferred, with his corps, to Va., and served with distinction under Sheridan, during the latter's campaign against Early; was noted for good conduct at Opequau and Fisher's Hill. He was a scholar of high attainments and wrote several books on military and topographical topics. He died at Washington, D. C., Dec. 1, 1887.

EMPIRE, THE STRUGGLE FOR COLONIAL

CAUSES OF THE SEARCH FOR NEW MARKETS—ENGLAND CEASES TO GROW HER OWN FOOD SUPPLY—THE EXPANSION OF THE BRITISH COLONIAL EMPIRE—THE CONQUEST OF INDIA—GREAT BRITAIN AS THE TRUSTEE OF CIVILIZATION IN EGYPT—THE PARTITION OF AFRICA AND THE STRUGGLE FOR ASIA—THE EXPANSION OF RUSSIA IN SIBERIA—THE TRANS-SIBERIAN RAILWAY—THE RISE OF JAPAN—THE UNITED STATES IN THE PHILIPPINES—POLICY OF "THE OPEN DOOR"—THE POWERS IN CHINA AND THE MARCH TO PEKIN.

THE civilized world stands at the beginning of the twentieth century upon the threshold of a struggle for new markets and for opportunities for investment in the undeveloped countries, which promises to give color to the entire political and economic life of the century. The movement to acquire territory beyond the national boundaries is not a novel one in the history of the world, and it has on previous occasions, as at present, grown out of the search for trade in new markets; but the struggle upon which the civilized nations have recently entered has some peculiar characteristics, which have not belonged to such struggles in the past. The essential difference between the present movement and previous colonial enterprises is the severity of the industrial competition, which has resulted from the use of machinery. On the one hand, every manufacturing nation has become capable of producing a vastly greater quantity of exchangeable goods than ever before, while on the other hand, these goods can be laid down in the most distant markets, at a trifling cost, by the aid of the improved means of transportation due to the development of steam power.

The foreign trade of previous ages was largely a trade in a few luxuries that did not affect vitally the consuming power and industrial life of the nation. The raw ma-

terials of manufacturing industries were usually found within the country, and the food supply which sustained the laborers was not far removed from the manufacturing centers. The foreign commerce of to-day is essentially different. The whole economic and industrial life of manufacturing nations is linked with their ability to buy raw materials at low prices in foreign markets, to transport them, as economically as do their rivals, to the centers of manufacture, to transform them at the lowest cost into finished goods, and to sell in foreign markets upon terms as favorable as those of the most skilful and efficient of their competitors. How keenly a nation suffered from economic changes abroad even forty years ago, before the system of modern machine production had interwoven, to anything like the present degree, the interests of each country with those of all others was shown by the cotton famine in Lancashire, which followed the cutting off of the American cotton supply. To-day, a war in any quarter of the globe is likely to affect all nations by influencing the prices or the supply of raw materials or by reducing the market for finished goods. This sensitiveness of the world market is further augmented by the organization of the money market and the credit system, which causes any event affecting the world's producing or purchasing power, even by the threat of disturbance, to react upon the demand and supply of goods, and hence upon their prices and upon the demand for money and capital. It is of vital importance, therefore, for the greater manufacturing nations to make sure of their command over all the instruments of production, upon terms as favorable as those secured by any of their competitors, and to have access to sufficient markets abroad, as well as at home, to absorb the enormous output resulting from machine production.

Great Britain was the first nation to enter seriously the field of modern industrial colonization. Some of her earlier conquests, like those of Spain and Portugal, were of a less distinct economic character, but grew out of her position as the mistress of the seas and from the daring and skill of her navigators. When the Napoleonic wars were at an end, England, by means of the security which she had enjoyed for more than twenty years, while every part of Europe was threatened by the tramp of Napoleon's armies, found herself the chief manufacturing nation of the world. It soon became evident that the high duties levied upon the raw materials of industry were an injury to her manufactures, and that they might enable competitors to grow up, who would drive her to the wall. Hence came the proposition of Huskisson, one of the most foresighted statesmen of the Tory government, that the raw materials of industry should enter England free of duty. His plans were gradually carried out. Raw silk was made free of duty, the duties on wool were reduced, and those on the metals were cut in two in 1824, and 1825. The process was already going on which was to convert England from an agricultural into a manufacturing nation and which would compel her to seek beyond her own soil the food supply for her thousands of factory laborers. This movement culminated in the abolition of the corn laws, which had imposed such excessive charges upon imported food, and which did so much to add to the misery of Ireland during the famine years, from 1845 to 1847. The landed aristocracy fought in vain to retain the duties, maintaining the proposition that England should be kept self-sufficing in her food-supply. The manufacturing interest, supported by the outbreak of feeling against duties on food in the face of starvation, was strong enough to over-ride the landlords. The corn laws were repealed May 16, 1846, and manufacturing England became paramount to the agricultural England of the centuries gone by.

The foundations of the British Empire in India had been laid before the necessity for markets and for fields of investment had dawned, with its modern meaning, upon English statesmen. Spain and Portugal were the first to break in upon the seclusion of Asia and the East Indies. Magellan, while in the service of Spain, was killed in 1519

in a battle with the natives at Zebu, one of the Philippines. The permanent conquest of the Philippines for Spain was made by the famous Admiral Legaspi, in the middle of the sixteenth century. He founded Manila in 1751, and surrounded it by a wall, after the model of a Spanish city. The decline of the Spanish power prevented further progress in the Orient, but several important islands, including Java and Sumatra, were occupied at the beginning of the seventeenth century by the Dutch East India Company, and important factories were erected not only on these islands, but on the shores of India, the Red Sea, and the Persian Gulf. France, also, was an adventurer in Eastern waters and still holds several strong posts, like Pondicherry on the coast of British India.

The romantic story of the English conquest of India,—how Clive won his victory at Plassey (1757), how kingdom after kingdom was annexed by British governors, and how Arthur Wellesley, afterward Duke of Wellington, won his spurs in putting down rebellion at Assaye (September 23, 1803),—belongs rather to the earlier history of the colonization than to its later aspects. But in India were laid the foundations of an Empire which has proved one of the strongest arms of Great Britain and which has afforded an opportunity not only for trade, but for the development of the finest qualities of English manhood. All through the nineteenth century, progress was made in the extension of British power in India. From 1818 to 1838 there was a long reign of quiet, during which native princes learned to appreciate the firmness of British rule, and the conquered and tributary provinces were organized upon a permanent basis. The only war of importance during this period was that with the king of Burma (1824–26), which resulted in adding the entire province of Assam, at the foot of the Himalayas, to the territory under British Government. Then came the British invasion of Afghanistan, with the horrible massacre of Kabul, where 4500 British, and Indian, troops were cut down by the Afghans, after a promise that they should be given free exit from the country (1842). Summary vengeance was inflicted upon Kabul and the Afghan people; but this was only the beginning of a number of serious uprisings which tested the capacity of successive governors-general to maintain British authority. Nearly every conflict, however, resulted in a new extension of British power. After the Sikh army laid down its arms, and the province of the Punjab (adjoining Afghanistan) was annexed (March, 1849), the British administration did so much to quiet the country that when the Sepoy mutiny broke out, the Sikhs were enlisted by thousands in putting down the rebellion.

The Sepoy mutiny began in earnest with the revolt of the native brigade at Meerut, near Delhi, on May 7, 1857. The mutineers shot many of their officers, seized the ancient Indian capital, murdered scores of Europeans, and saluted the aged Mogul prince as emperor of India. The European troops in India were fewer than usual, because of serious calls for men in China, but the government acted with a promptness appropriate to the emergency, and soon taught the mutineers that British power could not be safely resisted. Sir John Lawrence, who was cut off in the North, disarmed the Sepoys in the Punjab district, marched against Delhi, and with a force far inferior in numbers to that of its defenders, stormed the city in six days of desperate fighting (September 14–20, 1857). A small force which had been promised free passage by river to Calcutta, was attacked at Cawnpore, the men were murdered, and their bodies, hacked to pieces, were cast into a well. The famous relief of Lucknow was achieved by Sir Henry Havelock, who had arrived at Calcutta with troops returned from the Persian war. He reached the besieged garrison on September 25, but it was not until November that Sir Colin Campbell came up with a force large enough to rescue the garrison and escorted the men to a place of safety. Troops now poured into India by tens of thousands, and the rebels after repeated defeats received their final blow at Bareilly (May 7, 1858). The

conclusion of the mutiny was followed by a change in the civil organization of India, by which the control of the East India Company was brought to an end and the whole machinery of government was placed under a Secretary of State for India, and a viceroy appointed by the queen. The next twenty years were again a period of quiet, marked by agricultural improvements, by the building of railways and canals, and by other measures of internal development, which cemented English power throughout India.

Lord Beaconsfield was the first modern English statesman to recognize the importance to England of the future of her colonial empire. When he became a part of the conservative ministry, in 1866, he enunciated the conception of England as an imperial power, interested in the maintenance and development of her colonial and Indian empire. English foreign policy had been weak and evasive under the Liberal party, and when Beaconsfield finally entered upon his long term of power as prime minister, in 1874, the time was almost ripe for public appreciation of his ideas. He proclaimed Queen Victoria empress of India, on January 1, 1877, and he returned from the conference of Berlin, which decided the fate of the Christian provinces of Turkey, declaring that he brought "peace with honor." He lived only three years longer to enjoy the fruits of his policies; but so fully pledged was Great Britain to the resolute foreign policy, which came to be called "Imperialism," that even Gladstone was compelled by circumstances and by public opinion to order the bombardment of Alexandria when British influence was threatened in Egypt.

The control of Egypt by the great powers is one of the most striking illustrations of the modern tendency to acquire financial and economic control of the undeveloped countries, even where complete sovereignty is not asserted. Lord Beaconsfield first brought England into a prominent place in the affairs of Egypt by purchasing from the Khedive his shares in the Suez Canal. The large traffic which passed through the Red Sea to the Orient, after the construction of the canal in 1870, made it of vital importance that order should be maintained in all the adjacent countries. The Khedive wasted the resources of Egypt until the government was practically bankrupt, and Great Britain and France interfered, in 1879, for the protection of the foreign bondholders. The old Khedive, Ismail, was compelled to abdicate, and his son Tewfik accepted what was known as the "Dual Control." This was exercised by the two powers through their ministers at the Egyptian court, who dictated expenditures and endeavored to secure a proper use of the revenues. Their interference cut off some of the perquisites of the native officials, and an ambitious officer named Arabi Pasha put himself at the head of the movement, with the watchword, "Egypt for the Egyptians." The troops supported him, he seized the person of the Khedive, and drove away the foreign ministers (April, 1882).

Mr. Gladstone, who was in power at London, hesitated for a moment but soon ordered the Mediterranean squadron to Alexandria. A great riot broke out in the city, directed against all Europeans, many of whom were massacred.

The insurgents under Arabi believed that the British and the French fleets were in the harbor merely for the sake of a demonstration. They proved to be right in the case of France. The French fleet sailed away, while the British admiral, Seymour, notified Arabi to stop fortifying Alexandria. When his mandate was refused, he bombarded the town (July 11, 1882); it was deserted by Arabi, but was nearly wrecked by the mob before British marines could be landed to restore order. This was followed up by a vigorous campaign on land, under Sir Garnet Wolseley, which soon drove Arabi from one point to another, until he was captured and sent to Ceylon. The Khedive was placed on his throne, but an English army remained in Egypt to see that order was maintained. Mr. Gladstone promised the French and Turkish Governments that

the British troops should be removed when the maintenance of order was permanently assured, but the time never arrived when these conditions were fulfilled. While the Khedive nominally governed, a few British officers and financiers, advised what course to pursue, and when he showed signs of restlessness, British troops and ships were ready to enforce obedience. Under Sir Evelyn Baring, afterward Lord Cromer, the financial system of Egypt was organized, corruption was brought to an end, taxation was reduced, the revenues were increased, and the debt of Egypt, guaranteed by France and Great Britain, is to-day quoted on the stock exchanges above nearly every loan of continental Europe. The corrupt, barbarous, and wasteful government of the Turks, which alarmed the owners of capital, and discouraged enterprise, has given place to a degree of security which has promoted the building of railways, has permitted the irrigation of the Delta of the Nile, and has given the possibility of a contented and well-ordered life to the oppressed fellahs, who were formerly in a worse condition than that of slavery. Lord Cromer and Sir Herbert Kitchener, who was for several years the military adviser of the Khedive, had only to indicate the measures which they considered wise to have them adopted by the Khedive.*

Southern Egypt, known as the Sudan, was already lost to civilization before the rebellion of Arabi Pasha in lower Egypt. A fanatic named Mohammed Hamed proclaimed himself the prophet expected to appear before the last judgment, and announced that he was the destined conqueror of the world. A British army under Gen. Hicks was cut to pieces (November 5, 1883) and Gladstone determined to abandon the Sudan. Charles Gordon, who had made a remarkable reputation in China, was surrounded and massacred in Khartum, with 11,000 of his garrison (January 26, 1885), and all of Southern Egypt passed under the control of the Mohammedan fanatic. His reign was soon ended by death (June 22, 1885), but his successor, known as Khalifat el Mahdi, destroyed the towns, in order to wipe out the memory of civilized rule, and spread desolation over all the Sudan. The British Government at last began to realize that its own national interests, as well as the more remote interests of civilization, were threatened by the surrender of a great and populous country to barbarism. Kitchener, "the man of certainties," was allowed to organize the Egyptian army and was strengthened by English troops. Moving South early in 1896, he won a series of victories which culminated at Atbara (April 8, 1898), and was soon followed by the capture of Omdurman, and Khartum (September, 1898), and by the rescue of the Sudan for civilization.

While these events had been going on in Egypt, the whole of Africa was being parceled out among the great powers of Europe, eager for territory and for opportunities for commercial development. Great Britain had been the chief power in Africa down to 1880. Only scattered possessions along the coast were occupied, even by the British, in order to afford outlets for the trade of the unknown regions of the interior. The most important establishments were in South Africa, where Cape Town had been acquired by treaty of Vienna in 1815. The original settlers of South Africa were Dutch, and independent states such as the Transvaal, or the South African Republic, were long maintained there. The Transvaal was annexed to Great Britain in 1877, partly to protect the people against the Kaffirs, who were constantly attacking the white settlers. It was in the most important of these wars that the young Prince Napoleon, son of Napoleon III., was killed in 1879. The Boers rose against the British in 1880, and inflicted a severe blow at Majuba Hill (February 27, 1881). Mr. Gladstone, who was then in power, granted them independence under a nominal admission of British sovereignty.

*For some of the details of these improvements, see Sanderson's "Africa in the Nineteenth Century," ch. VI., pp. 136, 46.

Then came the discovery of the gold mines of the Transvaal, which attracted thousands of British subjects to the Witwatersrand, and built up the flourishing town of Johannesburg. The Boer Government refused to grant the franchise to the British settlers, and a variety of causes of irritation finally led to a crisis. An ultimatum was transmitted to the British Government by the Transvaal Republic (October 9, 1899) in terms which made war inevitable, and the Boers were aided by the Orange Free State, mainly peopled by men of their own race. The British at first underestimated the task before them and met serious reverses at Magersfontein, Colenso Hill, Spion Kop, and elsewhere. The British people then became thoroughly aroused, and dispatched to South Africa Lord Roberts, their master in strategy, and Lord Kitchener, who had rescued the Sudan in 1898. They retrieved some of the blunders of their predecessors, relieved Kimberley (February 15, 1900), and Ladysmith, captured 4,000 Boers under Kronje, and occupied Bloemfontein, the Free State capital (March 13, 1900). The war still dragged along with obstinate resistance on the part of the Boers, however, and it was long before terms were finally forced upon the South African Republic.

While British power was being thus extended, powerful rivals of Great Britain in Africa had been growing up under the influence of the new policy of colonialism on the continent of Europe. Prince Bismarck endeavored, as early as 1880, to enter upon an imperialistic policy for the promotion of German commerce abroad. He sought at that time to secure a loan of \$2,500,000 from the *Reichstag* for a new corporation which took over the property of an older one, with many trading establishments in the Southern Pacific, including the Samoan Islands. He failed to secure the support of the *Reichstag*, but the new South Sea Company received the moral and political support of the cabinet. Then came the German interference in Samoa, which led to friction with Great Britain and the United States, the revolt of the pretender, Tamesese, encouraged by the Germans, the tripartite control by the United States, Great Britain, and Germany in 1887, and finally, the division of the islands between Germany and the United States by the treaty of November 14, 1899, to which Great Britain assented.

The venture in Samoa was only a part of the new colonial policy of Germany. A foothold was obtained in New Guinea in 1885, and the territory was christened Kaiser Wilhelm's Land. Nothing but prompt action by Great Britain prevented the seizure of the entire island and the creation of a threatening neighbor for the Australians. More important in a territorial and financial sense were the acquisitions of Germany in Africa. Bismarck persevered in seeking the support of the *Reichstag* for his colonial policy and encouraged the creation of a colonial association, with seven thousand members, throughout Germany. A colonial bank, with a capital of \$7,500,000, was founded in 1884 at Hamburg. A colonial office was soon after created by the Government, and comprehensive plans were carried out for obtaining a footing in East and West Africa. Certain rights acquired by a Bremen merchant prior to 1880, North of the Orange River, were made the occasion of conventions with local chieftains, which resulted in the creation of German West Africa, with an area of 322,450 square miles, under the authority of an imperial commissioner. A German gunboat came to the rescue of German merchants threatened in the Kamerun district in 1884, hoisted the German flag, and took possession of the entire tract between the British Niger Company on the north, and French Congo on the south. In Eastern Africa, a protectorate was established in 1885, which was extended the next year, with the consent of Great Britain, to a large region in the interior, back of the Zanzibar Coast, and up to Lake Victoria Nyanza. When the Arabs revolted in 1889, the Government abolished the administration of the East African Society and established its own direct control.

German East Africa is the largest and most populous of German colonies, embracing 384,180 square miles, and containing eight millions of people. The entire German Empire in Africa has been extended to include 930,760 square miles and 14,200,000 people. The number of Europeans residing in these districts is small, their trade is limited, and they are a source of expense to the imperial government, but in the struggle for markets and opportunities, the time may come when the German people will have occasion to thank the foresight of Prince Bismarck in obtaining for Germany a share in the struggle of the nations for colonial establishments.

Italy entered the field of competition for colonial power in 1885, when she seized the town of Massowah, in Abyssinia. King John of Abyssinia undertook to expel the Italians, but Prince Menelik, one of his subject princes, entered into an arrangement by which he came to the aid of the foreigners, and was himself seated on the throne, with Italian support. Many commercial privileges were ceded by the treaty between Menelik and the king of Italy (September 25, 1889), but the attempt of the Italian cabinet to extend their suzerainty over the whole of Abyssinia resulted in revolt, after some delay, in 1895. The Italians met a crushing defeat near Adowa (February 29, 1896), and were compelled to acknowledge the independence of Menelik. A considerable strip of territory on the Red Sea, known as Eritrea, and Somaliland, on the India Ocean, the two having an area of 188,500 square miles and a population of 850,000, are what Italy has to show for her colonial ventures.

France, in spite of her somewhat bureaucratic methods of government, was a great power in Africa early in the century, and has greatly extended that power in recent years. After Great Britain, she ranks as the greatest colonial power in the world, in the extent and population of her domains; and with the great Empire of India, with its teeming millions, out of the account, France would press Great Britain close in the number of her subject population.

France conquered Algeria in 1830, bringing to a permanent end the reign of piracy which the United States and Great Britain, fifteen years before, had shaken, but had not destroyed. The French army, which entered Algiers (July 5, 1830), was sent to Africa to punish political outrages and to maintain the prestige of the tottering Bourbon dynasty at home. They found the suppression of the Turkish corsairs easier than the subjugation of the Arabs, who maintained a stubborn war for seventeen years, under the brilliant and humane chief, Abd-el-Kadr. He at last surrendered in 1847, but this was far from ending the local revolts, which broke out with peculiar violence when the French garrisons were reduced, in 1870, to supply men for the war with Germany. The French, although not the most tactful administrators, gradually converted Algeria into a civilized state, with 2,156 miles of railway, 1,815 miles of national roads, and 5,025 miles of telegraph routes. Exports which go to France in the proportion of five-sixths, amounted in 1897 to 276,708,518 francs (\$54,000,000). The military and civil establishments of Algeria are estimated to have cost the French Government \$1,000,000,000 from 1830 to 1890, and they still draw a considerable sum annually from the French Treasury.* The population is about 4,430,000, of which 600,000 are white. Algeria has been treated, since the establishment of civil government, as one of the departments of France, and has representatives in the Chambers.

In spite of the heavy cost, in both blood and money, of the conquest of Algeria, France kept covetous eyes fastened upon the neighboring state of Tunis, which included the site of ancient Carthage and some of the best harbors of northern Africa. French influence was potent at the court of Tunis, after the conquest of Algeria, and France finally, in 1881, forced the Bey to acknowledge her protectorate. The adminis-

* Morris's "History of Colonization," I., p. 450.

tration is in the hands of a cabinet chiefly composed of Frenchmen who act under the direction of a bureau of Tunisian affairs at Paris. Tunis, therefore, is already more strongly under the control of France than is Egypt under the control of Great Britain, and it will eventually be annexed upon the same basis as is Algeria. The larger part of the commerce of Tunis is carried on with France; it amounted in 1898 to about \$12,500,000 in imports and \$10,500,000 in exports.

In the struggle for colonial establishment under the tropics, the large Island of Madagascar, off the east coast of Africa, has fallen into the lap of France. The French title descended from before 1686, when the island was formally annexed to the French crown by Richelieu. The claim was practically abandoned, however, and the trade of the island remained more largely in English and American, than in French hands, until France again acquired political possession. A naval force was sent to the island in 1883, ostensibly to redress some wrongs done to French settlers and to a friendly local tribe. Peace was made in 1885 upon the condition of a cession of land for a French colony and the acceptance of a French resident as adviser to the native government. Friction continued, because of the obvious anxiety of the Hovas, the ruling race, to give trade preferences to the British and the Americans. When the government refused submission to the acceptance of an absolute protectorate, France declared war (November, 1894). Troops were landed in the following April, entered the capital (September 30, 1895), and compelled the acceptance of a full French protectorate. Formal annexation of the territory to France followed in August, 1896, the queen was deposed in February, 1897, and foreign governments were notified that a discriminating tariff in favor of French products was levied upon imports from other countries.

The establishment of the king of Belgium in the Congo Free State, in the heart of Africa, has been one of the most prosperous, commercially, of African Colonies. The total trade more than doubled from 1894 to 1898, and amounted to \$9,054,000 in the latter year, of which \$6,960,000 was with Belgium. The Congo Free State originated in an effort to promote systematic research in an harmonious manner, and to discourage the slave trade. The International African Association was created for this purpose, in 1876, under the patronage of the king of the Belgians. The Association came into conflict with the claims of France and Portugal, in Central Africa, with the result that a conference was called at Berlin. The International Association was awarded by the convention of February 26, 1885, a territory of 1,100,000 square miles and 40,000,000 people, with authority to organize an independent state. The seat of government is at Brussels, the king of the Belgians is the governor, and in 1890 a treaty between the Belgian Government and the Congo Free State authorized the annexation of the latter at some future time. The king in the meantime has, by will, left to the Kingdom of Belgium all his rights and interests in the Congo, so that this vast territory, slightly reduced by later treaties, is for all practical purposes, a dependency of Belgium.

The limits of French, English, and German control in Central Africa were defined by the treaty of Berlin in 1885, which paved the way for later agreements between Great Britain and France (August 5, 1890, and June 14, 1898), and between Great Britain and Germany (November 15, 1893), more carefully limiting boundaries. These agreements were not reached before there had been serious risks of a clash between the earth-hungry powers in various parts of Africa. The French had small settlements at Senegal and on the Ivory coast, which they began after 1880 to extend inland. It was to checkmate their projects, and to keep the basin of the Lower Niger free from trade, that the Royal Niger Company was organized in 1885. The treaty of 1898 gave the lands on the middle Niger to France, and those along the lower Niger to Great Britain. Great

Britain and France came to the verge of war in the spring of 1898, from a clash at Fashoda, in southern Egypt. Kitchener had just rescued the country from barbarism, when a small French exploring party, under Major Marchand, reached Fashoda and seized it in the name of France. Lord Salisbury, the British premier, notified France that this force must be withdrawn. The French Government yielded, and a treaty was signed, conceding that the whole Nile basin was within the English sphere of influence.

With Egypt subject to British dictation, and her borders extended to the upper Nile; with South Africa a part of the British Empire; with northern Africa practically in the hands of France, and with the intervening territories parceled out between Great Britain, Germany, and a few Portuguese settlements, the whole of Africa has, within the past twenty years, been absorbed or claimed by European governments. It remains to discuss the extension of the colonial system to Asia, the greatest and richest of the undeveloped continents.

The firm footing obtained by Great Britain in India has already been set forth. France had already obtained strong stations on the coast of India, as the result of her early colonial ventures. She lost some of these in the settlements of 1815, but has more than made up for them within the past generation. An expedition was sent by France and Spain to Annam, in 1858, to protect the native Christians, who had grown to respectable numbers under the teachings of the early missionaries. Several provinces in Cochin China were retained as the result of these operations and Cambodia was occupied by the French in 1863. Annam was finally subdued completely by French arms, after some hard fighting and picturesque marches, in 1883-85. Then followed the conquest of Tonking, which was not completed until 1893, and finally the annexation of a part of Siam in 1896. The entire area in India and on the borders of China under the control of France is 363,027 square miles and the population is 22,679,100. Cambodia, Annam, and Tonking, are nominally under French protection, but were united with Cochin China in 1887, under the name of Indo-China, with a customs union, and a governor-general as the chief representative of French power. Railroads, public roads, and industries, are being rapidly extended, but the French have not yet reaped material commercial benefits from their policy of conquest and occupation.

The most striking modern fact in European aggression in Asia is the rise of the power of Russia. The Russian Empire, although recognized as an important military force in Europe in the time of Napoleon, was not regarded as an industrial competitor of the Western world until within very recent years. Struggling with a heavy debt and a fluctuating paper currency caused by the early wars with Turkey, the struggle against Napoleon, the Crimean War, and the war against Turkey in 1877, the financial organization of Russia was regarded in Western Europe as not much better than that of Turkey, and her industries were supposed to be in swaddling clothes. But even under her worst conditions, from an economic point of view, the Russian Government enjoyed such advantages as arise from a continuous policy and a fixed purpose. The executive government is not subject to the fluctuations of public opinion, and there is little or no division of opinion in Russia in respect to the long cherished national policy of extending the Empire to the Mediterranean in Europe, and to the Pacific and the Indian Oceans in Asia. It was a natural outcome of the modern struggle for commercial supremacy that Russian statesmen discovered, a few years ago, that economic power was as vital to national greatness as is political and military power. M. de Witte, the minister of finance, entered, in 1893, upon a vigorous policy for restoring specie payments, encouraging domestic industry, and extending banking privileges to the peasants as well as to merchants, in order to stimulate agricultural and manufacturing production.

Then came, in 1898, the famous proposition of the Czar Nicholas II. for the peace conference at The Hague, which was a coherent part of the Russian plans for reducing military expenditures in order to encourage the economic growth of the country. In proposing The Hague Conference, however, the Russian Government by no means renounced the arts of war nor the triumphs of the most tortuous diplomacy in seeking the extension of the Empire, wherever skill, finesse, or threats, would achieve results.

Siberia, for so many years a penal colony, was looked upon by the Western world as a land of desolation and barbarism until the wonderful revelations of the past few years. The country was for centuries in the hands of the roving Tartar tribes, who paid little attention to the title, "Lord of Siberia," which was assumed by the Russian czar, Ivan the Terrible, in 1558. In 1850, however, the attention of the Russian Government was attracted seriously to Siberia by the Cossack chief, Yermak, who appealed successfully to the Russian Government to aid him against the Don Cossacks. Yermak was defeated soon after, but the Russians invaded Siberia, fortified Tobolisk on the Obi, built stockades wherever they found convenient sites, and gradually extended their power until, in 1639, they reached the Pacific Ocean. The Russians were excluded from the Valley of the Amur by a treaty with China, signed in 1689, at Nertchinsk. The foundations were thus laid for the Russian Empire in the East, which a century and a half later was to prove so serious a menace to the British Empire in India. Russia made little further progress in the extreme East for two centuries, but she constantly extended her power and influence in the South, until she acquired control of nearly the whole of Central Asia. One of the expeditions of Peter the Great reached the shores of the Caspian and erected several forts, one of which was at Krasnovodsk. The Kirghiz tribes were gradually brought under Russian authority, the Jaxartes Valley was seized in 1830, and Tashkend was captured and made the capital of Russian Turkestan in 1865. The Khanate of Bokhara was subdued in 1868, that of Khiva in 1873, and the Turkomen of Merv in 1884. The Russian frontier was thus carried up to Afghanistan.

It was before the last of these conquests that serious alarm spread throughout Great Britain and the journals were full of warnings that the Russians were at "the gates of Herat," from whence they would have an easy march into British India. In order to prevent their occupation by Russia, Great Britain extended her boundaries in 1893 into the mountain districts north of India, and considerable garrisons were planted in the district of Chitral in 1895. The appearance of the British uniform in these remote mountain sections led to outbreaks among the Afridis, which were put down by some hard fighting in 1898. The Russian Government came to a halt for a time on the South, when it reached the frontiers of Afghanistan, but soon began intrigues with the government of Persia, which bore important fruit in the beginning of the year 1900. British financial influence was overthrown by the creation of a Russian bank at the capital of Persia, which advanced to the government \$12,000,000 to pay off debts to British bondholders, and secured the pledge of the Persian customs receipts for the payment of interests on the loan. It was soon announced that Persia would lease to Russia a port on the Red Sea, which would enable her to establish a naval station on the Indian Ocean, and to threaten the entrance to the Suez Canal and the route to India.

While Russian policy was thus being relentlessly pursued in Central Asia, Russian generals and governors were not idle on the side of China. When the Chinese were exhausted, in 1859, by their conflict with England and by the Taiping rebellion, Russia forced them to make a treaty giving to her the whole left bank of the Amur River, and bringing her frontier on the Pacific down to Korea. The large inlet formerly known as Victoria Bay was rechristened for Peter the Great, and a new city was founded in

1861, called Vladivostock or "Dominion of the East." It was this port which Russia proposed to make the terminus of the Trans-Siberian Railway, the great route designed to connect European Russia with the Pacific, and to transform the commercial map of the world. But even this achievement did not fix the limit of Russian ambition. Vladivostock was closed for two months in the year, by ice, and it was the declared ambition of Russian statesmen to secure an outlet on the Pacific, which could be used at all seasons. The opportunity did not come until 1895, but the interval was employed in strengthening Russian power in Siberia and in making the plans for the railway, which was to make it possible to carry Russian troops and supplies across the greatest of continents, while her possible military rivals were employing roundabout routes on the ocean. The Trans-Siberian Railway, the most extensive engineering enterprise of modern times, was the dream of Russian statesmen as far back as 1850. The opening of the Ural line, in 1880, connected European Russia with Tyumen, on the Tobol, a branch of the Irtish, in the heart of Asia. Serious work upon the extension of the line to the Pacific began in 1891, and was supplemented in 1897 by the beginning of the Eastern Chinese Railway across the Chinese province of Manchuria.

It remains to set forth how Russia was able to fasten upon a Chinese province as an object for her military and political projects, and how a rival world power sprang into existence, almost in a night, and stood defiantly facing her in the Orient. This new power is Japan, which remained split up into small principalities, without a vigorous central government, down to the restoration of the Mikado in 1866. In 1852 the United States sent an expedition to open Japan to modern commerce, an enterprise which at first encountered opposition. The reappearance of Commodore Perry with a larger fleet, in 1854, led to a treaty, which opened two ports to American trade. Similar treaties were quickly made with Great Britain, Russia, and Holland, the number of open ports was increased, and foreign residents were permitted to travel freely in parts of the interior. Disorders growing out of the system of feudalism broke out, which in many cases took the form of anti-foreign demonstrations, but in 1867, the new sovereign, Mutsuhito, was acknowledged sole emperor, and he began the organization of Japan as a modern state. The feudal princes surrendered their powers, their military followers were disbanded, and the emperor issued a decree (August 7, 1869), dividing the country into districts, under the direct control of the central government.

The Japanese people responded at once to the plans of their leaders for utilizing foreign inventions and adopting foreign ideas. Almost as if by magic, Japan was equipped with railways, telegraphs, a postal system, a regular custom service, an army and a navy armed with European weapons, and a constitutional government divided into political parties. Nearly all of these events were consummated within a score of years, and when war broke out with China, over Korea, in 1894, the Japanese army swept everything before it and was on the road to Peking, when China sued for peace. The Japanese, with their modern steel cruisers and battleships, dealt a severe blow to the Chinese at the battle of the Yalu River (September 17, 1894), and seized Port Arthur and Wei-hai-wei. The prestige of Japan was so greatly heightened by these incidents that when she proposed to retain Port Arthur, three great European powers, —Russia, Germany, and France, —intervened to demand her withdrawal from the Chinese mainland. Japan looked for a moment to Great Britain, but found the latter unwilling to aid her to the extreme limit. She yielded to superior force, but obtained control of the Island of Formosa and an indemnity in money, which enabled her still further to strengthen her position as a great power by substituting gold for silver as her standard of value, and by entering upon an elaborate project of naval equipment and railway construction.

The collapse of China, in spite of its enormous population and untouched natural resources, revealed to the world the weakness of the Empire. Almost in a moment, the great powers gathered around the prey, from which they had driven the courageous little Empire of Japan. It was suspected from the first that Russia had warned Japan away from Port Arthur in order to seize it for herself. Russia was anticipated by Germany, however, in seizing a Chinese port. The German Government took possession of Kiao-chau (November 4, 1897), upon the ground that some German missionaries had been murdered, and held it by force until the Chinese signed a treaty, leasing the port and the adjacent territory to Germany for ninety-nine years. The German Government was authorized to construct fortifications and to establish a naval station; and German subjects were to have the right to construct railways, to open mines, and to transact business in the rich mineral and agricultural province of Shantung. Russia did not long delay action. She obtained permission to winter her naval squadron at Port Arthur, and soon secured from the Chinese Government (March 27, 1898) a lease for twenty-five years of Port Arthur and the neighboring port of Talienswan. It was stipulated that Russia should have the power to extend the Trans-Siberian railway through Manchuria to Port Arthur, and to protect it by Russian troops. The British Government then stepped forward and obtained a lease of the harbor of Weiheiwei (April 2, 1898) on the same terms as those by which Port Arthur was granted to Russia. England obtained also (June 9, 1898) an additional lease of about two hundred square miles on the mainland, opposite Hong-Kong. France, not to be outdone in the scramble for Chinese territory, obtained a lease of the harbor of Kwangshanwan, near its possession in Tonking. The Italian Government made a demand in the spring of 1899 for Sanmun Bay, but this demand was rejected.

The partition of China among the powers of Western Europe seemed upon the eve of taking place, when a new power, younger than Japan by many centuries, but with an older heritage of European civilization, became a factor in the problem. This new power was the United States. Comparatively indifferent to Oriental affairs after the opening of the Chinese treaty ports, and without any military or naval footing in the East, the United States suddenly became one of the foremost of Oriental powers, by what seemed like the merest of accidents. Spain was directed, early in 1898, to evacuate Cuba, her chief possession in the West Indies, because she had proved herself incapable of restoring order there and of protecting the interests of American citizens doing business in the island. The natural refusal of Spain to comply with this mandate resulted in war with the United States. The resolutions declaring "that the people of the Island of Cuba are, and of right ought to be, free and independent," and directing the President "to use the entire land and naval forces of the United States" to carry these resolutions into effect, were accepted by both houses of Congress on April 19, 1898, and approved by President McKinley on the next day. The Spanish minister demanded his passports, and quitted Washington, and Congress on April 25, 1898, declared war against Spain.

The evacuation of Cuba by Spain might have been enforced by the United States without gaining for it a foothold in the Orient, but for the foresight of John D. Long and Theodore Roosevelt, Secretary and Assistant Secretary of the Navy. In the anticipation of war, they directed Commodore George Dewey, who commanded an American squadron at Hong-Kong, to proceed at once, if war should be declared, to Manila, the chief city of the Philippine Islands, and to take or to destroy the Spanish fleet. Commodore Dewey promptly left Hong-Kong upon the proclamation of neutrality issued by the British Colonial Government there, and at daybreak on May 1, 1898, entered Manila Bay. The American fleet was engaged by the Spanish naval vessels, which were supported by strong batteries on land; but so skilful was the

handling of the American vessels, and so incompetent were those who manned the Spanish guns, that a complete victory was won without the loss of a life on the American ships. The Spaniards sustained serious losses, including the sinking of nearly all of their ten warships and the capture of Cavite, their naval station on land.

Up to the morning of the second day of May, 1898, hardly an American had dreamed that the United States would ever become an Oriental power. There had already, however, been much discussion regarding American interests in China, and the capture of the Spanish outposts of Manila, which was followed later by the surrender of the city, came at a singularly opportune moment for making the United States a factor in the settlement of the future of the Orient. There was hesitation at first among the American people and American public men, who doubted whether the responsibility of governing hundreds of islands, with a population of eight or ten millions, including many barbarous tribes, could be accepted without doing violence to the traditions of self-government, and to the written constitution of the United States. When an armistice was arranged between the contending countries, August 12, 1898, the article regarding the Philippines provided simply that "the United States will occupy and hold the city, bay, and harbor, of Manila, pending the conclusion of a treaty of peace which shall determine the control, disposition, and government, of the Philippines." Public opinion, however, influenced on the one hand by far-sighted students of American economic interests, and on the other by the natural disinclination of the masses to see the flag lowered, where it had once been raised in triumph, gradually crystallized upon the decision that the whole of the Philippine Archipelago should remain forever under the paramount influence and control of the American Republic. The treaty, which was signed at Paris on December 10, 1898, provided, therefore, for the surrender of the Philippines to the United States for an indemnity of \$20,000,000 paid to Spain, and the assumption by the United States of the claims of American citizens against Spain for injuries arising in Cuba, in connection with the recent war.

The war with Japan, and the encroachments of the European powers, opened the eyes of the young emperor of China to the need of sweeping reforms. He submitted to his council in 1897 a series of projects for the suppression of the provincial armies and for the erection of a national force on European models; for the abolition of the *likien*, or provincial barrier taxes; for the adoption of a regular monetary standard; and for the creation of a central bank. These and other proposed reforms aroused the hostility of the Chinese conservatives, and a palace revolution (September 22, 1898) dethroned the young emperor, and put him under the control of his able, but reactionary, aunt, the Empress Dowager. The anti-foreign party at the court availed itself of the seizure of the leading ports of China by foreign powers to organize anti-foreign sentiment throughout Northern China. The Chinese people have never had the national spirit of a cohesive nation, and ignorant prejudice against railways, the foreign missionaries, and other visible aspects of foreign intervention in Chinese affairs, was easily worked upon to provoke an uprising. Secret societies, known as the "Boxers," rapidly spread. They were soon encouraged to begin a general crusade.

Attacks upon foreigners were reported from various points in China early in 1900, and all the leading powers ordered their available ships of war in Eastern waters to rendezvous at Chinese ports. The foreign legations were surrounded in Peking and an effort to keep the railway open and to send a force for the protection of the legations was met by hostile fire from the Chinese forts at Taku. The forts were shelled by the foreign vessels, except the Americans, and were captured in two days. The legations in Peking were completely cut off from communication with the outside world on June 19, and the German minister was killed in the street on the next day. A regular siege

of the legations was now begun by the Boxers, with the aid of many of the Chinese Imperial troops. The mission compounds were abandoned, and all the legations took refuge in the British Legation, which afforded the strongest points for defense. An almost continuous fire was poured upon the devoted band of Europeans, Japanese, and Americans, from June 20 until July 17, and repeated attempts were made to burn the legations by setting fire to neighboring houses.

Preparations for rescue were set on foot at the close of June, but were inevitably slow in completion. An expedition of about two thousand men, under a British admiral, fought its way over half the distance to Peking, but was compelled by overwhelming forces to turn back. The movement of the civilized troops in force began at the end of July with hard fighting at Tien-tsin, a large Chinese city, which was stormed and partly destroyed. A force set out from this point in August, made up of Japanese, Russian, British, and American troops, which won another important victory at Yangtsun and pursued its march to the Chinese capital. The city was reached on August 14, 1900, and the heroic defenders of the legations, including many women and children, were rescued. The Chinese imperial family and the government had fled, a few days before, to the interior of China.

The United States, with its authority firmly planted at Manila, at the gates of the Orient, was able to take a more resolute part in meeting the outbreak in China than might otherwise have been the case. The seizure of important ports by Russia, Germany, and France, was not viewed with indifference by the United States. When it appeared that the seizure could not well be resisted without armed conflict with some of the great powers, the effort was made to preserve equality of opportunity for American trade in the territories still under Chinese authority. For this purpose, an inquiry was addressed during the autumn of 1899, by the Secretary of State, Mr. John Hay, to each of the leading European powers, asking them to give assurances that the people of all nations should continue to enjoy equality of opportunity for trade and investment, and equality of tariff and railway charges, with the people of the country exercising protection over any part of China. Each power responded favorably, after more or less consultation, that they would give such assurances if they were concurred in by all the other powers. Full concurrence was obtained from all early in the year 1900, and the correspondence on March 27, 1900, was communicated to Congress in a special message by the President.

It was in pursuance of the same policy of equality of opportunity, which had come to be designated as "the open door in China," that the Government of the United States thought proper again to define its attitude, when armed intervention in China was proposed by the powers for the rescue of their besieged legations. A note addressed to each of the powers by Secretary Hay on July 3, 1900, declared: "The policy of the Government of the United States is to seek a solution which may bring about permanent safety and peace to China, preserve Chinese territorial and administrative entity, protect all rights guaranteed to friendly powers by treaty and international law, and safeguard for the world the principle of equal and impartial trade with all parts of the Chinese Empire." This principle was accepted by all the powers, and was the basis of the policy pursued by the United States in all its negotiations in regard to the settlement of affairs in China. A protocol intended to form a basis of settlement was agreed upon at the close of the year 1900, and was signed by the envoys of the Chinese Government in January, 1901. This protocol provided for the revision of the commercial treaties with China, in the interest of wider trade and of greater privileges for foreign merchants. The details were left for later negotiations.

While the struggle for the unappropriated territory under the tropics, and for the control of the backward nations, was becoming thus acute during the closing years of

the nineteenth century, a development of a somewhat different character was going on among the colonies of the British Empire. This development, encouraged by the healthful climate of the temperate zone, raised Canada and Australia to the position of vigorous, self-governing nations, held to the empire only by pride in its greatness and by the tolerant policy of the mother country. Canada became a people numbering nearly 5,000,000, with a foreign trade of more than \$250,000,000. Australia drew from Great Britain many millions of English capital, and developed with a rapidity almost unparalleled, even by the Western territories of the United States. From 1861 to 1898, her population increased by more than 25 per cent., and stands at about 3,500,000. Her foreign trade rose from £39,729,016 in 1871, to £83,678,859 in 1897 (\$415,000,000), or more than three times the amount per capita of the trade of the United States, and her producing power per capita is calculated higher than that of any other people. The separate provinces of Australia began to yearn for a common nationality, and Australian federation was established and inaugurated at the beginning of the year, 1901. The Earl of Hopetoun was on that day inaugurated as the first governor-general of the Federal Australian Colonies, and received a message from the British colonial secretary, Mr. Joseph Chamberlain, that "the Queen commands me to express through you to the people of Australia her Majesty's heartfelt interest in the inauguration of the commonwealth." The governor-general was appointed at London, but a new Federal Parliament was created, which deals with the federal affairs of Australia as the Federal Congress deals with the affairs of the United States. Australian and Canadian troops fought by the side of British regiments in South Africa in 1900-01, and their courage and loyalty served to cement the bonds which bound together the Empire of which Beaconsfield had dreamed a quarter of a century before.

The other islands of the Pacific have been parceled out among the leading European states, principally between Great Britain and Holland. Java and Sumatra are among the most important of the Dutch possessions and are very productive in tea, tobacco, coffee, and sugar. There have been insurrections in Java against Dutch authority, but the island has prospered greatly from an economic standpoint in recent years, and a more liberal policy than formerly prevailed has been adopted toward the natives. The coffee crop of Java in 1897 reached 156,503,866 pounds, and it was estimated that the profit of the public treasury, which gets a share of the crop, would in the year 1902 be more than \$4,000,000.

At the close of the nineteenth century, the colonies, protectorates, and other dependencies of the leading countries of the world, including China and Turkey, numbered nearly 140, and covered two-fifths of the land surface of the globe, and one-third of its population. Great Britain, whose possessions in India and Africa place her at the head of colonizing nations, controls more than half of the subject territory and two-thirds of its population. Her colonial dependencies grew from 2,541,240 miles in area in 1860 to 7,684,970 miles in 1880, and to 11,605,238 miles in 1900. Their population, which was 145,129,080 in 1860, rose to 267,935,144 in 1880, and to 345,222,339 in 1900. The smallest of the great colonizing nations in her own area, and surpassed in her home population by Russia, the United States, and Germany, Great Britain finds the strongest reasons for keeping open, at any cost, the ocean routes which afford her people the means of obtaining their food supplies. She finds in these conditions, and in her wide colonial responsibilities, the natural justification for a navy strong enough to cope with that of any other single power, or with any two powers combined. France and Germany, in striving to follow in British footsteps, have acquired a strong footing in the undeveloped countries, and their forces played a prominent part in the restoration of order in the Chinese Empire. The following table presents a careful

calculation of the area and population of the dependencies of each colonizing country and of their relation to the mother country:—

	NO. OF		AREA (SQUARE MILES)		POPULATION	
	COLO- NIES		MOTHER COUNTRY	COLONIES, ETC.	MOTHER COUNTRY	COLONIES, ETC.
United Kingdom.....	50		120,979	11,605,238	40,559,954	345,222,339
France.....	33		204,092	3,740,756	38,517,975	56,401,860
Germany.....	13		208,830	1,027,120	52,279,901	14,687,000
Netherlands.....	3		12,648	782,862	5,074,632	35,115,711
Portugal.....	9		36,038	801,100	5,049,729	9,148,707
Spain.....	3		197,670	243,877	17,565,632	136,000
Italy.....	2		110,646	188,500	31,856,675	850,000
Austria-Hungary.....	2		241,032	23,570	41,244,811	1,568,092
Denmark.....	3		15,289	86,634	2,185,335	114,229
Russia.....	3		8,660,395	255,550	128,932,173	15,684,000
Turkey.....	4		1,111,741	465,000	23,834,500	14,956,236
China.....	5		1,336,841	2,881,560	386,000,000	16,680,000
United States.....	6		3,557,000	172,091	77,000,000	10,544,617
TOTAL.....	136		15,813,201	22,273,858	850,103,317	521,108,791

The reason for the remarkable outburst of colonial activity during the closing generation of the nineteenth century, will be appreciated in some degree from the facts presented in an article entitled "Economic Progress of the Nineteenth Century," elsewhere in this volume, showing the remarkable capacity of the civilized world for producing finished goods, and the great amount of saved capital which now seeks investment in new enterprises. If the older countries are comparatively well equipped with these enterprises, as tested by their capacity to pay dividends, the new opportunities for the investment of capital under profitable conditions must be sought in the equipment of the undeveloped countries, with the same producing plant and the same means of transportation which have spread the benefits of civilization over Western Europe and the United States. The colonizing and organizing countries are those of the temperate zones. Their population has been increasing under the influence of growing wealth and constitutional liberty, at a rate which threatens soon to exhaust the food-producing capacities of their own territories, and to drive them to the rich resources of the tropical, and undeveloped, countries. The races inhabiting these countries have thus far shown less capacity than have those of the temperate zones for drawing from the soil its full riches for the benefit of the human race. Hence, by a logical evolution of events, the civilized countries, having equipped themselves with the most efficient machinery of production, are turning their enterprise, their capacity for organization, and their fund of saved capital, to the development of the countries which have not yet felt the full impulse of modern civilization. Already the development of increased producing power and modern means of transportation, under governments which protect personal rights, private property, and the sanctity of contracts, has created a volume of importations by the subject, or protected, countries, of \$1,500,000,000 per year, of which 40 per cent. is drawn by the dependencies from the governing countries.

Empire City.—A name of New York City, as being the financial and commercial metropolis of the Empire State (New York), and of the country.

Empire State.—A name applied to N. Y., because of its leading position with respect to wealth, population, commercial and industrial enterprises.

Empirics.—A regular sect of physicians in the time of Celsus and Galen. Their work was of a professedly practical nature. They did away with theoretical study even of anatomy. The word has come in modern medicine to mean something of the nature of a quack or pretender.

Ems.—(1) A noted watering place in Prussia. (2) A river of Prussia, flowing into the North Sea. Length, 180 miles.

Emu.—A large bird of Australia; incapable of flying but runs fleetly; it is hunted chiefly for the oil which its body contains in large quantities.

Emuckfau (Ala.), Battle of.—In Jan., 1814, Jackson, with 930 volunteers and 200 friendly Indians took the field against the hostile Seminoles. Jan. 21, with Gen. Coffee, he camped near Emuckfau, southern Ala. At dawn on the 22d, the savages made an attack, but were repulsed and driven back two miles. The Indians then returned to the attack, but were again repulsed. Gen. Coffee was wounded. His aid-de-camp and three others were killed.

Énambuc, or Esnambuc, Pierre Vaudrosque Diel d'.—(1570-1636.) The founder of the French West Indies; his first colony was founded in 1625 on the island of St. Christopher.

Enceladus.—A son of Tartarus and Ge; one of the hundred-armed giants.

Encyclopædia Britannica.—An English "dictionary of arts, sciences, and general literature" first published at Edinburgh (1768-71). The last edition was published in 1888.

"Endeavor," The.—The ship in which Captain Cook set out in 1771 to observe the transit of Venus in southern seas. The expedition was wholly successful and added much to scientific knowledge.

Endicott, John.—Born in England in 1589; died at Boston, Mass., 1665. A former governor of Massachusetts colony, noted for his persecution of the Quakers, four of whom he caused to be executed in Boston during his administration.

Endicott, William Crowninshield.—Born at Salem, Mass., 1827. He was appointed judge of the Mass. supreme court in 1873; was Secretary of War (1885-89) in the Cabinet of President Cleveland.

Endymion.—A youth in ancient Greek mythology, upon whom Zeus conferred the gift of immortality, unfading youth, and everlasting sleep.

Enfield.—A town in Conn., on the Connecticut River; the seat of a Shaker community, and also noted for its manufactures of carpets and powder. Pop. (1900), 6,699.

Engineer, The Electrical.—5105.

Engineer, The Mining.—5111.

Engineer, The Stationary.—5117.

Engineering and Its Opportunities, Civil.—5095.

Engineers, Royal Corps of.—The scientific and constructive part of the British army, which attends to the making of all military works.

Engineers, United States Corps of.—A branch of the U.S. military service which was organized by Congress in 1802. Its duties consist in the ordinary engineering work of fortification, bridge-building, etc. Another branch has control of the construction and repair of seacoast defenses and harbor and river improvements.

England.—Takes its name from Angle-land or the land of the Angles, the most powerful of the tribes which went over in 449 under the leadership of Hengist and Horsa. It has an area of 32,610,349 acres and a population (1901), exclusive of Wales, of 30,827,914. It is bounded on the north by Scotland, from which it is separated by the Cheviot Hills and the Solway Firth. It is separated from France on the south by the English Channel and the Straits of Dover; from Ireland on the west by Bristol Channel and the Irish Sea; it has the German Ocean or North Sea on the east. It includes the Isle of Wight, the Isle of Man, and the Channel Islands. The largest cities are London, Liverpool, Manchester, Birmingham, Leeds, and Sheffield. The chief manufactures are cotton, woolen, iron, steel, hardware, leather, etc.

England, John.—Born in Ireland, 1786; died at Charleston, S. C., 1842. He was the first appointed Roman Catholic bishop of Charleston, 1820.

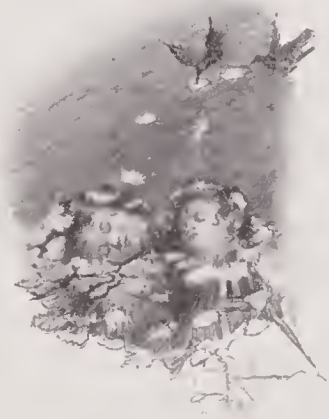
English, Sources of.—3010.

English Fables.—1395.

English Fairy Tales.—1312.

English Hawthorn, The.—2825. ENGLISH FABLES

Enoch, or Idris (Arabic Legend).—1428.



ENGLISH FAIRY TALES — CHILDREN IN THE WOOD

Entangling Alliance.—An expression originally used by Thomas Jefferson, in his inaugural address. He counseled "peace, commerce, and honest friendship with all nations, entangling alliances with none," as some of the principles which "form the bright constellation that has gone before us and guided our steps through an age of revolution and reformation." The expres-

- sion has since come into general use in the discussion of our foreign relations.
- "Enterprise," The.**—Sept. 5, 1813, the American brig "Enterprise" while cruising off the coast of Me. captured the British brig "Boxer" after a desperate fight in which both captains were killed.
- Envelopes.**—In the manufacture of envelopes, the paper is first cut into four-sided pieces, and then a cutting-die cuts these into the shape of an envelope spread out. The folding and gumming is done by machinery. Envelopes were first used in 1839.
- Envoy.**—A diplomatic minister second in rank to an ambassador. An envoy represents only the affairs of a sovereign and not his dignity.
- Ephesus.**—One of the twelve Ionian cities of Asia Minor, on the Cayster River near its mouth in Lydia. A temple of Artemis (Diana of the Ephesians) was founded here in the 6th century B.C.
- Ephesus, Council of.**—(1) A council which was convoked at Ephesus by Theodosius II., Valentinian III., and Cyril of Alexandria, in 431 A. D. At this council the heresy of Nestorius was condemned. (2) The Robber Council held by authority of Theodosius in 449. At this council Eutyches was reinstated and Flavian deposed.
- Epictetus.**—A stoic philosopher of Hierapolis. He taught that the highest wisdom is to wish for nothing beyond freedom and contentment; that our happiness depends upon our own will; that unavoidable evil in the world is only unreal and apparent. He died about 90 A. D.
- Epicurus.**—(341-270 B.C.) An ancient Greek philosopher who was born on the Island of Samos. He taught that the great evil which afflicted men was fear; that man's chief duty was to get rid of this fear. His idea that pleasure was the chief end has given him a false reputation, on account of the various interpretations of the word "pleasure" among its votaries.
- Epigram.**—Originally among the Greeks the word meant an inscription. It was the Romans who first imparted to this inscription a satirical turn. Martial and Catullus were the best epigrammatists.
- Epirus.**—An ancient district of northern Greece. It was brought up to its greatest height under Pyrrhus (295-272 B.C.) A part of it now belongs to Turkey, and a part was ceded to Greece in 1881.
- E Pluribus Unum.**—A Latin phrase meaning "out of many one" or "one of many." As so commonly used in America it refers to the formation of one Federal Government out of several independent states. It is the motto of the U. S., having been selected by a committee composed of John Adams, Benjamin Franklin, and Thomas Jefferson. They made their report on a design for a motto and great seal Aug. 10, 1776. The phrase is probably derived from "Moretum," a Latin poem by Virgil. As stamped on coin, it first appeared on money issued by N. J. in 1786.
- Epping Forest.**—A large tract of land in Essex, England, now including 60,000 acres. Formerly it included the whole of Essex, and furnished sport for the ancient kings of England.
- Epsom.**—A market town near London. From the latter part of the 17th century until about 1736, a fashionable resort because of its famous mineral springs.
- Epworth League.**—The Young People's Society of the Methodist Episcopal Church, was organized at Cleveland, O., 1889. Its object is "to promote intelligent and vital piety in the young members and friends of the church, to aid them in the attainment of piety and purity of heart and in constant growth of grace, and to train them in works of mercy and of help." It enrolls nearly 2,000,000 members in America. It takes its name from the village of Epworth in England, where John Wesley was born.
- Equator.**—An imaginary line passing around the earth equidistant from the poles. The meridians cut it at right angles; and upon it longitude distance E. or W. of the first meridian is measured. The distance around the earth at the equator is 24,499 miles.
- Equinoxes.**—The two points on the equator where the sun in its apparent course through the heavens crosses. The days and nights at these periods are nearly equal. The vernal of spring equinox occurs on Mar. 20; and the autumnal equinox takes place Sept. 20.
- Era of Good Feeling.**—The period from 1817 to about 1824 in U. S. history, so called on account of the absence of strong party feeling which then prevailed.
- Erastus, Thomas.**—(1524-1583.) A German physician and Protestant disputant.
- Erebus.**—In Greek mythology, the son of Chaos and brother of Nox (Night); a place of nether darkness, through which the spirits of the dead must pass on their way to Hades.
- Erebus.**—An active volcano in Victoria Land, Antarctic Regions. Height about 12,000 ft.
- Ericsson, John.**—Inventor and naval engineer; sketch of, 173.
- Eric the Red.**—A Norseman who founded a colony in Greenland and sailed down the eastern coast of America in the 10th century.
- Erie.**—A city and port of entry in Pa., on Lake Erie. It occupies the site of Fort de la Presqu'isle, which was built about 1749. Its chief industry is iron and steel manufactures. Pop. (1900), 52,733.
- Erie, Lake.**—One of the Great Lakes, lying between Ontario, Canada, on the north, N. Y., Pa., and Ohio on the south and southeast, and Mich. on the west. On its banks are the important cities of Buffalo, Cleveland, Sandusky, and Toledo. Its length is about 250 miles, its average breadth about 40 miles. Area, 9,000 sq. miles and height above sea-level, 573 ft.
- Erl-King.**—A goblin of German legend, who dwells in the forests and lures people to their death.
- Eroica Symphony, The.**—The third and greatest of Beethoven's symphonies.
- Eros.**—In Greek mythology, the god of love.

- Erskine, John.**—(1695-1768.) A Scottish jurist. His writings are regarded as an authority in the study of law.
- Escorial.**—A palace in Spain, 27 miles northwest of Madrid. It consists of a palace, a monastery, a church, and a mausoleum of Spanish kings. It is celebrated for its library and gallery of paintings. It was erected 1563-84, by Philip II.
- Esk.**—The name of several rivers of Scotland.
- Eskimo Fairy Tales.**—1356.
- "Essex."**—A famous frigate of 860 tons, built at Salem, Mass., in 1799. On Aug. 13, 1812, under the command of Capt. David Porter, she fought and captured the "Alert," and after doubling Cape Horn, entered the harbor of Valparaiso in 1813. She was the first American warship that appeared in the Pacific. In 1814 while blockaded in Valparaiso harbor by the British "Phœbe" under Capt. Hillyar and the "Cherub" under Capt. Tucker, she boldly engaged these ships in a storm, but after a gallant fight which lasted from 4 to 7:30 P. M. was compelled to surrender.
- Essex Junto.**—A synonym for New England Federalism. The name was first applied by John Hancock, in 1781, to a group of Essex Co. (Mass.) Federalists. They advocated a stronger general government and the protection of the commercial interests of the country. President John Adams brought them into national prominence by accusing them of trying to bring on war with France in 1798. Fisher Ames, Cabot, the Lowells, Higginson, Pickering, Parsons, and Goodhue were among the prominent members of the Essex Junto. John Quincy Adams sharply criticised their policy and principles in his writings.
- Esslpoiff, Madame Annette.**—Born, 1850. A noted Russian pianist.
- **Established Church.**—A church maintained and established by a state.
- Esterházy von Galantha, Prince Paul Anton von.**—(1786-1866.) A notable Austrian diplomatist
- Esther.**—An oratorio by Häudel.
- Ethyl.**—The origin of ethers and the alcohols. It may be prepared by treating the iodide of ethyl with granulated zinc. The ethyl passes off as a colorless, inflammable gas, of an agreeable odor, insoluble in water, but soluble in alcohol.
- Ethiopia.**—An ancient division of Africa, extending from Egypt to Khartum. It is now held by the Abyssinians and Mahdists.
- Étienne (*à-tyen'*), Charles Guillaume.**—(1778-1845.) A French dramatist, poet, and journalist.
- Etna.**—In Sicily, the highest volcano of Europe; height 10,835 ft.
- Eton College.**—One of the famous educational institutions of England. Henry VI. founded it in 1440.
- Etruria.**—A division of Italy, in ancient geography, which extended along the Mediterranean. It corresponds very nearly to the modern Tuscany.
- Eucalyptus.**—A genus of trees mostly native to Australia. They grow to great size, sometimes 8-16 ft. in diameter; and a plank 148 feet long was shown at the exhibition at Crystal Palace, London, in 1851. They yield an essential oil called eucalyptol, which is used for an anti-septic dressing.
- Euclid.**—A famous Greek geometrician who lived at Alexandria about 300 B.C. His works comprising the "Elements of Geometry" form the basis of text-books to the present day.
- "Eugene Aram."**—The title of a novel by Bulwer-Lytton, published in 1832.
- Eugene, Prince (FRANÇOIS EUGÈNE DE SAVOIE-CARIGNAN).**—(1663-1736.) An Austrian general who took part in the war of the Spanish Succession. He coöperated with Marlborough at Oudenarde, Lille, and Malplaquet.
- Eugénie (EUGENIA MARIA DE MONTIJO DE GUZMAN, Countess of Teba).**—Born in Spain, 1826. Wife of Napoleon III.
- Euphrates.**—A great river of Mesopotamia.
- Eureka.**—(1) A town in Nev., noted for its silver and lead mines. Pop. (1900), 785. (2) A seaport city in Cal. on Humboldt Bay. Pop. (1900), 7,327.
- Euripides.**—(480-406 B.C.) An Athenian tragic poet.
- Europa, or Europe.**—In Greek mythology, daughter of Phœnix, and mother, by Zeus, of Minos and Rhadamanthus.
- Europe.**—The smallest grand division of the Eastern Continent. Bounded on the north by the Arctic Sea; east by the Ural Mountains, the Ural River, the Caspian Sea, and the Kara River; south by the Mediterranean Sea, the Black Sea, and the Sea of Marmora; west by the Atlantic Ocean. Length, northeast and southwest, 3,400 miles; breadth, north and south, 2,400 miles; estimated area, about 3,550,000 sq. miles. Its coast line is longer in proportion to its size than that of any other great natural division of the globe, estimated at about 19,500 miles. It is the most highly civilized and most populous of the grand divisions of the Old World. Pop., about 380,000,000.
- Eurydice.**—(1) Wife of Amyntas II., king of Macedonia. (2) In Greek mythology, the wife of Orpheus.
- Eusebius of Cæsarea.**—(264-349.) An ancient theologian and writer of ecclesiastical history. He has been called "The Father of Church History."
- Eustis, William.**—Born at Cambridge, Mass., 1753; died at Boston, 1825. He was Secretary of War (1809-13) and governor of Mass. (1823-25).
- Eutaw Springs (S. C.), Battle of.**—A fierce but indecisive fight of the Revolution, occurring Sept. 8, 1781. The American general, Greene, with an army of 2,500 men attacked the southern division of the British army, a force of 2,000 men under Lieut.-col. Stewart, at its headquarters at Orangeburg, S. C. Stewart fell back to Eutaw Springs, near the Santee River, where the battle took place, the British held the field, but at night retired toward Charleston. Greene took possession of the battle-ground and sent detachments in pursuit of the British. The Americans lost 408, the British, 693.
- Euterpe.**—In classical mythology, one of the Muses; the divinity of happiness and pleasure, and the patroness of flute-players.

- "**Evangeline.**"—The title of a poem by Longfellow, published in 1847.
- Evangelical Alliance, The.**—An association of Christians, which was formed in London in 1846, with the object of bringing about harmony and intercourse between the different sects of Christians.
- Evans, Augusta J. (MRS. WILSON).**—Born 1838. An American novelist.
- Evans, Oliver.**—Born at Newport, Del., 1755; died at New York, 1819. Distinguished as a mechanical inventor. By his inventions in milling, he effected a great revolution in flour manufacture. He is claimed to have been the inventor of the first high pressure steam engine. He wrote "The Young Millwright's and Miller's Guide."
- Evanston.**—A town in Ill., on Lake Michigan; the seat of the Northwestern University of Garrett Biblical Institute and of the Evanston College for Women. Pop. (1900), 19,259.
- Evansville.**—A city in Ind., on the Ohio River. It is chiefly noted for its extensive manufactures of tobacco, and is an important shipping point. Pop. (1900), 59,007.
- Evarts, William Maxwell.**—Born at Boston, Mass., 1818; died at New York, 1901. A famous lawyer. Admitted to the N. Y. bar in 1840; was President Johnson's counsel during the impeachment trial before the U. S. Senate in 1868; was attorney-general of the U. S. under President Johnson (1868-69); U. S. counsel at the Geneva Tribunal in 1872; counsel for the Republican party before the U. S. Electoral Commission of 1877; secretary of state under President Hayes (1877-81), and U. S. senator from N. Y. (1885-91).
- "**Evelina.**"—The title of a noted novel by Madame d'Arblay (Frances Burney) published in 1778.
- Evelyn, John.**—(1620-1706.) An English author who took an active part with the Royalist forces in the civil war in England. His "Memoirs" which contains his diary throw great light upon the history of his time.
- Everett, Edward.**—Born at Dorchester, Mass., 1794; died at Boston, 1865; brother of A. H. Everett; distinguished as a statesman, orator, and classical scholar. He was appointed professor of Greek at Harvard College in 1819 and became editor of the "North American Review" in 1820; member of Congress from Mass. in 1825; governor of Mass. in 1836, minister to England in 1841; president of Harvard College, 1846; Secretary of State, 1852; U. S. Senator from Mass., 1853, and was candidate of the Constitutional Union party for Vice-president in 1860.
- Everglades.**—An unreclaimable bog in southern Florida.
- Evergreen.**—A pseudonym of Washington Irving, under which he wrote "Salmagundi."
- Evolution.**—A continuous progress from the unlike to the like, from the simple to the complex, as applied to all forms of life. This doctrine is taught by Herbert Spencer and by Charles Darwin.
- Ewell, Richard Stoddard.**—Born in the District of Columbia, 1817; died at Springfield, Tenn., 1872. A U. S. officer, and a general in the Confederate army during the Civil War. He was graduated from West Point in 1840; served on the western frontier and in the Mexican War; became a captain of dragoons in 1849; resigned his commission in 1861 and entered the Confederate service, in which he rose to the grade of lieutenant-general; commanded a division in Lee's army until May, 1863, when he succeeded to the command of "Stonewall" Jackson's corps, when the latter fell mortally wounded at Chancellorsville; was continuously in active field service—except for a time while recovering from the loss of a leg—until the end; was captured, with a large part of his corps, at Sailor's Creek, during Lee's retreat from Petersburg, and three days before the surrender at Appomattox.
- Excelsior Geyser.**—A geyser in Yellowstone Park, Wyo., noted as being the largest in the world, throwing up a column of water from 200 to 300 feet in height.
- Exchequer.**—A division of the High Court of Justice in England, in which all questions pertaining to royal revenues are decided.
- Excise.**—A tax upon goods first introduced into England by the Long Parliament, which placed the tax upon liquors in 1642. It controls the licensing of the sale and manufacture of liquors.
- Excise Laws.**—An excise is a tax imposed on articles of home production and consumption, as tobacco and liquors, or upon their manufacture or sale. The first national excise law was passed in 1790 after a fierce debate. Alexander Hamilton, then Secretary of the Treasury, had insisted that such a tax was necessary. Opposition to it was strong throughout the country, and culminated in the Whiskey Insurrection (which see) in western Pa. in 1794. Under Jefferson the excise tax was abolished. It was revived again in 1813, during the war, with England, and again repealed in 1817. Excise laws were enacted during the Civil War and ever since that time the tax has been high on tobacco and liquors. In 1899, the tax on whiskey was \$1.10 per gallon. (See also REVENUE.)
- Executive.**—That branch of a government whose function it is to carry out the laws, whether king, emperor, president, council, or other power. From 1775 to 1789 Congress was the only executive of the U. S. Government. The constitution invested the President with executive power, sharing only the powers of appointment and treaty-making with the Senate. The executive is one of the three great departments of the Government; the two others are the legislative and the judicial. Under some administrations executive power has wielded the most influence; under others perhaps the least of the three. The weight of the executive has steadily increased since the inauguration of the Government, not only on account of the appointing power, which is shared with the Senate, and which grows with the expansion of the Republic, but also because the President's functions are constantly exercised when Congress and the judiciary are in recess. He is,

moreover, the one person who represents to the average citizen the concrete majesty of the law—the embodiment of authority in a democratic representative government.

Executive Department.—The Executive department of the U. S. Government comprises the following subordinate departments: (1) State, which administers foreign affairs; (2) Treasury, which has charge of the finances; (3) War, which administers military affairs; (4) Navy, which has charge of naval affairs; (5) Interior, which has charge of matters pertaining to home affairs, including public lands, Indians, patents, pensions, education, railroads, and the census; (6) Justice, which is the legal counsel of the Government; (7) Post Office, which has charge of the mail service; (8) Agriculture, which collects and disseminates information on agricultural subjects.

Executive Mansion.—The President's official residence at Washington, D. C. It is built in the English Renaissance style of architecture, with a projecting columned and pedimented porch at the front entrance, and a large semi-circular projecting wing on the garden front opposite. The corner stone was laid by Washington in 1792, and it was first occupied by President John Adams, in 1800. It stands on Pennsylvania Avenue, slightly over a mile from the Capitol, and is surrounded by about 20 acres of handsomely laid-out grounds. The Executive Mansion is two stories high, 176 ft. long, 86 ft. wide, and is built of freestone, painted white. From the latter circumstance it is familiarly known as the White House. When the British captured Washington, in 1814, the Executive Mansion, together with other buildings, was burned. Congress authorized its restoration in 1815, which was completed in 1818, and it has been occupied by the successive Presidents since that time.

Executive Sessions.—The Constitution of the U. S. provides that the President "shall have power, by and with the advice and consent of the Senate to make treaties, provided two-thirds of the senators present concur; and he shall nominate and, by and with the advice and consent of the Senate, shall appoint ambassadors, other public ministers and consuls, judges of the Supreme Court, and all other officers of the U. S. whose appointments are not herein otherwise provided for, and which shall be established by law." A rule of the Senate providing for the manner of "advising" and "consenting" to execute recommendations and appointments requires that when acting upon confidential or executive business, unless the same shall be considered in open session, the Senate Chamber shall be cleared of all persons except the senators and the necessary officials, and the latter shall be sworn to secrecy. The Senate is then said to be in executive session. The House holds no executive sessions. It may go into secret session, however, whenever confidential communications are received from the President, or whenever the speaker or any member shall inform

the House that he has a communication which ought to be kept secret for a time.

Exercise.—See HEALTH, 1816.

Exequatur.—A Latin word meaning "Let him execute." In diplomatic usage, the word is used to signify a document authorizing an official to act in the capacity of agent or representative. Usually a written recognition of a person in the character of consul or commercial agent issued by the government to which he is accredited, and authorizing him to exercise his powers. The government from which an exequatur is asked has the right to refuse it, on either political or personal grounds. The government may also withdraw it. When deprived of his exequatur, a consul may withdraw with his records or delegate his powers to another, according to instructions.

Exeter.—A town in N. H., on the Exeter River, the seat of Phillips Academy. Pop. (1900), 4,922.

Exhibitions.—The first international exhibition held in America was that at New York City in 1853. On a very much larger scale was that held in Philadelphia in 1876, known as the Centennial Exposition. Then followed the International Cotton Exposition at Atlanta, Ga., 1881; Southern Exposition at Louisville, Ky., 1883; World's Columbian Exposition, Chicago, Ill., 1893; Midwinter Exposition, San Francisco, Cal., 1893-94; International Cotton Exposition, Atlanta, Ga., 1895; Tennessee Centennial Exhibition, Nashville, 1897; Trans-Mississippi Exhibition, Omaha, Neb., 1898; the Pan-American Exposition, Buffalo, N. Y., 1901; and the Charleston, S. C. Exhibition, 1902.

Exmoor.—A moorland region of England; the scene of Blackmore's novel "Lorna Doone." Noted for its breed of ponies.

Exodus.—The name given to the departure of the Children of Israel from Egypt. The word literally means "a going-out."

Expatriation.—The voluntary renunciation of the rights and liabilities of citizenship in one country to become the citizen or subject of another. The right of expatriation has been sanctioned by custom and usage in the U. S. The Government has even, in a number of instances, refused protection to native born and naturalized citizens, on the ground that they had expatriated themselves. Notwithstanding this, there has never been any statutory provision for expatriation other than is contained in the act of Congress of July 27, 1868, which declares it the natural and inherent right of all people, and that any denial or restriction thereof is contrary to the fundamental principles of government. Expatriation has been frequently pleaded before the Supreme Court, but the plea has always been overruled. Though the right be admitted, except in the case of persons subject to military service, holding public trust, or charged with crime, the difficulty remains to give evidence of the mode of expatriation. It is usually fixed, however, by a person taking the oath of allegiance to another country and government.

Expenditures, Public.—In 1794 the annual expenditures of the Federal Government amounted to only \$6,300,000. In 1814, on account of the war with Great Britain, they increased to \$34,700,000. They fell in 1834 to \$18,600,000 and in 1854 were \$55,000,000. During the last year of the Civil War (1865) they amounted to \$1,295,000,000; in 1878 they had declined to \$237,000,000. For the following ten years the expenditures averaged \$260,000,000 per annum. For the fiscal year ending June 30, 1893, they were \$459,400,000. In 1896 they were \$343,678,000, and for the year ending Sept. 30, 1898, they increased to \$532,381,000. In 1901 they amounted to \$509,967,353.

Explosives.—2959.

Ex Post Facto Law.—A law which makes criminal an act done before its passage; one which aggravates a crime and makes it legally greater than when committed; one which changes the punishment or makes it greater than that affixed by law to the crime when committed; or one that changes to the injury of the offender the legal rules of evidence applicable to an offense already committed. The Constitution of the U. S. prohibits the passage of such laws by Congress or by any other legislative body, but this applies to criminal and penal statutes only, and not to those which affect property.

Expounder of the Constitution.—An epithet applied to Daniel Webster.

Expunging Resolutions.—March 28, 1834, the Senate passed a resolution censuring President Jackson and declaring that in removing the Federal deposits from the Bank of the U. S., he had assumed authority not conferred by the Constitution and the laws. Through the efforts of Senator Benton, of Mo., an "expunging resolution" was passed Jan. 16, 1837. A black line was drawn around the resolution of censure in the Journal, and across it was written "Expunged by order of the Senate, this 16th day of January, 1837." The expunging resolution was strenuously opposed by Webster, Clay, and Calhoun.

Extradition, International.—The delivery of persons by one state or nation to another, particularly fugitives from justice. Extradition treaties have been concluded by the Government of the U. S. with the principal governments of the world and many of the smaller ones. The first was that with Great Britain, negotiated by

John Jay in 1794. Congress made no law for carrying out its provisions and in 1842 a second treaty was negotiated. This was found to be inadequate in many respects, and called forth a protest from Great Britain. By 1886, the treaty of 1842 was found to be entirely inadequate, and the Phelps-Rosebery convention of that year offered a more satisfactory system, but it was rejected by the Senate. That body, however, ratified the Blaine-Pauncefote convention of 1889, which accomplished the desired result. Extradition treaties were negotiated by this country with France in 1843; Hawaii, 1849; Switzerland, 1850; Prussia, 1852; Austria, 1856; Sweden and Norway, 1860; Mexico, 1861; Italy, 1868; Ecuador, 1872; Ottoman Empire, 1874; Spain, 1877; Japan, 1886; Netherlands, 1887; Russia, 1893.

Eyck, Hubert van.—(1366-1426.) A Flemish painter, 3481.

Eyck, Jan van.—(1386-1440.) A Flemish painter, 3481.

Eylau.—A town of Prussia near Königsberg; the scene of a battle in 1807 between the French under Napoleon and the Russians and Prussians under Bennigsen and Lestocq.

"Eyre, Jane."—A famous novel by Charlotte Brontë, published in 1847.

Ezra Church (Ga.), Battle of.—In July, 1864, during Sherman's Atlanta campaign, Gen. Johnston was superseded in the command of the Confederate army by Gen. Hood. The former had retreated more than a hundred miles and the latter was given to understand that he must fight. Within nine days Hood made three furious attacks in a determined effort to break Sherman's line, if possible. The hostile lines at this time were drawn closely around Atlanta. Hood's first two assaults are known as the battles of Peachtree Creek and Atlanta (which see). The third was delivered July 28th at Ezra Church near the right flank of Sherman. The attack was made upon a portion of the Army of the Tennessee, commanded by Gen. John A. Logan. The Confederates assailed the line with great gallantry, but the attack was not sustained, and after a brief but bloody action the Confederates drew off. The Union troops fought behind strong works and their loss was but 700, while that of the Confederates was above 4,000.

F

Fables.—1365.

Introduction, 1365.	French, 1385.
Hindoo, 1367.	German, 1392.
Latin, 1373.	English, 1395.
Armenian, 1377.	Spanish, 1402.
Turkish, 1379.	Russian, 1406.

Face Value.—The amount for which a note or bill is drawn.

Faed, Thomas.—Born 1826. A Scottish painter and illustrator.

"Faerie Queene."—A poem planned to consist of 12 books, written by Edmund Spenser, setting forth in allegory the reign of Queen Elizabeth.

Fairbanks, Erastus.—(1792-1864.) The inventor of the Fairbanks scales (1831).

Fairchild, Lucius.—(1831-1896.) A volunteer soldier, statesman, and diplomat.

Fairfield.—A town in Conn., on Long Island Sound, burned by Tryon in 1779.

Fairmount Park.—A large park in Philadelphia. It was the site of the Centennial Exhibition in 1876.

Fair Oaks (Va.), Battle of.—See SEVEN PINES, BATTLE OF.

Fairyland (Koran).—1740.

Fairy-Tales.—1213.

Introduction, 1212.	French, 1265.
Hindoo, 1217.	German, 1287.
Japanese, 1220.	Austrian, 1302.
Arabian, 1225.	English, 1312.
Australian, 1237.	Scotch, 1325.
New Zealand, 1238.	Welsh, 1330.
Russian, 1240.	Irish, 1331.
Polish, 1246.	Norse, 1334.
Servian, 1248.	Swedish, 1338.
Greek, 1251.	Danish, 1342.
Italian, 1253.	Icelandic, 1354.
Spanish, 1259.	Eskimo, 1356.
Portuguese, 1261.	North American, 1357.

Falcon, The.—See HAWK, 2527.

Falguière (fāl-gyār), Jean Alexandre Joseph.—A French sculptor and genre painter.

Falkland Islands.—In the South Atlantic Ocean, a group of islands belonging to Great Britain.

Falling Market.—A steady decline in prices.

Fall River.—A city and port of entry in Mass., at the mouth of the Taunton River; noted for its extensive manufactures. Pop. (1900), 104,863.

False Solomon's Seal.—2920.

Falstaff, Sir John.—A character in Shakespeare's "Henry IV." and in "The Merry Wives of Windsor."

Family Compact.—A series of three treaties between the French and Spanish Bourbons, more especially the last of the three made in 1761, by which Spain joined France in war against England.

Faneuil, Peter.—(1700-1743.) An American merchant and founder of Faneuil Hall, Boston, Mass.

Faneuil Hall.—A historic building in Boston.

Fanning, Edmund.—(1737-1818.) A Tory leader who distinguished himself in the Revolutionary War.

Faraday, Michael.—(1791-1861.) An English physicist and chemist.

Farewell, Cape.—The southern extremity of Greenland.

Farewell Address.—An address issued by George Washington, to his countrymen, on his retirement from public life, in 1796.

Fargo.—A city in N. D., on the Red River of the North, a large trading and manufacturing center. Pop. (1900), 9,589.

Fargo, William George (1818-1881), was the founder of several express companies, beginning with a "pony" express across the plains to Cal.

Farmers' Alliance.—A political organization devoted to the interests of farmers in the U. S. It succeeded in electing several state governors and congressmen in 1890, and was merged into the People's party in 1891.

FARM NOTES.—

The average daily consumption of hay in the New York market has amounted to 1,500 up to

1,200 tons. 20,400,000 tons of forage are consumed each year. Of this fully two-thirds must be grown on the farm in the form of hay, stover, silage, pasturage, clovers, etc.

A milch cow of 1,000 pounds consumes about 4½ tons of dry fodder in one year. The first requisite in starting a permanent meadow is to have the land in good condition.

A good meadow ought to last from four to six years and yield an average of three or four tons of hay per acre each year.

In preparing a field for grass, all stirring, mixing, and opening of the soil must be done before the seed is planted.

All weeds must first be gotten rid of, as there is no satisfactory way of cleaning weeds out of a meadow except that of breaking up the sod and re-seeding.

A fall seeding is most desirable.

The field should be gone over twice, in two directions, using half the quantity each time. This will secure an even seeding.

The use of the roller is very important. The packing of the dirt around the seed insures a higher percentage of germination. Seeds require sufficient moisture and an even temperature to make their best growth.

The most commonly cultivated grasses in the eastern United States are timothy, orchard grass, or June grass.

All kinds of farm stock enjoy a varied ration, and the grazing will be more relished and more nutritious when the meadow consists of several kinds of grass.

For destroying weeds reproducing themselves from seeds only, prevent the production of seeds.

The seeds often retain their vitality for years.

FEEDING OF FARM ANIMALS.—An ox standing in the stall requires less food nutrients than one which is working hard every day.

The cow requires not only materials for maintenance but must also have protein, fat, and carbohydrates to make milk from.

The cow must not only have a generous supply of good food but it must contain sufficient amount of the nutrient needed for making milk. If the supply of proper materials is small, the output will be small.

The cow that will not repay generous feeding should be disposed of at once and one bought that will.

A common practice of fattening steers in the South is to feed 15 to 24 pounds of cotton-seed hulls and 6 to 8 pounds of cotton-seed meal. Experience has proved the value of wheat as a feed for all kinds of stock.

One hundred pounds of wheat furnishes more real nutriment than a similar amount of any other grain.

When, as recently, 60 pounds of wheat sells for less than 56 pounds of corn, the economy of wheat is apparent.

To guard against danger from indigestion, and to utilize wheat to the best advantage, it should be fed with other grains.

Farm Notes.— *Continued*

Whole wheat has been found the cheapest feed for sheep.

For horses wheat should be coarsely ground and fed on moistened hay, alone, or with bran.

For cows it is well to crush or coarsely grind wheat mixed with bran.

A ration recommended is 6 to 8 pounds of bran and 6 pounds of wheat.

For young pigs wheat may be fed with a little corn with good results.

Ground wheat may be mixed with corn and shorts and made into a slop.

Breeding ewes need not be fed more than twice daily.

Turnips are much preferred for sheep feeding, being relished by them.

Sugar beets are satisfactory if fed to sheep in small quantities.

For feeding lambs to be used for breeding purposes, preference should be given to bran, oats, and linseed meal.

Corn meal tends to fatten, but does not produce growth to the same extent as other foods.

In rearing lambs that have lost their mothers, or when the latter do not give enough milk to nourish the lambs properly, it is best to feed cows' milk from a bottle that has a small rubber nipple attached to it.

The lambs like the milk hot and thrive better on it.

For fattening lambs for early market, corn meal is the leading food.

Sheep of all kinds and ages are fond of bran.

SOME FACTS ABOUT DAIRY CATTLE.— Unless it be the little Irish Kerry, there is no cow which excels the Ayrshire in obtaining subsistence and doing well on scanty pasture, and giving a dairy profit upon the coarsest of forage.

The Ayrshire lives to serve dairy interests with the utmost economy in the utilization of food.

Like all other good dairy cattle, the Ayrshire responds promptly and profitably to liberal feeding. The Ayrshire cow is a large and persistent milker.

The milk of the Ayrshire is not exceptionally rich, but somewhat above the average.

The Ayrshire is not a first-class butter cow, but its milk is admirably suited for town and city supply.

Brown Swiss cows yield a generous flow of milk and hold out well.

Good specimens may be expected to give an average of 10 quarts for every day in the year.

The quality of milk is above the European average.

Ordinarily, 22 pounds of the milk of this breed will make one pound of butter.

These cattle are good for beef as well as for dairy.

Devons thrive on meagre pasturage.

Devon cows do not yield large quantities of milk and are not persistent milkers.

The milk of this breed is rich in quality, being well above the average milk of the dairy cows of the country.

The friends of this breed regard it as more particularly a beef producer.

The calves are always fat and lusty, showing a vigorous growth.

The beef is fine-grained, usually tender, and well marbled, and the fat of a deep yellow color.

Dutch Belted are docile beasts, fairly hardy, vigorous in growth and action.

As milk producers they seem to give good satisfaction, although the milk is not above the average in quality.

Guernseys produce liberal quantities of milk, and it is of uncommon richness in butter and fat and in natural color.

They are especially recommended for butter cows, as well as for market milk.

The average Guernsey cow is expected to produce 5,000 pounds of milk and 300 pounds of butter in a year without high feeding.

This average is very often larger.

One cow has given 48 to 52 pounds of milk a day and over 800 pounds of butter per year.

Holstein-Friesians are very large feeders and at the same time dainty about their eating.

To do their best they must be given an abundance of rich food, without the necessity of much exertion to get it.

The breed is famous for enormous milk-producers.

Cows giving 5 to 7 gallons of milk per day are regarded as average animals.

The milk of these large producers is generally pretty thin.

The cows have been favorites of dairymen doing a milk supply business, but in numerous cases their product has been below the standards fixed by state and municipal laws.

Jerseys are the smallest in size of the noted dairy breeds.

Jerseys have been bred especially and almost exclusively for butter.

Two, three, and four gallons of milk per day are common yields of this breed.

They are noted for persistence in milking, making a long season of profit.

Good cows are depended upon to produce 350 to 400 pounds of butter per year.

Several tests with single animals have resulted in 600, 700, 800, and even 1,000 pounds of butter within twelve months.

Jerseys are heavy feeders.

They have great capacity for assimilating and turning to profit all kinds of cattle forage.

The Jersey cow is principally a machine for producing milk — butter-making milk.

Polled Durham is the only breed of cattle which has originated in America.

Polled Durhams are bred principally for beef production.

They are regarded as "general purpose" cattle.

Farm Notes.—*Continued*

In several instances they have been found to be somewhat above the average in milk supply.

Red Polls are placed in the second class as dairy animals.

They give rather more milk than Devons on the average, but not quite so rich in quality.

A single selected cow gives 30, 40, and sometimes 50 pounds of milk a day.

The tendency in this country is to improve the beef-producing capacity at the expense of dairy qualities.

Shorthorns are probably the largest in point of size among pure breeds of cattle.

Bulls ordinarily weigh a ton or more, sometimes running up to 3,000 pounds.

Shorthorns when first brought to America earned the name of "the milk breed."

From old records we find that cows of this breed have given 6, 8, and even 9 gallons of milk a day on grass alone.

The Shorthorn's milk is of good quality, rather above the average.

Single cows have records of 400 pounds of butter a year and over, one yielding 513 pounds.

Normandies belong to the "general purpose" class of cattle being as good for beef as for dairy purposes.

Cows have been known to yield 7,000 to 8,000 pounds of milk per year.

They have produced over 300 pounds of butter annually.

These cattle can be almost entirely cared for by women, being very quiet and easily managed.

They are hearty feeders, and not dainty about their food.

As a matter of ordinary business prudence, every dairyman should study the individuality of his cows.

A record of quantity and quality of milk product should be kept.

A room open to the roof, which is fairly high, is better than a low level ceiling above the cows.

The most important point in selecting animals is to get perfectly healthy stock.

Close confinement, with impure air and lack of exercise, is prejudicial to the health of milch cows.

Exposure to storms and cold is equally injurious to the health and profit of cows.

Every member of a herd should pass under the critical eye of the owner or his trusted assistant daily, preferably twice a day.

Calves born in the fall are easier reared, better cared for, and make finer cows than those born in the spring or summer.

Cows need much water.

Keep dairy cattle in a room or building by themselves. It is preferable to have no cellar below and no storage above.

Stables should be well ventilated, lighted, and drained; should have tight floors and walls, and be plainly constructed.

Whitewash the stable once or twice a year; use land plaster in the manure gutters daily.

Clean and thoroughly air the stable before milking.

Keep the stable in good condition.

Have the herd examined at least twice a year by a skilled veterinarian.

Promptly remove from the herd any animal suspected of being in bad health and reject her milk.

Do not move cows faster than a comfortable walk while on the way to the place of milking or feeding.

Never allow the cows to be excited by hard driving, abuse, loud talking, or unnecessary disturbance.

Do not change the feed suddenly.

Feed liberally, and use only fresh palatable feed stuffs; in no case should decomposed or moldy material be used.

Provide water in abundance, easy of access, and always pure; fresh, but not too cold.

Salt should always be accessible.

Do not allow any strong-flavored food, like garlic, cabbage, and turnips, to be eaten, except immediately after milking.

Clean the entire body daily. If hair in the region of the udder is not easily kept clean, it should be clipped.

Farmville (Va.), Battle of.—One of the last engagements between the armies of Grant and Lee, immediately preceding the surrender of the latter. For a week after the evacuation of Petersburg and Richmond, Lee had been retreating westward, in the hope of reaching Lynchburg. His army had become much reduced by repeated conflicts with the infantry of Grant and the cavalry of Sheridan, which harassed it continually, day and night. He had lost thousands of his men and much of his artillery by capture, while Sheridan had taken and destroyed his supply trains, and his soldiers were almost without food. Footsore and famished and almost surrounded by thrice their number, the prospect was indeed gloomy. Lee aimed to cross the Appomattox River at Farmville, destroy the bridges, and thus check the Federal pursuit. Part of the Federal army under Gen. Ord was marching swiftly toward the same point, to intercept the Confederates. Ord's vanguard consisted of a small force of infantry under Gen. Theodore Read. He encountered the enemy at Farmville and fighting began at once. Read was killed, his force was brushed aside, and part of Lee's army effected a crossing. But Ord's main body arrived and Sheridan's cavalry also assailed the retreating column. The Confederates were broken and driven in disorder, losing 12 cannon, 250 wagons, and 4,000 prisoners.

Farnese (*fär'nä'-se*).—An important family of Italy, who built a palace at Rome partly under the direction of Michelangelo. There they gathered about them a great number of works of art, which have since been distributed throughout

- Europe. So we have the "Farnese Bacchus," the "Farnese Bull," "Flora," "Hercules," "Homer, Juno" and "Minerva."
- Faroe.**—A group of Danish Islands between the Shetlands and Iceland in the Atlantic, belonging to Denmark. They number 24, of which 17 are inhabited.
- Farragut, David Glasgow.**—Naval officer; sketch of, 179.
- Farrar, Frederic William.**—(1831-.) An English clergyman, writer, theologian, and educator. He was made canon and archdeacon of Westminster in 1883, and dean of Canterbury in 1895.
- Far Rockaway.**—A bathing-place on the south side of Long Island, 14 miles from New York. It became a part of Greater New York (Jan. 1, 1898).
- Farthing.**—An English coin; was originally coined in silver. It was first coined in copper by Charles II., 1665. It is worth about a half cent. Four farthings make a penny, worth $2\frac{1}{2}$ cents.
- Father of his Country.**—A sobriquet popularly applied to George Washington.
- Father of the Constitution.**—A name often applied to James Madison, by reason of the large part that he was reputed to have had in shaping that instrument.
- Father of Waters.**—A popular name given to the Mississippi River.
- Fatima** (*fā'tê-mā*).—(606-632.) Daughter of Mohammed and wife of Ali.
- Faun of Praxiteles.**—3540.
- Faure, Jean Baptiste.**—(Born 1830.) A celebrated French vocalist and composer. His baritone voice has been heard to greatest advantage in the character of Mephistopheles, in "Faust."
- Faust** (*foust*), or **Faustes, Doctor Johann.**—A magician, soothsayer, and astrologer who lived in Germany in the 16th century. He is the subject of Goethe's tragedy.
- Fawkes, Guy.**—(1570-1606.) The chief conspirator of the Gunpowder Plot, Nov. 5, 1605.
- Fayal** (*fî-âl*).—One of the Azores Islands, belonging to Portugal. The capital is Horta. The chief exports are oranges.
- Fear, Cape.**—A promontory forming part of Smith's Island, N. C. Its entrances were blockaded during the Civil War.
- Feather Grass.**—A genus of grasses having very long awns; found generally in a warm temperate climate.
- February.**—The second month of our year, has 28 days, except in leap year, when it has 29. It had among the Romans 29 days, but when the Senate decreed that the eighth month should be called August, in honor of the Emperor Augustus, a day was taken from February and added to August, which had only 30, that it be not inferior to July.
- February, Revolution of.**—In France, the revolution of 1848, which commenced on the 23d of Feb.
- Fechter, Charles Albert.**—(1824-1879.) A noted actor.
- Federal Constitution, The.**—The fundamental law of the United States; framed by the Constitutional Convention, in Philadelphia, 1787.
- Federalist, The.**—Eighty-five essays, written originally for the "Independent Journal" of New York, and published afterward in book form, constituted "The Federalist." Alexander Hamilton wrote 51 of the essays, James Madison 29, and John Jay five. They appeared between Oct. 27, 1787, and April 2, 1788, and their purpose was to inform and educate the people and to develop a public sentiment favorable to the Federal Constitution, then under discussion. They bore the common signature "Publius," and are a repository of Federal principles.
- Federalist Party.**—The first national political organization formed in this country after it had won its independence. Washington, Hamilton, Adams, Jay, and Marshall were among its most distinguished leaders. During the French Revolution, the Federalists did not sympathize with the elements of disorder in France, and because they would not involve this country in a war with England, in order to aid Robespierre, Marat, and others of their kind in France, they were most unjustly accused of favoring the British. Burr and Jefferson organized the Republican (Democrat) party and, themselves aristocrats who had little in common with the masses, charged the Federalists with being enemies of the people. The Federalists elected Washington President, and John Adams Vice-president. Hamilton's financial measures had found great favor with the friends of stable government and those who desired to see the various states of the Union consolidated and authority and responsibility centralized. In 1797 a considerable element in the party favored war with France. In 1798 Federalist influence and votes passed the Alien and Sedition Laws (which see). The Democrats made political capital of these, and in 1800, Adams and Pickney, Federal candidates for President and Vice-president, respectively, were defeated by the influence of Hamilton and Burr. The course of the Federalists in the War of 1812, was very unpopular, and after the Hartford Convention (see HARTFORD CONVENTION), that party disappeared as a political factor.
- Feldspar.**—A family of minerals which enters into the composition of granitic rocks and when decomposed form clay.
- Félibres, Les.**—The name of an extensive organization of modern Provençal poets. Originated in 1835 by Joseph Roumanille.
- "Felix Holt, the Radical."**—A novel by George Eliot.
- Felix I.**—Bishop of Rome (269-274).
- Fellahs, or Fellahin.**—The great agricultural class of Egypt.
- Fellowship in a University.**—In the universities of Oxford and Cambridge, these are gifts conferred upon such students as are found worthy after they have taken the degree of B.A., or made progress in civil law.
- Felo de Se.**—This term is applied in law to voluntary self-destruction on the part of a man at the age of discretion and of sound mind. In the state of New York the attempt to commit suicide, or aiding or assisting another in the act or the attempt is made a felony, and aiding or assisting another is manslaughter in the first degree.

Felt.—5281.

Feeling.—1914.

Fénelon (FRANÇOIS DE SALIGNAC DE LA MOTHE-FÉNELON).—(1651-1715.) A celebrated French prelate and author.

Fenians.—A semi-military organization of Irish-Americans and Irish revolutionists pledged to the liberation of Ireland from British rule, and the establishment of an Irish Republic.

The Fenian Brotherhood was founded in New York in 1857, and one of its charter members was Michael Corcoran, who was later, during the Civil War, a brig.-gen. in the U. S. army, and died in the service.

Coeval with the Fenians and with much the same object, was the Phoenix Society, whose head, James Stephens, when in the U. S. in 1858, reported that in Ireland alone it had an enrolled and disciplined membership of 35,000. John O'Mahony was the first president of the American order, which in 1863 had a national congress in Chicago, at which the claim was made that of the 15,000 men on its rolls, half were then in the Union army.

After declaring Ireland an independent nation, and James Stephens its head, the Congress adjourned to meet at Cincinnati in Jan., 1865. By this time the "circles," as the Fenian subdivisions were called, had increased fivefold.

The Congress that met in New York in Jan., 1866, planned, and with Gen. Thomas W. Sweeny, formerly of the U. S. army, as executive officer, conducted an abortive invasion of Canada. The U. S. authorities, informed of the details of the plot, seized about 3,000 stand of arms that had been collected at Eastport, Me., Rouses Point, N. Y., and St. Albans, Vt.

Notwithstanding the loss of these weapons, 1,200 Fenians, commanded by Col. O'Neill, May 31, 1866, crossed the Niagara at Buffalo, and took possession of Fort Erie, which they were obliged to evacuate two days afterward. On their way back to the U. S., they were intercepted by troops of the latter and were later released upon their promise to go to their homes.

Other invaders were caught on the Vt. border, and similarly dealt with. The government instructed Gen. Meade to keep vigilant watch on the Canadian boundary, and President Johnson, in a proclamation, warned the citizens of the U. S. against participating in the raids.

Almost simultaneously with the so-called invasion of Canada, outbreaks in Ireland occurred. In the U. S., the aggressive movements of the Fenians were soon paralyzed by the arrest of their leaders.

A second attempt to invade Canada was even less successful than the first. In 1867 the Fenian riots in Ireland resulted in imprisonments and executions. The Fenian organization, as such, no longer exists in the U. S.

Feodor I. Ivanovitch.—(1557-1598.) Czar of Russia (1584-1598).

Ferdinand I.—(1379-1416.) "The Just." King of Aragon (1412-1416).

Ferdinand I.—(1793-1875.) Emperor of Austria (1835-1848).

Ferdinand I.—(Died 1065.) "The Great." King of Castile and Leon.

Ferdinand II.—(Died 1188.) King of Leon (1157-1188).

Ferdinand III.—(1200-1252.) "The Saint." King of Castile and Leon.

Ferdinand IV.—(1285-1312.) King of Castile and Leon (1295-1312).

Ferdinand V. (II. of Aragon and Sicily and III. of Naples).—(1452-1516.) "The Catholic." King of Castile (1474-1516).

Ferdinand VI.—(1712-1759.) King of Spain (1746-1759).

Ferdinand VII.—(1784-1833.) King of Spain (1808-1833).

Ferdinand I.—(1503-1564.) Emperor of the Holy Roman Empire (1556-1564).

Ferdinand II.—(1578-1637.) Emperor of the Holy Roman Empire (1619-1637).

Ferdinand III.—(1608-1657.) Emperor of the Holy Roman Empire (1637-1657).

Ferdinand I.—(1424-1494.) King of Naples (1458-1494).

Ferdinand II.—(1469-1496.) King of Naples (1495-1496).

Ferdinand I.—(1345-1383.) King of Portugal (1367-1383).

Ferdinand II.—(1816-1885.) King of Portugal. Regent (1853-1855).

Ferdinand I.—(1751-1825.) King of the Two Sicilies (1759-1825).

Ferdinand II.—(1810-1859.) King of the Two Sicilies (1830-1859).

Fergus.—A mythical king of Scotland.

Ferguson, Adam.—(1723-1816.) A noted Scottish philosopher and historian; for some years professor in Edinburgh University.

Fermentation and Its Products.—2950.

Fern, Fanny.—The pseudonym of Mrs. Sara Payson Willis, a popular writer of her time.

Ferns.—The fern is a leafy plant, throwing upward a stem, which, in the species that grows on trees, often reaches from 25 to 30 feet in length. In other varieties, the plants are less than one inch in height.

If one searches for ferns early in March, a little evergreen may be discovered. In April, the woolly croziers, or fiddleheads, appear, and quickly develop into the luxuriant plant found on low wet ground, and along roadsides. Early in May, the Osmundae reach a good state of development; the Royal fern is to be found, delicate and fleshy, in wet meadows. In the open wood, or along roadsides, the Interrupted, or Cinnamon, fern is found. The three plants described above soon reach maturity and correspond to one another in size, and in the appearance of their flower-like fruit clusters.

The Fragile Bladder fern is to be searched for on rocky banks, and among the spreading roots of some forest tree. It soon unrolls little fronds on which fruit dots appear.

Several of the Rock Spleenworts are evergreen. Their ordinary diminutive stature is

quickly dwarfed by cold weather, and the plant is seldom encountered in winter walks in the woodland. A number of the Shield ferns endure until spring.

Even in the middle of January, the keen-eyed fern hunter may hope to make some discoveries as to the haunts and habits of his favorites.

In the cultivation of ferns, a compost of peat or bog earth, with decayed leaf mold, yellow loam, and silver sand, in equal proportions, should be used when the ferns are potted. All must be well underdrained. Fragments of mortar, and limestone, in the compost would prove dangerous to growth.

There is sufficient proof in ancient history to show that ferns were growing in abundance centuries ago. A poet spoke of the falling of the fern seed on the night St. John was born. Collections of the various species were practically commenced in 1628, when Mr. John Tradescant returned to England from a trip to Virginia. He took back with him many new kinds of ferns. Rear-admiral Bligh carried home from the West Indies, where he had sailed in the interests of the breadfruit culture, thirty-seven species of the fern. In 1813, one-half of the known ferns were growing in the West Indies, and in North America.

In the numerous isles of the Pacific Ocean, some of the most magnificent ferns of the world grow. The island of Mauritius has produced two hundred and thirty-five native species; Java claims four hundred and sixty; Brazil, three hundred and eighty-seven, and the Isthmus of Panama, one hundred and seventeen. Compared with these results in warm climates, there appear annually within the borders of the Arctic zone, twenty-six species of ferns.

The general character of the plant is much the same all over the world. Members of the species distinct from the Tree fern, grow to a height of from one inch to six or seven feet. Some are stout and fleshy, others are delicate and filmy, but nearly all are herbaceous, resembling ordinary flowering plants in texture of foliage. In structure, the plants vary greatly. Some have fronds rising from different portions of the rootstick; others are tufted—for instance the Ostrich ferns. Some grow in crowns, with fronds continually rising from the older ones.

One of the most interesting species of fern is the Aquatic, the sterile fronds of which float about in the shallow waters of southern Florida.

A few species are epiphytic, growing on other plants. In tropical countries, ferns have been found growing on trees at a height of two hundred feet.

Another species may have different sizes of fronds, according to the character of climate and soil. The Lady fern, which in ordinary localities grows from two to four feet high, has in mountainous regions reached only a height

of a few inches. In the Northern States of this country, some specimens are produced in May, others as late as September.

In flowering ferns, the *Osmundas* kind includes some of the largest and coarsest specimens. In rich woods, somewhat moist, may be found a few Spleenworts, most of the Shield ferns, the Beech, Grape, Maidenhair, and some others. In such a situation are found the finest development of fern foliage. On dry cliffs, the *Woodsia* species may be looked for; the cloak ferns, lip-ferns, and cliff-breaks. Many of these are leathery in texture; others are thickly covered with tangled hair or scales.

Somewhat in the nature of a surprise it would be for a resident of the continental portion of the United States to receive an invitation, when on a visit to a fellow-citizen in the newly-acquired Hawaiian territory, to come out into the woods and have a feast of roast ferns. It is a fact, however, that the ferns in those islands have been cooked, and found palatable. Without salt, they are found tasteless and possess a sort of leatheriness. In past times, the stems of the Tree fern were sometimes cooked in the steaming cracks of volcanoes. The bases of the petioles of another species have been cooked and eaten in times when there was a scarcity of other food. When raw, these smelled precisely like raw potatoes.—2927.

Ferrara.—(1) A province of northern Italy, on the Adriatic Sea. (2) The capital of the province of Ferrara. Pop. (1899), 91,259.

Ferrari.—(1484-1546.) An Italian painter.

Ferrel, William.—(1817-1891.) Distinguished as a meteorologist. Inventor of a maxima and minima tidal predicting machine.

Ferrers, George.—(1500-1579.) An English politician and poet.

Ferret.—An animal of the weasel family; it was employed in ancient times, as it is now, in catching rabbits. Can be in a measure domesticated.

Ferrier, Susan Edmonstone.—(1782-1854.) A noted Scottish novelist.

Fesca, Friedrich Ernest.—(1789-1826.) A German composer and violinist.

Fessenden, William Pitt.—(1806-1869.) An American statesman.

Fetich Worship.—“Fetich” is a word of Portuguese origin and was the expression of the idea among Portuguese navigators of the worship of the natives of the west coast of Africa with whom they traded. It is an object to which a magical influence is attributed, as stones, carved images, parts of animals. The fetich is an idol and the worship is idolatry.

Fétis, François Joseph.—(1784-1871.) A Belgian composer and writer on music.

Feudal Laws.—The laws in vogue in the Middle Ages, relating to the holding of land, whereby the tenant held the property and made return to his lord in military service in time of war. They were introduced into England by William the Conqueror.

Feuillet, Octave.—(1821-1890.) A noted French novelist and dramatist.

- Fez.**—(1) A sultanate in northern Morocco. (2) The capital of Morocco; pop., 140,000.
- Fiat Money.**—A proposed circulating medium often heard of during the greenback delusion that followed the Civil War. The term was applied to projected irredeemable paper currency, which its advocates claimed could be made valuable, though it had neither intrinsic worth nor the promise to pay, by the mere governmental assertion of its equality and identity with money of known, accepted, and established excellence. "Fiat," a Latin word, means "Let it be done."—Say it is money, and it is money.
- Fichel, Benjamin Eugène.**—(1826-1895.) A French painter of genre.
- Fichte, Johann Gottlieb.**—(1762-1814.) A celebrated German metaphysician.
- Fidelio.**—The only opera composed by Beethoven; first produced at Vienna, 1805.
- Field, Cyrus West.**—He laid the first Atlantic Cable; sketch of, 186.
- Field, David Dudley.**—(1805-1894.) A noted American lawyer and jurist.
- Field, Eugene.**—(1850-1895.) A journalist and poet.
- Field, John.**—(1782-1837.) A noted British composer and pianist.
- Field, Stephen Johnson.**—(1816-1899.) A noted American jurist.
- Field Codes.**—A series of codes embodying all the general laws of the state of N. Y., which were prepared by a commission appointed in N. Y. (1857), under the presidency of David Dudley Field. Among the chief reforms outlined were the substitution of a single procedure in place of the technical forms and distinctions of common-law actions and equity suits, and the admission of parties and interested persons to testify as witnesses.
- Fielding, Copley Vandyke.**—(1787-1855.) A noted English water-colorist.
- Fielding, Henry.**—(1707-1754.) A celebrated English novelist and dramatist.
- Field of the Cloth of Gold.**—In France, a plain near Ardres, Pas-de-Calais, which was the scene, in 1520, of the meeting between Henry VIII. of England and Francis I. of France. The great splendor of the display on this occasion gave the name to the spot.
- Fields, James Thomas.**—(1817-1881.) A man of letters, a member of several publishing firms in Boston, and editor of the "Atlantic Monthly."
- Fiesole.**—In Italy, a town of the province of Florence. It is noted for its Etruscan and Roman antiquities.
- Fiesole, Giovanni Angelico da (FRA ANGELICO).**—Celebrated Italian painter; see 3411.
- Fife.**—A maritime county of Scotland. Its leading industry is the manufacture of linen. Pop. of the shire (1901), 218,843.
- Fifth Avenue.**—One of the principal thoroughfares of New York City, once a fashionable residence street, but gradually being encroached upon by business houses. It extends from Washington Square to the Harlem River. Length about 6 miles.
- "Fifty-four Forty or Fight."**—An alliterative campaign cry raised by the Democrats in the national election of 1844. Between the parallels 42° and 54° 40' north lay what is now Ore., claimed both by Great Britain and by the U. S. Many American settlements had already been made in the territory and Americans had surveyed as far north as 49°. English fur traders had passed below 49°, and in 1846, by a treaty between the two countries, that parallel was agreed upon as the boundary. In the meantime, "Fifty-four Forty or Fight," had served its political campaign purpose, as Mr. Polk had been elected President.
- Fig.**—A genus of trees of the order Moraceæ. There are more than 100 species, some of which are very large trees. They are very abundant in the Himalayas and throughout India. The fruit is an important article of food in the East and is of a certain medicinal value. The best come from Smyrna. Through recent investigations of the entomological department of the U. S. an insect has been found that fertilizes the female flowers on the trees in California and the yield has during the years 1900 and 1901 been so largely increased that foreign importation will in a few years be shut out.
- "Figaro, Le."**—A noted Parisian periodical, founded in 1826.
- "Fighting Joe."**—A popular designation of Gen. Joseph Hooker.
- "Fighting McCooks," The.**—An Ohio family famous for the military service of its members in the Civil War. Six entered the army and reached the grade of maj.-gen. or brig.-gen. Two were killed during the war. The father, nearly 70 years of age, shouldered his rifle and joined the "Squirrel-hunters," who were called out in Ohio, 1863, to meet an emergency.
- Fiji, or Feejee Islands.**—They number over 200, lie in the South Pacific Ocean, and belong to Great Britain. The people are no longer cannibals. Sugar is the principal export. Area, 8,045 sq. miles; pop. estimated (1899), 122,673. Capital, Suva.
- Filibuster.**—From the Spanish word *filibustero*, which means freebooter or buccaneer, and was originally applied to the adventurers who plundered the coast settlements of North America in the 16th and 17th centuries. It was revived about the middle of the last century, when Narciso Lopez, a Venezuelan, who had been identified with the revolutionary element in that country, landed at Cardenas, Cuba, May 19, 1850, with an expedition of 600 men, capturing the town, which he soon evacuated to return to New Orleans. Here he organized another expedition and accompanied by Col. William L. Crittenden, of Ky., disembarked at Bahía, Hondo, west of Havana, Aug. 3, 1851. Leaving 130 men at this point, he marched to Las Pozas, with more than 300 followers. He appealed to the inhabitants to rise in revolt, but they did not respond, and on Aug. 28, he was obliged to surrender to the Spaniards.

- Convicted of high treason, as he had once served in the Spanish army, Lopez was garroted three days after his capture. Col. Crittenden tried to make his way back to New Orleans, but was intercepted and, with 50 others, was shot. Gen. William Walker, who invaded Sonora, Mexico, in 1853, was more successful than Lopez, as in 1855, he procured his election as president of Nicaragua. The U. S., of which he was a citizen, soon compelled him to retire from this office and surrender with his forces; but he was not otherwise punished. In 1857, the U. S. frustrated a second Walker expedition to Nicaragua. In 1860, Walker with a force of followers, landed in Honduras, but was captured, and on the order of the president of that country, was shot.
- Filibustering.**—The name given to the practice often resorted to in parliamentary bodies by the minority party, or by a few individuals, to delay or defeat legislative action by the majority. It was often employed in Congress to prevent the passage of acts which were obnoxious to some of the members. Its most frequent use was to gain or defeat partisan political ends. The filibuster was practically abolished in the House by the adoption of the "Reed rules," in 1890. For a description of the methods by which filibustering was carried on, see REED, THOMAS B. p. 486.
- Fillmore, Millard.**—Thirteenth President; sketch of, 191.
- Finances, Superintendent of.**—An office created by the Continental Congress. It was established Feb. 7, 1791, and replaced the Treasury Board, which consisted of five members of Congress. Its first incumbent was Robert Morris, the banker, who impoverished himself in the patriot cause. It was Morris's duty to investigate the national finances, report plans for their improvement, enforce orders bearing on revenue and expenditure and control public accounts. When Morris resigned the position, in 1784, a board of three commissioners took charge of the finances and retained office until 1789, when the existing Treasury Department was established.
- Finch, The.**—2570.
- Findlay.**—A city in central Ohio, noted for the supply of natural gas in its vicinity. Pop. (1900), 17,613.
- Fingal's Cave.**—In the island of Staffa, off the coast of Mull, Scotland, a cave 200 ft. in length and 65 ft. in height at the entrance.
- Finland.**—A Grand-duchy of Russia, bordering on the Gulf of Bothnia. Helsingfors is the chief city. Area, 144,255 square miles. Pop. (1897), about 2,500,000.
- "Flonnan Haddle," The.**—See COD, 2681.
- Finns.**—The natives of Finland.
- Fire Bird, The.**—See BALTIMORE ORIOLE, 2551.
- Fire-damp.**—Light carbureted coal-gas which occurs in coal mines. When mixed with seven or eight times its proportion of air, it becomes highly inflammable and dangerous. It was to overcome this danger that Sir Humphry Davy invented the safety-lamp.
- Firefly.**—A name for insects which emit light. They appear in great numbers in summer evenings over swampy ground, flashing and disappearing in all directions in a mazy flight. In the West Indies some specimens are so large and the light is so brilliant that they are used for illuminating purposes and for decoration of dress on festivals.
- Fire island.**—A popular summer resort off the coast of Long Island, N. Y.
- Fireweed, The.**—2897.
- Fire-worshippers.**—The Parsees who lived in Persia until 638. They were the followers of Zardusht or Zoroaster, 1708.
- Fiscal.**—Pertaining to the public revenue.
- Fiscal Bank of United States.**—The Whig majority in Congress, after the repeal of the sub-treasury act in 1841, passed a bill chartering the Fiscal Bank of the U. S. President Tyler vetoed the bill, as well as a measure to establish the Fiscal Corporation of the U. S., which it was supposed he would favor.
- Fiscal Year.**—The financial year of the treasury of a government; the period at the end of which all public or government accounts are made up and balanced. The fiscal year of the U. S. Government begins July 1 of each year and ends June 30 of the following year.
- Fish, Hamilton.**—(1808-1893.) An American statesman.
- Fish Commission.**—In 1872 the artificial propagation of fish, under the supervision of Congress, was begun. The Fish Commission had been established a year before, and Prof. Spencer F. Baird was the first commissioner. He served until his death in 1887, when Dr. George Brown Goode received the appointment. Marshall McDonald, John J. Brice, and George M. Bowers have since held the office. Congress appropriates annually an average of \$150,000 for the work of the Commission, and the Government maintains stations at various points in the country. Many individual states have Fish Commissions of their own; these supplement the work of the National body, which in 10 years distributed 2,390,000,000 fish. The latter and their eggs are transported in cars specially built for the purpose. The purpose of the Commission is to stock the waters of the country with the best food and game fish, and to restock the lakes and streams in which the supply has been exhausted. The work has been very successful, and such choice fish as bass, trout, whitefish, perch, salmon, and many others have been propagated at the hatcheries and distributed in enormous quantities.
- Fisher, Fort.**—See FORT FISHER.
- Fisheries.**—The right to fish on the high seas is common to all, but the term high seas does not include the waters within a marine league, or three nautical miles of the adjoining land of the country, nor can foreigners fish within this limit except by express permission of the controlling government. The fisheries have been fruitful of disputes between Great Britain and the U. S. The Canadians, after the Revolution,

wished to bar citizens of this country from taking fish off the coasts of Labrador and Newfoundland and from the Gulf of St. Lawrence. The treaty of 1783 gave to Americans the right to take and prepare fish on the coast line of any unsettled British possessions, and to take them, without curing or drying, on the banks of Newfoundland. They also had sweeping rights on the coasts of Nova Scotia, Magdalena Islands, and Labrador, until such time as the shores should become settled, and thereafter, if the inhabitants or proprietors consented. The War of 1812 ended this arrangement. A treaty made with Great Britain in 1818 was less favorable to U. S. citizens than the convention of 1783. A reciprocity treaty, in force from 1854 to 1866, gave to our people the right to fish in the waters of all British possessions except Newfoundland. From 1866 to 1871 the provisions of the treaty of 1818 were again in force. Under the agreement entered into in 1871, Canadian fishermen had the right to take any but salmon, shad, and shellfish in the waters of the U. S. as far south as latitude 39°, our citizens to have corresponding privileges in Canadian waters. The Canadians, however, claimed that U. S. fishermen had the better of the bargain and a joint commission was named to ascertain the excess of advantage on the side of the U. S. and to determine the compensation to be paid therefor. (See HALIFAX COMMISSION.) In 1885 the operation of the 1871 treaty ceased and the condition that was unsatisfactory to all interests ensued. In the spring of 1886, a U. S. fishing schooner was seized for buying bait on forbidden coasts. Other seizures for similar reasons were made and excitement ran high in both countries. In 1887 Congress authorized the President to retaliate, and empowered him to close the ports of the country against the vessels and products of Great Britain and its dominions; but the President preferring a more amicable method, appointed Thomas F. Bayard, William Putnam, and James B. Augell to confer with special representatives of Great Britain. The result of their deliberations was the treaty of 1888, by which England abandoned her claim that the 3-mile limit extended from headland to headland, and agreed that, except in cases expressly provided for, of bays more than 10 miles wide, the marine league should be calculated outward from a line across such bays, and allowed U. S. vessels in Canadian ports all the rights of Canadian vessels except to buy bait. The treaty failed in the Senate. Amicable relations between Canadian and U. S. fishermen are now maintained by means of a *modus vivendi*, that may be terminated at the pleasure of the parties to the arrangement. A joint high commission that met in 1898-99 was unable to reach an agreement, and the fisheries question is now (1902) pending between the U. S. and the British Government.

Fisher's Hill (Va.), Battle of.—After the defeat of the Confederates under Gen. Early, at Opequan, in the Shenandoah Valley, Sept. 19, 1864, Early

continued his retreat 12 miles up the valley to Fisher's Hill, where he rallied his force for a stand. Sheridan had followed him closely, with cavalry and infantry and made dispositions for an immediate attack. He sent Gen. Torbert, with two divisions of cavalry, to assail the Confederate rear, while the main attack was made in front by the 6th and 19th corps. The action took place late in the afternoon of Sept. 22. It was brief, for such was the momentum of the assault that the Confederates everywhere gave way and fled in confusion. Sheridan took 1,200 prisoners and 16 pieces of artillery. Early was unable to offer further resistance and retreated rapidly 80 miles further up the valley, to Staunton and beyond. Sheridan then laid the valley in utter waste, burning barns and grain and driving off cattle and sheep, leaving nothing to aid in the subsistence of the Confederate army.

Fitch, John.—(1743-1798.) An inventor and constructor of steamboats, the first of which was launched in 1787 on the Delaware River. Discouragement at the financial failure of his enterprise led him to take his life.—See FULTON, ROBERT, 211.

Fitchburg.—A city in Mass., on a branch of the Nashua River, noted for its manufacture of machinery. Pop. (1900), 31,531.

Fitzgerald, Edward.—(1809-1883.) An English poet and translator, best known by his translation of Omar Khayyám.

Fitzgerald, Lady Edward.—(1776-1831.) Wife of the former.

Fitzgerald, Lord Edward.—(1763-1798.) An Irish politician and revolutionist and member of the United Irishmen.

Fitzjames, James, Duke of Berwick.—(1670-1734.) A distinguished soldier; illegitimate son of James, Duke of York (James II.) and Arabella Churchill, sister of the Duke of Marlborough.

Five-cent Piece.—A silver half-dime of 20.8 grains; was the first coin struck by the U. S. mint. In 1853 the weight was made 19.2 grains. This coin was not issued in 1798, 1799, 1804, or from 1806 to 1828. The nickel five-cent piece dates from 1866, when the legal tender of five-cent pieces was reduced from \$5.00 to 30 cents. No silver half-dimes have been coined since 1873.

Five Forks (Va.), Battle of.—A notable victory won by Gen. Sheridan, Apr. 1, 1865; it prepared the way for the successful assault on the Confederate lines at Petersburg, which immediately followed. Mch. 27, Sheridan, with 10,000 cavalry, rejoined Grant at Petersburg after his Shenandoah Valley campaign. Mch. 29, Grant began a movement, the purpose of which was to turn the Confederate right and cut off Lee's line of retreat to the south. Sheridan, with the 5th corps (Warren) and 9,000 cavalry, crossed Hatcher's Run and proceeded to Dinwiddie Court-house. Warren found the Confederates in strong force (Mch. 31) and in the engagement that followed he was forced to give ground. The following day, Apr. 1, Sheridan, having his force well in hand, assailed the Confederate

line and swept all before him. He captured 6 guns, 13 colors, and above 5,000 prisoners. Sheridan's loss was about 1,000. The next day Graut overwhelmed Lee at Petersburg—and then came the end.

Five Points.—A district in New York City, north-east of the City Hall, once noted as a center of immorality and crime, but of late years vastly improved in its social conditions.

Flag.—A national or state banner or ensign, often referred to, in military parlance, as colors. Early in the Revolution the patriots had as many as six distinct flags, three of which were very suggestive of those in use in Great Britain. Even then many of the colonists in arms against England did not seriously contemplate an absolute separation from the mother country and were reluctant to adopt a device that would typify complete independence. In New England a green pine tree on a field of white was a very popular banner. Still better known was the "rattlesnake flag," composed of a snake in 13 sections, each section bearing the initial of a colony, and under or above this device the legend "Join or Die." An approximation to the present standard was made in another rattlesnake flag, which had a background of alternate red and white bars and the words, "Don't tread on me." In 1775 Congress adopted the flag of the Philadelphia Light Horse Cavalry, which, in view of the fact that it retained the British union, was not wholly satisfactory. The need of a banner that should be at once a common standard for all the soldiers of all the States, and an expression of the idea of national independence, which had displaced all hope of a reunion with Great Britain, had its statutory inception in this resolution introduced in the Continental Congress, June 14, 1777: "Resolved, that the flag of the U. S. shall be 13 stripes, alternate red and white; that the union shall be 13 stars, white on a blue field, representing a new constellation." The stars, five-pointed, are arranged in a rectangular space. It is supposed that the idea of using the stars was derived from the arms of the Washington family. A committee of Congress and Gen. Washington called on Mrs. John Ross, of Philadelphia, in June, 1777, and she made a model flag from a rough pencil drawing that had been modified by Washington, at whose suggestion the stars were altered to five-pointed instead of six-pointed, as in the original design. As states other than the first 13 entered the Union, it became evident that the addition of a stripe for each new State, as well as a star, in accordance with the plan early adopted,—and this was done for the first four new states,—would make the flag unwieldy. Congress in 1818 reestablished the standard with 13 stripes and twenty stars, one for each state then in the U. S. The principle established in 1818 of leaving the number of stripes undisturbed and representing each newly admitted state by an added star, is still in force. The number of stars now is (1902), 45.

Flamingo, Tbe.—2613.

Flammarion, Camille.—Born 1842; a noted French astronomer; author of a number of astronomical works.

Flamsteed, John.—(1646-1719.) A noted English astronomer.

Flanders.—An ancient and independent territory embracing all that bears that name now in Belgium, and a portion of the south of Holland and a part of the northeast of France. It was ruled by "Counts" who played an important part in early European history. Modern Flanders in Belgium is divided into East and West Flanders. The area is 2,407 sq. miles, and the pop. (1899), 1,845,479. It includes the towns of Ghent, Bruges, and Ostend.

Flat.—A term applied to the Stock Market indicating that prices are low.

Flatbush.—A town in Long Island, N. Y., the scene of part of an important engagement known as the battle of Long Island, in 1776. It was annexed to Brooklyn in 1894, and was incorporated into the City of New York, in 1897.

Flaubert, Gustave.—(1821-1880.) A noted French novelist and miscellaneous writer.

Flax, The Cultivation of.—Although the cultivation of flax is carried on with satisfactory results in western portions of the United States, the best flax is grown on the other side of the Atlantic. The European countries favorable to the growth of the plant are Russia, Great Britain, Ireland, and Belgium. In the latter country, through which the river Lys runs, is produced the finest flax in the world.

A moist climate is most favorable to flax-raising, and strong, deep loam is the best soil. As a preparation for the planting, the land is plowed in the fall and again in the spring. Then follows a harrowing, and a thorough manuring of the soil. Afterward a liquid manure is spread over the ground; as much as twenty-five hundred gallons to the acre being used. Next comes a light rolling. The seeds are sown in rows, eight or nine feet apart. American cultivators sow about one-half bushel of seed to the acre. They cultivate largely for the seed.

After the sowing, the roller is again used, until the earth becomes compact and hard.

One of the principal cares of flax culture is the weeding. In other countries than our own the women and the children attend to this work, which is one of great importance.

When the leaves of the plants begin to fall, and the stems turn yellow, harvesting should begin. In the United States, the harvesting machine is used and the plants are cut off at the roots. In European countries, the growers are more careful of their product, and take pains to remove the plants from the ground, roots and all. This is probably the better way to harvest, for the flax so gathered has attained a fame for excellence not achieved by the American product, planted, and harvested, as it is, with so much quickness, and dexterity, by machinery.

After the sheaves have been gathered in, the seed is removed by hand, and by machine. Then comes the "retting" or "rotting," *i. e.*, the loosening of the fiber from the wood. To accomplish this, the sheaves are thrown into vats of water and allowed to remain there until they rot. In Belgium, the flax grown along the river Lys, is rotted either in that river, or in water taken from it. There are chemicals in this water which seem peculiarly to aid in the retting, and flax retted in the Lys readily brings in France a price twenty-five per cent. more than the local product.

After the retting, the woody pith is removed from the stalks and a combing process takes place, which results in the elimination of all chaff and short tow.

In European countries one planting of flax-seed is sufficient for the production of crops for eight consecutive years. In America such care is not taken, and frequent replanting becomes necessary.

In several countries, notably in England, the cultivation of flax has been influenced by legislation. The flax raised in Ireland, where hundreds of thousands of acres of it were once under cultivation, is used in the manufacture of the famous Irish-linen.

The American manufacturers are paying to-day one-third more for the best foreign flax than for that grown at home. Although more than \$10,000,000 is invested in the industry in this country, more than \$15,000,000 worth of foreign product is imported annually. All of which says much for the European soil and climate, and also for the thoroughness of the method adopted by the cultivators.

Flaxman, John.—3599.

Fleabane.—2910.

Fleas.—See HOUSEHOLD PESTS, 2300.

Fleet Prison, The.—A very old prison in London.

In 1290 it was a debtors' prison; it was burned in 1381 by Wat Tyler's men; again burned in the Great Fire of 1666, and again by the rioters in 1780.

Fleet Street.—In London, an old street of much historical interest; now one of the busiest of the city's streets.

Fletcher, John.—(1579-1625.) A celebrated English dramatist and poet.

Fleur-de-Lis.—A French emblem derived either from the white lily or the flag or iris. The kings of France from the time of Clovis bore an indefinite and varying number upon their banners. Charles VI. reduced the number to three, arranged one and two, in reference to either the Trinity or the three different races of French kings.—See IRIS, 2907.

Fliegende Holländer, Der (THE FLYING DUTCHMAN).—The title of an opera by Wagner.

Flint.—A species of quartz or a mineral intermediate between quartz and opal. It is composed almost wholly of silica, and is of many colors. It strikes fire with steel very readily and was the common means of fire before the introduction of friction matches and percussion caps.

Floating Docks.—These were a necessity induced by the large size of ships and the necessity of quick repairs. Formerly vessels of small size were beached and the repairs made between tides. This method was extremely dangerous. Sometimes vessels were listed or careened so as to expose a part of the hull. It was during such an operation that the "Royal George" went down in 1782 with 600 men. Floating docks were formerly made of wood. The vessel was floated in, the gates closed, and the water pumped out. The introduction of iron in the manufacture has rendered it possible to work in deep water and to accommodate the largest sized vessels.

Flodden Field.—The scene of a great battle between the English and Scots, Sept. 9, 1513.

Flora McFlimsey.—The subject of a poem entitled "Nothing to Wear," written by William Allen Butler.

Florence.—In Italy, the capital of the province of Florence. A city famous for the beauty of its environments and for its art collections. Pop. (1899), 216,051.

Florence, William James.—(1831-1891.) A distinguished American comedian and playwright.

Florence Nightingale of America.—The name applied as a compliment to Clara Barton, by reason of her life-work in relieving the distress of sufferers by war, pestilence, famine, fire, and flood. (See BARTON, CLARA, 41.)

Florida.—The extreme southeastern state of the U. S. of America. Bounded on the north by Ga. and Ala., east by the Atlantic Ocean, south by Florida Strait, and west by the Gulf of Mexico and Ala. It was discovered by Ponce de Leon in 1513, on Easter day, and for that reason called by him Florida, or, according to one authority, because he found it to be a land of flowers; settled by the Huguenots in 1562 and by Spaniards in 1565; ceded to Great Britain in 1763, to Spain in 1783, and to the U. S. in 1819; admitted to the Union in 1845; seceded Jan. 10, 1861, to become one of the Confederate states; readmitted in 1868. Tallahassee is the capital and Jacksonville, Pensacola, Key West, and Tampa are the principal cities. The surface is generally flat and the chief agricultural products are cotton, corn, and oranges and other tropical fruits. Has 45 counties; area, 58,680 sq. miles; pop. (1900), 528,542. Called the Peninsula State, or Flower State.

"Florida," The.—A Confederate cruiser that for two years greatly harassed and damaged U. S. shipping. Equipped in England as the "Otero," her name was changed to the "Florida," after she had had two narrow escapes from Federal cruisers. Oct. 7, 1864, while she was in the harbor of Bahia, Brazil, she was, in violation of the rights of neutrals, attacked and captured by the U. S. frigate "Wachusett," under the command of Capt. Napoleon Collins. The "Florida" was eventually sunk by a collision in Hampton Roads.

Florida Keys.—South of Florida, a group of small islands and reefs which form part of Monroe and Dade counties, Florida.

- Florida Strait.**—A sea passage, connecting the Gulf of Mexico with the Atlantic Ocean.
- Flotow, Friedrich von.**—(1812-1883.) A German composer of operas.
- Flotsam.**—Goods lost by shipwreck and floating on the water.
- Flounder, The.**—See HALIBUT, 2668.
- Flour City.**—A name sometimes applied to the city of Rochester, N. Y.
- Flower, Roswell Pettibone.**—(1835-1899.) A financier and politician. He was a Democratic member of Congress from N. Y. (1881-83 and 1889-91); became governor of N. Y. in 1891.
- Flowers, Cultivation of.**—4138.
- Flowerly Kingdom, The.**—A name applied to China.
- Floyd, John Buchanan.**—(1805-1863.) A politician and a Confederate general in the Civil War.
- Floyd, William.**—(1734-1821.) An American politician, one of the signers of the Declaration of Independence.
- Flume, The.**—A picturesque gorge in the Franconia Mountains, N. H.; at one point it is about 10 feet wide.
- Flushing.**—(1) A seaport of Netherlands, on the southern coast of the island of Walcheren; it is a popular bathing resort. (2) A village and a town on Long Island, N. Y.
- Fly, The.**—See HOUSE-FLY, 2772.
- Flycatcher, The.**—2585.
- Flying Dutchman, The.**—In seamen's lore, a spectral ship, appearing near the Cape of Good Hope in stormy weather, and unable to enter a port. (See FLIEGENDE HOLLANDER.)
- Flying-fish, The.**—2666.
- Flying Squadron.**—A detachment of swift cruisers commanded by Commodore Schley during the Spanish-American War. (See SCHLEY, WINFIELD SCOTT, 505.)
- Flying Squirrel, The.**—2448.
- Fog Signals.**—Warnings on board ship, on coasts, or on railroads during a fog to avoid accident. The commonest means are: ringing of a bell; striking the anchor with a hammer; blowing horns or whistles.
- Folger, Charles James.**—(1818-1884.) A noted American jurist and politician.
- Folkestone or Folkstone.**—In Kent, England, a seaport and watering resort. Pop., about 24,000.
- Fond du Lac.**—In Wisconsin, the capital of Fond du Lac County; it has large lumber interests. Pop. (1900), 15,110.
- Fontaine, Jean de la.**—See LA FONTAINE.
- Fontainebleau.**—In France, a town about 35 miles from Paris; noted largely for its magnificent palace, one of the principal of the royal residences, from the Middle Ages. The forest of Fontainebleau, comprising 42,500 acres, is famous as one of the most beautiful forests in France.
- Fontainebleau, Peace of.**—A treaty between the emperor of France and the Dutch, concluded at Fontainebleau in 1785, by the terms of which the French forfeited their rights to free navigation of the Schelde beyond certain limits, and their claim to Maestricht, in the Netherlands, and its environs. In return, the Dutch paid 10,000,000 guilders.
- Foo-Chow or Fuchau.**—A seaport in China, province of Fukien, near the mouth of the Min. It was made one of the ports open to foreign trade in 1842. It has an enormous trade in tea. Pop. (1899), 650,000.
- Football.**—1997.
- Foote, Andrew Hull.**—(1806-1863.) A officer of the U. S. navy. He commanded the naval force which coöperated with Gen. Grant in the reduction of Fort Henry and Fort Donelson, in Feb., 1862, and rendered valuable assistance.
- Foote, Mary (HALLOCK).**—Born at Melton, N. Y., 1847. An American novelist and artist.
- Foote, Samuel.**—(1720-1777.) A noted English actor and dramatist.
- Foote's Resolution.**—(Dec. 29, 1829.) A resolution introduced into the U. S. Senate by Senator S. A. Foote, relative to the sale of public lands. It gave rise to the famous debate between Webster and Hayne, 1830.
- Foraker, Joseph Benson.**—Born 1846. An American lawyer and politician.
- Forbes, Archibald.**—(1838-.) A British journalist and correspondent, especially noted as a war correspondent.
- Forbes, Edwin.**—(1839-1895.) An artist, noted for his drawings illustrative of the Civil War.
- Force, Peter.**—(1790-1868.) A distinguished antiquarian whose library of 22,000 rare books and 40,000 pamphlets was purchased by Congress.
- Force Bill.**—This name has been given to various bills introduced in Congress. The "Force bill" or "Bloody bill" of 1833 was enacted for the purpose of enforcing the tariff act of 1828, the execution of which S. C. had attempted to prevent by the Nullification Act. The two bills passed in 1870 and 1871, to enforce the fourteenth and fifteenth amendments, and protect negroes in the South in the exercise of the suffrage, were known as "Force bills." The term was also applied to the similar bill introduced in the House by Mr. Lodge, of Mass., in the 51st Congress, "to amend and supplement the election laws of the U. S. and to provide for their more efficient enforcement." This bill passed the House, but was defeated in the Senate. (See CALHOUN, JOHN CALDWELL, 101.)
- Ford, John.**—(1586-1639.) An English dramatist.
- Ford's Theater.**—Formerly a theater in Washington, D. C., in which President Lincoln was assassinated by John Wilkes Booth, Apr. 14, 1865. In more recent years it was used as the record division of the War Dept. The building collapsed in 1893, killing a number of people.
- Foreclosure, in law,** is the legal process by which the mortgagor of a property is, on account of failure to perform his obligations, prevented by law from all rights to redeem his interest in the property.
- Forefathers' Day.**—The name given to the anniversary of the landing of the Pilgrim Fathers at Plymouth, Mass., Dec. 21, 1620. The date by the old-style calendar is Dec. 11. In 1769, the Old Colony Club was formed by seven citizens of Plymouth, to celebrate "the landing of our ancestors in this place," but in adjusting the date,

- to the new-style or Gregorian calendar, the Club by mistake established the anniversary on Dec. 22 instead of Dec 21. New England Societies have been established in many of the states and the celebration of Forefathers' Day is becoming more general.
- Foreign Affairs, Secretary of.**—At the solicitation of its representatives in other countries, the Continental Congress in 1781 created the office of Secretary of Foreign Affairs. The first incumbent of the office was Robert R. Livingston of N. Y. Its duties also included the adjustment of affairs between states. From 1784 to 1789, the position was held by John Jay. July 27, 1789, the two Departments of Home and Foreign Affairs were combined in the Department of State. It has so continued since that time.
- Foreign Elements in English, The.**—3019.
- Forest City.**—A name applied to the city of Cleveland, Ohio.
- Formes, Carl Johann.**—(1818-1889.) A noted German bass singer.
- Formosa or Taiwan.**—An island lying east of China, formerly a province of that country, but ceded to Japan in 1895. Area, 13,458 sq. miles. Pop., about 2,000,000.
- Formosa Strait,** separating the Island of Formosa from the mainland.
- Forrest, Edwin.**—(1806-1872.) A celebrated American actor.
- Forrest, Nathan Bedford.**—(1821-1877.) A celebrated Confederate cavalry lieutenant-general.
- Fort Benton.**—A small town in northern Mont., on the Missouri River, a center of the fur-trade.
- Fort Bowyer.**—A former fort in Ala., in the vicinity of Mobile, the scene of a British defeat in 1814.
- Fort Brown (Tex.) Attack.**—The annexation of Texas, it was believed in Washington, would precipitate war with Mexico, and to provide for this contingency the government sent all of its available troops to the frontier. In Nov., 1845, Gen. Zachary Taylor had concentrated 4,000 men at Corpus Christi on the Nuecès, with whom on Mar. 25, 1846, he occupied Point Isabel on the Gulf of Mexico. In April he led his army up the Rio Grande and camped opposite Matamoros, then held by Mexican troops under Gen. Arista. Here the Americans under the direction of Maj. Brown erected a fort to which they gave his name. Taylor's supplies were still at Point Isabel and when he learned that the Mexicans intended to destroy or capture these he fell back, May 1, to protect them. Two days later, when the Mexicans heard of his departure, they began a bombardment of Fort Brown, which lasted for a week. Maj. Brown, who was killed with Captains Hawkins and Mausfield, made a splendid and successful defense. Sergt. Weigert also fell and 13 privates were wounded.
- Fort Caswell.**—On Oak Island, N. C.; held by the Confederates till 1865.
- Fort Clinton.**—A fort of the Revolutionary War, situated on the Hudson, south of West Point.
- Fort Craig.**—In N. Mex., scene of a battle during the Civil War, Feb. 21, 1862, in which the Fed-
- erals under Col. E. R. S. Canby, were defeated by the Confederates under Gen. H. H. Sibley.
- Fort Damnation (Va.)**—A strong work in the line of Confederate defenses around Petersburg, Va., in 1864-65. The fire of its guns was, from its location, especially annoying to the Federal troops, and its strength was such that all attempts to capture it had failed. Grant's soldiers named it "Fort Damnation," and so it was known throughout the siege.
- Fort Dearborn.**—A fort established by the U. S. Government in 1804 on the site of the city of Chicago.
- Fort Donelson (Tenn.), Capture of.**—After the reduction of Fort Henry, on the Tennessee River (Feb. 6, 1862), Gen. Grant at once began operations against Fort Donelson. This was a strong work, on the Cumberland River, 65 miles below Nashville. It mounted 70 guns and was garrisoned by 21,000 Confederates; Gen. John B. Floyd was in command, with Gen. Gideon J. Pillow and Gen. Simon B. Buckner as his chief subordinates. The fort completely commanded the navigation of the Cumberland and was relied on to protect the Tennessee capital from the Federal gunboats. Grant moved against Fort Donelson with 15,000 men, but a large reinforcement under Gen. Lew Wallace increased his force to 27,000. The weather was exceedingly inclement and the troops of both armies suffered intensely from the severe cold. Grant's operations on land were supplemented by a fleet of six gunboats under Commodore Foote. An attack by the gunboats resulted in their repulse, two of them being so crippled as to be wholly disabled. The fort was on a high bluff and could not be effectively reached from the water. Grant invested the fort from the land side, fighting his way at all points. Feb. 15, Floyd made an attempt to cut his way through the Federal lines, but was defeated and driven back, after severe fighting. That night Floyd and Pillow relinquished the command to Buckner and, with a small body of men, escaped by means of boats. The next morning (Feb. 16) Buckner displayed a white flag and sent a message to Grant asking what terms would be granted. Grant replied in terms that at once made him famous, informing Buckner that no other terms than unconditional surrender could be granted, and adding: "I propose to move immediately upon your works." Thereupon Buckner surrendered with nearly 15,000 prisoners. During the fighting Grant lost about 2,800 men, killed, wounded, and missing. The Confederate casualties were about the same. This was the first great Union victory of the war and Grant was the hero of the hour. The initials of his name, U. S., were at once popularly applied to two words in his message to Buckner and he was loudly acclaimed as "Unconditional Surrender" Grant. (See GRANT, ULYSSES SIMPSON, 228.)
- Fort Edward.**—A small town in N. Y., on the Hudson River; an important post in the French and Indian War.

Fort Erie (Canada), **Battles of.**— Occurred Aug. 14-15, 1814, between Gen. Gaines commanding 2,500 Americans, and 5,000 British under Lieut.-Col. Drummond. The latter bombarded the fort on both of the above days and between midnight and dawn on the 15th tried to carry it by assault. He was driven off with a loss of 531, killed, wounded and prisoners, while the total American loss was but 84. Sept. 17, Gen. Brown, who had taken command in consequence of injuries to Gen. Gaines, ordered a sortie on the enemy's outposts and all the British batteries were captured or destroyed. This action saved Buffalo and western N. Y. from invasion. In the sortie the British lost 885 and the Americans 295. Drummond at once retired to Canada and the Americans abandoned Fort Erie after destroying it.

Fort Fisher (N. C.), **Capture of.**— Wilmington, N. C., was the most important of the Confederate sea-ports during the Civil War, because of its natural advantages for the ingress and egress of blockade-runners. Its approaches were defended by heavy works, the chief of which was Fort Fisher. It was eighteen miles below Wilmington, on a peninsula at the mouth of Cape Fear River. It was a work of the first class, mounting 75 guns, some of these of the largest caliber and longest range known to the ordnance of the time. In Dec., 1864, an expedition to attempt the reduction of Fort Fisher was organized at Fortress Monroe. It sailed Dec. 13, and consisted of 73 vessels, carrying 655 guns, with a land force of 6,500 men, the whole being under the command of Gen. Benjamin F. Butler. The naval commander was Rear-Admiral David D. Porter. A novel feature of the expedition was a vessel loaded with 215 tons of gunpowder. This was to be exploded near the fort and it was believed that its effect would be to ignite by concussion the magazines in the fort. The experiment was tried, but the powder ship was at such a distance from the fort that there was no appreciable effect; in fact it only made sport for the Confederates. Dec. 24, the fleet subjected the fort to a terrific bombardment, which really did but little damage. On the 25, Gen. Butler made a survey of the fort and its surroundings and decided that it would not be wise to attempt an assault. He abandoned the enterprise and the fleet returned northward. Admiral Porter was not satisfied and urged the Washington authorities that he be permitted once more to train his guns upon the fort. Another expedition was dispatched under the command of Gen. Alfred H. Terry. After a furious bombardment by the fleet, the troops— which had landed under cover of the fleet— assaulted the fort and carried it in gallant style. Everything within the fort was surrendered, including 2,100 officers and men. The entire Federal loss was about 600. (See PORTER, DAVID DIXON, 475.)

Fort George (Canada), **Capture of.**— On May 27, 1813, Gen. Dearborn, commanding 4,000 American troops, attacked Fort George, on the Canadian

side of the Niagara River. The fort was held by 1,800 British regulars, 350 militia, and 50 Indians under Brig.-Gen. Vincent. Gen. Dearborn's force was transported from Fort Niagara, an American stronghold nearly opposite, by the fleet of Commodore Chauncey and Capt. Perry. After a sharp engagement of 20 minutes, the British fled to Beaver Dams, 18 miles away, to rendezvous. Fort George, its dependencies, and the village of Newark, fell into the hands of the victors, who lost 40 killed and about 100 wounded. The British regulars lost in killed, wounded, missing, and prisoners, 56, while 507 Canadian militia were captured, together with much ammunition and stores.

Fort Griswold (Conn.), **Capture of.**— Sept. 6, 1781, Arnold and the Tories captured Fort Griswold, opposite New London, which they had already taken. The garrison fought stubbornly; 73 of its 150 men were killed, including Col. Ledyard, the commander.

Fort Harrison (Ind.), **Assault on.**— Sept. 4, 1812, Capt. Zachary Taylor, afterward general and President, held, with a garrison of 50 men, ill or convalescing, this blockhouse on the Wabash River until reinforcements reached him. The attacking Indians fired the fort, and inflicted a loss of three killed and three wounded. (See TAYLOR, ZACHARY.)

Forth Bridge, The.— Built by the North British Railway across the Firth of Forth, 1882-89. One of the largest bridges ever constructed.

Fort Henry, Capture of.— In the early days of the Civil War the Confederates established a general line of defense in the West, extending from Columbus, Ky., on the Mississippi River, to the Cumberland Mountains, in eastern Tennessee. Two important factors in this plan were Fort Henry, on the Tennessee River, and Fort Donelson, on the Cumberland. These fortifications were but 12 miles apart, the rivers flowing near together as they approach the Ohio River, into which they empty. Early in 1862 Gen. Halleck, commanding the department of Missouri, determined upon a movement against these works, and the execution of the plan was intrusted to Gen. Grant, with a cooperating naval force, consisting of a flotilla of ironclad gunboats, commanded by Com. Foote. The expedition left Cairo, Ill., Jan. 30, 1862. The transports, carrying 15,000 troops, were conveyed by the gunboats. Fort Henry was first attacked, and its reduction was easily accomplished. After a bombardment by the gunboats, which lasted an hour and a half, a white flag was displayed and Gen. Tilghman, who commanded the fort, surrendered. Its garrison consisted of 2,700 men, but all except about 100 left before the surrender and made their way to Fort Donelson. (See FORT DONELSON, CAPTURE OF.)

Fort Independence.— Situated on Castle Island, one of the defences of Boston.

Fort Jackson and Fort St. Philip (La.)— These fortifications are situated one upon either bank of the Mississippi River, 65 miles below New Or-

- leans. During the first year of the Civil War they were occupied by the Confederates. They were put in the strongest possible condition, with an armament of heavy guns, and they were relied upon as a protection to the city of New Orleans. It was not deemed possible that the Federal war vessels would be able either to reduce the forts or to pass them. To make assurance doubly sure, a boom was extended across the river, consisting of heavy timbers and the hulks of vessels, bound together by chains. But Admiral Farragut forced a passage, passed the forts (Apr. 24, 1862), and took New Orleans. Before the passage of the fleet, the forts were furiously bombarded for six days, by mortar-boats under the command of Com. David D. Porter. The bombardment had little effect in impairing the forts or their armament. After the fall of New Orleans the forts were surrendered to the land forces of Gen. Butler. (See FARRAGUT, DAVID GLASGOW, 179.)
- Fort Mackinac** (Mich.), **Capture of.**—The British in Canada heard of the declaration of the War of 1812 sooner than the Americans on the opposite side of the St. Lawrence, and on July 17, English and Indians, 700 strong, under Capt. Roberts, surprised and captured the garrison of 61 officers and men under Lieut. Hanks at Fort Michilimackinac, or Mackinaw.
- Fort Macon.**—On Bogue Island, Beaufort Harbor, N. C.; captured by the Federals under General Parke, assisted by a naval force under Commander Lockwood, April 26, 1861.
- Fort McAllister** (Ga.), **Capture of.**—At the middle of Dec., 1864, Gen. William T. Sherman, with 60,000 men, having marched "to the sea" from Atlanta, appeared before Savannah, which was occupied by 15,000 Confederate troops commanded by Gen. Hardee. One of the main defenses of the city was Fort McAllister, on the Ogeechee River. This was a strong work which had resisted many attacks by sea and effectually barred the river to the Federal gunboats. Dec. 14, Gen. William B. Hazen's division, of the 15th corps, crossed the river and stormed the fort from the rear. The work was gallantly carried, the conflict lasting but 15 minutes. Communication was at once opened with the fleet under Admiral Dahlgren, and the investment of Savannah followed. The fort was erected by the Confederates opposite Genesis Point, Ga., to guard the approach to Savannah.
- Fort McHenry** (Md.), **Bombardment of.**—Sept. 13, 1814, the British fleet of 16 heavy vessels attacked Fort McHenry, three miles southeast of Baltimore. Eight hundred men, under Maj. Armistead, defended the fort, which withstood a bombardment for 25 hours, when the hostile ships were obliged to withdraw with a loss of two vessels and many men. During the action Francis Scott Key, who was in the city, wrote "The Star-Spangled Banner." During the Civil War this fort was much used by the U. S. Gov't as a place of confinement for high military and state prisoners.
- Fort Meigs** (Ohio), **Bombardment of.**—Lasted from May 1 to May 6, 1813, when the British and Indians numbering 2,500 under Col. Proctor, despairing of carrying the fort, abandoned operations against it. The defenders, commanded by Gens. Clay and Harrison, lost over 600 of their 2,200 men through the disobedience of orders by Col. Dudley, who in an attack on the British rear penetrated too far into the woods and were ambushed. Notwithstanding this reverse to the Americans, the English failed in their main purpose.
- Fort Mercer** (N. J.), **Attack on.**—Though the British occupied Philadelphia in Sept., 1777, Washington's army encamped near by, prevented them from getting control of the Delaware and Schuylkill rivers. Near the mouth of the latter, on the N. J. side at Red Bank, was Fort Mercer, garrisoned by 400 men. Oct. 22, it was unsuccessfully attacked by British ships and Hessian troops. The enemy lost 400 men and 3 ships; the Americans, 35 men.
- Fort Mifflin** (Pa.).—On the Delaware River, near the mouth of the Schuylkill; one of the defenses of Philadelphia.
- Fort Mimms** (Ala.) **Massacre.**—In 1813 the people of Ala., alarmed by the hostile course of the Creek Indians, crowded Fort Mimms, near Montgomery. It was garrisoned by 16 regulars and 240 volunteers. Aug. 30 it fell before an attack of 1,000 savages, and 400 persons, including all the women and children, were slain.
- Fort Monroe.**—A strong fortress situated on Old Point Comfort, at the mouth of the James River, Va., the largest military stronghold in America; it commands the anchorage of Hampton Roads; and was an important base of military and naval operations during the Civil War. Immediately after the war, Jefferson Davis, the late Confederate President, was confined in a casemate there while a prisoner, until released on bail.
- Fort Morgan.**—Situated at the entrance to Mobile Bay, on the site of the old Fort Bowyer, the scene of a repulse of the British and their Indian allies by the Americans under Major Lockwood, Sept. 15, 1814. Fort Morgan was also an important factor in the defense of Mobile in the Civil War. It was captured by the Federals in Aug., 1864. (See MOBILE BAY, BATTLE OF.)
- Fort Moultrie** (S. C.).—One of the defenses of the harbor of Charleston, S. C. It stands on Sullivan's Island and was built during the War of 1812, but was afterward greatly enlarged and strengthened. Just before the Civil War began, and while the Confederates were preparing to reduce Fort Sumter, it was occupied by a small detachment of U. S. troops, forming a part of the force of Maj. Robert Anderson, who commanded in the harbor. On the night of Dec. 26, 1860, Anderson evacuated Fort Moultrie and withdrew its garrison to Fort Sumter. The abandoned work was immediately occupied by the Confederates.
- Fort Niagara.**—At the mouth of the Niagara River, N. Y.; established by the French in 1678, and

surrendered to the U. S. by the British in 1796. Nov. 21, 1812, Fort Niagara repelled a bombardment by Forts George and Niagara on the Canadian side, silencing their batteries. American loss nine; British loss unknown.

Fort Pillow (Tenn.), **Capture of.**—A strong fortification on Chickasaw Bluff, Mississippi River, 40 miles above Memphis, built by the Confederates early in the Civil War. It fell into the hands of the Federals in June, 1862, its evacuation having been forced by the destruction of the Confederate gunboat fleet. In Apr., 1864, it was garrisoned by 550 U. S. officers and men, of whom about half were negro troops. On the 12th of that month, Gen. Forrest, with a body of Confederate cavalry, suddenly appeared before it and demanded its surrender. This was refused and Forrest carried the fort by assault. It was alleged that many of the colored soldiers were brutally massacred, even after they had surrendered. This was, however, vigorously denied by Forrest and his officers.

Fort St. Philip (La.), **Bombardment of.**—Fort St. Philip, on the Mississippi, 65 miles below New Orleans, was bombarded by British vessels from Jan. 9 to Jan. 14, 1815. The English failed to capture it, and inflicted a loss of only two killed and seven wounded. This fort also formed one of the Confederate defenses of New Orleans, early in the Civil War. In Apr., 1862, Farragut ran his ships past the fort and captured the city. (See FARRAGUT, DAVID GLASGOW. See also FORT JACKSON.)

Fort Sanders (Tenn.), **Attack on.**—This work was one of the defenses of Knoxville during the Civil War. A few weeks after the battle of Chickamauga, Gen. Bragg, the Confederate commander, detached Gen. Longstreet, with the two divisions which had been sent west from Lee's Virginia army, to operate against Knoxville, in eastern Tennessee, about 100 miles from Chattanooga. Longstreet laid siege to the place which was defended by the Army of the Ohio, under Gen. Burnside. Nov. 29 the Confederates attempted to pierce the Union line by attacking Fort Sanders. For a distance in front of the work was a network of wires strung a few inches from the ground. This proved most effective in tripping the assailants as they came within range of the musketry from the works. The attempt was a most gallant one, but it was impossible to reach the fort, and after sustaining a loss of 900 men, the troops were recalled. The Federal loss was very small. In the meantime the battle of Missionary Ridge had been fought and 30,000 men under Gen. Sherman were on their way to succor Burnside at Knoxville. After the failure at Fort Sanders, Sherman's advance being but two days' march away, Longstreet raised the siege and returned to Va., where he rejoined the army of Lee.

Forts Clinton and Montgomery (N. Y.), **Loss of.**—These forts were on the west side of the Hudson River, six miles below West Point. The latter was unfinished and was defended by a company of artillery, a few regulars, and some poorly armed

militia. Fort Clinton, commanded by Gen. James Clinton, was a completed work, but was insufficiently garrisoned. Oct. 6, 1777, they were carried by the British under Gen. Henry Clinton, the Americans losing 300 in killed, wounded, and missing, 100 cannon and much ammunition. The British lost about 200.

Fort Stedman (Va.), **Assaults on.**—Fort Stedman was a fortification built by the Federal troops, at the right of Gen. Grant's line in front of Petersburg, Va. Toward the end of March, 1865, it became apparent to Gen. Lee that he would be forced to evacuate his position. He wished to strike a blow, however, and planned to surprise Fort Stedman. The assault was made Mar. 25, and was successful; the batteries were carried and 500 prisoners were taken. Two days later the guns of the adjacent Union forts were brought to bear upon it and after a furious fire the work was stormed and recaptured. About 2,000 Confederates were taken prisoners. The Union loss was 900.

Fort Stephenson (Ohio), **Attack on.**—Maj. Croghan with 160 men occupied Fort Stephenson, now Fremont, Ohio. Aug. 1, 1813, he was attacked by Gen. Proctor with 400 regulars and many hundred Indians, while Tecumseh and 2,000 braves held the roads to prevent reinforcements. Aug. 2 the garrison repelled a general assault with slight loss, the enemy losing 120.

Fort Stevens (D. C.), **Battle of.**—In June, 1864, Gen. Lee reinforced Gen. Early, who commanded the Confederate forces in the Shenandoah Valley, raising his strength to 20,000. He then directed Early to demonstrate against the city of Washington, in the hope that Grant would thereby be compelled to draw largely from his army confronting Lee near Richmond. Early suddenly debouched from the valley, entered Md., and swept eastward, causing great consternation at Washington and Baltimore. He showed so much enterprise that his cavalry, July 11, actually captured a passenger train en route from Philadelphia to Baltimore, taking from it as prisoners a number of Federal officers, one of whom was Maj.-gen. Franklin. At this time Early, having defeated the Federals at Monocacy (which see), moved directly on Washington with his infantry. There is little doubt that had he acted with vigor and promptness he might have captured it, for he was within striking distance before a force adequate to its defense had been assembled. Grant detached the 6th corp (Wright) and it was hurried from City Point to Washington by swift steamers. By good fortune, part of the 19th corps (Emory), which some time before had been ordered up from New Orleans, arrived at Washington at the moment when the need was sorest. Scattered detachments from various adjacent points were gathered at the capital, and thousands of government employees, marines, convalescents, and citizens were organized, armed, and placed on duty at the point of danger. Early reached the outskirts of the city, on the north, and a sharp engagement took place

July 12 at Fort Stevens, a work which had been hastily built with trenches extending a long distance eastward and westward. The Federal force was a motley one having little coherence, but it made such stout resistance that Early was beaten off. He abandoned his enterprise and returned to the Shenandoah Valley. The losses in the action did not exceed 200 on each side. President Lincoln was at Fort Stevens and viewed the battle from the parapet. The fort—on the Seventh Street road, near what is now Brightwood—has been preserved, and is one of the objects of interest to tourists.

Fort Sumter (S. C.).—The principal work for the defense of the harbor of Charleston, S. C. It has a special historic interest from the fact that it was here that the Civil War began, in April 1861. During the winter of 1860–61, the fort was in command of Maj. Robert Anderson, of the U. S. army, with a garrison of less than 100 men. The state of S. C. seceded from the Union Dec. 20, 1860. This was soon followed by the secession of several other states and the organization of a provisional Confederate government. Steps were at once taken looking to the reduction of Fort Sumter. The operations were placed in charge of Gen. P. G. T. Beauregard, and under his direction forts were built at various points commanding Sumter, and a force of 7,000 men was assembled at Charleston. War had not yet been declared, but there was no attempt to conceal the purpose of gaining possession of the fort. During the winter the food, clothing, and ammunition in the fort became nearly exhausted, and the Confederates would not permit the U. S. Government to furnish the garrison with supplies of any kind, or to throw in a reinforcement of men. In Jan., 1861, an attempt to revictual the fort was made with the steamer "Star of the West," but she was driven off by the fire of the Confederate batteries on Morris Island. On April 11, Gen. Beauregard sent to Maj. Anderson a demand for the surrender of the fort, which was refused. The next morning the Confederates opened fire. The guns of Sumter responded and for two days a desultory fire was continued. The barracks and other buildings within the fort were set on fire, and the flames threatened the magazines. The unequal contest ended on the 14th when Anderson struck his flag and surrendered. There were no casualties on either side during the engagement. Then came the proclamation of President Lincoln calling for 75,000 volunteers and at once the war-drums were beating in every part of the land. The Confederates held Fort Sumter until Feb. 17, 1865, nearly four years. It passed again under the Stars and Stripes when the northward march of Gen. Sherman from Savannah compelled the Confederate evacuation of Charleston. The replacing of the U. S. flag upon Fort Sumter was made the occasion of great rejoicing. Many leading men from the North were present and an oration was delivered by the Rev. Henry Ward Beecher. See pp. 46, 89, and 90.

Fortunate Islands, The.—The ancient name of the Canary Islands, a group in the Atlantic Ocean, northwest of Africa.

Fortune, The.—An old London theatre. Built in 1599; destroyed by fire in 1621, and again, by a party of soldiers, in 1649.

Fortune Bay Outrages.—They grew out of a conflict between the Treaty of Washington of 1871 and certain Newfoundland laws. In Jan., 1878, people of Fortune Bay, Newfoundland, attacked Gloucester, Mass. fishing craft that were taking herring, destroyed their nets and dispersed their crews. The aggressors pleaded that the Gloucester men had violated local laws. The British Cabinet decided that the treaty was paramount to the local laws and the injured fishermen were awarded \$73,000 damages.

Fortuny, Mariano.—3450.

Fort Wagner (S. C.).—A strong fortification built by the Confederates on Morris Island, in the harbor of Charleston. In April, 1863, a formidable effort to reduce it was made by a fleet of iron-clads and monitors, under the command of Admiral Dupont. The operations were in the nature of an experiment, as it was desired to test the efficacy of this class of vessels against land fortifications. The attempt failed, the fleet being forced to retire, after having been roughly handled. In June following, Gen. Quincy A. Gillmore, a skilful engineer, with a land force of 12,000 men, with a powerful co-operating naval squadron under Admiral Dahlgren, was sent to operate in Charleston Harbor. Gillmore's plan was, if possible, to reduce Fort Wagner and then to proceed against Fort Sumter. Gillmore overcame difficulties that seemed insuperable, and planted in the swamps batteries of the heaviest guns, bearing on Wagner. One of these guns, the foundation for which was built with piles and tens of thousands of bags of sand, became famous under the name of "The Swamp Angel." This gun burst when but a few shots had been fired from it. A combined land and naval attack on Wagner was made July 10, 1863, but it failed. Another attempt was made July 18, to carry the work by storm, but the Federals were repulsed with a loss of 1,200 men. Among the slain was Col. Robert G. Shaw, of the 54th Mass., the first regiment of colored troops sent to the field from a northern state. Gillmore then undertook to approach Fort Wagner by means of parallel trenches. In the meantime, in August, the land batteries were trained upon Fort Sumter, and that work, which was of masonry, was in a few days reduced to an almost shapeless mass. Arrangements were completed for another attempt to carry Wagner by storm, Sept. 7, but during the previous night the Confederates evacuated it. It was estimated that more than 122,000 pounds of metal had been hurled against it, but it had not been materially damaged.

Fort Washington (N. Y.), **Capture of.**—This work was one of the principal defenses of the Hudson River, and after the disastrous battle of Long

- Island in 1776, Washington quickly saw that it would become untenable and urged that it be abandoned. The Continental Congress disregarded his advice, and Gen. Howe sent an expedition against Fort Washington and Fort Lee, the latter on the opposite or N. J. side of the river. Fort Washington fell Nov. 16, 1776, the British capturing 2,600 men and all the munitions of war. The victory was dearly brought, as the English lost 450, while the American killed and wounded did not exceed 130.
- Fort Wayne.**—A city in Ind. A center of trade and manufactures. A fort was built here in 1794. Pop. (1900), 45,115.
- Fort William Henry.**—At the head of Lake George, N. Y. It was surrendered by the English to the French and Indians under Montcalm in 1757.
- Fort Winthrop.**—Situated on Governor's Island, one of the defenses of Boston.
- Fort Worth.**—A city in Tex., noted as a shipping center for stock, and for its manufacture of flour, etc. Pop. (1900), 26,688.
- Forum Romanum.**—The Forum in Rome was the place where markets and courts were held. The market was the *forum venalium* and the court was the *forum judicialium*. The Roman forum was seven jugera in extent and was situated at the foot of the Capitoline Hill, surrounded by houses. It ceased to be a market about 472 B.C. The place is now a cattle market.
- Foster, John Gray.**—(1823-1874.) An officer in the U. S. army. He was graduated from West Point in 1846 and in 1860 was a captain in the corps of engineers; was one of the garrison of Fort Sumter when it was taken by the Confederates in April, 1861; was made a brig.-gen., and commanded a brigade under Burnside in the expedition which resulted in the capture of Roanoke Island and Newburn, N. C., early in 1862; served through the war, holding various important commands, was brevetted maj.-gen., and after the war directed important government engineering enterprises.
- Foster, Stephen Collins.**—(1826-1864.) An American composer of popular songs; among his successes are "Old Kentucky Home," "Come Where my Love Lies Dreaming," and "Old Folks at Home."
- Foucault, Jean Bernard Léon.**—(1819-1868.) A distinguished French physicist, especially celebrated for his achievements in optics and mechanics.
- Fougères.**—In France, a town 27 miles N. E. of Rennes; a stronghold of Brittany, often besieged; the ruins of its feudal castle still remain.
- Fountain of Youth, The.**—See PONCE DE LEON.
- Fourier, François Marie Charles.**—(1772-1837.) A noted French socialist.
- Fourierism.**—A system of socialism developed by François Marie Charles Fourier (1772-1837). The underlying principle is that human society may best reach its highest development by association of 400 families on a coöperative basis founded upon natural and mathematical laws.
- Attempts to carry out the system, both in France and America, have failed for lack of funds.
- Four Lakes, The.**—A chain of lakes in southern Wis.
- Fourth of July Claims.**—So called because they were allowed by Congress July 4, 1864. They were for quartermaster and commissary stores taken from loyal citizens and used by the Union armies during the Civil War.
- Fowler, Orson Squire.**—(1809-1887.) Distinguished as a phrenologist, and founder of the "American Phrenological Journal" in 1838.
- Fox, Charles James.**—(1749-1806.) An English statesman and Cabinet minister under Lord North. In 1772, in consequence of a quarrel with Lord North, he passed over to the Opposition. He was the most powerful advocate of just concession to the American colonists during the War of the Revolution. His contest with Pitt, the trial of Warren Hastings, the French Revolution, gave him abundant opportunity to exert his wonderful talent and oratory.
- Fox, George.**—(1624-1691.) Founder of the Society of Friends.
- Foxe or Fox, John.**—(1516-1587.) Englishman; author of "Actes and Monuments," popularly known as "Foxe's Book of Martyrs."
- Fox Hunt Described by a Fox, A.**—See ANIMAL STORIES, 2740.
- Fox Indians.**—Of the Algonquin stock. They aided the British in the Revolution and again during the War of 1812. By treaties made between 1804 and 1830 they ceded large tracts to the U. S., and after the Black Hawk War (see BLACK HAWK WAR) made further cessions. The remnants of the tribe are incorporated with the Sacs and dwell on a small reservation in Oklahoma.
- Foxglove (*Digitalis purpurea*).**—A well-known plant of the order *Scrophulariaceæ*. It is poisonous and medicinal and yields the active principle digitalis.
- Fra Diavolo (MICHELE PEZZA).**—(1760-1806.) An Italian robber and partizan of the Bourbons. The name is Italian for "Brother Devil." It is also the title of a comic opera, which appeared in 1830, by Auber and Scribe.
- Framingham.**—A town in Mass., 20 miles from Boston. Pop. (1900), 11,302.
- France.**—The principal republic of Europe. It has an area of 204,146 sq. miles and a population of about 39,000,000, exclusive of her colonies, which have 35,000,000. In the south and east the surface is mountainous, and in the north and west it is quite level. Grain, wine, fruit, vegetables, dairy produce, and cattle are raised in large quantities. In the quality of its silk, cotton, woollens, laces, linens, chemicals, glass, and pottery France is unsurpassed by any other nation. The government consists of a President elected for 7 years, a senate of 300 members, and a chamber of deputies of 584. The colonies are in Africa, Asia, Oceanica, and America. Roman Catholicism is the prevailing religion of France.

- Francesca da Rimini.**— Daughter of Guido da Polenta, lord of Rimini, and wife of Giovanni Malatesta. She loved the younger brother of her husband. The latter slew them both (1288). This furnishes an incident in Dante's "Inferno." It has been the subject of many poems and paintings.
- Franche-Comté.**— An ancient government of eastern France.
- Francia.**—(1450-1518.) Italian painter, 3416.
- Francis I.**—(1777-1830.) King of the Two Sicilies, 1825-1830.
- Francis II.**—(1836-1894.) King of the Two Sicilies.
- Francis II.**—(1544-1560.) King of France, 1559-1560. Husband of Mary Queen of Scots.
- Francis I.**—(1708-1765.) Emperor of the Holy Roman Empire, 1745-1765. Husband of Maria Theresa of Austria.
- Francis I.**—(1768-1835.) Emperor of Austria and of the Holy Roman Empire.
- Francis I.**—(1494-1547.) King of France (1515-1547).
- Francis Joseph I.**—(1830-) Emperor of Austria (1848-).
- Francis of Assisi.**—(1182-1226.) An Italian monk and preacher, who founded the Franciscan order of monks in 1210.
- Francis, Sir Philip.**—(1740-1818.) Is said to have been the author of "Junius's Letters." An English politician and author.
- Franco-German War.**—A war between France and Germany (1870-71) on account of the election of a Hohenzollern prince to the Spanish throne. The leading events were:—
 Declaration of war, July 19, 1870.
 Battle of Weissenburg, Aug. 4, 1870.
 Battle of Worth, Aug. 6, 1870.
 Battle of Spicheren, Aug. 6, 1870.
 Battles around Metz, Aug. 14-18, 1870.
 Battle of Vionville, Aug. 16, 1870.
 Battle of Gravelotte, Aug. 18, 1870.
 Battle of Sedan, Sept. 1, 1870.
 Surrender of the French, Sept. 2, 1870.
 Siege of Paris by Prussians, Sept. 19, 1870.
 Surrender of Strasburg, Sept. 27, 1870.
 Surrender of Metz, Oct. 27, 1870.
 Battle of Coulmiers, Nov. 9, 1870.
 Battle of Beaune-la-Rolande, Nov. 28, 1870.
 Sortie from Paris, Nov. 30, 1870.
 Battle of Orléans, Dec. 2-4, 1870.
 Sorties from Paris, Jan., 1871.
 Battle of Le Mans, Jan. 12, 1871.
 Battle of Lisaine, Jan. 15-17, 1871.
 Surrender of Paris, Jan. 28, 1871.
 Peace at Versailles, Feb. 26, 1871.
 Occupation of Paris, Mch. 1-3, 1871.
 Peace of Frankfurt, May 10, 1871.
- Franconia.**—A great duchy of the old German kingdom, situated chiefly in the valley of the Main.
- Franconia, Lower.**—A district in the northwest of Bavaria.
- Franconia, Middle.**—A district in western Bavaria.
- Franconia, Upper.**—A district in the northeast of Bavaria.
- Franconia Mountains.**—A ridge in New Hampshire. Mount Lafayette (5,270 ft.) is the highest point.
- Frangipani.**—A noble Roman family of the 11th century. They were the leaders of the Ghibelline party.
- Frank Forester.**—Pseudonym of Henry William Herbert (which see).
- Frankfort.**—The capital of Kentucky, on the Kentucky River. Pop. (1900), 9,487.
- Frankfort-on-the-Main.**—A city in Prussia in Hesse-Nassau, on the north bank of the Main. It was a Roman station. It is noted for its commerce and is one of the greatest banking centers in the world. Pop. (1900), 288,489. A council was held here in 764 by direction of Charlemagne. The treaty which concluded the war between Germany and France was concluded here Feb. 26, 1871.
- Franking Privilege.**—A right enjoyed by government officials to send letters and packages by mail free of postage. It was first granted by Congress in Jan., 1776, to private soldiers actually in service, and was gradually extended to the President, Vice-president, Cabinet officers, members of Congress, bureau officials, postmasters, etc. The franking privilege covered letters, newspapers, executive papers, documents, and printed matter. Many abuses grew up under the system, and Postmaster-general Creswell, in his report in 1872, estimated that the frank matter, if paid for, would yield a revenue of \$3,500,000. Jan. 31, 1873, Congress passed an act entirely abolishing the privilege. Certain features have since been restored. By acts passed in 1874 and 1875, documents ordered printed for the use of Congress were admitted for free transmission through the mails. By special acts the privilege has been extended to widows of Presidents. The act of Jan. 12, 1895, gives to members of Congress the right to frank through the mails all correspondence on official and departmental business only.
- Franklin, or Frankland.**—The first constitution of N. C. made provision for a future state within her limits, on the western side of the Alleghany Mountains. In May, 1794, N. C. ceded to the U. S. her territory west of the Alleghanies provided Congress would accept it within two years. This Congress did not do, and a majority of the people within the territory concluded to adopt a constitution and organize a state of their own. This they proceeded to do, and called a convention which met at Jonesboro, Aug. 23, 1784. The convention adjourned after issuing an address to the people. In the following November, the delegates again assembled at Jonesboro but broke up in confusion, because of the fact that in October of that year N. C. repealed the act of cession. Dec. 14, 1784, another convention assembled at Jonesboro and adopted a constitution, which was to be ratified or rejected by a convention called to meet at Greenville, Nov. 14, 1785. In the meantime a general assembly was elected which met at Greenville early in 1785 and chose John Sevier for governor and other officers. The new state which they attempted thus to create was named in honor of Benjamin Franklin and is therefore properly called Franklin not Frankland. Later they concluded they would seek admission to the Union, and accordingly they made an effort to

have Congress recognize the new state. The boundary lines show that it included what are now 15 counties of Va.; six of W. Va.; one-third of Ky.; one-half of Tenn.; two-thirds of Ala., and at least one-fourth of Ga. The convention met in Greenville in Nov. 1785, to adopt a constitution, but when the constitution proposed was submitted it was rejected and in lieu thereof the constitution of N. C. was adopted. This was the beginning of the trouble which ended in the overthrow of the state. The assembly or legislature of the state continued to meet for several years, during which time dual governments existed in the territory and many acts of violence were committed by one party against the other. In Oct., 1788, Sevier was arrested and carried to N. C. for trial, his property having been attached in January of that year. Soon after his arrest the government of Franklin collapsed and N. C. passed an act of "pardon and oblivion" resuming her authority over these people. Later, N. C. passed a second act ceding the territory to the U. S., and Aug. 7, 1790, President Washington appointed William Blount governor of the territory. The state of Tenn. was soon thereafter organized out of this territory.

Franklin (Tenn.), Battle of.—When Gen. Sherman had captured Atlanta, in the autumn of 1864, Gen. Hood assembled the Confederate army at Palmetto, southwest of that city. After a brief rest he marched rapidly northward and entered upon his Tennessee campaign. Sherman, still clinging to Atlanta, followed Hood with a large part of his army until the purpose of the latter had been fully developed. Then he detached the 4th and 23d corps under Thomas to oppose Hood, and with the remainder of his army started on the "march to the sea." Thomas hastened to Nashville, to draw together and equip an additional force, while Schofield was placed in immediate command of the two corps above designated, with orders to impede the advance of Hood, but if possible to avoid a general engagement until his force could be united with that of Thomas. Schofield, with about 18,000 men, came into collision with Hood, who had 35,000 men, at Columbia, forty miles south of Nashville. After much heavy skirmishing, Schofield withdrew and by a rapid march, after repelling an attack by Cheatham's Confederate corps at Spring Hill, ten miles north of Columbia, arrived safely at Franklin, 20 miles from Nashville. Hood followed closely, and reached Franklin in the afternoon of Nov. 30.

Franklin lies in a pocket of the Harpeth River, on the south bank. Hood found Schofield occupying a line just south of the city, and extending from the river above to the river below. The few intervening hours, after the arrival of Schofield's army, had been well improved by the Union troops in throwing up a strong barricade of timber and earth and advantageously posting the artillery. It had not been Schofield's wish to fight at Franklin,

but it became a necessity, in order to save his long train of wagons. Stung by the failure of Cheatham to break Schofield's column at Spring Hill and cut off the latter's retreat by getting possession of the pike, Hood determined to strike hard and quickly, hoping to catch his adversary in the confusion of retreat. As fast as his troops arrived they were immediately formed for assault. About four o'clock the bugles sounded and the serried lines swept forward in magnificent array. The advance was over a nearly level cotton field, half a mile in extent, which afforded a clear sweep for the Union musketry and artillery. Two of Schofield's brigades, which had been placed several hundreds yards in front of the works, were mistakenly held there too long. In the oncoming rush of the Confederates they were swept away and some 800 were made prisoners. For two hours the fighting was terrific, not exceeded in its stubborn and sanguinary character by any conflict of the war. Again and again Hood's men charged in the face of the deadly blast from musket and cannon, but as often were they repulsed, leaving the ground thickly strewn with the dead and wounded. Once, only, the Union line was pierced and through the break poured several hundred Confederates. The prompt rush of Opdycke's Union brigade which had been lying in reserve, closed the gap, and nearly all of the Confederates who had leaped the works were captured, including one brigadier-general. The fighting did not cease till night curtailed the awful scene. The Confederate loss was about 1,400 killed, 4,000 wounded, and 800 prisoners; that of the Union army, which was sheltered by its works, was 190 killed, 1,000 wounded, and 1,100 prisoners. The Confederate loss in general officers was larger than in any other battle of the war—six killed, seven wounded, and one captured. During the battle the wagons of Schofield's train were passed rapidly across the river and hurried northward. Before midnight Schofield's army had withdrawn from Franklin, crossed the river, and was on its way to Nashville. It arrived there and joined Thomas during the morning of Dec. 1. (See sketch of JOHN B. HOOD, 300.)

Franklin, Benjamin.—Philosopher and statesman; sketch of, 194.

Franklin, Sir John.—(1786-1847.) An Arctic explorer, who made exploring journeys in 1818; 1819-22; 1825-27; and 1845, from which latter he never returned. Thirty-nine relief expeditions were sent out from England and America in search of him and his party. From papers found it was learned that Franklin died June 11, 1847. The farthest point reached by him was within 12 miles of the northern extremity of King William's Land.

Franklin, William.—Born at Philadelphia, 1729; died in England, 1813. A son of Benjamin Franklin. He was royal governor of N. J., 1762-76.

Franklin, William Buel.—Born at York, Pa., 1823. An officer of the U. S. army. He was graduated

- from West Point in 1843, served in the Mexican War, and in 1861 was colonel of the 12th U. S. Infantry; was made a brig.-gen. at the beginning of the Civil War, and a maj.-gen. soon afterward; commanded a brigade at Bull Run, a corps in the Peninsular campaign, a grand division in the assault at Fredericksburg, and a division under Banks in the Red River Expedition; resigned from the army in 1866. In July, 1864, when Gen. Early led his Confederate army to the very gates of Washington, a detachment of his cavalry captured a railway train between Philadelphia and Baltimore. Among the captives taken therefrom was Gen. Franklin, but he made his escape the following night. After his resignation, Gen. Franklin held various civil positions and was for many years president of the board of managers of the National Homes for disabled soldiers.
- Franz, Robert.**—(1815-1892.) A German composer, especially noted for his songs.
- Fraser River.**—A river in British Columbia, flowing into the Gulf of Georgia. It has a course of over 800 miles.
- Frazler's Farm (Va.), Battle of.**—See WHITE OAK SWAMP, BATTLE OF.
- Fréchette** (*frâ-she'*), **Louis Honoré.**—A French Canadian poet, whose work was crowned by the French Academy in 1880. He was born at Levis, opposite Quebec City, in 1839.
- Frederick.**—The capital of Frederick Co., Md., 41 miles from Baltimore. Pop. (1900), 9,296.
- Frederick III.**—(1415-1493.) Emperor of the Holy Roman Empire (1440-1493).
- Frederick I.**—(1657-1713.) King of Prussia (1701-1713).
- Frederick II., "The Great."**—(1712-1786.) King of Prussia (1740-1786).
- Frederick III.**—(1831-1888.) German emperor and king of Prussia (Mar. 9-June 15, 1888).
- Frederick I.**—(1754-1816.) King of Württemberg.
- Frederick I., Barbarossa.**—The most celebrated emperor of the Holy Roman Empire, was crowned emperor 1155. He took part in the Third Crusade in 1189 and was drowned in Asia Minor.
- Frederick II.**—(1194-1250.) Emperor of the Holy Roman Empire (1220-1250).
- Frederick III., "The Handsome."**—(1286-1330.) King of Germany (1314-1322).
- Frederick I.**—(1425-1476.) "The Victorious." Elector-Palatine (1451-1476).
- Frederick II., "The Wise."**—(1482-1556.) Elector-Palatine (1544-1556).
- Frederick III., "The Pious."**—(1515-1576.) Elector-Palatine (1559-1576).
- Frederick IV., "The Upright."**—(1574-1610.) Elector-Palatine (1592-1610).
- Frederick V.**—(1596-1632.) Elector-Palatine (1610-1632).
- Frederick III.**—(1609-1670.) King of Denmark and Norway.
- Frederick IV.**—(1671-1730.) King of Denmark and Norway (1699-1730).
- Frederick V.**—(1723-1766.) King of Denmark and Norway (1746-1766).
- Frederick VI.**—(1768-1839.) King of Denmark and Norway (1808-1839).
- Frederick VII.**—(1808-1863.) King of Denmark (1848-1863).
- Frederick William I.**—(1688-1740.) King of Prussia (1713-1740).
- Frederick William II.**—(1744-1797.) King of Prussia (1786-1797).
- Frederick William III.**—(1770-1840.) King of Prussia (1797-1840).
- Frederick William IV.**—(1795-1861.) King of Prussia (1840-1861).
- Fredericksburg (Va.), Battle of.**—The authorities at Washington were dissatisfied with the lack of vigor shown by Gen. McClellan after the battle of Antietam (Sept. 16-17, 1862), and on Nov. 7 following he was relieved of the command of the Army of the Potomac. His successor was Gen. Ambrose E. Burnside, who undertook a midwinter campaign against Lee. The losses of Antietam were more than made good by recruitment and the army was augmented to 110,000 men. It was reorganized into three grand divisions, each consisting of two corps. These were commanded by Hooker, Sumner, and Franklin. Soon after the middle of November Burnside marched his army to Falmouth, on the north bank of the Rappahannock River, nearly opposite Fredericksburg, which point he had chosen to effect a crossing. There was a long delay in getting the pontoon trains from Washington, and Lee marched from Culpeper, where his army had occupied a position of observation, to Fredericksburg. The Confederate troops were strongly posted on the commanding hills behind the town. In the face of a galling fire from a heavy line of Confederate pickets that fringed the south bank, Burnside succeeded in laying his pontoons and the greater part of his army crossed during Dec. 11 and 12. Lee was content to await the Federal attack. The battle took place on the 13th. On the part of the Federals it was a series of disconnected assaults upon the enemy's position, by different corps, acting without coöperation. The fighting was fierce and bloody. The assailants showed the utmost valor, but they strove in vain to ascend the slopes that were swept by murderous storms from artillery and musketry. The Confederates had little difficulty in repelling all of the successive attacks. Gen. Lee stated in his official report that he did not find it necessary to put into action more than 20,000 men—scarcely more than a quarter of his army. On the 14th and 15th the Federals asked a truce for the burial of the dead, and it was granted. During the night of the 15th Burnside recrossed his army to the north bank and took up his bridges. The Federal loss was 1,284 killed, 9,600 wounded, and 1,769 missing, a total of 12,653. The loss of the Confederates was about half as large—a total of 5,377. A few days later Burnside attempted another movement but was compelled to abandon it by reason of a severe and protracted storm that made the roads impassable and caused great suffering to his troops. He put the army into winter quarters at Falmouth, and on Jan. 25 was re-

lieved of the command, at his own request. He was succeeded by Gen. Joseph Hooker.

FREDERICK THE GREAT. — (1712-1786.)

Frederick II., King of Prussia, surnamed "The Great," was born in 1712, and was the youngest of three brothers. His childhood was not spent in an atmosphere of kindness and love. His warm affections were not cultivated. He was made cold by suffering. He was roughly reared under a stern, rigorous system of training, prescribed by his tyrannical father who had a passion for military life and desired to make a hardy soldier of his son. Besides his prescribed course he managed to gain a knowledge of Latin and French. Through his French teacher he was led toward freedom of thought.

As he became older, he grew restless and dissatisfied with his dull and monotonous life. When he saw that he could not agree with his father, who opposed him in a love affair and often gave expression to his dislike by violent outbursts of anger, he resolved to run away. Attempting to escape to England, he was captured, and thrown into prison. He barely escaped the gallows, and was saved only by the strong influence which many prominent men of Europe brought to bear upon his stubbornly determined father.

After his release he was given a public office (1732) which proved to be the making of the young man. He became interested in the importance of a military training. He began to think of more serious things than love and French philosophy — though to please his father he married (1733) Elizabeth of Brunswick, and corresponded with Voltaire, the French scholar. He discharged his duties so faithfully that he finally gained the esteem of his father.

In 1740, when he took charge of the government, which he inherited from his father, he chose able ministers and faithful advisers. He made several useful reforms. He introduced religious liberty, abolished torture in the courts, and encouraged manufactures. He proved himself able to cope with the great diplomats of the time. He was somewhat tricky in politics, and could rule with a hand of iron.

At the death of Emperor Charles VI., in 1740, Frederick was one of the six claimants who came forward, each demanding all or part of the territory that had been under the emperor's rule. Though Maria Theresa, the queen of Hungary, produced plenty of properly authenticated law documents to prove her right to her father's crown, Frederick said it would have been better for her if her father "had left her fewer papers and more fighting-men." In the dispute that followed, in which nearly all of Europe took sides, he took advantage of his chance to interfere in Austria, pounced upon Silesia and managed to keep it. In the contest that followed, he won full control of the territory. He made Prussia a great power, though he did it partly by strategy and duplicity. He

afterward wrote a history of his achievements in which he justified his course. His motives were based upon the idea of defense. He also revived an ancient claim to Silesia through the house of Hohenzollern.

In a second war in which he was forced to engage, Frederick defeated his enemies and obtained Silesia by treaty. Thus he became known as "Frederick the Great."

At first he was not a success as a leader of troops, and was advised to keep off the battlefield; but he profited by his failures. The essential principle of all of his battles was quickness. When he became scared, he was a stoic: When Maria Theresa of Austria proposed to grab Saxony from him he felt that the crisis of his life had come, and he met it with vigor. On such a vital issue he was always ready to risk everything in order to carry his point. The Seven Years' War was for him a "struggle to the death" — and perhaps he was saved only by the death of Elizabeth of Russia. He soon made a treaty with Russia in order to protect himself against Austria. In 1785 he put into operation the greatest idea of his career, by securing a league of the German states against Austria and Russia.

It is difficult to form a correct idea of Frederick's character as shown by his diplomacy and foreign policy. He has been strongly blamed for his strategy and duplicity, especially in his dealings with Maria Theresa. His deceptions have been justified by Carlyle in the following words: —

"Of the political morality of this game of fast and loose, what have we to say — except that the dice on both sides seem to be loaded; that logic might be chopped upon it forever; that a candid mind will settle what degree of wisdom (which is always essentially veracity) and what of folly (which is always falsity) there was in Friedrich and the others; whether, or to what degree, there was a better course open to Friedrich in the circumstances? And, in fine, it will have to be granted that you cannot have to work in pitch and keep the hands evidently clean."

Carlyle, with his gospel of success, was inclined to give credit to his hero for acts that appeared dishonorable and underhand, if the hero carried his point in the end. Droysen, accepting the same gospel, published Frederick's shame and glorified in it. They accept the principle that the end justified the means, if only the end is gained — that if a man is strong, and proves his strength by successfully completing the work that his hands find to do, we need not trouble ourselves to scrutinize too narrowly his ways and means. One should be careful not to fall into the error of worshipping a hero to such an extent that his faults cannot be seen.

By 1745 Frederick had become the most conspicuous ruler in Europe — and thoroughly absolute, as the "first servant" of his state. His so-called ministers were mere clerks whose busi-

Frederick the Great.—*Continued*

ness was to execute his will. He kept his eye upon the most minute details of public affairs. He infused new vigor into every department of state life. He gave faithful service. He rose at four o'clock in the morning. He made it his business to know every village and landed estate in his kingdom. He kept himself busy with business.

While Frederick showed extraordinary self-control in some respects, he was never the master of his stomach. He had an extravagant appetite, which he gratified by eating to excess. As a result of eating too much of rich and unwholesome cookery, he became a sufferer from gout, and other disorders. Though he suffered much, he showed remarkable patience and up to the last day of his life, he continued to perform his political duties punctually. He finally fell into a lethargy from which he never recovered.

"He died at Sans-Souci on the 17th August 1786; his death being hastened by exposure to a storm of rain, stoically borne, during a military review. He passed away on the eve of tremendous events which for a time obscured his fame; but now that he can be impartially estimated, he is seen to have been in many respects one of the greatest figures in modern history."

Though he added new territories, left his country free from debt, and did the highest possible in politics, he never provided for self-government. When he died his state machine had no statesmen to run it, and broke down after working awhile with fitful energy. His successor was unstable, and the state continued to decline until its vigor was revived by the master hand of Baron von Stein.

Fredericton.—The capital of New Brunswick, Canada, is situated on the St. John River, 84 miles from its mouth. Pop. (1901), 7,117.

Free Banking System.—Apr. 11, 1838, the N. Y. legislature passed the free bank act, under the provisions of which any person or persons might establish a bank by depositing stocks, bonds, or mortgages as security for its circulating notes. This law was afterward amended, requiring at least half of the securities to be N. Y. state stocks. Previous to the passage of the free banking law of N. Y., charters were granted by special act of the legislature of various states, and their circulating medium was often far in excess of their capital. This caused heavy losses to note-holders. The action of the N. Y. legislature was followed by similar legislation in many other states and was made the basis of the national banking act of 1863.

Freeman, Edward Augustus.—(1823-1892.) An English historian who became regius professor of history at Oxford (1884).

Freeman, James.—Born at Charlestown, Mass., 1759; died at Newton, Mass., 1835. He was pastor of King's Chapel, Boston (1787-1835), and was the first in the U. S. to assume the name of Unitarian.

Freeman, Mrs.—The name under which the duchess of Marlborough, Sarah Jennings, conducted a correspondence with Queen Anne, who signed herself Mrs. Morley.

Free Negroes.—The first census taken in the U. S. showed nearly 60,000 free colored population. Of this number about half were in the Southern States. The fact that they were considered a dangerous element led to a movement for colonizing them in Liberia, and they were put under certain disabilities, especially in the Southern States. By the Dred Scott decision it was held that they were not and could not be citizens. Political rights equal with those of the whites were conferred by constitutional amendments after the war.

Freeport.—A city in northern Illinois, and the capital of Stephenson Co., on the Pecatonica River, 108 miles from Chicago. Pop. (1900), 13,258.

Free Ships, Free Goods.—The Declaration of Paris, 1856, holds that "neutral goods in an enemy's ships and an enemy's goods in neutral ships, except contraband of war, are not liable to capture." As the U. S. refused to surrender the privilege of privateering, it could not subscribe to this declaration of the leading nations. The U. S. Government has always held to the doctrine that in time of war all goods, whether belonging to neutrals or to belligerents, are, if carried in neutral vessels, thereby exempted from capture unless they are by nature contraband of war. During the war between England and France (1793-1815), the U. S. contended for the recognition of this principle. England, on the other hand, always maintained that the ownership of the property itself should determine the question of seizure. This was a contributory cause of the War of 1812. The Treaty of Ghent did not settle the question. The motive for privateering, which once existed, has been obviated by the addition of numerous fast cruisers to the navy.

Free-Soilers.—An anti-slavery political party that came into existence in 1848. It was composed of the Liberty party, the "Barn-burner" Democrats of New York, and a number of Northern Whigs who favored the Wilmot Proviso to the appropriation bill to conclude the treaty of peace with Mexico. Wilmot's amendment provided that there should be no slavery in the territory acquired under the appropriation. It passed the House, but was defeated in the Senate. In the next session it failed to pass either house. Resolutions of the same import as the Wilmot Proviso were introduced in the Whig and Democratic conventions of 1846, but were rejected. Upon this many prominent men of N. Y., Mass., and Ohio withdrew and formed the Free-Soil party. At Buffalo, in 1848, they nominated Martin Van Buren of N. Y., and Charles Francis Adams of Mass., for President and Vice-president. These candidates received no electoral votes, and only 291,000 popular votes. At Pittsburg, in 1852, they nominated John P. Hale of N. H., and George W. Julian of Ind., but their vote only reached 156,000. In

1856 the Free-Soilers joined the Republican party.

Freetown.—The capital of Sierra Leone in West Africa. Pop., 30,033.

Free Trade.—In politics and economics this term is used to signify an exchange of merchandise between the people of different countries without the imposition of any government tax. A tariff for the protection of home manufactures is held by the advocates of free trade to be contrary to sound principles of political economy, and unjust to the consumers of the articles so taxed.

Freischütz, Der.—The title of an opera by Weber.

Frelinghuysen, Frederick.—Born in N. J., 1753; died, 804. A member of the Continental Congress, and U. S. senator from N. J. (1793-96).

Frelinghuysen, Frederick Theodore.—Born at Millstone, N. J., 1817; died at Newark, N. J., 1885; nephew of Theodore Frelinghuysen. He was elected U. S. senator from N. J. in 1866 and 1871; was a member of the Electoral Commission in 1877, and Secretary of State in 1881.

Fremont.—A city in northern Ohio, on the Sandusky River, the scene of Croghan's defense of Fort Stephenson in 1813. Pop. (1900), 8,439.

Fremont, John Charles.—Explorer and soldier; sketch of, 204.

Fremont's Peak.—The highest peak of the Wind River Mountains in Wyo., about 13,790 feet high.

French, Daniel Chester.—Born at Exeter, N. H., 1850. A distinguished American sculptor. His principal works are the "Minute Man," "John Hancock," "Lewis Cass," "Death and the Young Sculptor," the colossal statue of the Republic at the Columbian Exposition, etc. See p. 3606.

French, William Henry.—Born, 1815; died, 1881. An officer of the U. S. army. He graduated at West Point in 1837, served in the Seminole War in Fla., and as aide to Gen. Pierce in the Mexican War; was made a brig.-gen. of volunteers in 1861, and maj.-gen. in 1862; served in the Peninsular, Antietam, Fredericksburg, and other campaigns in Va.; was retired in 1880.

French and Indian or Old French War.—The last of a series of wars between France and England for supremacy in America which extended over a period of ten years, from 1753 to 1763. The principal events in connection with this war were the dispersion of the Acadian settlers in 1755, Braddock's defeat (1755), capture of Oswego by Montcalm (1756), capture of Fort William Henry by Montcalm (1757), battle of Quebec under Wolfe (1759), surrender of Montreal (1760), and the surrender of Canada to Great Britain (1763).

French Fables.—1385.

French Fairy Tales.—1265.

French Revolution.—(1789-1795 or 1799 or 1804.) The chief events in the French Revolution were:—

Meeting of States-General, 1789.

The Third Estate becomes the National Assembly, June 17, 1789.

Tennis-Court oath, June 20, 1789.

Storming of the Bastille, July 14, 1789.



FRENCH FAIRY TALES—BEAUTY AND THE BEAST

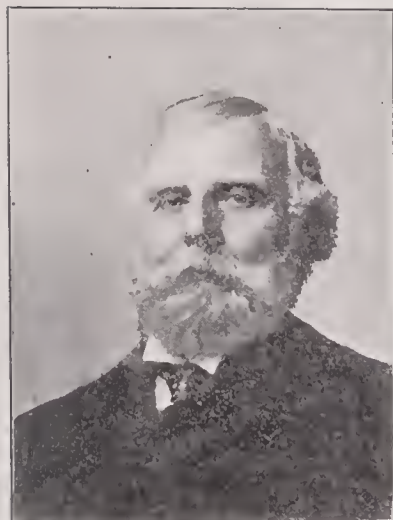
Bread-riot and march to Versailles, Oct., 1789.
 Unsuccessful flight of the king, June 20, 1791.
 Adoption of the Constitution, Sept. 17, 1791.
 Legislative Assembly opened, Oct. 1, 1791.
 War against Austria and Prussia, April, 1792.
 Tuileries attacked, June 20, 1792.
 Massacres of September, Sept., 1792.
 Valmy fought, Sept. 20, 1792.
 National Convention opened, monarchy abolished and republic proclaimed, Sept. 21, 1792.
 Battle of Jemmapes, Nov. 6, 1792.
 Nice and Savoy annexed, 1792.
 Louis XVI. executed, Jan. 21, 1793.
 European powers combine against France, Feb., 1793.
 Beginning of Vendean wars, 1793.
 Neerwinden fought, March, 1793.
 Revolutionary tribunal established, March, 1793.
 Committee of Public Safety established, April, 1793.
 Girondists overthrown, June, 1793.
 Reign of Terror, 1793-94.
 Marat assassinated, July, 1793.
 Marie Antoinette executed, Oct., 1793.
 Toulon besieged, Dec., 1793.
 Hébertists overthrown, March, 1794.
 Danton executed, April 5, 1794.
 Fleurus fought, June 26, 1794.
 Robespierre overthrown, July 27, 1794.
 Bread-riots, 1795.
 Holland conquered, 1795.
 "Sections" in revolt subdued by Bonaparte, Oct. 5, 1795.
 Directory supplants the convention, Oct.-Nov., 1795.
 Napoleonic wars begun, 1796.
 Consulate, Nov., 1799.
 Peace of Lunéville, Feb. 9, 1801.
 Concordat, 1801.

- Peace of Amiens, 1802.
 Napoleon consul for life, 1802.
 Empire established, May 18, 1804.
 See NAPOLEON, EUROPE AFTER.
- French Spoliation Claims.**—In July, 1796, the Directory of the Republic of France announced to the world that French cruisers and privateers had been ordered to treat vessels of neutral and allied powers, either as to search, seizure, or confiscation, in the same manner as they (the neutral or allied powers) should suffer the English to treat them. It was claimed that the U. S. did not exercise sufficient vigilance over the belligerent rights and treaty stipulations between themselves and the warring European powers, and American commerce became the prey of French cruisers. By a convention between the U. S. and France, ratified in 1801, the differences were adjusted and the U. S. urged the claims of its citizens for damages sustained, amounting to \$20,000,000. France made a counterclaim many times as great, for damages alleged to have been sustained by her citizens resulting from the failure of the U. S. to keep their treaty obligations. The result of this convention was a mutual surrender of these claims and the U. S. became responsible to its own citizens for indemnification. The claims have been repeatedly pressed upon Congress and the subject has engaged the attention of our ablest lawyers and statesmen. Bills for their payment were vetoed by Polk (1846) and by Pierce (1855). In Jan., 1885, Congress passed an act authorizing the claimants to apply to the court of claims for adjudication of their claims. The 51st Congress passed an act appropriating about \$1,000,000 to pay such of the claims as had been reported favorably by that court. A similar bill, carrying over \$1,000,000 for their payment, was vetoed by President Cleveland, in 1896. March 3, 1899, President McKinley approved an act to pay over \$1,000,000 of these claims. Most of these claims are a hundred years old.
- Frenchtown.**—A small town in Michigan, situated on Lake Erie, 22 miles south-west of Detroit, on Raisin River. Here, in the War of 1812, it was the scene of a victory by the British and Indians under General Henry Proctor over the Americans under Brig.-General James Winchester, Jan. 22, 1813. The American loss, in killed and prisoners, was 934 out of a detachment of 1,000 in all, while that of the British was only 180. Winchester was taken a prisoner to Quebec until released by exchange in 1814.
- Frère** (*frãr*), **Charles Théodore.**—(1815-1888.) A French painter of landscapes and Oriental subjects.
- Frere, Sir Bartle.**—(1815-1884.) An English statesman and official, was governor of Cape Colony during the Zulu War against Cettiwayo.
- Fresenius, Karl Remigius.**—(1818-1897.) A German chemist and authority.
- Fresh Fish.**—A term in common use among the soldiers during the Civil War. It was applied by prisoners of war, in a building or stockade, to new arrivals of captives.
- Frey.**—1645.
- Freyja.**—1645.
- Frith, William Powell.**—(1819-.) An English painter and royal academician (1852).
- Fröbel, Friedrich.**—(1782-1852.) A German educator and founder of the kindergarten system.
- Frobisher, Sir Martin.**—An English navigator and explorer, who died in 1594. He made several expeditions to effect the development of Canada; and fought against the Armada in 1588. Frobisher Bay, an arm extending into Baffin Land, was named after him.
- Frog, The.**—2645.
- Froissart, Jean.**—(1337-1410.) A French historian and chronicler of events between 1325 and 1400.
- "Frollic," The.**—A British brig captured by the American sloop-of-war "Wasp," Oct. 18, 1812. (See "WASP," THE.)
- Fronde, The.**—A satirical epithet applied to the party which waged civil war in France, during the minority of Louis XIV., against the Court party, from 1648-1652. (See MAZARIN.)
- Frontenac, Comte Louis de Buade de.**—(1621-1698.) A French governor of Canada (1672-82 and 1689-98), who by sheer force of will saved the colony in critical times.
- Frost, Arthur B.**—An American artist and well-known illustrator, born 1851.
- Frothingham, Richard.**—Born at Charlestown, Mass., 1812. A political historian, author of "History of the Siege of Boston," etc.
- Froude, James Anthony.**—(1818-1894.) A celebrated English historian.
- Fructidor.**—The name which the National Convention gave to the 12th month in 1793. The month began with Aug. 19 and later with Aug. 20, and consisted of 30 days. The 18th Fructidor marked a *coup d'état* against the royalist reaction. It resulted in the ejection of two Directors and the expulsion of fifty members of the Five Hundred.
- Fuca, Juan de, Strait of.**—A passage separating Washington state from the Island of Vancouver. It was named after the famous Spanish-Greek navigator who discovered and explored it (1592). It joins the Pacific Ocean and the Gulf of Georgia.
- Fuchsia.**—A genus of plants found native in the southern part of North America and in South America. The genus was named in honor of Leonhard Fuchs (1501-65), a professor of botany at Tübingen.
- Fugitive Slave Laws.**—Article IV, section 2, of the Constitution provides: "No person held to service or labor in one state, under the laws thereof, escaping into another, shall in consequence of any law or regulation therein, be discharged from such service of labor, but shall be delivered up on claim of the party to whom such service or labor may be due." In pursuance of this declaration, Congress, in 1793, passed the first fugitive slave law, which provided that on proof of ownership before a magistrate of the locality where a slave was found, the magistrate should order the slave to be delivered to his owner, without trial by jury. Obstructing an arrest or harboring a fugitive slave was punishable by a fine of \$500.

- In 1850, as a part of the compromise measures of that year, a law was passed providing for U. S. commissioners to aid in the more strict enforcement of the law. Proof of identity, and two witnesses to the fact of escape, were all that was required in evidence. The negro could neither testify nor have a jury trial. In all the colonies before the Revolution, laws had been passed providing for the return of fugitive slaves. The New England Confederation of 1643 had provided for mutual extradition of slaves. Extradition from British territory had been denied, by the decision of the Somersett case in 1771. In the case of *Prigs vs. Pa.* (1842) the Supreme Court held that the execution of the law of 1793 devolved upon Federal authorities alone; that state authorities could not be forced to act. Several states thereupon forbade action by their officials. The act of 1850 aroused much bitter feeling in the North, and "personal liberty" laws were passed in many of the states, some of them conflicting with Federal laws and some even with the Constitution itself. The Civil War ended the whole matter and the laws were repealed.
- Fugue.**—A musical composition in which the parts do not all begin at once, but follow after one another as though *fleeing* from one another.
- Fuller, George.**—(1822-1884.) An American figure and portrait painter.
- Fuller, John Wallace.**—(1827-1891.) An officer of U. S. volunteers in the Civil War.
- Fuller, Melville Weston.**—Born at Augusta, Me., 1833. A celebrated jurist. He was appointed Chief-justice of the Supreme Court of the U. S. by President Cleveland, in 1888.
- Fuller, Sarah Margaret** (Marchioness Ossoli).—Born, 1810; lost by shipwreck off Fire Island, near New York, 1850. A noted American author.
- Fulton, Robert.**—Inventor; sketch of, 210.
- "**Fulton,**" *The.*—A small American warship built in New York in 1815, and named after the inventor Robert Fulton. It was the first warship propelled by steam, and was the prototype of the modern iron-clad.
- Funchal.**—The capital of the island of Madeira. Pop. about 20,000.
- Fund.**—A deposit of money from which supplies are drawn. A sinking-fund is an amount set apart, so that by constant regular additions a public debt may be paid off within a fixed period.
- Funding.**—The process of funding a debt consists in dividing it into shares or bonds, with stated times of payment of interest and principal. Refunding a debt is the process of substituting bonds, usually at another rate of interest, for outstanding obligations. The first funding of the national debt was by act of Congress in 1790, at the suggestion of Alexander Hamilton, then Secretary of the Treasury. This act provided for the payment, by the issue of 6 per cent. bonds, of all the floating, foreign, and domestic debts of the U. S., and such of the debts of the several states as were incurred in prosecuting the war for independence. Since that time there have been numerous issues of bonds by the Federal state, county, and municipal governments. It was not until 1870 that an attempt was made to refund the entire national debt, when Congress passed the Sherman Act, providing for the issue of \$200,000,000 5 per cent. bonds (later increased to \$500,000,000), \$300,000,000 4½ per cents. and \$1,000,000,000 4 per cents. The 5 per cent. bonds have been retired or refunded at 3 or 3½ per cent. interest. Nearly all the 4 and 4½ per cent. bonds have been bought in the open market with surplus cash in the Treasury.
- Fundy, Bay of.**—An arm of the Atlantic which separates the provinces of New Brunswick and Nova Scotia, in the Dominion of Canada. It is about 180 miles long and has an average width of 35 miles. It is remarkable for the greatest rise of tide in the world, sometimes reaching a height of 70 ft.
- Fungi.**—2934.
- Furlong.**—(As long as a furrow.) A measure of length, 220 yds. or the eighth part of a mile.
- Fursch-Madi, Emma.**—(1849-1894.) A noted French mezzo-soprano singer.

G

- Gaboriau, Émile.**—(1835-1873.) A noted French novelist.
- Gabriel.**—The name of one of the archangels.
- Gaddi, Taddeo.**—(1300-1366.) A Florentine painter and architect.
- Gade** (*gä'de*), **Niels Wilhelm.**—(1817-1890.) A distinguished Danish composer and conductor.
- Gadsden, Christopher.**—(1724-1805.) A distinguished officer in the Revolutionary War.
- Gadsden, James.**—(1788-1858.) While minister to Mexico he negotiated the "Gadsden Purchase" in 1853.
- Gadsden Purchase.**—The treaty, concluded Dec. 30, 1853, through which the United States obtained from Mexico 45,000 square miles of land which is now included in southern Arizona and New Mexico. The negotiations were conducted by James Gadsden, the United States minister to Mexico, and the price paid was \$10,000,000.
- Gadshill.**—An elevation near Rochester, England. Charles Dickens resided there.
- Gaeta.**—A seaport of the province of Caserta, on the west coast of Italy. It is strongly fortified and is a town of much historical interest.
- Gagarin, Ivan Sergejewitch.**—(1814-1882.) A Russian Jesuit writer.
- Gage, Lyman Judson.**—Born at Deruyter, N. Y., 1836. An eminent financier. He was president of the Chicago Exposition Company and in 1897 was appointed Secretary of the Treasury, in the Cabinet of President McKinley.



LYMAN J. GAGE

Gag Rule.—May 26, 1836, Congress passed a resolution providing that thenceforth all petitions, memorials, resolutions, propositions, or papers, relating in any way to the subject of slavery should be laid upon the table without being read, printed, or referred. John Quincy Adams led a strong and bitter opposition to this infringement upon the right of petition. The cry of "gag rule" was raised in the North and served to increase the exercise of the right of petition in that section. December 3, 1844, the rule was abolished.

Gaines, Edmund Pendleton.—(1777-1849.) A general of the U. S. army, distinguished for his defence of Fort Erie against a superior British force in Aug., 1814.

Gaines's Mill (Va.), Battle of.—One of the series of engagements known as the Seven Days' Battles, during the Federal retreat down the Peninsula, after the failure of McClellan's attempt to reach Richmond (May-June, 1862). June 27, the day following the battle of Mechanicsville, the corps of Gen. Fitz-John Porter took position at Gaines's Mill, where it was attacked by the Confederate corps of A. P. Hill. Porter was reënforced by Slocum, increasing his force to 35,000, and "Stonewall" Jackson joined Hill, swelling the Confederate strength to nearly 60,000. The action was desperate and sanguinary, and continued till dark. The Federals were outnumbered, but succeeded in holding the enemy in check sufficiently to pass the artillery and wagon trains of the army across the Chickahominy, to defeat which was the aim of the Confederates. The latter lost 3,300 men, while the loss of the Federals was nearly 7,000, including 900 killed. The Confederates captured 22 cannon.

Gainsborough, Thomas.—(1727-1788.) A celebrated English portrait painter.

Galahad, Sir.—In Arthurian legend, the noblest and purest knight of the Round Table. The "Order of the Round Table" was established by the British chieftain, King Arthur, who lived in the 6th century, the era of the half-legendary bard and echanter, Merlin, who was counselor

to the king. At the Round Table, festivals were held, the Knights of the Court sitting round it, with the Holy Grail (Sangraal) in their midst. Among them, sitting in the "Seat Perilous," was Sir Galahad, son of Sir Launcelot of King Arthur's court by marriage with Elaine, who, according to the legend, had been permitted, owing to his sanctity, to see the Holy Grail (the chalice used by Christ at the Last Supper, in which Joseph of Arimathea is said to have caught the last drop of our Lord's blood as he was taken from the cross). In the quest of this holy vessel, visible only to pure eyes, Sir Galahad was the only one of the knights who was permitted to see it, for, as the legend relates, when men became sinful it had disappeared. On its recovery depended the honor and peace of England, and so when Galahad had succeeded in quest of it, he was honored with a distinctive seat at the Round Table—a seat called "the perilous," for whoever else sat in it the earth swallowed. The exploits of Arthur and his chivalrous knights have come down to us through Breton (French) romances, translated by Sir Thomas Malory in his "Morte D'Arthur" in the 15th century. The legends are supposed to have been written down in the 12th century. See Malory's Romance, and Tennyson's "Sir Galahad"; also his "Elaine" and the "Holy Grail," in the "Idylls of the King."

Galapagos Islands.—In the Pacific, west of Ecuador, a group of volcanic islands, noted chiefly for the enormous turtles found there.

Galatea.—(1) In Greek mythology, a sea-nymph. (2) A statue loved by Pygmalion and animated, at his request, by Venus. Not the Galatea of "Acis and Galatea."

Galatia.—Anciently a division of Asia Minor; conquered and settled by the Gauls in the third century B.C. It became a province of Rome in 25 B.C.

Galaxy, The, or The Milky Way.—A great circle of luminous bodies which encircles the heavens from one horizon to the other. It is composed of millions of stars lower than the eighth magnitude.

Galen, Claudius.—A noted Greek physician, who lived in the second century and gained a great reputation at Rome in the era of the emperor Marcus Aurelius, when he was physician to the Roman court. Over eighty of his treatises on medicine have come down to us, in which are gathered up all the medical knowledge of Galen's time. He wrote also of philosophy, for he had traveled much and had thought deeply. He was born at Pergamus, in Mysia, in 130 A.D., and is supposed to have died in Sicily about 201 A.D.

Galena.—A city in northwestern Ill., on the Galena River. The center of a lead-mining district. Pop. (1900), 5,005.

Galena, or Lead-glance.—A mineral composed of 13.3 of sulphur and 86.7 of lead. It is called a sulphuret of lead. It contains usually some silver, copper, zinc, antimony, and selenium. When crystallized it takes the form of octahedrons or cubes. It occurs in veins, beds, and masses.

Galesburg.—A city in Ill., seat of Knox College (non-sectarian), and Lombard University (Universalist). Pop. (1900), 18,607.

Galicia.—A crownland of Austria-Hungary, lying north of the Carpathians. Capital, Lemberg. Natural productions, lumber, grain, lead, zinc, petroleum, salt, etc. Pop. (1890), about 6,600,000.

Galilee.—In ancient history, the northern division of Palestine. Now a Turkish possession.

Galilee, Sea of, also called the Sea of Tiberius, and the Lake of Gennesaret, is situated in northern Palestine, and is 13 miles in length and six in breadth. It lies in a deep basin, of volcanic origin, over 650 feet below the level of the sea. The Jordan flows into it, and the region about is replete with sacred associations of the time of Christ, when it was more densely populated than it is to-day. On its banks are Bethsaida, Capernaum, and Tiberius, cities in which are found the ruins of many fine synagogues. Galilee to-day forms part of the division called the "pashalic" of Damascus, in the Turkish province of Syria.

Galileo.—(1564-1642.) For many ages people looked with childish wonder and ignorant awe upon many of the interesting things of nature. The causes of day and night, the moon's changes, different seasons of the years, comets, winds, tides, and other things were wrapped in sacred mystery. It was but slowly that the laws of nature became known, and many of the pioneers of discovery were unhonored and even persecuted by the people of their day. Sometimes the priests and rulers of a country would prevent new discoveries from being made known.

In the sixteenth century there was a great spread of learning. The universities of Italy were visited by students from all parts of the world. Many studied nature with untiring zeal.

Among the most restless inquirers was Galileo of Pisa, who entered the University at the age of nineteen. He had to practise much self-denial, for his liberal-minded father was not rich; but he took the deepest interest in his work. From his earliest childhood he had shown talent for the invention of toys and machinery. At the university he was a constant toiler. He kept his eyes open and reflected on what he saw. By counting his pulse while he watched the swinging of a lamp in the Cathedral of Pisa, he found a method of measuring time with a pendulum. His invention led to the most important results. It soon took the place of hour-glasses, sun-dials, water-dials, and burning candles. Later it led to the knowledge of the real shape of the earth.

From the beginning of his career, he was surrounded by the enemies of progress, who accepted ancient ideas without question and followed in beaten paths; but he did not become discouraged. He continued his search for truth and the correction of error. He won many friends by his spirit of persistent determination; but his enemies rejected the most conclusive proofs of his arguments, and even refused to believe the evidence of their own eyes.

After he was elected to the chair of mathematics in the university of his native town (1589) he proved that heavy bodies fall no faster than light ones. By his boldness and originality of thought, and his unbelief in many ideas which had become accepted dogmas, he won the ill-will of several professors.

When his enemies drove him from Pisa (1592), he went to Padua, where he lectured with great success, and rapidly won fame. He boldly attacked old ideas, and spoke in the language of the people so that he could be understood by all. He wrote and distributed many essays on his new and startling theories, and soon became known to the scientific world. He became familiar with the works of Copernicus, who refuted the theory (of Ptolemy) that the earth was the center of the universe, and held that it had a daily rotation on its axis and an annual revolution around the sun.

In 1604 he studied a new star which was attracting attention by its sudden appearance. He proved by exact calculations that it was among the most distant of the heavenly bodies, and denied that it had a motion around the earth. He was soon called upon to defend the Copernican system. He presented his views with such zeal that many, who had before agreed with Aristotle, now accepted his new doctrines.

In 1609, by means of a telescope, which he invented, he was enabled to prove the truth of his theories to all except those who stubbornly refused to be convinced.

He soon became famous, and his house was thronged with visitors who came to see the skies through his "tube." As he studied, mystery after mystery was unfolded to his wondering gaze, and he saw that he had only just begun to learn of the marvels of creation. While watching the planet Jupiter, he discovered that it had four moons revolving around it in the same direction that our moon revolves around our earth. He amazed the world by his announcement, but his enemies refused to look through his telescope for fear they would be convinced of their error.

He made observations of the moon, from which he concluded that it was like the earth in structure, having mountains and oceans. Though his critics entered into endless disputes, he calmly and energetically continued to announce new wonders and discoveries. He found that the Milky Way was caused by myriads of stars. He detected the presence of the rings of Saturn, and discovered the phases of Venus and the spots on the sun.

With unwearied efforts he worked in the face of opposition and discouragement. In 1632 the labor of his life was given to the world in the form of a book called "The Dialogue on the Ptolemaic and Copernican Systems." He was openly attacked by his enemies. As a result he was soon summoned to Rome to answer to the charge of heresy, and was examined by the Inquisition.

He was ordered to change his mind—to renounce the most cherished convictions of his

soul. For a while he agreed to remain silent. Finally, feeling that he was suppressing the truth, he again published his theory. He was compelled to go to Rome, where he was again forced to recant if he desired to save his life; but as he arose from his knees he said: "And it still moves." For this, he was sentenced to prison for life. Later, he was banished to Florence, where he worked constantly in spite of his burdens and persecutions.

In January, 1642, he died. Nearly one hundred years later, a monument was erected to attest the greatness of his fame. By his great discoveries he placed mankind under obligations to him.

Galin, Pierre.—(1786-1822.) A French musician, instructor of mathematics at Bordeaux.

Gallitzin, Prince Dmitri.—Died, 1738. A Russian statesman and diplomatist.

Gallatin, Albert.—(1761-1849.) A financier and statesman. He came to America in 1780, and was elected member of Congress from Pa. in 1795; became Secretary of the Treasury in 1801. He was the first promoter of the committee of ways and means, and was reported as one of the greatest financiers of the age. He was U. S. minister to France (1816-23) and to England (1826-27).

Gallaudet, Edward Miner.—Born at Hartford, Conn., 1837, son of T. H. Gallaudet. He became president of the National Deaf-Mute College at Washington, D. C., in 1864.

Gallaudet, Thomas.—Born at Hartford, Conn., 1822. An American clergyman, son of T. H. Gallaudet. During 1843-58, he was engaged in the New York Institution for the Instruction of the Deaf and Dumb; in 1852, he founded St. Ann's Church for the Deaf-Mutes; and became manager of the Church Mission to Deaf-Mutes.

Gallaudet, Thomas Hopkins.—(1787-1851.) He was the founder of the first deaf-mute institution in America, at Hartford, Conn.

Galley.—A long, low, single-decked vessel, propelled by oars or sails, used as a war vessel by the ancients, and still to be seen, in a modified type, in the Mediterranean. As vessels of war, they were generally manned by slaves or criminals, chained to the oars, and known as galley-slaves. Occasionally, they were Turkish or Moorish captives or Christian prisoners. Between the small deck at the prow and the one at the stern, the rowers were seated on either side of a longitudinal bridge or plankway, on which stood those in charge of the craft, with boatswains, armed with long whips, which they used to scourge the slaves. On large galleys, as many as 250 or 300 of these rowers would be crowded together, in addition to the fighting men who manned them and worked the guns and were ready on occasion to board an enemy's vessel.

Gall Flies.—Have you ever observed little rounded masses of vegetable matter, growing on the leaves and stems of plants, and having the appearance of fruit, or buds, growing on the tree? Those found on the oak tree are sometimes

called oak-apples, but they are more properly called galls.

If you taste one, you will find that it does not at all resemble an apple, in taste, for it is extremely bitter. Upon cutting into a gall, you will find inside a little, white, worm-like creature, but there is no sign of a hole through which he could have got there. It would seem, that he must have grown there, and that is really the case. The little creature came from an egg, that was laid by the mother, when the leaf, or stem, was green and smooth.

When the female lays her egg, she deposits with it a sort of liquid, or virus, which causes the vegetable matter to grow around it and when the insect hatches out, he finds himself in the midst of plenty of food, upon which to feed. When he has eaten sufficient to make him grow large and strong, he gnaws his way out of the gall, and appears as the little insect known as the Gall-fly.

There are many varieties of these little Gall-flies, all of which have much the same appearance as a wasp, except that they are very, very much smaller, some of them being only a little more than one-eighth of an inch in length. Each kind of Gall-fly makes galls of a certain kind, and the various kinds of galls differ very much from one another. Some kinds are shaped like apples, and others like bunches of currants; some are as hard as stones, and others as soft and as juicy as fruit. Some kinds of galls are useful, as for instance, those found on an oak tree that grows in western Asia. These are used in large quantities in the manufacture of ink.

Gallissonnière (ROLAND M. B.), Marquis de la.—A French admiral and governor of Canada prior to the Conquest; was born in France in 1693, and died there in 1756. The period of his governorship of New France was the years 1745-49, when France and England sought to decide the question which Power should be supreme on the North American continent. The whole interior of the continent was at this time claimed by France, while the English were shut in between the mountain ranges of the Alleghanies and the sea. The English colonists, however, would not be hemmed in either by nature or by France, and sought, like the French, adventure and gain in the fur trade of the Far West. The French, resenting the intrusion, began to erect a series of forts, to mark the boundaries of their possessions and conserve the inland fur trade. Already, in the Gulf of the St. Lawrence, the first scene in the opening drama had been enacted at Louisburg. This stronghold in Cape Breton, which guarded the marine highway to New France, had surrendered to England and her colonial levies. French pride, hurt at this loss, thereupon sent Count de la Gallissonnière to Canada, but he accomplished little of his mission, owing to the extravagant territorial assumption which he put forward in behalf of his country, which offended the English colonists and roused the suspicion of many of the Indian tribes.

- Gallon.**—A liquid measure, composed of four quarts, eight pints, or 32 gills. The standard liquid gallon of the U. S. contains 231 cubic inches; the imperial gallon of Great Britain 277.274 cubic inches.
- Galt, Sir Alexander Tilloch.**—(1817-1893.) A noted Canadian statesman.
- Galvani, Luigi.**—A distinguished Italian physicist and surgeon, who lived in the latter half of the 18th century. His great achievements were in the field of galvaic or voltaic electricity. His chief experiments were with skinned frog's legs, the muscle-contractions of which, in contact with metals, led to the use of the electric battery and to the demonstration of electric currents. (See GALVANOMETER.)
- Galvanism.**—See ELECTRICITY.
- Galvanized Iron.**—Iron is so-called which has been coated with zinc by being dipped into a bath of amalgam of zinc and mercury and a little sodium.
- Galvanometer.**—An instrument for measuring the intensity of an electric current, usually by the deflection of a magnetic needle. Varieties of this electrical instrument have been perfected by Edison, by Lord Kelvin, and by D'Arsonval. The two types most in use are the D'Arsonval galvanometer, and the one perfected by Kelvin, and by Paschen, a German scientist. The latter is one in which the magnet is fixed and the conductor suspended so as to rotate between the poles of the magnet: the other, of the magnetic type also, is one in which the conductor is bent into a circular coil of wire, in the middle of which a small magnet is suspended. When a current is passed through the wire, previously placed in the plane of the magnetic field, the latter will be changed and the suspended magnet will turn on its axis, thus showing the presence and intensity of the current.
- Galveston, Tex.**—A seaport and city, on Galveston Island, between the Gulf of Mexico and Galveston Bay, noted for its exports of cotton. In the Civil War, it was occupied by Federal troops in 1862 and retaken by the Confederates in the following year. In 1885, it was devastated by a calamitous fire, and on Sept. 8 and 9, 1900, was swept by a most destructive cyclone, causing an appalling loss of life, and wrecking about ten million dollars' worth of property. Galveston was first settled in 1837, and had in 1900 a population of 37,789.
- Galway.**—A maritime county of Connaught, Ireland. Pop. (1901), 192,146.
- Gama, Vasco da.**—A famous Portuguese navigator, born about 1469 and died in 1524. His achievements form the theme of the national epic of Portugal—the "Lusiad" of Camoens. His enterprise led him to discover the sea-route to India *via* the Cape of Good Hope, previously attempted by Bartholomew Diaz. He undertook two expeditions by this route, in 1497-99 and in 1502-03, in both of which he reached and landed at Calicut, on the Malabar coast of India, where he established a factory, or trading-place, in Mozambique and in 1524 was made Portuguese viceroy of India. Considering the merit of his discoveries, he may be said to rank only second to Columbus.
- Gambetta, Léon.**—A French statesman of Jewish origin, born in 1838 and died in 1882. After the Franco-German War and the surrender of Napoleon III., Gambetta took a prominent part in proclaiming the republic and in opposing the German occupation of Paris. Before the capital surrendered, he escaped in a balloon and practically became for a time dictator of France. On the fall of the Commune he was elected a member of the National Assembly, then became president of the Chamber, and finally Premier, in 1882, the year of his death, the result partly of an accident. By profession he was a lawyer and advocate.
- Gambia.**—A river and British colony in Senegambia, part of the West African settlements of the English crown. The river has a length of 1,400 miles and falls into a noble estuary of the Atlantic at Bathurst. It is navigable as far as Barraconda. The colony has an area of 69 square miles which adjoins extensive protected territories in the interior. Its chief products and exports include India-rubber, groundnuts, rice, cotton, corn, hides, and beeswax. The population (1899), 15,000, is chiefly of Mohammedans and natives. The chief town is Bathurst, on the island of St. Mary (population, 6,000).
- Gambier Islands.**—A group of small islands in the South Pacific; under a French Protectorate.
- Game Laws.**—Laws to regulate the killing of game. In former times in England, all game was considered the property of the king, and those who infringed upon the royal rights in this direction were punished. In the U. S. a license may be secured by anyone wishing to hunt during the proper seasons; no one, however, may kill game during what is called the "close season" without incurring the risk of punishment.
- Gamp, Mrs. Sairey.**—A famous character in Dickens's "Martin Chuzzlewit."
- Ganges.**—The sacred river of India, next to the Indus and the Brahmaputra in length. Its remote source is in the Himalayas, the main stream extending for a distance of 1,600 miles, and flowing mainly southeastward into the Bay of Bengal, which it reaches by many mouths. Its chief tributaries are the Jumna, Gandak, Kusi, Gogra, and Ramgunga, and on or near its mighty highway are the cities Calcutta, Patna, Behar, Benares, Allahabad, and Murshadabad. The delta of the river begins about 200 miles from the Bay of Bengal, the widest and deepest outlet being that known as the Hugli. Much of its adjacent low-lying land is inundated by the river in the summer and autumn months. The river is held in high veneration by the native Indians, and is indeed worshiped by them as the goddess Ganges.
- Ganymede.**—According to Greek legend, the most beautiful of mortals, son of Tros, first king of Troy, and the supplanter of Hebe in her rôle as cup-bearer to Zeus. In art, he is represented as

being carried off by Zeus, in the form of an eagle, and given place among the immortals in bliss. In the Zodiac, he is represented by the sign Aquarius, or water-bearer: other tradition makes the beautiful young Trojan the presiding deity of the Nile.

García, or Garzia, or Garcias.—(958-1001.) King of Navarre, 995-1001.

García y Iniguez, Calixto.—A noted Cuban revolutionary leader, born at Holguin, Santiago province, in 1836, and died at Washington, D. C., Dec. 11, 1898. He took part in the Ten Years' War in Cuba (1868-78) against Spain, was wounded and taken prisoner. His life was spared, however, in this as well as in the later "Little War" on the island, though he was again captured and taken to Madrid, where for sixteen years he was under police surveillance. In 1895, he left Madrid secretly and made his way to the United States, where he organized a filibustering expedition which was interfered with by the U. S. government. In the following year he found his way back to Cuba, where he conducted an irregular warfare against Spain, capturing Guaimaro in Dec., 1896. At the siege of Santiago by the U. S. forces, in June-July, 1898, García with his native insurgents coöperated with Gen. Shafter, and when the city surrendered he withdrew to Holguin in a huff because he was not placed in command. Late on, he was commissioned by the Cuban Assembly to visit Washington and confer with President McKinley on the future policy of this country toward Cuba. Here, however, he met his death, the result of an attack of pneumonia.

Garden of the Gods.—A district near Colorado Springs, Col., comprising about 500 acres, covered with extraordinary rock formations.

Garden of Virginia.—The Shenandoah Valley.

Garden State, or Garden of the West.—A name sometimes applied to Kansas.

Gardiner, Samuel Rawson.—Born 1829. An English historian.

Gardiner's Island.—A small island lying off the coast of Long Island, New York.

Garesché, Julius P.—An American soldier. He was chief of staff to Gen. Rosecrans, with the rank of colonel. At the battle of Stone River, Dec. 31, 1862, while riding by the side of his chief across a field swept by the Confederate fire, he was literally beheaded by a cannon ball. He was an officer of very high soldierly and scholarly attainments. He was born in Cuba in 1821.

Garfield, James Abram.—216.

GARIBALDI.—(1807-1882.)

Giuseppe Garibaldi, the knight-errant of Italian unity, was born at Nice, Italy, July, 1807. Through the example of his father who was a trader and a seafaring man, he early formed a love for life on the sea. He made trips to Odessa, Rome, and other cities, with experienced commanders, and soon became a skillful and fearless sailor, noted for his prompt decision and presence of mind. He was a great hater of despotism and was much devoted to



GARFIELD AS TOWPATH BOY

the cause of universal freedom; and from 1833 he was one of the leaders in the Italian Liberal movement. To escape punishment for his conspiracy at Genoa, in 1834, he went into exile.

After again sailing the Mediterranean for awhile, in 1836 Garibaldi went to Rio Janeiro, and soon became an active spirit in the war for the liberty and independence of the republic of the Rio Grande. At the close of the war he settled at Montevideo with his creole wife. He commanded the naval force of Uruguay against the attack of Buenos Ayres. By organizing an Italian legion, he also saved Montevideo.

In 1848, he embarked with his legion, and sailed for Italy to aid the Italian Liberals in the war against Austria. When the Roman republic was organized, in 1849, he was invited by Mazzini to take command of its army. After the French by greatly superior numbers became masters of Rome, he withdrew and pushed toward the Adriatic with part of his men, but failed to escape, and suffered the loss of his heroic and devoted wife, who died from exhaustion by the dangers and exertions of the flight. Banished by the Sardinian government he sailed to New York, in July, 1850, and soon settled down as a candle-maker on Staten Island. When he revisited South America, he was received everywhere with public admiration and sympathy.

After the outbreak of the Italian war against Austria, in 1859, Garibaldi was appointed major-general, and organized the hardy "Hunters of the Alps." After the peace, he took one thousand devoted followers, in May, 1860, sailed to Palermo and, after a desperate conflict, forced his way into the city. Overcoming all opposition, in a month he became dictator of Sicily. To show Europe that his arrival was that of a friendly liberator, he entered Naples without his army, and with but one or two friends. In

Garibaldi.—*Continued*

October, his army was attacked by fifteen thousand royalists from Capua, but finally succeeded in driving them back in disorder. He soon resigned his power to his sovereign, Victor Emmanuel, refused any title or other reward, and retired to his little island of Caprera (Nov. 1861).

He had now reached the turning point in his life. He had earned the lasting gratitude of his country by a romantic daring expedition which freed Sicily and Naples, with their nine million subjects, from the despotic rule of Francis II., and added them to the new Italy. In a marvelous campaign, he had created an army and conquered a kingdom. By defeating 35,000 disciplined troops with an army of half that number, he had silenced the cavils of men who called him only a brilliant guerrilla leader. Finally, by surrendering his dictatorship to the Sardinian king, to prevent dissension among Italian patriots, he had achieved a conquest over self.

Garibaldi still gave his thoughts to the recovery of Rome and Venice in order to complete the unification of Italy. In 1862 he was elected to the Chamber of Deputies. He was soon made general of the National Guard, but when he raised an Hungarian legion for service against Austria, he was removed from his command for political reasons. In Aug., 1862, he was defeated in an attempt to capture Rome. After two months imprisonment, he returned to his island home. In 1864, he was received with great enthusiasm in England.

In 1867, he resumed his designs against Rome, and led an independent expedition to seize it for Italy and freedom, but was defeated. He was opposed by Victor Emmanuel, who, although sympathizing with Garibaldi in his purpose, did not desire to give offense to France.

After a brief residence at his home, in 1870, he went to France, joined Gambetta, and fought against Germany in the Franco-Prussian War. Though he was elected a member of the French National Assembly (1871), he took no part in its meetings, and soon resigned his seat and returned home on account of his hatred for the priesthood.

In 1873, though he needed money, he refused to accept assistance which was offered, and declined a pension from the Italian government.

In 1874 he was elected a representative of Rome in the Chamber of Deputies, and made a triumphant entry into the city in Jan., 1875. Though he continued to oppose the political course of the government, he proposed several plans for public improvement which were adopted. In 1875, he resigned and returned to his home, where he died in 1882.

Though he had always been honest and sincere, with a kind and unsuspecting nature, after 1861, he began to lose faith in both God and man, and became harsh, suspicious, selfish, and bigoted, tolerating no dissent from his opinions, even among his nearest and most devoted

friends. During his last years he felt that he had lived too long, and that Italy no longer needed him. But the splendor of a unique career cannot be marred by a brief old age embittered by rheumatic pain and by disappointment. The Garibaldi who led the thousand from Marsala to Naples was an ideal hero, whose fame will remain a noble treasure to his race.

"Through all his life, he had remained faithful to the dreams of his youth, aided largely in their accomplishment. To him more than to any other belongs the honor of the unification of Italy in a government in which the wishes of the people are heard and obeyed."

He was a great military genius and possessed great heroic qualities. His life was crowded with varied experience and romantic adventures. He was an incorruptible patriot, and an interesting hero, with a marvelous career, as a sailor, workman, trader, teacher, soldier, general, and dictator. He showed great bravery and presence of mind from his earliest childhood. At the age of eight he saved a woman's life; at thirteen he saved the passengers from a wrecked ship; at thirty-seven, at Marseilles, he saved a drowning youth; at forty-one, he saved a ship from burning on the ocean.

He hated all forms of oppression, loved all peoples, protected the weak, refused honors, scorned death, adored Italy. It is said that gentlemen left their palaces, workmen their ships, youths their schools, to join his legions and fight for the honor of Italy. He was a blonde, strong and handsome. "On the field of battle he was a terror, in affection he was a child, in affliction a saint. Thousands of Italians have died for their country, happy if, when dying, they saw him pass victorious in the distance. Thousands would have met death for him; millions have blessed and will bless him." He is said to have been engaged in forty battles and gained thirty-seven of them. Future generations will admire his character as a hero who liberated oppressed peoples, fought for the right, scorned the wrong. His two sons, Menotti and Ricciotti, took part with their father in some of his campaigns.

Garland, Augustus Hill.—(1832-1899.) He was a member of the Confederate Congress, elected governor of Ark. in 1875, U. S. Senator from Ark. (1877-85), and attorney-general (1885-1889).

Garland, Hamlin.—Born 1860. An American novelist.

Garland Case.—In 1860 Augustus H. Garland, of Ark., was admitted to practice in the U. S. Supreme Court. Soon after the State of Ark. had seceded from the Union, in 1861, he was elected to the Confederate Congress, where he served until the surrender of Gen. Lee in 1865. He was included in the general amnesty extended to citizens of the Southern States. July 2, 1862, Congress enacted a law requiring all candidates for office to take an oath that they had never engaged in hostilities against the U. S. and on Jan. 24, 1865, this oath was required

of persons admitted to the bar of any circuit or district court of the U. S. or courts of claims. Garland refused to take the prescribed oath, on the ground that it was unconstitutional and void as affecting his status in court, and that if it were constitutional, his pardon released him of compliance with it. The court sustained him in his contention, on the ground that the law was *ex post facto*. Justice Field, delivering the opinion, said: "It is not within the constitutional power of Congress thus to inflict punishment beyond the reach of Executive clemency." Chief-justice Chase and Justices Miller, Swayne, and Davis dissented.

Garlic.—A plant with a pungent aromatic taste and odor, used as an article of food, especially in Spain. It possesses some medicinal properties, being tonic, stimulant, diuretic, and sudorific.

Garnet.—A precious stone, the carbuncle of the ancients, found chiefly in Ceylon, Saxony, Bohemia, and northern Europe, as well as in Peru and Brazil. It is a mineral, a compound of several silicates, found among crystalline rocks, and, though hard, is brittle and has a vitreous luster. It occurs in mica slate, hornblende slate, in gneiss, granite, and sometimes in lava. It is of various colors, the more common being a clear deep-red, occasionally of an emerald shade, and sometimes black. The best stones are those known to the lapidary as Syrian garnets. The common form is the dodecahedron crystal. See p. 2368.

Garnett, Robert Seldon.—(1820-1861.) A Confederate general in the Civil War.

Garonne.—A river of southern France, having its source in the Spanish Pyrenees, whence it flows in a northeasterly direction as far as Toulouse, then northwesterly, through Gascony and Guienne, past Bordeaux into the estuary of the Gironde and the Bay of Biscay. It is 350 miles in length, and is navigable for two-thirds of the distance. It receives a number of affluents, the largest of which is the Dordogne. At Toulouse it is connected by a canal with the Mediterranean. Roughly speaking, the river is the boundary between the Celtic and the Basque population of France.

Gar-pike, The.—See STURGEON, 26:7.

Garrick, David.—A celebrated English actor, born in 1717 and died in 1779. After a short period at school, where he was for a time a pupil of Dr. Samuel Johnson, he found his way to London, and there manifested a fondness for the stage. After several appearances in minor parts on the boards, he achieved his first success as Richard III., in Shakespeare's historical play of that name. This occurred in 1741, and his after-career was a succession of triumphs, for he was popular alike in comedy as in tragedy. In 1747, he became manager of Drury Lane theatre in London, which he continued to direct till 1776, when he retired with a handsome fortune. As an actor, he has since had but one rival—in Edmund Kean.

Garrison, William Lloyd.—221.

Garter, Order of the.—A famous military order of Europe, instituted by King Edward III., of England, about 1344.

Garter Snake, The.—See SERPENTS, 2639.

Gas.—A fluid occurring either in the elastic or æriform state, a term primarily used by chemists as synonymous with air, or in its permanently elastic form, such as oxygen, hydrogen, etc., in contradistinction to vapors as steam, which become liquid on a reduction of temperature. For lighting and heating purposes, gas is artificially produced by the destructive distillation of gas coal, and sometimes of peat, wood, oil, resin, etc. It has of late been used largely in some districts in its natural form for fuel and illuminating purposes, and as such is derived from the coal measures. Coal gas came first to be used about the close of the 18th century, when it was distilled from coal by a miner in Cornwall, England. Some years later, it was used to illuminate a large factory in Birmingham, and by a Gaslight Company in London it was introduced in the British metropolis as an illuminant in houses, superseding oil. It has now become a vast industry, though in turn it is now being superseded by electricity. Highly bituminous coal is best adapted for gas-making. The richest gas-making coal will yield from 12,000 to 15,000 cubic feet of gas from a ton of coal, and of an illuminating power of about 40 standard candles. Gas is explosive only when mixed with air in the proportions of from 3 to 9 of air to 1 of gas. The use of the incandescent mantle, which greatly raises the illuminating power of the gas, and improvements in gas engines, have in a measure revolutionized the gas-lighting industry in recent years.

Gascony.—An ancient duchy of France.

Gaskell, Mrs. (ELIZABETH CLEGHORN STEVENSON).—(1810-1865.) An English novelist; best known by her "Life of Charlotte Brontë," and the story "Cranford."

Gas-light.—See ILLUMINATING GAS.

Gate City.—A name applied to Atlanta, Ga., and also to Keokuk, Iowa.

Gate of Tears.—The Arabic term for which is Babel-Mandeb, the strait which connects the Red Sea with the Indian Ocean and separates Arabia from eastern Africa. It derives its name "Gate of Tears" from the dangerous character of the navigation of its waters.

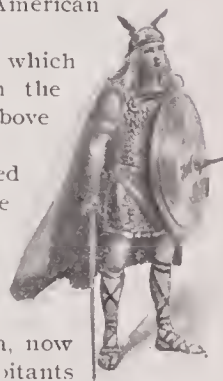
Gates, Horatio.—(1728-1806.) A noted American general in the Revolutionary War.

Gate of the Mountains.—A gorge through which the Missouri River flows through the Rocky Mountains, about 40 miles above Great Falls, Mont.

Gatling, Richard Jordan.—Born, 1818; noted as the inventor of the Gatling gun, the first of which was constructed in 1862.

Gatling Gun.—A repeating machine gun, which consists of a number of rifles revolving around an axis.

Gaul.—The anglicized name of Gallia, now called France. The original inhabitants were Celts. Under the sway of Julius Cæsar



- it became Romanized; but after the decay of the Roman empire German influence prevailed.
- Gaul, Gilbert.**—Born, 1855; an American painter of battle scenes.
- Gauss, Kari Friedrich.**—(1777-1855.) A celebrated German mathematician.
- Gautier, Théophile.**—An eminent French poet, critic, and prose writer, born in 1811 and died in 1872. With Victor Hugo, he early took part in the romantic movement in French literature, and in 1835 produced a notable novel, "MADEMOISELLE DE MAUPIN." Later on he traveled extensively in Europe, and wrote a number of delightful works describing his voyages and travels; he also produced two masterly critiques on Lamartine and Charles Baudelaire. He also wrote largely on art, numberless striking short stories, such as his "A Night with Cleopatra," and a longer novel, entitled "Captain Fracasse," besides several plays for the stage, and a large body of delicate and rich verse.
- Gavarni** (the *pseudonym* of Sulpice Paul Chevalier).—(1801-1866.) A noted French caricaturist.
- Gaveston, Piers.**—Executed, 1312. Favorite of Edward II. of England, with whom he had been brought up from childhood.
- Gawain or Gawayne, Sir.**—One of the principal Knights of the Round Table.
- Gay, John.**—Born, about 1685, died, 1732. An English poet.
- Gay-Lussac, Joseph Louis.**—An eminent French chemist and physicist, was born in 1778, and died in 1850, a peer of France. For scientific purposes, in 1804, he made two daring balloon ascents (in one of which he reached a height of 23,000 feet), to enable him to make observations on the earth's magnetism, the moisture of the air, etc. His early researches were also of much value in determining gaseous laws, specific heats, gravities, and in the decomposing action of the voltaic pile. His tests were also notable in his special line as a chemist, especially in connection with ethers, alkalies, iodine, bleaching chlorides, cyanogen (of which he was the discoverer), and their combinations. For nearly a quarter of a century he was professor of physics in the Sorbonne, and later became professor of chemistry at the Jardin des Plantes.
- Gaza.**—A town of Syria, an important trade center. Anciently one of the five principal cities of the Philistines. Pop., about 16,000.
- Gazaland.**—A portion of Portuguese East Africa, lying between Mashonaland and the sea.
- Geary, John White.**—(1819-1873.) A U. S. politician and soldier.
- Gecko, The.**—See LIZARD, 2643.
- Gelkie, Sir Archibald,** 10, Chester Terrace, Regent's Park, N. W. London, age 65; a geologist of great distinction and many honors; director-general of the Geological Survey of the United Kingdom (Great Britain).
- Geissler, Heinrich.**—(1814-1879.) A German maker of physical apparatus and the inventor of tubes containing rarefied gas through which electric discharges are passed, causing varying effects of color and light.
- Geiderland, or Guelderland, or Guelders.**—A province of Netherlands, bordering upon the Zuzyder Zee.
- Gemini** (The Twins).—See CONSTELLATIONS, 3002.
- Gem of the Antilles.**—A fanciful name applied to the Island of Cuba.
- Gems** (from Latin *gemma*, a precious stone) have from ancient times been valued for personal adornment, as well as for engraving on, in relief (cameo engraving), and for intaglio or sunk engraving. The forms most in use for gem engraving were the colored and banded quartz and colorless rock crystals, though the precious stones, such as emeralds, sapphires, rubies, garnets, beryls, etc., were also held in high esteem. For the authorities on gem engraving among the ancients, including the Egyptians, Assyrians, Etruscans, Phœnicians, Greeks, and Romans, see King's "Handbook of Engraved Gems." The production of artificial gems has now become a great industry, aided by tests and researches of the chemists and lapidaries. Imitation gems were also known to the Romans, who used to produce, among other mock gems, good imitations of the emerald and lapis-lazuli. In Egypt, research has discovered the location of Cleopatra's emerald mines, in a mountain east of Edfu, about 15 miles from the Red Sea. Burma has also yielded largely of precious stones, chiefly of rubies. In this country, some large sapphires have been mined in the Yogo Valley country, in Montana. The import trade in precious stones is a large one in the United States, the value of the imports in 1899 being over seventeen million dollars. See 2365.
- Gens d'armes** (*zhän-därm'*) were originally the French king's horse guards. The term means "men-at-arms." Now they are military police and comprise both cavalry and infantry. The position is regarded as a sort of reward for soldiers from the regular army who have won distinction by good conduct and length of service.
- General.**—The highest rank in the U. S. army conferred in recognition of distinguished military service. It was first created by act of Congress, Mar. 2, 1799, and conferred upon George Washington. It was abolished in 1802, but was revived July 25, 1866, for Ulysses S. Grant. William T. Sherman succeeded to the rank Mar. 4, 1869, Grant having become President, and held it until his retirement Feb. 8, 1884. The grade was revived June 1, 1888 for Philip H. Sheridan, who held it until his death, August 5 of that year. The rank of general was also the highest in the Confederate army.
- General Land Office.**—A bureau of the Interior Department charged with the surveying and disposal of the public lands of the U. S. Until 1812 the Secretary of the Treasury acted as agent for the sale of public lands. After the office of Commissioner of the General Land Office was created, the Land Office remained a bureau of the Treasury Department until the creation of the Interior Department, in 1849, when it was attached to that Department.

Genesee River.—A river in N. Y., flowing into Lake Ontario, noted for its picturesque falls.

Genesius, Josephus, or Josephus Byzantinus.—A Byzantine historian; lived about 950.

"**Genesta.**"—An English cutter, built expressly to win back the America's cup, but was twice beaten by the "Puritan" (Sept. 14 and 16, 1885).

Geneva.—A town in N. Y., the seat of Hobart College. Pop. (1900), 10,433.

Geneva.—An important and wealthy city of Switzerland, lying on both sides of the Rhône, where it leaves the Lake of Geneva. It has many fine buildings, including the Cathedral of St. Pierre, a university which dates from the year 1368, several academies, museums, picture galleries, and a Hôtel de Ville in the Florentine style of architecture. The city is a favorite and interesting one for artists, tourists, etc., for it has had a long and historic career back to the 1st century of the Christian era. Later it was a Roman city, then the capital of the Burgundian empire, and subsequently became the center of the Reformation movement under Calvin. For a time it was incorporated with France, but in 1815 both city and canton entered the Swiss confederation. Population of the city, (1900), 104,044.

Geneva Convention.—An agreement made at Geneva, Switzerland, in 1864, by France, Belgium, Switzerland, Portugal, Holland, Italy, Spain, Denmark, Baden, and Prussia. Many other military powers have since subscribed to it, including the U. S. The convention provides that no distinction of nationality shall be made in caring for sick and wounded soldiers and guarantees the neutrality of ambulances. When natives of an invaded country shelter the wounded in their homes, these natives shall be exempted from the quartering of troops and military contributions. Hospitals and their staffs, when undefended by arms, are recognized as neutral. Surgeons, physicians, nurses, and ambulance drivers are, for their protection, distinguished by a red cross on a white field, a device usually worn on the arm. Flags bearing the same emblem are used to indicate hospitals. The sick and wounded held by the enemy shall, when cured, be returned to their own country if unfit for service; if able for duty they shall be paroled. A convention in 1868 extended the principles of the agreement to naval warfare. There are many Red Cross societies that work in sympathy with the aims of the Geneva Convention. The idea that found practical expression in the latter originated with Heinrich Dumout, a physician, and Gustave Moynier, chairman of the Society of Public Utility, citizens of Switzerland. (See BARTON, CLARA.)

Genghis Khan.—A great Mongolian conqueror and ruler, who lived in the latter part of the 12th and the early part of the 13th centuries. In 1215 A.D., he invaded northern China, seized Peking, and annexed the country, marrying meanwhile the daughter of the Chinese Emperor. Thus uniting the Mongols under his

sway, he fell upon India, conquered Persia, and advanced far into Europe. Reckless of bloodshed, he is said to have spilt the blood of five million men in central Asia alone. He afterward descended upon southern China, took Nankin and other cities, and designed to conquer the whole of the then known world. Death, however, conquered him in 1227.

Genoa.—The chief commercial city and seaport of Italy, situated at the foot of the Apennines, on the Gulf of Genoa. In early Roman times it was a great maritime port, has always done a large trade with Levantine towns, and during a period in its history did a lucrative commerce with India and other rich possessions in the East. It has several fine palaces and magnificent churches (the Cathedral of San Lorenzo being the most notable), a university, many museums, picture galleries, theaters, etc. Owing to local party struggles and the rise of other and more virile modern nations, Genoa has lost all her foreign conquests and possessions. Pop. (1899), 237,846.

Genseric.—A king of the Vandals in Spain, who, in 429 A.D. invaded Africa, and ten years later, on a subsequent expedition, captured Carthage and made it the capital of a Vandal kingdom in Africa. So reckless and wasteful were the armies Genseric led through the lands he traversed and pillaged that the term "vandal" is now a synonym for destructive barbarism. Creating in the Mediterranean a great naval power, he fell upon Rome in 455 A.D. and plundered it for two weeks in the most ruthless fashion and carried away from it many captives. Like other conquerors in history, he was ever greedy of conquest, and made religion (he professed the Arian creed) the excuse for his cruelty.

Gentian, The.—2907.

Geographer of United States.—An act passed by Congress May 20, 1875, created a national geographer whose duty it was to supervise all surveys and submit plats to the Treasury Dept. The U. S. Coast and Geodetic Survey now has control of this work.

Geography (from two Greek words, one (*gē*), meaning "the earth," the other (*grapho*, "to write").—Literally, a description of the earth. Descriptive geography includes an account of the earth's surface, the climate and natural features and productions of the world in its different divisions, including not only plants, but animals and man, and the social and political condition of the various peoples of the world. The latter is otherwise termed political geography, in contradistinction to physical geography. The latter, again, is classified into two branches, known technically as it refers to the natural features of the land as *physiography*, and, where it relates to the waters, and describes and measures the seas, lakes, rivers, and their phenomena, this is termed *hydrography*. Both terms belong to physical geography, in contrast to political geography, which deals with the earth as the abode of human races, communi-

ties and societies, their modes of government, population, and resources, etc. Mathematical geography is still another term, and this treats of the earth as a solar system, its movements of rotation in space around the sun, the causes of its seasons and daily changes, as well as of the

location of portions of the land's surface, with its longitude and latitude, etc. Topography has to do with the local and minuter features of both land and water; while cartography is the science which represents or sets these features down on charts, maps, atlases and globes.

GEOGRAPHY, COMMERCIAL

IN WHATEVER line of business one may obtain employment, he will find the geography of his state and country to be among those subjects with which he must acquaint himself in order to discharge his duties with intelligence and competency. The subject may be divided into several classes, viz., mathematical, physical, political, and commercial, and insomuch as the first three of these are discussed in other pages of our work.

it is the last mentioned of which it is our purpose here to treat, especially in its relation to *carriers* and the routes which they traverse.

In a work of this character it is obviously impossible to give a treatise so comprehensive as to afford all the information necessary in every case that may arise; indeed,

It is believed that such a work does not exist.

But a general idea of the subject will at least

form a basis for whatever details it may become necessary to acquire.

The term "carriers," in its popular sense, comprises those engaged in the transportation of passengers, freight, and information, and the mediums employed may be classified as follows: railroads, waterways, telegraph, and telephone lines. Each of these will be treated separately.

RAILROADS

A glance at a railroad map, with its labyrinth of lines penetrating every corner of the country, crossing and re-crossing each other, and stretching over the area of one or more states, cannot fail to produce a sensation of confusion, but if we proceed systematically, examining and acquainting ourselves with each section of the territory traversed, a fund of information may be acquired without much trouble or loss of patience.

It may be fairly assumed that every one is informed as to what railroads touch the hamlet, town, or city in which he resides. He should not stop there, however, but should proceed to ascertain the routes of such roads, noting carefully the territory covered by them, the important cities located on them, and their termini. He should



then proceed to learn by comparison which of the lines that reach the same places, especially the larger centers, employs the most direct route from his place of residence. Having done this, another section of the country should be selected for study. If the student be employed in a business the character of which is such that the railroads extending to a particular section of the country are used in the conduct of its business, he will, of course, take especial pains to become informed of all the conditions affecting such section. He will learn the names of such roads and their connections. If the particular section be distant, he will observe which of the great through or "trunk" lines would be the most advantageous to employ. At least one of such great lines penetrates every state of the Union.

It is, however, necessary that a knowledge of all sections should be gained, and, as stated, this should be done by examining one section at a time. Mark well which of the lines extend to the large cities and trade centers of the country. Imagine that you desire to travel, or to ship goods, from New York to Los Angeles and ascertain which route would be the most desirous. Again, suppose you desired to travel from one of the above-mentioned points to the other, but that you wished to reach some point located between the two that could not be reached by taking the most direct route. In these cases you will, of course, disregard the smaller roads which traverse only one or two states, and ascertain the trunk line or lines which cover the territory between the point of starting and the point of destination. Then try a trip from Buffalo to Jacksonville; from Washington to Houston; from Chicago to Seattle; from Baltimore to Kansas City; from Atlanta to Memphis; from New York to New Orleans; from San Francisco to Philadelphia; from Ft. Leavenworth to Cincinnati; from Cleveland to Denver, etc.

The student will do well to note the list of centers of large industries given below, using the place named as one terminus and his own residence or one or more of the large cities as the other, and ascertain the best route to be used.

CENTERS OF LARGE INDUSTRIES

- Worcester, Mass.*— Extensive manufacturing industries.
Fall River, Mass.— Cotton mills. The annual output of the cotton mills in this city is equal to three-fourths of the gold mined yearly in the United States.
Lowell, Mass.— Cotton mills; proprietary medicines.
Lawrence, Mass.— Woolen and cotton factories.
Lynn, Mass.— Great shoe manufacturing center.
Holyoke, Mass.— Paper mills.
Bangor, Me.— Great lumber market.
Manchester, N. H.— Large cotton mills.
Bridgeport, Conn.— Manufacturing industries.
Waterbury, Conn.— Brass manufactories.
Scranton, Reading, and Erie, Pa.— Large iron works.
Newark, N. J.— Tanneries; jewelry.
Paterson, N. J.— Largest silk factories in the United States.
Trenton, N. J.— Potteries.
Dover, Del.— Fruit canning.
Richmond, Va.— Tobacco manufactories.
Wheeling, W. Va.— Nail works.
Parkersburg, W. Va.— Large trade in oil.
Raleigh, N. C.— Leading cotton market.
Charleston, S. C., and Wilmington, N. C.— Export more rosin and turpentine than any other two ports in the world.

Atlanta, Ga.— A southern trade center.

Charleston, S. C.— Ranks next to New York and New Orleans in the export of cotton.

Akron, O.— Large rubber works, and book manufacturing plant.

Augusta, Ga.— Largest cotton mills in the South.

Key West, Fla.— Manufacture of cigars.

Pensacola, Fla.— Lumber.

Birmingham, Ala.— Extensive manufacture of iron and steel.

Memphis, Tenn.— Important cotton port.

Chattanooga, Tenn.— Iron and steel industries.

Shreveport, La.— Large cotton market.

Little Rock, Ark.— Cotton-seed oil.

Fort Smith, Ark.— Great trade center.

Columbus, O.— Carriage manufactories.

Youngstown, O.— Iron and steel industries.

Fort Wayne, Ind.— Important trade center.

South Bend, Ind.— Wagons and plows.

New Albany, Ind.— Extensive glassworks.

Grand Rapids, Mich.— Large furniture factories.

Saginaw, Bay City, and Muskegon, Mich.— Lumber.

Racine, Wis.— Farm implements.

Des Moines, Iowa.— Grain market.

Duluth, Minn.— Important shipping center.

Topeka, Wichita, and Leavenworth, Kan.— Important centers for grain and cattle.

Pueblo and Leadville, Col.— Large smelting works.

Los Angeles, Cal.— Large fruit market.

Cheyenne, Wyo.— One of the largest cattle markets in America.

WATERWAYS

Under this head may be included the two great oceans, rivers, lakes, and canals.

The Atlantic Ocean, sweeping the entire eastern coast of the country and extending to many European ports, affords magnificent commercial facilities for domestic and foreign trade. In domestic transportation where time is not the most important element, the ocean routes are used on account of the lower rates. This is an advantage which is enjoyed by but comparatively few states. Reliable steamship lines, operating safe and commodious vessels, extend between the important seaports, handling enormous cargoes. The most important of these routes are from New York to Norfolk and other Virginia ports, to Baltimore, and to Savannah; from Boston and Newport to Norfolk and to Savannah; and from points on the Chesapeake Bay (an arm of the Atlantic) to Charleston, Savannah, and other southern ports.

The western coast of the United States is also blessed with great transportation companies, whose steamers ply the Pacific Ocean for the purpose of carrying passengers, mail, and freight between the various important ports in California, Oregon, and Mexico. At the present time all the travel to Alaska from northwest America is by the way of these routes.

By referring to a map showing the various domestic ocean steamship lines, the student will be enabled to familiarize himself with all important facts pertaining to the subject.

The lines commanding transportation to and from foreign ports extend principally from New York and Philadelphia to ports in Great Britain and the continent of Europe, and thence to the northern, western, and eastern coasts of Africa, and also to South

American ports. From Florida and the Gulf States routes extend to the West Indies and Central America. Direct lines are also maintained from New York to these points.

The most direct route from the United States to points in the Orient is from the western coast, San Francisco being the most famous in this regard. The lines employing this route extend to the Philippine Islands, China, Japan, and India, and also to Hawaii and the Cape Verde Islands.

Throughout the interior of our country flow mighty rivers, which form highways of trade and travel. The most important of these, perhaps, is the Mississippi, which commands the patronage of many of the middle, northern, and southern states, extending, in the main, from St. Paul to New Orleans, at which latter point connection is made by it with the Gulf lines.

The Missouri River commands Topeka, Kansas City, and important cities in Missouri, tapping the Mississippi some distance north of St. Louis.

Another outlet of the Mississippi is the Ohio River. This highway leaves the Mississippi at Cairo, Ill., and commands all points on the southern boundaries of Illinois and Indiana and the southern and eastern boundaries of Ohio.

The Rio Grande flows from southern Colorado through New Mexico, dividing the state of Texas from Mexico and emptying into the Gulf.

The Colorado River extends from Western Colorado through Utah and divides the states of Nevada, Arizona, and California, thence to the Gulf of California.

The Hudson River is another important interior waterway. It is the means by which a vast amount of the business of New York City is conducted. From New York it extends northward to the large cities in the state of New York; notably Poughkeepsie, Albany, Troy, and Schenectady.

The St. Lawrence River is an important outlet of Lake Ontario, extending in a northwesterly direction into the Dominion of Canada.

Of the lakes which afford excellent transportation facilities those known as the Great Lakes are the only ones deserving special mention. They are Lake Superior, Lake Michigan, and Lake Huron, and they are connected with each other by a narrow strait. Over these lakes are daily transported multitudes of people and tons of freight between the states of Minnesota, Illinois, Michigan, and New York, and the Dominion of Canada.

Much use was made of canals in this country in former times, but owing to the growth of surface transit, they are being rapidly eliminated. Being of an almost purely local character, it is hardly possible to do more than to recommend a study of the geography of those that happen to be in the student's vicinity.

TELEGRAPH AND TELEPHONE LINES

There are but two great systems of telegraph in this country, viz., the Western Union and the Postal, and by their lines messages may be sent to almost every point that can lay claim to having a name. The larger of these systems is the Western Union, but the Postal system is rapidly extending its facilities, thereby becoming as great a factor in the conduct of business as the Western Union.

In addition to these carriers, there is a multitude of telephone lines which, in addition to transmitting local messages, are now extending their plants in such a manner as to enable them to perform, to a certain extent, the functions of the telegraph companies.

Any one intending to enter a business life, or having done so, will do well to seek information that will qualify him to know the points that are reached by each of the telegraph and telephone lines, their relative rates of transmission, and which of them

possesses the facilities that will be of the most advantage in the particular line of business in which he seeks employment. After familiarizing himself with the conditions affecting his immediate neighborhood, his research should be extended to his entire state and then to the country at large.

The foreign telegraphic carriers are known as "cable companies," and their lines extend to all inhabited parts of the world. Messages destined to foreign points may be filed with the domestic telegraph companies at any of their offices. Such messages are transmitted by them over domestic territory and delivered to the cable company at the nearest ocean port for transmission through the submarine cables.

CURRENT POLITICAL CONDITIONS

This subject affords a most important and useful field of information to those who desire to engage in a business avocation without spending the time and energy necessary to become thoroughly schooled in the subject of political economy. One may keep in touch with current conditions, so far as they affect the business world, and his attention should be turned not only to such as arise within, or affect, the municipality in which he may be employed, but more particularly to those matters which grow out of state and national politics.

It may be said that no political condition ever arises that does not, directly or indirectly, materially affect the world of business, and he who has an understanding of the relations between such conditions and their results will be far better equipped for employment than he who knows not whether we are under a protective tariff or under free trade, or whether the government is issuing money on a single or a bimetallic basis, or what the results of such conditions may be.

Keep informed, then, as to tariff regulations, the nature and extent of their effect upon business in general and upon the particular kinds of business that are more materially affected by them. The same should be done as to internal revenue, conditions affecting combinations of capital, and the relations between master and servant, the acquisition or release of territory by the Federal Government, the coinage of money, the issuance of Government securities, and such other matters as may arise.

Be familiar with the various political parties and the attitude of each upon the questions of the day; the personnel of the government of your state, and of the Federal Government; the names of those men who are prominent in public life, the causes of their prominence, and with what questions their names are especially identified.

Geological Surveys.—Expeditions for the special purpose of making geological inquiry have been provided for by the general government and by nearly all the States, beginning with N. C., whose legislature authorized a survey of the State in 1823. The U. S. at first attached geologists to exploring parties, but in 1834 it sent out a special Geological Survey under Featherstonhaugh. Similar expeditions set forth in 1839, 1845, 1847, and 1848. In 1867 F. V. Hayden surveyed Neb., extending his work later into other territories. In 1871 J. W. Powell surveyed the country bordering on the Colorado River, and G. M. Wheeler was put in charge of a topographical survey. In March, 1879, the U. S. Geological Survey was created and the Hayden, Powell, and Wheeler surveys were consolidated with it. The work of the survey covers all parts of the U. S. and has been a most valuable aid in the development of the mineral resources of

the country. The Geological Survey bureau is attached to the Department of the Interior, Washington, D. C. It has charge of the classification of public lands, the examination of the geological structure, mineral resources, and products of the U. S., and the survey of the forest reserve.

Geology (Greek *gē*, the earth, and *logos*, a discourse) is the science which treats of the structure, surface, configuration, and composition of the earth—of the different strata which compose its crust, their order of succession or deposition through eons of time, the characteristic forms of their fossilized animal and vegetable life, etc. As a science, it is of comparatively recent date, and is full of interest, not only in its revelations of what in the nature of rocks, metals, and the solidified remains of early life, are to be found in the bowels of the earth, but as these throw light upon the earth's his-

tory in the long ages of the past. Geology time is divided into ages, eras, periods, and their subdivisions, and attempts to reveal their successive order from the earliest and lowest strata, beginning with the Archæan, with its Laurentian and Huronian deposits, up through the Silurian (the age chiefly of invertebrates), the Devonian (the age of fishes, and of the Old Red Sandstone formations), the Carboniferous (the coal measures era), to the Mesozoic and Cenozoic eras (the age of reptiles and mammals—of oölites, chalks, and the marks of glacial movement and erosion). The subdivisions of the science are Dynamic Geology, which treats of the agents and forces which have been at work in making the earth as we know it, the actions of climate, atmosphere, seas, volcanoes, etc.; Structural Geology, which treats of the rock formations and strata and their relations to one another; Paleontologic Geology, which deals with fossils, etc.; Physiographic Geology, which has to do with the present form of the earth's surface; and Economic Geology, that phase which treats of the commercial value of minerals to man, such as ores, coal, clay, petroleum, gas, salt, building stone, marble, etc.

George, Henry.—(1839-1897.) A distinguished writer on political economy and sociology.

George, Lake.—Situated in eastern N. Y., noted for its beautiful scenery. It was the scene of several engagements in the French and Indian and the Revolutionary wars.

George, Saint.—A half legendary, half-historical character, supposed to be born of Christian parents in Cappadocia. For his faith he is said to have suffered martyrdom in Nicomedia in 303 A.D., and hence was held in high honor by the Church during the Middle Ages. Another account of him locates him in point of time toward the close of the 11th century, when he is said to have taken part in the early Crusades and aided them at Antioch against their foes the Saracens. For this reason, he became patron of the Normans, and during Edward III.'s reign, in the 14th century, he was adopted as the patron saint of England. A well-known legend connects him with an encounter and conquest of the dragon (the devil), the subject of a notable painting by Raphael (1506) in a museum at St. Petersburg.

George Eliot.—The pseudonym of Mrs. Cross, British novelist, which see.

George I. of Greece.—Georgios I., reigning king of Greece, the ancient Hellas, was elected "King of the Hellenes" by the National Assembly at Athens in March, 1863. He is the second son of the present king of Denmark (Prince Christian of Schleswig-Holstein), and in 1867 married Olga, eldest daughter of Grand-duke Constantine of Russia, brother of the late Emperor Alexander II. Greece, which had been a province of the Turkish empire since early in the 16th century gained its independence in 1829, and was declared a kingdom in the following year under the protection of Britain, France, and Russia. By special permission, George I.

is allowed to adhere to his Protestant Lutheran faith, though his successors must be members of the Greek Orthodox Church.

George Sand.—See SAND, GEORGE.

Georges, The Four English.—Kings of Great Britain, from 1714 to 1830. These monarchs came first upon the scene on the death of Queen Anne and just after the union of England and Scotland. In the latter of these two countries, Jacobite feeling was at the time very strong, and civil war was not a remote contingency. To save the nation from this, and from Stuart and Catholic rule, Parliament, by the Act of Settlement, provided that on the death of Anne, who succeeded William of Orange, the crown was to go to Sophia of Hanover, granddaughter of James I., and her Protestant heirs. Sophia was the wife of Ernest Augustus, elector of Hanover, and her son, born at Hanover in 1660, came to the English throne at the age of fifty-four, and ruled as George I. When he came to England he could speak no English, and like his son and successor was never popular. During the eras of both, the nation was ruled by the Whigs, an appellation replaced about the era of the Reform Bill (1832) by the term Liberal. The ruling political chiefs of the time were Walpole and the elder Pitt, to the latter of whom England owed much for his vigorous foreign policy during the Seven Years' War (1756-63) and the restoration of England's military fame abroad. The notable events of the eras of George I. and II. were the Jacobite rebellion in Scotland in 1745; the war of the Austrian Succession, in which George II. and his son, the Duke of Cumberland, routed the French at Dettingen; the Seven Years' War, which gave Canada to Britain by the Conquest of Quebec, and decided English supremacy in India, through the efforts mainly of Lord Clive. Of the two later kings of the Hanoverian or Brunswick dynasty George III. was the more notable. Born at London in 1738, he succeeded to the throne on the death of his grandfather (George II.) in 1760. Educated under the tutelage of Lord Bute, a Tory of the Tories, the king imbibed to the full Tory principles. Though honest in the main and of good life, he was stubborn in his own convictions, and this, added to the evil counsels of ministers such as Grenville and Lord North, lost to England the American crown colonies. Affairs went better in India, where British rule was rapidly extended through the able administration of Warren Hastings. In England, the younger Pitt was at the helm of affairs, and by his ability and political sagacity, with the moral support of Burke and Fox, the nation passed triumphantly through the struggle with Napoleon. The earlier triumphs were the naval victories gained by Nelson, followed by those of the army under Wellington, first in the Peninsular War and later on the field of Waterloo. In 1811 George III. became insane, and following this came the stupid insistence of England on the "right of search" and the War of 1812 with the

United States. The reign of George IV. was confined to the brief period between the years 1820 and 1830, marked chiefly by the passing in Parliament of the Catholic Emancipation Act (1829) and other struggles for religious equality and parliamentary reform. Many are the blemishes on George IV.'s character: the little of good in him was sadly marred by sensual indulgence, cowardice, and falsehood. Having left no heirs, he was succeeded by his brother, known as "the sailor king." William IV., who reigned only seven years, brings English history down to the era of Victoria.

Georgetown.—A port of entry and part of the city of Washington, D. C., situated on the Potomac. It was incorporated with Washington in 1878, and is now known as West Washington.

Georgia.—One of the southern states of the Union and the latest to be settled of the thirteen original states, has an area of close upon 60,000 square miles. It was first settled by English colonists in 1733, and became a royal province in 1752. It seceded in 1861 at the outbreak of the Civil War, and was readmitted into the Union in 1868, after it had become the theater of considerable fighting around Chattanooga and Atlanta and by the passing of Sherman on his famous march through the heart of the state to the sea. Georgia is one of the chief cotton-producing states, and has now considerable manufactures, mainly of cotton, woollens, and iron. Rice is also one of its products, besides lumber and coal. In the north the surface is elevated and mountainous, but in the south and center it is level or undulating. It has 137 counties and sends 2 senators and 11 representatives to Congress. Atlanta (pop., 89,872) is the capital. Its chief seaport is Savannah (pop., 54,244). Population of the state, (1900), 2,216,331.

Georgia, Army of.—This name was given by Gen. Sherman to the army that he led from Atlanta to the sea. It was composed of the 15th and 17th corps, Army of the Tennessee, and the 14th and 20th corps, Army of the Cumberland. Its strength was 60,000.

"Georgia," The.—A cruiser built at Glasgow, Scotland, for the Confederate government, to prey upon the commerce of the U. S. during the Civil War. Her career on the sea was brief. She sailed in April, 1863, and destroyed a number of vessels off the European coast. Aug. 15, of the same year, she was seized by the U. S. S. "Niagara," which ended her service as a commerce destroyer.

Georgia Pine, The.—See PINE, 2818.

"Georgics."—By Virgil, a poem in four books.

Geranium.—A genus of plants comprising 500 species. They are propagated by seed or cuttings. A mixture of leaf mold and sand is most suitable.

German Colonial Possessions.—Since 1884 Germany has made great strides as a Colonial Power, acquiring possessions in foreign countries, chiefly in Africa and among the islands of the Pacific Ocean. These now embrace a total of over a million square miles, with an estimated popu-

lation of close upon 15,000,000. Besides these she has acquired in China the port and protectorate of Kiau-Chau, in the province of Shantung. In Africa are her chief possessions, which include Togoland, Kamerun, German East Africa, and German Southwest Africa. In the Pacific, she has acquired Savaii and Upolu of the Samoan group, besides Kaiser Wilhelm's Land, Bismarck Archipelago, Solomon Islands, Palaos, of the Pelew group, the Marshall Islands, the Caroline, and the Marianne Islands. The government of these possessions is chiefly in the hands of Imperial and Deputy Commissioners.

German Fables.—1392.

German Fairy Tales.—1287.

Germantown.—A former borough of Pa., but now forming part of Philadelphia. The scene of a repulse of the Americans under Washington by the British, Oct. 4, 1777. See following:

Germantown (Pa.), Battle of.—After the American defeat at Brandywine Creek and the British occupation of Philadelphia, Washington determined to attack the main body of Howe's army, which was quartered at Germantown. The American army numbered 10,000 men, and about two-thirds of this force, under Generals Wayne and Sullivan, started for Germantown, Oct. 3, 1777. The battle opened about 7 A. M. on the 4th. The Americans were repulsed with a loss of 673 killed and wounded and 400 prisoners.

Germany is a confederation of German states under the presidency of the Emperor William II. of Hohenzollern, king of Prussia. The confederation embraces 25 states, with one imperial province (Alsace-Lorraine), the entire area of which is 208,830 square miles in the central portions of Europe, with a total population, in 1900, of 56,345,014, or 269.3 to the sq. mile. A few of the chief cities of the empire are Berlin (pop., 1,884,151), Hamburg, Munich, Leipsic, Breslau, Dresden, Cologne, Frankfort-on-the-Main, Nuremberg, and Hanover, with populations, in the order given, ranging from 700,000 down to 235,000. Education throughout Germany is general and compulsory; besides special and technical schools, and those in which elementary and advanced education are taught, as in the Gymnasias, the Realgymnasias, Realschulen, etc., Germany has 21 universities, the chief of which are the universities of Berlin, Munich, Leipsic, Bonn, and Breslau. Political and military affairs are under the direction of the emperor, who may declare war, but if not defensive, the consent of the Bundesrath or federal council is required. The legislative functions of the empire are vested jointly in the Reichstag (which represents the German nation and consists of 397 members) and the Bundesrath (which represents the individual states of the union and consists of 58 delegates appointed by the governments of these states for each session). The Protestants form 62.7 per cent. of the population and the Roman Catholics 35.9 per cent., the Jews making up 1.2 per cent. of the remainder. The revenue is derived from the customs and

other imperial sources, and the balance is made good by contributions from the confederate state. For the colonies, see GERMAN COLONIES.

Germination (in plants).—The sprouting or budding, the beginning of vegetation or growth in a seed or plant. It is the process by which a spore, supplied with the necessary food matter in solution of heat and oxygen, germinates and develops a young plantlet, or organism, similar to the parent form. The process is other than that which occurs in the germination of seeds released from their seed-case, though the natural condition which favor the one favor the other.

Gérôme, Jean Léon.—An eminent modern French painter, a pupil of Paul Delaroche. He was born at Vesoul, France, May 11, 1824, and after studying art in Paris and traveling extensively in the East, he became professor of painting in the Academy of Fine Arts at Paris. Many of his canvases deal with early and modern Roman subjects and are characterized by vivid coloring and strong dramatic effect. His best-known paintings are, "Roman Gladiators in the Amphitheatre," "Cleopatra and Cæsar," "The Age of Augustus and the Birth of Christ," "Slave Market in Rome," "Night in the Desert," and "Women at the Bath."

Geronimo.—A famous Indian chief of the Apache tribe; pursued by Gen. George Crook, captured by Gen. Nelson A. Miles in 1886, and sent to Fort Pickens, Fla.

Gerry, Elbridge.—(1744–1814.) An American statesman; member of the Continental Congress and holder, subsequently, of several important offices under the government.

Gerrymander.—An arbitrary arrangement of the legislative or congressional districts of a state, regardless of geographical contiguity and compactness, whereby the voters of the political parties are so grouped that a party which is in the minority may elect a majority of the representatives in Congress or in a state legislature,—more than its just proportion, based on its numerical strength. It is a scheme, the avowed purpose of which is to gain a political advantage. The word was coined in 1811, suggested by the name of Elbridge Gerry, who, as governor of Mass., signed a bill passed by the Democratic majority of the legislature, grouping the counties that gave Federalist majorities into one district. In its unique form, this district had a fancied resemblance to the reptile known as the salamander, and by combining the governor's name with the latter half of this word, the result was "Gerrymander." This device has been resorted to by both political parties at different times, in many states, to in-trench themselves in power.

Gerster, Etelka.—Born, 1856. A noted Hungarian soprano singer.

Gethsemane.—A garden adjoining the city of Jerusalem, the resort of Christ and his disciples, and the scene of the agony of Our Lord before his crucifixion. It lies at the foot of Mount

Olivet by the brook and valley of Kedron. Here, led by Judas, he was taken by emissaries of the Jews on the night of the betrayal. The name Gethsemane is derived from the Hebrew for "oil-press."

Getty, George Washington.—Born at Georgetown, D. C., 1819. A Union general in the Civil War.

Gettysburg (Pa.), Battle of.—Gettysburg is the capital of Adams, one of the southernmost tier of counties of Pa., and is 36 miles southwest of Harrisburg, the state capital. Here was fought, July 1, 2, and 3, 1863, one of the great battles of the Civil War. The Union army, with about 80,000 effective men, was commanded by Gen. George G. Meade, and the Confederate army, 70,000 strong, by Gen. Robert E. Lee. The battle began July 1, by an accidental collision between the advance of the Union army under Gen. John F. Reynolds, and a Confederate force under Gen. Ambrose P. Hill. Gen. Reynolds was killed early in the action. The fighting of the first day was favorable to the Confederates, who captured above 5,000 prisoners. Both armies concentrated during the night and the combat continued two more days with terrific fighting and great losses on both sides. A historic feature of the battle was the charge of Pickett's Confederate division, July 3, to the crest of Cemetery Ridge, the key to the Union position. Nothing more gallant is recorded in history. Three-fourths of Pickett's men were killed, wounded, or taken, but the sacrifice was in vain. It was the climax of the battle, and when Pickett failed to pierce the Union line, Lee determined to retreat. He did so and conducted his army back to Va. The losses in the action were nearly equal, and aggregated 6,000 killed, 26,000 wounded, and 11,000 prisoners. The victory at Gettysburg defeated the purpose of Gen. Lee in his second and last campaign north of the Potomac, and has been characterized as the "high-water mark of the rebellion." See the following sketches: GEORGE G. MEADE, ROBERT E. LEE, JAMES LONGSTREET.

Geysers.—A crater, crevasse, or bowl-shaped trough, from which at intervals columns of hot water, steam, mineral matter, and mud are ejected or erupted from underground caverns. They occur in volcanic regions, the more notable being in Iceland, whence they derive their name, also in New Zealand, and in America in the region of the Yellowstone National Park, in N. W. Wyoming. In the latter, the geyser familiarly termed "Old Faithful," which spouts, on an average once in an hour a column of hot, sulphurous water to a height of about 130 feet, is the best known in this country, together with its consorts, the giant, giantess, grotto, punch-bowl, and grand geysers. The eruptions are due to the expansion of steam, accumulating in the underground caverns, which pushes the superincumbent column of water upward and out of the geyser.

Ghazipur.—(1) In British India, a district in the Northwestern provinces. Pop., about 1,077,909.

- (2) The capital of the district of Ghazipur. Pop., about 45,000.
- Ghent.**—The capital of East Flanders, Belgium; an important trade center; and a city of much historical interest. Pop. (1899), 163,030.
- Ghent, Treaty of.**—A treaty of peace concluded by the U. S. and Great Britain, at Ghent, Belgium, Dec. 24, 1814, and ratified, Feb. 17, 1815. It brought to a close the War of 1812, leaving matters substantially as they had been before the war. The treaty was negotiated by John Quincy Adams, James A. Bayard, Henry Clay, Jonathau Russell, and Albert Gallatin on behalf of the U. S. and by Lord James Gambier, Henry Goulburn, and William Adams on the part of Great Britain.
- Ghiberti, Lorenzo di Cione.**—Italian sculptor, 3561.
- Giant's Causeway.**—A promontory of the coast of Antrim, in Ireland, extending into the North Channel, which separates it from Scotland. The singular headland is composed largely of basaltic columns, mainly hexagonal in form, closely packed together, and formidable cliffs rising to a height of from 400 to 500 feet. The location of the Causeway is west of Bengore Head, about 11 miles N. E. of Coleraine. Locally the causeway is spoken of as the stepping-stones of the Fomorians, a race of pirates who once infested this part of the Irish coast, and whom legend has transformed into giants who desired, by means of these basaltic rocks, to form a causeway across the channel to the Scottish coast.
- Gibbon, Edward.**—A famous English historian, whose great work and high authority for the period it covers, is "The History of the Decline and Fall of the Roman Empire." One of the great masterpieces of history, the work is distinguished by the splendor of the author's prose, and by a glowing imagination which gives a special charm to the narrative, especially in the treatment of ancient paganism and the portrayal of the chief characters of the age with which it deals. Gibbon was born in 1737 and died in 1794. His "Autobiography" also deserves to be read by the literary student. See the monograph on Gibbon, by Morrison, in Morley's "English Men of Letters" series.
- Gibbon, John.**—(1827-1896.) A general of the U. S. army.
- Gibbon, The.**—See MONKEY, 2453.
- Gibbons, James Sloane.**—(1810-1892.) An American banker and author; to some extent identified with the abolition movement. He was author of the war song, "We are Coming Father Abraham, Three Hundred Thousand More."
- Gibbons, Orlando.**—(1583-1625.) A distinguished English organist and composer, especially of church music.
- Gibbons vs. Ogden.**—A important Supreme Court case, denying the right of a state to grant the exclusive privilege of navigating the waters of a state, extending to the coastwise traffic of another state. Aaron Ogden had obtained by assignment the exclusive right to navigate for 30 years the waters within the jurisdiction of the state of New York. In 1808 the N. Y. court of chancery granted an injunction, forbidding Thomas Gibbons from running steamboats between New York and Elizabethtown and other places in N. J. Gibbons appealed and the N. Y. court of errors sustained the chancery court. The U. S. Supreme Court reversed the decision and rendered judgment for the appellant, Gibbons. Daniel Webster appeared for the appellant. Chief-justice Marshall delivered the opinion.
- Gibraltar** (the classical Calpe, one of the Pillars of Hercules).—A rocky promontory and fortress of Great Britain in the south of Spain, the key to the Mediterranean. It is about two miles square and over 1,400 feet in height, connected with the mainland by a spit of sand, known as "neutral ground." The town and fine harbor are on the west side and are commanded by strong batteries. In early days, it was a Moorish stronghold, but has belonged to Britain since 1704, though repeatedly besieged by Spain subsequent to its capture. It is governed as a crown colony; the fortress has a garrison usually of 5,000 men. An engagement took place here in 1801 between French and English vessels of war. Population (1899), 24,701.
- Gibraltar of America.**—A name sometimes applied to Quebec.
- Gibson, Charles Dana.**—American artist, 3525.
- Gibson, John.**—(1790-1866.) An English sculptor, 6301.
- Gibson, Randall Lee.**—(1822-1892.) A noted lawyer and politician and an officer of the Confederate army in the Civil War.
- Gibson, William Hamilton.**—(1850-1896.) An American painter, illustrator, and writer.
- Giddings, Joshua Reed.**—(1795-1864.) Distinguished as an anti-slavery leader and politician.
- Gifford, Robert Swain.**—Born on the island of Naushton, Mass., 1840. A noted landscape painter.
- Gifford, Sandford Robinson.**—(1823-1880.) An eminent landscape painter.
- "Gila Monster," *The.*—See LIZARD, 2645.
- Gilbert, John Gibbs.**—(1810-1889.) A distinguished comedian.
- Gilbert, Marie Dolores Eliza Rosanna.**—(1818-1861.) An adventuress and dancer, better known as Lola Montez.
- Gilbert, Mrs. George H.**—(1814-). A noted English-American actress.
- Gilbert, Sir Humphrey.**—(1539-1583.) A noted English soldier and navigator. He established the first English colony in America, at St. John's, Newfoundland, and was lost at sea off the Azores, on his return voyage.
- Gilbert, Sir John.**—(1817-1897.) A noted English painter.
- Gilbertines.**—A religious order established in England 1131-48.
- "Gill Blas de Santillane, *Histoire de.*"—The best known of the works of Le Sage (1668-1747), French novelist and dramatist.
- Gilder, Richard Watson.**—Born, 1844. An American editor and poet.
- Giles, William Branch.**—(1762-1830.) American Democratic politician.

- Gill, André** (the *pseudonym* of LOUIS ALEXANDRE GOSSET DE GUINNES).—(1840-1882.) A noted French caricaturist.
- Gillis Land.**—A polar land lying northeast of Spitzbergen.
- Gillmore, Quincy Adams.**—(1825-1888.) A celebrated military engineer and general of the Civil War.
- Gilmore, Patrick Sarsfield.**—(1829-1892.) A noted Irish-American bandmaster and organizer of "Gilmore's Band."
- Ginseng Family, The.**—2881.
- Giorgio, Francesco di.**—(1439-1502.) A celebrated Italian artist, engineer, and worker in bronze.
- Giorgione.**—A celebrated Italian painter, 3437.
- Giotto, or Giotto di Bondone.**—Celebrated Italian artist, 3410.
- Gipsies.**—A corruption of the word Egyptians, caused by the popular belief regarding the origin of this people. A wandering race who appeared first in England in the 16th century. They differ from other people in physical appearance and speech. It is thought that they are akin to ancient Hindu races. The name is indiscriminately applied to all wandering races.
- Giraffe, The.**—2480.
- Girard, Stephen.**—Born in France, 1750; died, 1831. A wealthy philanthropist. He founded Girard College at Philadelphia (1833-48).
- Girard College.**—An educational college for poor white male orphans, founded in Philadelphia, 1833, by Stephen Girard. By a provision in his will, "no ecclesiastic missionary or minister of any sect or denomination whatever" is permitted to officiate in the college; nor is he even admitted as a visitor.
- Gironde.**—A department of southwestern France; capital Bordeaux.
- Girondists.**—An important political body at the time of the first French Revolution.
- Girtin, Thomas.**—A celebrated English landscape-painter, 3474.
- Girton College.**—An educational institution for women; situated at Girton, near Cambridge, England.
- Gist, State Rights.**—(1833-1864.) A general in the Confederate army during the Civil War.
- Glacier, the Largest Known.**—In Alaska, where the Muir Glacier is situated, Professor John Muir, after whom the glacier is named, was the first to describe it. According to a recent visitor, Mr. S. P. Baldwin, it is as large as all the Alpine glaciers in one, being 1,200 square miles in area. Where it discharges into the sea, it presents a wall of blue ice exceeding 500 ft. in thickness. This river of ice, with its numerous branches, is 150 miles in length, and varying from one to a dozen miles in width. It is continuously discharging icebergs, small and large, some containing hundreds of tons of ice, the fall of which into the sea casts up spray for hundreds of feet into the air. The Muir Glacier is estimated to discharge 77 billion cubic feet of ice in icebergs, and 175 billion cubic feet of water, by melting every year. The Justedals Brae, in Norway, is the largest glacier in Europe. It covers an area of 350 square miles. The largest Alpine glacier is the "Mer de Glace" around the Finsteraarhorn. This glacier sends out thirteen branches, and covers 125 square miles. The longest glacier pass in the world is the Hispar Pass in the Himalayas; it is ninety miles in length.
- Gladstone, Rt. Hon. William Ewart.**—A distinguished British statesman, orator, and author, born in 1809, and died in 1898, and was buried with public honors in Westminster Abbey, London. He first entered Parliament in 1833, in the Conservative or Tory interest, and so favorably did the young orator and debater impress the House that Sir Robert Peel gave him the post of junior lord of the Treasury, and then that of under-secretary for the colonies, subsequently giving him the presidency of the Board of Trade. Peel's death in 1850 paved the way for an ampler career, aided by his own abilities as a debater and financier. In the Aberdeen ministry he became chancellor of the exchequer, and at this time he had a formidable rival in Disraeli, afterward Lord Beaconsfield, an orator on the Tory side, for about this period Mr. Gladstone abandoned his conservative proclivities and became an ardent Liberal. Palmerston's death, in 1865, which called Lord Russell to the premiership, made Mr. Gladstone leader in the House of Commons. Henceforth he occupied the most conspicuous position in the politics of the time, which was later on marked by the legislation shaped by him as premier—a post he held at four different periods in his career, until his retirement in 1894. Among his notable characteristics as a politician was his commanding personality, purity of motive, and honorable uprightness. During his career he did much for Ireland and ardently espoused her cause, especially in the disestablishment of the Irish Church and the granting to Ireland of the boon of Home rule. As an author Gladstone possessed remarkable gifts and he contributed much to literature.
- Glasgow.**—The largest city of Scotland; second city of Great Britain, and third in importance of the British seaports. Pop. (1901), 735,906.
- Glass.**—A hard, brittle, usually transparent substance, made by fusing together sand or silica with lime, potash, soda, or lead oxide. It is today extensively used for window panes, mirrors, for lenses, as well as for many articles for table and culinary use, or for ornament. Its invention dates from an early era, being known to the Egyptians, Phœnicians, and Romans, as well as to the Arabs. Glass-making is a large industry in the United States, where it is made at Pittsburg and other districts in Pennsylvania, in Massachusetts, and in New Jersey and New York. The chief varieties made in this country are window, common and plate glass, flint or crystal glass, and bottle glass. The coloring of glass is produced by the use of certain oxides of metals.
- Glastonbury.**—In England, an historical town of Somerset, near Bristol.

- Glauber, Johann Rudolf.**—(1604-1668.) A noted German chemist; discoverer of Glauber's salts (hydrous sodium sulphate).
- Glens Falls.**—A picturesque town of New York, situated at the falls of the Hudson. Pop. (1900), 12,613.
- Glinka, Mikhail Ivanovitch.**—(1804-1857.) A noted Russian composer.
- Glisson, Oliver S.**—(1809-1890.) An American naval officer, commander of the schooner "Reefer" in the Mexican War.
- Globe, The.**—A famous old London theater; built 1599. Shakespeare wrote for this theater and appeared upon its stage.
- Gloucester, Mass.**—A city and seaport on the peninsula of Cape Ann, about 30 miles N. E. of Boston. It is noted for its extensive fisheries trade,

chiefly in mackerel and cod, and in which over 5,000 men are annually employed. The "catch" in some seasons amounts to nearly 10 million pounds of fish, the vessels engaged in the trade numbering over 400, with a gross tonnage of about 40,000 tons. Gloucester was occupied as a fishing station as early as 1624, being the first settlement on the north shore of Massachusetts Bay. It has a fine harbor and beach. Pop. (1900), 26,121.

- Glover, Richard.**—(1712-1785.) An English poet.
- Glover, Stephen.**—(1812-1870.) An English musician and composer.
- Gloversville.**—A town in N. Y. Its chief industry, the largest of its kind in the U. S., is the manufacture of buckskin gloves and mittens. Pop. (1900), 18,349.

GLUCK

CHRISTOPHER WILLIBALD GLUCK, generally known as the Chevalier, or Ritter, von Gluck, was born July 2, 1714, at Weidenwang, in Bavaria. His parents, in spite of their limited means, contrived to give to their children an excellent education, far above the average of the time. In his twelfth year, he entered the Jesuit college at Komotau, and at the age of eighteen entered the University at Prague, where his studies were soon cut short by the necessity of earning his own livelihood by means of his music. Gradually young Gluck attracted the notice of the Bohemian nobility. When, drawn by the musical reputation of Vienna, and by the better opportunities for study there afforded, he went thither at the age of twenty-two, his father's former master, Prince Lobkowitz, received him at his palace and allowed him a salary which enabled him to take up the study of the theory of music. In 1740 he was commissioned to write an opera for the court at Milan. His subject was chosen for him, the *Artaserse* of the librettist Metastasio. In spite of the somewhat sneering attitude which the public adopted toward the young German composer, the opera was a triumphant success, and Gluck was summoned from one Italian city to another to direct productions of the *Artaserse*.

A journey to England in 1745 proved a milestone in Gluck's career. Händel's majestic oratorios made a deep impression upon him, and during a short trip to Paris, he was struck by the musical declamation and recitative which was peculiar to French opera. A new light then dawned upon him as to the real mission of music and its relation to drama, and ideas of reform began to shape themselves in his mind. He worked out a theory of dramatic composition which marked an epoch in the history of opera, and which can be summed up in the statement that music in opera should represent the ideas expressed by the poet, and that the orchestral accompaniment should not only support the voices, but should also add color to the picture.

In 1746, the composer returned to Germany, and he thenceforth made his home in Vienna, where his great social talents, no less than his fame as a composer and his abilities as a performer, made him a favorite in all circles. In 1751, the Empress Maria Theresa appointed him court chapel-master and the Pope bestowed upon him the decoration of the Order of the Golden Spur, whence arises Gluck's title, Chevalier or Ritter. In 1761, Gluck produced a very successful ballet, *Don Juan*, which is interesting as the forerunner of Mozart's immortal *Don Giovanni*.

Up to 1762, there was no indication in his works of the approaching change in style. The defects and inconsistencies of the opera of the day were obvious and distaste-

ful to him, yet he had not found the opportunity to break from existing traditions. He was constantly hampered by the character of "Metastasio's" libretti, which, though of the highest merit of their kind, were lyric in their nature, rather than true dramas. Gluck had discussed this subject with Raniero Calzabigi, a councilor in the department of finance. Himself a poet, Calzabigi had long been conscious of the defects which Gluck saw, and was rejoiced to find that the distinguished composer's views coincided with his own. He agreed to prepare a libretto which would enable Gluck to embody these views and to bring them before the public. Accordingly he wrote the libretto of *Orpheus and Eurydice*. In the music to this opera, Gluck departed entirely from his previous style. It was performed at Vienna in 1762, and although both text and music presented strange surprises to the public, so long used to the conventional mode of dramatic composition, the power, beauty, and truthfulness of the work appealed to all, and won universal admiration. *Alceste*, performed at Vienna, in 1767, more than fulfilled the promise of *Orpheus*. In the latter, there are a few concessions to popular taste; in *Alceste* there is no shadow of turning from the composer's theories. The great opera was not fully appreciated at first, but after a few presentations, admiration grew into enthusiasm. In 1769, *Alceste* was published, with a dedicatory letter to the grand duke of Tuscany, in which the composer announced to the world the principles of operatic composition which he had reasoned out, and which he had so successfully tested.

Although his operas, based upon the new principles, had proved so successful in Vienna, Gluck did not feel sure that he had established his system beyond further dispute, and he believed that the best way to accomplish this would be to secure a hearing from the stage of the royal opera house at Paris. In the face of many difficulties, and in spite of cabals and intrigues against the German master, *Iphigénie en Aulide* was performed there in 1774. The Parisian public was at once divided into two portions, the adherents of the old style of opera, and the converts to Gluck's doctrines. It soon became evident, however, from the unprecedented interest that was taken in the rehearsals of the opera, that the composer was growing in popular favor. The Italian party now set up Piccinni, a man of decided talent, in opposition to Gluck. The controversy raged more fiercely than ever, and the musical war of the Gluckists and Piccinnists is unique in the history of music. In 1777, *Armide* was produced, but it did not meet with the success its composer had anticipated, although it gradually rose in favor, and is by many considered to be the composer's finest work. Others place it second only to *Iphigénie en Tauride*. This latter opera was presented in Paris in 1779. It was received with intense enthusiasm, and all acknowledged it to be a masterpiece. The Gluckists were triumphant, and Piccinni himself admitted the genius and superiority of his rival.

In 1783, the composer had a stroke of apoplexy, from the effect of which he suffered for years, until his death in 1787. He was buried at Vienna, where a fine monument has been erected to his memory. Gluck has been called the "Eighteenth century Wagner," for, like Wagner, he waged his war of reform, not only through his music, but by means of pamphlets, treatises, and prefaces to his published scores. He exercised a deep and far-reaching influence over his contemporaries and successors, which indeed, has not yet been exhausted. Mozart, Beethoven, Cherubini, and Wagner himself, all give evidence of the debt they owe to the poet-musician, Gluck.

Glucose.— Under this term are several distinct substances either directly or indirectly prepared from animal or vegetable products, such as dextrose, grape, and starch sugars, syrups, etc. They are derived naturally from ripe grapes, honey, cane sugar, etc., or from starch, by the action of heat and acids. Glucose is now

largely manufactured in the United States, where it is used in the manufacture of table-syrups and confectionery, in the brewing of ale and beer, and in the preparation of a food for bees and of artificial honey. The glucose of commerce is thick and tenacious, of a slightly yellowish tint, though nearly colorless, and

- with a specific gravity, at 20° C. or 68° Fahr. of 1.412. Its sweetness varies with different specimens: that derived from cane sugar is the sweeter.
- Gnostics.**—These were certain sects that appeared in the Christian church in the 1st century, reached their height in the 2d century, and disappeared in the 6th century. They refused the literal interpretation of the Bible and tried to weld onto Christianity some of the teachings of the Greek and Oriental philosophies.
- Goa, Old.**—A ruined city, in former times the capital of Goa, India; the seat of government (it is a Portuguese possession) was removed in 1759 to New Goa, a city of about 8,000 inhabitants. Goa is also a large district (a dependency of Portugal) on the Malabar coast of India.
- Goat, The.**—2414.
- Goat Island.**—The island in the Niagara River, which separates the Horseshoe and American Falls.
- Gobelins.**—The descendants of Jean Gobelin who died in 1476; famous dyers of Paris and first manufacturers of tapestries, which they introduced in the 15th century.
- Gobi, or Cobi.**—A great desert of the Chinese empire.
- Godavari.**—(1) A district in Madras, British India; pop., about 2,000,000. (2) A river of British India; length, 900 miles.
- Godfrey of Bouillon.**—(1061-1100.) A leader of the first Crusade.
- Godiva.**—The wife of Leofric, earl of Chester; lived about the middle of the 11th century; a woman of great beauty and piety. In order to secure for the people of Coventry relief from burdensome tax, she consented to ride, unclothed, through the town. A festival is still held in Coventry in commemoration of her sacrifice.
- Godkin, Edwin Lawrence.**—Born in Ireland, 1831. An American author and journalist.
- God of the Nile.**—See EGYPTIAN MYTHOLOGY, 1592.
- Godolphin, Sldney.**—First earl of Godolphin. Died, 1712. A noted English statesman and financier.
- God Save the King (or Queen).**—The English national anthem; origin uncertain; first performed in 1740.
- Gods of Asgard, The (Norse Mythology).**—1637.
- Godwin, or Godwine.**—Died, 1053. Earl of the West Saxons.
- Godwin, Mrs. (MARY WOLLSTONECRAFT).**—(1759-1797.) An English author.
- Goethe (*gê'te*) (JOHANN WOLFGANG VON).**—(1749-1832.) A celebrated German author, poet, and dramatist. He was a most voluminous writer, but is best known by his "Faust."
- Goetze, Hermann.**—(1840-1876.) A noted German composer.
- Gog and Magog.**—Two effigies in the Guildhall, London, thought to be intended for Gogmagog, a legendary king of the giants, and Corineus, a follower of Brut.
- Golconda.**—Near Hyderabad, or the Nizam's Dominions, in India, a place noted for its fort, its ancient mausoleums, and for the cutting and polishing of diamonds which was done there.
- Gold.**—2947.
- Gold.**—The most valued, and as the alchemists used to term it, the king of metals. It is a brilliant yellow metal, remarkable for its ductility and malleability; an ounce of it may be hammered out into 100 square feet of gold leaf, and 15 grains may be drawn into a wire over 2,000 yards in length. For the purposes of coinage, and that it may stand wear without loss, gold is alloyed with copper, silver, or other metals, and also in the manufacture of jewelry. The metal is remarkable also for its high specific gravity (19.3), and in this respect is next to platinum. Gold is widely distributed, being found largely not only in the United States and Canada (in the latter chiefly in British Columbia and on the Yukon), but in Australasia, in the Transvaal (though the product of the mines of the Witwatersrand has fallen off in the past two years, in consequence of the Boer War), in Russia, Hungary, Mexico, China, British India, British and French Guiana, Brazil, Chili, Colombia, and Peru. The total gold production of the world in 1900 was estimated as 12½ million fine ounces, valued at over \$250,000,000. Of this quantity and value the United States produced over one-fourth, the bulk of it coming from Colorado, California, and Alaska, with lesser quantities from New Mexico, Arizona, Montana, Idaho, Oregon, and Washington. Statistics of the Government Mint bureau show that in the year 1900 gold to the value of close upon a hundred million dollars was coined. This amount of gold represented the coinage of 6½ million pieces, of the denominations \$2.50, \$5.00, \$10.00, and \$20.00.
- In round numbers, the weight of \$1,000,000 in standard gold coin is 1¾ tons; standard silver coin, 26¾ tons; subsidiary silver coin, 25 tons; minor coin, 5 cent nickel, 100 tons.
- Gold and Silver.**—See table on opposite page.
- Gold Coast.**—One of the four British Crown colonies in West Africa, the others being Gambia, Lagos, and Sierra Leone. It stretches for 350 miles along the Gulf of Guinea, and has an area, exclusive of Adansi and Ashantiland, in the interior, of about 40,000 square miles, with a population estimated at 1,475,000, of whom only about 500 are Europeans. The chief towns are Accra (the administrative center—pop., 17,000), Cape Coast Castle (pop., 12,000), Elmina (pop., 10,500), and Winneba. The Ashanti country, with Kumassi as its capital, was in 1896 placed under British protection. The products of the colony are gold, India rubber, palm kernels and oil, timber, etc. A railway is now under construction from Sekondi to Kumassi (or Coomassie).
- Golden Age, The.**—A term used by early classical writers to describe an era in the infancy of the human race of simplicity, prosperity, and happiness—an era when war and bloodshed were unknown and men lived like gods in happy security, innocence, and plenty. The Greek poet Hesiod, as well as the Latin poets, Virgil, Tibullus, and Ovid, was fond of depicting this happy period and dedicated not a little of his

GOLD AND SILVER PRODUCTION IN 500 YEARS

COUNTRIES	GOLD			SILVER		
	Tons	Value	Ratio	Tons	Value	Ratio
Africa	740	\$ 520,000,000	7.1	.....	.....	.....
Australia.....	1,840	1,290,000,000	17.8	..	.....	..
Austria.....	460	325,000,000	4.4	7,930	\$ 305,000,000	4.1
Brazil.....	1,040	725,000,000	10.0	..	.....	..
Germany.....	.....	.....	.....	8,470	325,000,000	4.4
Mexico.....	.....	.....	.....	78,600	3,040,000,000	40.7
Peru.....	.....	.....	.....	72,000	2,770,000,000	37.3
Russia.....	1,235	865,000,000	12.0	3,200	120,000,000	1.7
Spanish America.....	2,220	1,550,000,000	21.5	.....	.....	.....
United States.....	2,042	1,430,000,000	19.7	11,600	445,000,000	6.08
Other Countries.....	778	535,000,000	7.5	11,200	430,000,000	5.8
The World.....	10,355	\$7,240,000,000	100.0	193,000	\$7,435,000,000	100.0

finest verse to its laudation. Many nations, both ancient and modern, have traditions of a "Golden Age" in their histories and literatures. The Assyrian and the Chaldean-Babylonian empires, as well as China, Egypt, Media, and Persia had such periods in their annals. Some of the modern nations also speak of such eras, as England in the reign of Queen Elizabeth, or in the literature of the era of Queen Anne, which is termed "golden" through the luster shed upon it by writers such as Dryden, Pope, Addison, Steele, Johnson, and Gay. The term is also applied in France to parts of the reigns of Louis XIV. and XV.; in Germany to the reign of Charles V. (1515-58), the Austro-Spanish monarch of many thrones; in Spain to the reign of Ferdinand and Isabella, when the crowns of Castile and Aragon were united (1474-1516); in Sweden to the eras of Gustavus Vasa and Gustavus Adolphus; in Russia to the reign of Czar Peter the Great; and in Prussia to the era of Frederick the Great. The term is also applied by modern poets to a coming millennial time, the dream of all seers, when 'the years have died away.'

Golden City.—A name sometimes applied to San Francisco.

Golden Eagle, The.—See EAGLE, 2524.

Golden Fleece.—According to the beautiful Greek legend of Jason and the Argonauts, was the fleece of the winged ram "Chrysomallus," to recover which was the object of Jason's expedition to Colchis, a generation before the Trojan War. Accounts of the sailing of the expedition, with incidents happening to Jason and his Greek heroes, is given in Homer's "Odyssey," in Pindar, and in Apollodorus. At Colchis, the king, Æetes, promised Jason the golden fleece, which was guarded by a sleepless dragon, on condition that he should yoke to a plow two fire-breathing, brazen-hoofed oxen, and sow the dragon's teeth which Cadmus had left at Thebes. By her magic power, the king's daughter, Medea, enabled Jason to accomplish this and other perilous exploits. The ram was sac-

rificed to Zeus and the fleece was hung by Jason on the branches of a sacred oak. The fleece was afterward seized by Jason and taken away by him to Corinth, and with him went Medea, the sorceress, who was in love with him, but who, after many adventures and plottings, was abandoned by Jason for Glauce, daughter of King Creon, and at length returned to Colchis. The "Golden Fleece" is also applied to a decorative order of Knighthood, founded in 1430 by Philip the Good, Duke of Burgundy, and is still conferred by Austria and Spain upon distinguished personages. The emblem was chosen probably from the fact that fleece (wool) was the chief manufacture of the Netherlands, when the duke of Burgundy, as regent of France, acquired Holland as a territory of France.

Golden Gate.—The name of the strait connecting San Francisco with the Pacific Ocean.

"Golden Legend"—(1) A collection of lives of the Saints, printed by Caxton, 1483. (2) The title of a dramatic poem by Longfellow.

Golden Pheasant.—A bird of China, remarkable for its beautiful plumage.

Golden Robin, The.—See BALTIMORE ORIOLE, 2551.

Golden Rod, The.—2915.

Goldfinch, The.—See FINCH, 2570.

Goldfish, The.—See CARP, 2695.

Goldmark, Karl.—Born, 1832. A noted Austro-Hungarian composer.

Goldsborough, Louis Malesherbes.—(1805-1877.) A U. S. naval officer. He commanded the North Atlantic squadron in 1861 and with a naval force cooperated with Gen. Burnside in the capture of Roanoke Island; was made a rear-admiral in 1862 and served through the war.

Goldschmidt, Mme.—The "Swedish Nightingale," or as she was familiarly known in her maiden days, "Jenny Lind." This famous singer was born at Stockholm, Sweden, in 1821, and died in Malvern, England, in 1887. She possessed, in her prime, a thrilling, sympathetic voice, though one more of sweetness than of volume. Her early successes were at Stockholm, where

she appeared as "Agatha" in "Der Freischütz" and as "Alice" in "Robert le Diable." After a period of study in Paris, she returned to Sweden, and afterward appeared in Germany, Great Britain, and under the auspices of the late P. T. Barnum in the United States, where she was received with enthusiasm. In 1852, while in this country, the prima donna married Otto Goldschmidt, a German musical conductor and composer, then in Boston, who

died in 1890. After 1856 she sang little in public, save occasionally for charity, and at the Royal College of Music, in London, where she was professor of singing from 1883 to 1886.

Goldsmith, Oliver.—(1728-1774.) A famous English writer, known everywhere as the author of the tale, "The Vicar of Wakefield."

Gold Standard.—See HANNA, HUGH H., 254.

Golf.—2055.

Golf-Croquet.—2074.

Goliath.—A giant of Gath, champion of the Philistines, slain by David.

Gompertz, Benjamin.—(1779-1865.) An English astronomer and actuary.

Goncourt, Edward de (1822-1896), and **Jules de** (1830-1870).—French authors; brothers who worked in collaboration.

Gonzalez, Manuel.—(1833-1893.) A distinguished Mexican general and statesman.

Good Friday.—The Friday before Easter; a fast of the church, in commemoration of the Crucifixion.

Good Hope, Cape of.—A promontory at the southwestern extremity of Cape Colony, South Africa.

"Good-natured Man, The."—A comedy by Goldsmith, produced 1768.

Goodrich, Samuel Griswold (*pseudonym* PETER PARLEY.)—(1793-1860.) The author of many juvenile books.

Good Templars.—A secret order having for its purpose the promotion of temperance and right living, intended especially to exert a moral influence upon young people. At the middle of the 19th century it had a large membership in the U. S. Its usefulness was impaired by its feature of secrecy, and as the temperance cause developed other forms of work, the Good Templars were in a considerable degree displaced. Of late years the membership has fallen off.

Good Will.—The interest of an established business in the way of trade or custom.

Goodwin Sands.—Dangerous shoals lying east of Kent, England.

Goodyear, Charles.—(1800-1860.) A noted American manufacturer of India rubber goods. After years of experimenting he discovered the proc-

ess of vulcanization for which he took out his patent in 1844.

Goose, The.—2497.

Goose-fish, The.—See ANGLER, 2682.

Gopher, The.—2445.

Gordius.—An ancient Lydian king, father of Midas.

It was declared by an oracle that he who should untie the knot in the harness of the oxen of Gordius would rule over Asia. The knot was cut by Alexander the Great.

Gordon, Charles George, familiarly known in his day as "Chinese Gordon," or "Gordon Pasha," was a British military hero, a strange compound, as he has been termed, of Oliver Cromwell and Thomas à Kempis. He came of a race of soldiers and himself entered the British army in 1852 as an officer in the Royal engineers. He first saw fighting at Sebastopol during the Crimean War, and he there gained from the French, then allies of England, the decoration of the Legion of Honor. He then served in China during the Taiping rebellion, where in command of a European-clad Chinese army he fought 33 actions in two campaigns, took numerous walled towns, and crushed the formidable rebellion. We next find him in Egypt, as governor of the equatorial provinces, suppressing the slave trade and establishing a series of fortified posts inland to the great lakes. Now become a major-general in the British army, he was sent once more to Egypt, where in 1884 the Moslem population had risen in revolt, and defeated and isolated Egyptian garrisons. Gordon was intrusted with the perilous duty of leading his trusty Sudanese soldiery against the Mahdi and his fanatic followers and of withdrawing to safety the endangered and exposed Egyptian garrisons. Cairo was reached Jan. 27, 1884, and on the 18th of Feb., the simple lion-hearted soldier hero reached Khartum. Here he was besieged by the Mahdi's forces, and before relief could reach him he was killed in the storming of the city, Jan. 26, 1885. It was not until 1898 that the British reëntered Khartum, the dervishes of the Sudan having been defeated at Omdurman by Lord Kitchener, who restored the country to peace and order.

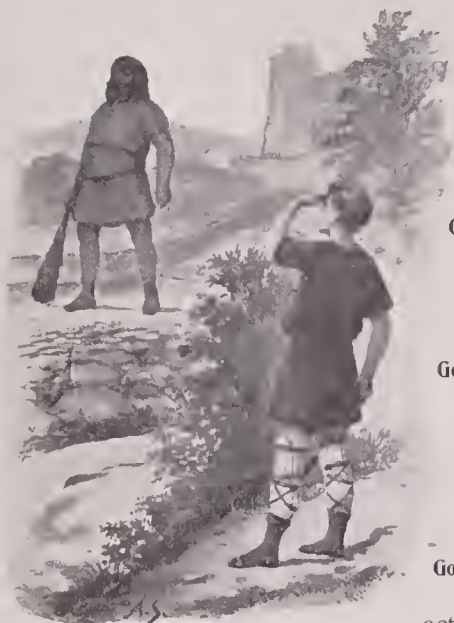
Gordon, Lord George.—(1751-1793.) An English reformer or agitator. His action in opposing, as president of the Protestant association, the Bill of Toleration in favor of the Roman Catholics, caused riots in London, June 8, 1780.

Gordon Riots.—The anti-Roman Catholic riots, instigated by Lord George Gordon, in London, June, 1780. See preceding article.

Gordon, Sir Arthur Hamilton.—Born, 1829. A British colonial governor; he was appointed governor of New Brunswick in 1866; Trinidad, in 1870; Fiji Islands, 1874; New Zealand, 1880; Ceylon, 1883.

Gore House.—In London, a house formerly occupying the site now occupied by the Albert Memorial. Early in the 19th century it was a famous resort for men of letters.

Gorgias.—A celebrated Greek rhetorician, a contemporary of Socrates.



x 959



LIBRARY OF CONGRESS



0 038 701 678 8